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FACTORS OF CRYPTOCURRENCY ADOPTION IN RUSSIA: A UTAUT MODEL ANALYSIS

Master's Thesis by the 2nd year student – Dan Tetelea

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ЗАЯВЛЕНИЕ О САМОСТОЯТЕЛЬНОМ ХАРАКТЕРЕ МАГИСТЕРСКОЙ ДИССЕРТАЦИИ

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ABSTRACT

Master Student's Name	Tetelea Dan
Academic Advisor’s Name	Ilyina Yulia Borisovna, Associate Professor of the Department of Finance and Accounting.
Master Thesis Title	Factors of Cryptocurrency Adoption in Russia: A UTAUT Model Analysis
Description of the goal, tasks and main results the research	This research examines the socio-cultural, behavioral, and economic components of bitcoin adoption in Russia using the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). The study validates the theoretical framework using primary data from Russian residents. The study's key findings show the strong effect of “effort expectancy”,”social influence”, and “financial restriction” on behavioral intention toward bitcoin adoption. However, 'facilitating circumstances' had a negligible impact. The study provides strategic insights for Russian cryptocurrency enterprises and identifies potential research areas, such as a deeper analysis into perceived risk and conducive conditions. The study greatly contributes to scholarly knowledge and gives practical insights for managing Russia's emerging digital currency market.
Keywords	Cryptocurrencies, UTAUT, technology adoption, TAM, blockchain, cryptocurrency

АННОТАЦИЯ

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Название ВКР	Факторы, влияющие на принятие криптовалют в России: анализ с использованием модели UTAUT
Описание цели, задач и основных результатов исследования	В этом исследовании рассматриваются социокультурные, поведенческие и экономические компоненты внедрения биткойнов в России с использованием Модели принятия технологий (TAM) и Единой теории принятия и использования технологий (UTAUT). Исследование подтверждает теоретическую основу с использованием первичных данных жителей России. Основные выводы исследования показывают сильное влияние «ожидания усилий», «социального влияния» и «финансовых ограничений» на поведенческие намерения в отношении принятия биткойнов. Однако «облегчающие обстоятельства» оказали незначительное влияние. Исследование дает стратегическую информацию для российских криптовалютных предприятий и определяет потенциальные области исследований, такие как более глубокий анализ предполагаемых рисков и благоприятных условий. Исследование вносит большой вклад в научные знания и дает практические идеи для развития и управления формирующимся рынком цифровой валюты в России.
Ключевые слова	Криптовалюты, UTAUT, принятие технологий, TAM, блокчейн, криптовалюта

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INTRODUCTION

Research Motivation And Gap

Cryptocurrency has become increasingly popular in recent years, changing the way we think about finance worldwide. The advent of cryptocurrencies has revolutionized the financial landscape, offering a new medium of exchange that is decentralized, secure, and global. This phenomenon originates in 2008 when Satoshi Nakamoto (2008) introduced the concept of blockchain technology and Bitcoin in the paper "Bitcoin: A Peer-to-Peer Electronic Cash System.". This innovative technology created a new way of conducting digital transactions by establishing a decentralized peer-to-peer monetary system. Blockchain, the underlying technology of cryptocurrencies, is a transaction ledger duplicated across multiple computer systems, which makes it highly secure and transparent. Its potential extends beyond cryptocurrencies, as the World Economic Forum (2015) anticipated that by 2027, 10% of global GDP will be stored using blockchain.

Despite the potential applications of blockchain, cryptocurrencies are the most significant manifestation of the technology thus far. According to The World Bank, these digital currencies, based on cryptographic techniques, are not tied to any asset, have no intrinsic value, and are not a liability of any institution. They are viewed as a potential solution to the inefficiencies of the current payment system, which is often slow, insecure, and not global. Cryptocurrencies, such as Bitcoin, have gained significant attention worldwide, and their adoption varies across countries due to a variety of factors. One notable example of the utility of cryptocurrencies has emerged in Russia, where they are being used to circumvent financial restrictions imposed on citizens, enabling them to conduct international transactions independently of traditional financial institutions.

However, the adoption of cryptocurrencies is not without its challenges. These include potential misuse for illegal activities such as money laundering, tax evasion, and illegal transactions. Additionally, the technical complexity and limited user-friendliness of cryptocurrencies, coupled with a general lack of financial literacy, are significant obstacles to widespread adoption. Cryptocurrencies offer efficient, traceable, decentralized, and secure transactions, but their acceptance is hindered by their reputation as a risky investment compared to traditional securities like shares. Thus, it is crucial to enhance public understanding and awareness of digital currencies and mitigate the challenges associated with their use. Nevertheless, cryptocurrencies present risks, including volatility, technical and

financial complexities, and uncertain societal perceptions. Therefore, it is essential to scrutinize their impacts and challenges from various disciplinary perspectives.

While there has been significant global research on cryptocurrency adoption, there is a scarcity of focused studies on Russia. The existing body of research usually prioritizes the technical or economic aspects of cryptocurrencies, neglecting the equally important social, cultural, and behavioral dimensions that influence their adoption. Therefore, this research aims to provide a comprehensive analysis of cryptocurrency adoption in Russia, encompassing economic and regulatory facets as well as the influences of consumer behavior and technology adoption trends. It is important to note that, due to the current legal status of cryptocurrency in the country, this study focuses on using it as a tool for transactions, rather than for investment purposes. By doing so, this study will offer a unique insight into the factors influencing cryptocurrency adoption in Russia and contribute to a more holistic understanding of this digital transformation. Therefore, this report can provide valuable insights for policy-makers and financial institutions as they navigate the constantly evolving landscape of digital currencies by examining factors that are relevant predictors of behavioral intention to use cryptocurrency. Furthermore, it may also prove helpful for businesses and organizations in Russia that are either dealing with this technology or considering using it to develop their operations.

Furthermore, the theoretical foundation for the research will be based on the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). According to these concepts, perceived usefulness, perceived ease of use, social impact, and conducive environments all influence the adoption of new technology. However, these models have not been widely applied to the context of bitcoin adoption in Russia, which represents another gap that this research seeks to fill.

Research Goal and Questions

The purpose of this study is to look into the elements that influence cryptocurrency adoption in Russia. Given the growing global interest in cryptocurrencies and their potential to change financial systems, this is a critical topic. The study's goal is to provide a complete knowledge of the elements that promote or impede cryptocurrency development in Russia, a country with distinct economic and legislative circumstances.

The research questions guiding this study are:

RQ1: What factors are significant predictors of intention to adopt cryptocurrencies as a mean of transaction in Russia?

RQ2: How do experience, age and gender influence the intention to adopt cryptocurrencies as a mean of payment?

RQ3: How policy-makers and organizations can use the identified factors to increase cryptocurrency adoption?

These study questions are intended to delve into both the broad variables impacting bitcoin adoption as well as the specific demographic aspects that may play a role in this process. We will use a variety of data sources and approaches to answer these issues. We will perform a thorough analysis of the existing literature on cryptocurrency adoption, focusing on research that has looked into this topic in the context of Russia or other similar economic and legal situations. This will help us to identify major topics and gaps in existing research, as well as establish a theoretical framework for our own investigation. In addition, we will perform primary research among Russian individuals in the form of surveys. This will give us firsthand knowledge of the factors impacting Bitcoin adoption in Russia, as well as the opportunity to test our hypothesis in a real-world setting. The study is divided into three sections: a literature survey, the development of the research model, and model analysis. The literature review will offer a full overview of existing research on bitcoin adoption, while the research model will be developed through the formulation of hypotheses based on this literature. The model analysis will include the testing of these hypotheses using data from our surveys. In terms of potential hurdles, we think that reaching out to cryptocurrency users will be tough, given Russia's relatively low levels of Bitcoin usage.

In conclusion, this study seeks to develop a comprehensive understanding of the factors that impact the adoption of cryptocurrency in Russia. By conducting a thorough review of the existing literature and collecting and analyzing primary data, we aim to contribute to the growing body of knowledge on this important subject.

CHAPTER 1. LITERATURE REVIEW

1.1. Background Of Cryptocurrency

Cryptocurrency Nature and Types

Cryptocurrency is a digital or virtual form of currency that uses cryptography for security, making it nearly impossible to counterfeit or double-spend (Nakamoto, 2008). The defining feature of cryptocurrencies is that they are generally not issued by any central authority, rendering them theoretically immune to government interference or manipulation (Antonopoulos, 2015). Cryptocurrencies are digital or virtual currencies underpinned by cryptographic systems. They enable secure online payments without the use of third-party intermediaries. The term "Crypto" refers to the various encryption algorithms and cryptographic techniques that safeguard these entries, such as elliptical curve encryption, public-private key pairs, and hashing functions.

The history of cryptocurrencies dates back to 2009 with the creation of Bitcoin, the first cryptocurrency, by an unknown individual or group of people using the name Satoshi Nakamoto. The invention of Bitcoin was groundbreaking as it introduced the concept of a decentralized digital cash system, which was a solution to the double-spending problem without the need for a trusted authority or central server. Bitcoin's pioneering status has led to it becoming the most recognized and valuable cryptocurrency in terms of market capitalization. Following the advent of Bitcoin, many alternative cryptocurrencies, often referred to as altcoins, were developed. These altcoins generally present themselves as modified or improved versions of Bitcoin. Some of the most prominent altcoins include Ethereum, Litecoin, and Ripple, each introducing unique features and targeting specific use cases.

Cryptocurrencies can be mined, purchased from cryptocurrency exchanges, or rewarded for work done on a blockchain. However, not all e-commerce sites allow purchases using cryptocurrencies. In fact, cryptocurrencies, even popular ones like Bitcoin, are hardly used for retail transactions. However, the value of cryptocurrencies has made them popular as trading and investing instruments. To a limited extent, they are also used for cross-border transfers. The cryptocurrency market has grown rapidly since the emergence of Bitcoin in 2009, and now includes various instruments built on distributed ledger technology. These instruments are commonly referred to as crypto assets, which are created using distributed ledger technology and serve different functions (Cocco et al., 2017). While some are used for payments, others are comparable to securities. There

are approximately 21,910 cryptocurrencies, with a total market capitalization of $850 billion (Hicks, 2023).

Table 1 compares five types of digital assets: Central Bank Digital Currencies (CBDCs), Electronic Money (e-money), Stablecoins, Unsecured Cryptocurrencies, and Tokenized Assets. CBDCs, like the Sand Dollar and Digital Yuan, are digital forms of a country's fiat currency issued by central banks. They are designed for payments and don't provide anonymity. E-money, such as AliPay and mPesa, is digital cash for cashless transactions issued by private companies. It's used for online transactions and peer-to-peer transfers. Stablecoins, like Tether and USD Coin, are cryptocurrencies pegged to a reserve to minimize volatility. They can be used for payments and their anonymity varies. Unsecured Cryptocurrencies, like Bitcoin and Ethereum, are not backed by an underlying asset and are used for peer-to-peer transactions. Their value is market-driven and can be highly volatile. Tokenized Assets represent a physical or digital asset in the form of a blockchain token. They are regulated, require KYC checks, and are not designed for payments. The digital asset landscape is diverse, with each type of asset having its own unique features, uses, benefits, and drawbacks. Understanding these differences is crucial for both individuals and institutions that are navigating the digital asset space.

Table 1: Classification of Digital Money and Crypto Assets

	State	Private			
	Central bank digital currency	**Electronic money (e-money)**	**Stablecoins**	**Unsecured cryptocurrencies**	**Tokenized assets**
Issuer	Central bank	Private company	Unidentified persons or private company	Unidentified persons or private company	Private company
Designed for payments	Yes, primarily designed for payments and to serve as a digital form of the country's fiat currency.	Yes, primarily used for online transactions, mobile payments, and peer-to-peer transfers.	Yes/No, designed to minimize volatility by being pegged to a reserve or basket of assets. Can be used for payments, especially in the crypto ecosystem.	Yes, primarily used for peer-to-peer transactions without an intermediary.	No, primarily used to represent a physical or digital asset.
Anonymity of transactions, inability of carrying out KYC	No, transactions are traceable and KYC is possible.	No, transactions are traceable and KYC is possible.	Possible, depending on the design. Some stablecoins offer more privacy than others.	Possible, depending on the design. Cryptocurrencies like Bitcoin are pseudonymous, not anonymous.	No, tokenized assets are typically regulated and require KYC checks.
Asset security	Central bank balance sheet, confidence in national currency.	At face value, backed by a reserve of cash or cash equivalents.	At face value or market value or none, depending on the type of stablecoin.	None, the value is purely market-driven and can be highly volatile.	At face value or market value or obtaining rights, depending on the type of asset being tokenized.
Examples	Sand Dollar (Bahamian islands), Digital Yuan (China), e-Krona (Sweden).	AliPay, mPesa, PayPal.	Tether, USD coin, DAI.	Bitcoin, Ethereum, Litecoin.	Amazon tokenized stock FTX, NBA Top Shot NFTs, CryptoPunks NFTs.

Source 1: Developed by author

1.2. Role Of Blockchain In The Cryptocurrency

Cryptocurrencies leverage complex computer science principles to ensure their integrity and security. The two key technologies that underpin most cryptocurrencies are blockchain and cryptography. This chapter delves into the intricacies of these technologies and how they contribute to the functioning of cryptocurrencies (Lantz & Cawrey, 2022). Cryptocurrencies are commonly associated with blockchain technology, which serves as their technological foundation. Essentially, a blockchain can be described as a sequential arrangement of blocks, with each block containing a record of transactions (Zheng & Lu, 2021). These transactions are consolidated and appended to the decentralized ledger, which is accessible and verifiable by all participants.

The decentralized structure stands out as a key characteristic of blockchain technology. Unlike conventional databases that operate under a centralized authority, a blockchain is upheld by a network of computers referred to as nodes. Each node in the network maintains a copy of the entire blockchain, thereby eliminating vulnerabilities associated with centralized control and fortifying the system against censorship. This decentralized nature also fosters a heightened level of transparency. All transactions recorded on the blockchain are openly visible to all network participants, thereby establishing a transparent ecosystem that promotes individual accountability. Additionally, the immutability of blockchain technology is highly regarded. Once a block becomes part of the blockchain, modifying the information it contains becomes exceedingly challenging. Such an endeavor would necessitate altering all subsequent blocks in the chain, a computationally infeasible task due to the prevailing consensus mechanism (Lantz & Cawrey, 2022).

Consensus mechanisms are protocols devised to ensure unanimous agreement among nodes regarding transaction validity and the state of the blockchain. The most widely adopted mechanism in the sphere of cryptocurrencies is Proof-of-Work (PoW). PoW entails nodes solving intricate mathematical problems, the successful resolution of which validates transactions and permits the addition of a new block to the chain (Lashkari & Musilek, 2021). However, due to the computational intensity and energy consumption inherent in PoW, alternative mechanisms such as Proof-of-Stake (PoS) and Delegated Proof-of-Stake (DPoS) have been implemented in various cryptocurrencies (Lashkari & Musilek, 2021). Beyond the fundamental structure of blockchain, certain blockchains, including Ethereum, encompass a groundbreaking innovation known as smart contracts. These contracts are self-executing agreements, wherein the contractual terms are directly encoded as lines

of code. Upon fulfilling specific conditions, these contracts autonomously enforce themselves, thereby obviating the necessity for a trusted intermediary.

Please refer to table 2 for a concise overview of the components of blockchain technology:

Table 2: Blockchain Technology Components

Component	Description
Decentralization	Blockchain is maintained by a network of nodes, each holding a copy of the entire blockchain. This makes it resistant to censorship and single points of failure.
Transparency and Immutability	All transactions are visible to the network participants, promoting accountability. Once a block is added, altering its data is computationally impractical.
Consensus Mechanisms	These are protocols that ensure all nodes agree on the state of the blockchain. Common mechanisms include Proof-of-Work, Proof-of-Stake, and Delegated Proof-of-Stake.
Smart Contracts	Used in some blockchains, these are self-executing contracts with terms written into code. They automate the execution of contracts when predefined conditions are met.

Source 2: Developed by author

Notwithstanding its manifold advantages, blockchain technology encounters several notable challenges. Bitcoin network can only validate up to seven transactions per second (TPS), which is significantly lower than the international payment system Visa which conducts 1,700 transactions every second on average (Gracy & Rebecca Jeyavadhanam, 2021). The reason for this limitation is due to the block size limit and the time it takes to add a new block to the blockchain. The block size limit is currently set at 1 megabyte, which means that only a limited number of transactions can be included in each block (Moustapha BA, 2020). Additionally, the time it takes to add a new block to the blockchain is around 10 minutes. This means that transactions need to wait in a queue until they can be added to the next block, which can cause delays and increase transaction fees.

Nonetheless, the blockchain community actively endeavors to address this scalability issue. Numerous novel blockchains have been introduced with the explicit objective of augmenting transaction speeds. Solana, for instance, employs a distinctive timestamp system known as Proof of History to streamline the validation process, while Polygon leverages a layer-2 scaling solution to enhance transaction capacity. Ethereum, the second largest blockchain in terms of capitalization, is also making substantial progress in this domain through the advent of Ethereum 2.0. This upgrade aims to amplify Ethereum's TPS by implementing sharding, a process that partitions the network into smaller segments, each capable of autonomously processing its own transactions and smart contracts. Moreover, Ethereum 2.0 intends to transition to a Proof of Stake consensus mechanism, thereby

expectedly strengthening scalability and energy efficiency. Another challenge confronting blockchain technology pertains to its potential utilization for illicit activities due to the anonymity it can afford (Giudici et al., 2019). Blockchain transactions can be anonymized through various means, such as mixers and zero-knowledge proof protocols, thereby complicating efforts to combat money laundering and terrorist financing.

Use Cases for Cryptocurrency

Cryptocurrencies have a variety of use cases, with their primary functions often categorized as a store of value, a unit of account, and a medium of exchange.

Medium of Exchange

As a medium of exchange, cryptocurrencies offer several potential advantages. They enable peer-to-peer transactions without the need for a central authority or intermediary, such as a bank. This can, in some cases, make transactions faster and cheaper, especially for international transfers. However, transaction times and costs can vary widely depending on the cryptocurrency and the state of the network (Hu et al., 2021). Cryptocurrencies could potentially offer financial services to those without access to traditional banking systems, a concept is known as "banking the unbanked". However, the level of technology infrastructure and digital literacy available to these folks frequently limits their potential. Cryptocurrencies are also used for remittances, which are payments made by migrant workers to their home countries (Kulkarni et al., 2019). While cryptocurrencies have the potential to offer rapid, low-cost cross-border payments, this is dependent on the exact cryptocurrency utilized as well as the availability of cryptocurrency infrastructure in both the sending and receiving nations.

Cryptocurrencies, such as Bitcoin and Ethereum, offer a decentralized and secure way of transferring value across borders, making them an attractive alternative for international payments. Traditional payment methods, like wire transfers and remittances, can be slow, expensive, and subject to regulatory hurdles, which has increased the interest in using cryptocurrencies for cross-border transactions. Table 3 describes the advantages cryptocurrencies have over traditional payment methods. Payment channel networks, like Bitcoin's Lightning Network and Ethereum's Raiden Network, have been proposed as a solution for micro-payments to address the challenges of high transaction waiting times and fees associated with public blockchain-based cryptocurrencies. These networks enable users to exchange ownership of funds by maintaining local account balances,

reducing the load on the blockchain, and allowing for faster, cheaper transactions. The growing interest in cryptocurrencies for international payments has led to an increase in research and development in this area. Several platforms, such as XRP (previously known as Ripple) and Stellar, have emerged to facilitate cross-border transactions using cryptocurrencies. These platforms aim to provide faster, cheaper, and more secure international payment solutions by leveraging blockchain technology and digital assets.

Store of Value

Cryptocurrencies, particularly Bitcoin, are sometimes likened to gold as a store of value. (Klose, 2022) This comparison arises from the fact that, like gold, cryptocurrencies are not tied to a physical commodity. Their value is derived from the trust and consensus of the community that uses them. However, unlike gold, which has a long history and physical utility that underpin its value, cryptocurrencies are a new technology with value based on speculative future uses (Taskinsoy, 2021). While some cryptocurrencies have a capped supply, which could theoretically make them resistant to inflation, their value is highly volatile. This volatility can lead to significant gains or losses for investors and can erode their purchasing power, similar to how inflation erodes the purchasing power of traditional currencies.

Table 3: Payment Comparison

Features	Traditional International Payment Methods	Cryptocurrencies
Speed	Can be slow, taking several days	Transactions can be processed within minutes or even seconds
Cost	Can be expensive due to high fees	Typically have lower fees, making them more cost-effective
Accessibility	May be inaccessible to unbanked and underbanked populations	Can be accessed by anyone with an internet connection, promoting financial inclusion
Decentralization	Subject to regulations and controlled by financial institutions	Operate on decentralized networks, reducing reliance on intermediaries

Source 3: Developed by author, based on Al-Amri et al. (2019)

Unit of Account

A unit of account is a standard measure used to set prices and make economic calculations. Cryptocurrencies, due to their volatility, are not commonly used as a standard measure for pricing

goods and services. This volatility can create significant problems for economic planning and contract enforcement. However, some businesses and online platforms do accept cryptocurrencies as payment, typically converting prices from a traditional currency into a cryptocurrency at the time of transaction. (Abdullah & Mohd Nor, 2018)

Other Use Cases

In addition to these monetary functions, cryptocurrencies have other potential applications. They are used in decentralized finance (DeFi) applications, which try to reproduce traditional financial processes (such as loans and interest) on the blockchain in a decentralized manner. However, these applications are frequently built on complicated smart contracts, which might be vulnerable to hacking and fund loss. Cryptocurrencies are also employed in "smart contracts," which are self-executing contracts in which the contents of the agreement are encoded directly into code (Martin-Bariteau & Pontello, 2020). While ingenious, these smart contracts are subject to legal and regulatory uncertainty. As a result, while cryptocurrencies have a number of interesting applications, they also carry considerable dangers and problems that must be carefully evaluated.

Development Of Defi Instruments and Its Implication

Decentralized Finance, or DeFi, is a key advancement in the field of cryptocurrencies. It refers to the application of blockchain technology to decentralize and reconstruct existing financial systems (Schueffel, 2021). DeFi apps strive to create open, permissionless, and highly interoperable protocols that allow users to retain complete control over their assets (Gramlich et al., 2023). DeFi has had substantial growth and innovation, with numerous applications being developed. Lending and borrowing platforms, decentralized exchanges (DEXs), prediction markets, stablecoins, and other services are examples (Gramlich et al., 2023). While many DeFi apps are built on the Ethereum blockchain, taking advantage of its smart contract features, it's crucial to emphasize that DeFi isn't limited to Ethereum. Other blockchains, including Binance Smart Chain and Polkadot, are also home to expanding DeFi ecosystems. The concept of "wrapped" tokens is a crucial advance in DeFi. These are coins that are tied to the value of another coin and are issued on a different blockchain. Wrapped Bitcoin (WBTC), for example, is an Ethereum blockchain asset that is linked to the value of Bitcoin. Bitcoin can now be utilized in Ethereum's DeFi applications. However, it is important to note that the process of wrapping and unwrapping tokens frequently entails fees, which might have an impact on the profitability of employing such tokens (Schueffel, 2021). Wrapped tokens have played a significant role in the rise of DeFi. They enable greater liquidity and interoperability among

blockchain ecosystems. For example, the total market value of BTC-pegged tokens on Ethereum surpassed $1.8 billion, with Wrapped Bitcoin (WBTC) accounting for 80% of that value. Binance, one of the major cryptocurrency exchanges, has introduced its own wrapped tokens on Ethereum called BTokens. These wrapped tokens have various advantages, including dedicated Binance support and improved security and insurance. However, it is critical to recognize that these security procedures are sophisticated and necessitate a certain level of technical ability to fully appreciate.

DeFi has far-reaching ramifications in the financial sector. It has the ability to democratize finance, making financial services available to people all around the world. However, there are substantial entry obstacles, such as the requirement for a stable internet connection and a certain level of technological proficiency. Furthermore, while DeFi can improve financial system efficiency and cut costs, it is not without concerns, such as smart contract problems and the possibility of hacking. These dangers exist and have resulted in significant losses in some circumstances (Schueffel, 2021).

In conclusion, the growth of DeFi and related instruments such as wrapped tokens is an important trend in the cryptocurrency market. It is a step toward a more open, decentralized, and interoperable financial system. It does, however, come with problems and hazards that must be understood and addressed. As the DeFi area evolves, it is critical that users educate themselves and exercise prudence (Carapella et al., 2022).

1.3.Legal Status of Cryptocurrency

The legal status of cryptocurrencies varies greatly around the world, reflecting the different opinions of regulatory organizations on this creative yet disruptive technology. Some countries have recognized the promise of cryptocurrencies, recognizing their ability to enhance financial inclusion and generate economic growth. Others have taken a more cautious approach, adopting stringent rules to reduce possible hazards linked with money laundering, fraud, and financial instability.

Countries such as Japan and Switzerland have been early adopters of cryptocurrency legislation. In Japan, for example, Bitcoin was recognized as a legitimate payment method as early as 2017 and a licensing framework for cryptocurrency exchanges was developed to improve consumer safety (Ueda, 2020). Switzerland has built 'Crypto Valley' in Zug, a global hotspot for blockchain and cryptocurrency enterprises, attracting several blockchain startups with its advantageous legislation (Lifshits & Loseva, 2020). On the other end of the spectrum, countries like

China and India have imposed stringent regulations on cryptocurrencies. China, once a powerhouse of the global cryptocurrency market, has banned financial institutions and payment companies from providing services related to cryptocurrency transactions, significantly impacting its domestic cryptocurrency market (Shen, 2021). India, despite its burgeoning cryptocurrency market, has proposed a ban on all private cryptocurrencies, citing concerns over financial stability (Halder & Saiyed, 2022).

The legal status of cryptocurrencies varies across other countries as well. For instance, the European Union, the United States, and some Asian countries have adopted different approaches to cryptocurrency regulation, ranging from liberal to prohibitive (Florea et al., 2021). In general, countries tend to regulate the payment function of cryptocurrencies and distinguish them from fiat money issued by central banks. In conclusion, the legal status of cryptocurrencies varies significantly across the globe, with some countries embracing their potential while others impose strict regulations to mitigate potential risks (Shmyreva et al., 2019). As the cryptocurrency market continues to evolve, it is crucial for regulatory bodies to closely monitor developments and adapt their approaches accordingly.

Regulatory Frameworks

The regulatory frameworks for cryptocurrencies are as diverse as the countries they originate from. In the United States, cryptocurrencies are subject to a patchwork of regulations at both the federal and state level. The Securities and Exchange Commission (SEC) oversees cryptocurrencies deemed as securities, while the Commodity Futures Trading Commission (CFTC) treats cryptocurrencies like commodities. The Financial Crimes Enforcement Network (FinCEN) focuses on money laundering issues, and the Internal Revenue Service (IRS) has guidelines for cryptocurrency taxation. Each of these bodies plays a crucial role in shaping the regulatory landscape for cryptocurrencies in the United States (Gazi, 2019).

In the European Union, efforts are underway to establish a comprehensive regulatory framework for cryptocurrencies. The proposed Markets in Crypto-assets (MiCA) regulation aims to provide legal certainty, promote innovation, protect consumers, and ensure financial stability. If adopted, it would be the first legal framework dedicated to cryptocurrencies at the European level (Gazi, 2019).

The advent of cryptocurrencies has given rise to numerous legal challenges and controversies. One of the primary concerns is the use of cryptocurrencies for illicit activities due to their pseudonymous nature. Law enforcement agencies worldwide have reported cases where cryptocurrencies were used to facilitate money laundering, drug trafficking, and cybercrimes. For instance, the infamous Silk Road marketplace used Bitcoin for illegal transactions, leading to significant legal and regulatory repercussions. Another contentious issue is the legal classification of cryptocurrencies. The lack of a universally accepted definition complicates their legal status. Therefore, it can be considered as currencies, commodities, securities, or a new asset class as this varies by jurisdiction and has profound implications for how cryptocurrencies are regulated (Sotiropoulou & Ligot, 2019). For example, the SEC in the U.S. has been involved in several legal battles over whether certain cryptocurrencies should be classified as securities. Furthermore, the decentralized and borderless nature of cryptocurrencies poses unique regulatory challenges. Traditional regulatory approaches are often ill-suited to address these challenges, necessitating innovative regulatory solutions. As the regulatory landscape for cryptocurrencies continues to evolve, it will be crucial to monitor these developments and their impact on the broader cryptocurrency market (Tatar & Martynenko, 2022).

Legal Regulation in Russia

The legal status of cryptocurrencies in Russia is defined by the Federal Law "On Digital Financial Assets, Digital Currency, and Amendments to Certain Legislative Acts of the Russian Federation" of July 31, 2020 (Consultant.ru, 2023). According to this law, which is referred to as Federal Law 259 (259-FZ), cryptocurrencies are not a monetary unit of the Russian Federation or other states. While cryptocurrencies can be used as an investment object, their use for payment and settlement of goods and services is prohibited (Consultant. ru, 2023). This limits the use of cryptocurrencies in Russia and reduces the economic feasibility of owning them (TASS, 2023). It is important to note that cryptocurrencies are actively used in illegal activities, such as money laundering, extortion, and bribery. Therefore, the regulation of cryptocurrencies in Russia is aimed at combating such negative phenomena. The taxation of cryptocurrencies in Russia is also regulated by the law "On Digital Financial Assets". When receiving income from transactions with cryptocurrencies, the taxpayer must pay income tax for individuals or corporate income tax (Consultant. ru, 2023). In general, Russian legislation regulates cryptocurrencies, but their use as a means of payment is prohibited. Instead, cryptocurrencies can be used as an investment object and tax obligations must be fulfilled in accordance with the law.

As of 2023, Russia has a complex relationship with cryptocurrencies, with regulatory attitudes fluctuating over time. The Central Bank of Russia (CBR) has outlined the risks associated with the legalization of cryptocurrencies, one of which is the potential for the growth of illegal operations. The CBR has expressed concerns about the potential for cryptocurrencies to be used for illegal activities, such as money laundering and financing terrorism (CBR, 2022). The bank has also noted the high volatility of the cryptocurrency market, which it attributes to the concentration of cryptocurrencies in the hands of a small number of owners. This concentration, the bank argues, creates opportunities for market manipulation. Despite these concerns, the CBR has acknowledged the potential for cryptocurrencies to be used in international transactions (CBR, 2022). The Central Bank is also said to be discussing ways to regulate cryptocurrency mining. Many critical concerns concerning the usage of digital currency and digital assets, however, have remained unsolved, causing challenges in law enforcement practice and hindering the achievement of the stated goals for developing a competitive digital economy (Pevtsova et al., 2022).

The Effect of Legal Status on Cryptocurrency Adoption

The legal status of cryptocurrencies in a particular country can have a substantial impact on their adoption. This link, however, is not always straightforward. While it is generally true that countries with clear and friendly legislation have better adoption rates, outliers do exist. For example, in economically unstable countries, citizens may turn to cryptocurrencies as a store of wealth, despite severe prohibitions. In Russia, the CBR's cautious posture regarding cryptocurrencies may have an impact on their adoption. A multitude of variables influence this position, including concerns about unlawful activity, financial stability, and consumer protection (CBR, 2022). Specific CBR policies or pronouncements, such as those concerning cryptocurrency mining regulation, may also have an impact on adoption rates (Yegorova & Belitskaya, 2020). However, cryptocurrency's legal status is only one of several factors influencing its adoption. Other important elements include the country's technological infrastructure, economic situation, and public opinion of cryptocurrencies. Widespread internet access, a robust tech industry, or high levels of inflation, for example, could all contribute to increased cryptocurrency adoption.

To summarize, the legal status of cryptocurrencies is a complicated and quickly evolving field. Different governments' policies reflect the particular opportunities and problems provided by cryptocurrency. As this embryonic industry matures, regulatory frameworks are expected to evolve in parallel to find a balance between encouraging innovation and managing risks.

1.4. Effect Of Financial Restrictions

The economic sanctions imposed on Russia in 2022 significantly affected the country's economy and banking system, leading to financial restrictions for Russian citizens and corporations (RBK, 2023b; Kovaleva et al., 2022). Notably, these restrictions included a price ceiling on oil and petroleum products and a ban on imports from several countries, including the EU, the US, Canada, Norway, and Japan (Tass, 2023). Moreover, the banking sector was severely impacted, with several Russian banks being prohibited from receiving loans, and a ban was imposed on Western companies collaborating with Russian defense companies and manufacturers (Kovaleva et al., 2022). The repercussions of these sanctions were significant; the Russian economy, which could have grown by 5-6 percent in 2022, was projected to face a 4 percent decline instead (Shukin, 2022). In response to these constraints, Russian companies and citizens began exploring alternative financial solutions. One of these solutions was the increased use of cryptocurrencies for conducting cross-border transactions (Финансовая Культура, 2022; RBK, 2023). This was particularly relevant after Visa and Mastercard suspended their operations in the country (RBK, 2022). Cryptocurrencies not only became a tool for circumventing sanctions but also a means for conducting international payments (Tasheit, 2022; Skrinnikova, 2022). Despite the closure of crypto accounts and wallets for Russians, decentralized exchanges without a centralized intermediary remained available, fostering the use of cryptocurrencies (Skrinnikova, 2022).

However, the rise in cryptocurrency usage in Russia in 2022 had its own challenges. According to Chainalysis (2023), crypto-related crime reached a peak in 2022 with a total of $20.6 billion in illicit funds transferred, marking a 145% increase from two years prior. Despite a surge in cryptocurrency adoption, it was not a panacea for the economic challenges brought on by the financial restrictions (CNN, 2022; Farid Makhlof & Refk Selmi, 2022). The Central Bank of Russia (CBR) took action to bolster its economy and finances, but the country could not solely rely on cryptocurrencies to evade prohibitions due to the SWIFT network's global reach and the traceable nature of the blockchain (Lurie, 2023). In fact, a substantially low amount of Russian money has been funneled through cryptocurrencies (Lurie, 2023). Despite the limitations of cryptocurrencies, they provided some relief to ordinary Russians, particularly as the Russian rubble plummeted (Kharpal, 2022). However, a U.S. government official expressed skepticism about the effectiveness of cryptocurrencies in evading financial restrictions due to their traceability and liquidity challenges (Kharpal, 2022).

In summary, the 2022 sanctions against Russia had a profound impact on its economy and banking system, leading to a shift towards cryptocurrencies as an alternative financial solution. Although the adoption of cryptocurrencies has increased in Russia, they are not seen as an effective tool to evade financial restrictions due to their inherent limitations. The situation elucidates the complex interplay between international politics, traditional banking systems, and emerging digital currencies in shaping the financial landscape of nations under restrictions in the financial sphere.

1.5. Consumer Behavior

Understanding how people choose, acquire, use, and return products and services, as well as the ramifications of these activities for the individual consumer and the greater community, is critical (Kotler et al., 2022). Consumer behavior is a broad topic that includes the study of people, communities, and organizations. This field combines ideas from other disciplines like as marketing, sociology, social anthropology, psychology, and economics. It seeks to comprehend customers' decision-making processes, both individually and collectively. Consumer variables such as demographics and behavioral features are investigated in order to better understand their preferences. Furthermore, it aims to assess how social circles such as family, friends, and reference groups, as well as society as a whole, impact customers (Schiffman et al., 2020).

Understanding consumer behavior is crucial for businesses for several reasons. First, it helps in understanding the needs and wants of customers, which is essential for creating and delivering value (Kotler et al., 2022). Second, it helps in segmenting and targeting markets effectively. By understanding why consumers make the purchase decisions they do, marketers can implement effective marketing strategies tailored to their target audience (Schiffman et al., 2020). Third, understanding consumer behavior helps in enhancing customer satisfaction and build long-term relationships with customers, which is crucial for customer retention and loyalty (Oliver, 2015). In the context of technology adoption, consumer behavior plays a significant role. The adoption of new technologies is influenced by a variety of factors, including perceived usefulness, perceived ease of use, and social influence (Venkatesh et al., 2003). For instance, a study by Fernando & Suryanto (2019) found that perceived usefulness and trust are significant factors affecting the adoption of FinTech services. Similarly, a study by Raya & Kartawinata (2022) found that consumer behavior and product characteristics significantly influence the adoption of digital products.

In terms of cryptocurrencies, understanding consumer behavior is even more critical due to the unique characteristics of cryptocurrencies. Cryptocurrencies are digital or virtual currencies that

use cryptography for security and operate independently of a central bank. They offer several advantages such as lower transaction costs, increased privacy, and potential for high returns, but also pose risks such as volatility, lack of regulation, and potential for misuse (Nakamoto, 2008). A study by Scimone (2022) found that knowledge about cryptocurrencies significantly influences consumer behavior towards cryptocurrencies. Similarly, a study (Scimone, 2022) found that perceived usefulness, perceived ease of use, and perceived risk significantly influence the intention to use cryptocurrencies. Another study (Nassè, 2021) found that trust and perceived risk are significant factors influencing the adoption of cryptocurrencies.

In conclusion, understanding consumer behavior is crucial for the successful adoption of new technologies, including cryptocurrencies. It aids in identifying client needs and desires, successfully segmenting and targeting markets, increasing customer happiness, and developing long-term customer connections. In the case of cryptocurrencies, characteristics such as perceived usefulness, perceived simplicity of use, trust, perceived risk, and cryptocurrency expertise all have a substantial impact on customer behavior.

1.6. Technology Acceptance Models' Overview

Researchers, developers, marketers, and policymakers have all expressed an interest in the study of technology adoption (Sudipta Kumar Ghosh, 2022). It's critical to understand the elements that drive new technology adoption. Understanding the characteristics that motivate individuals and organizations to adopt or reject cryptocurrencies, for example, can yield significant insights (Taherdoost, 2022). The study of technology adoption is becoming increasingly important in today's society due to the rapid speed of technological progress. Cryptocurrencies, for example, are being developed and implemented at an unprecedented rate. Their success, however, is not certain. To reach their greatest potential, they must be adopted and utilized. Understanding the factors influencing technology adoption is so critical for technology developers, marketers, and legislators. Cryptocurrencies represent a significant technological advancement with the potential to change the financial system and beyond (Thakur et al., 2020). They provide a decentralized and digital alternative to traditional fiat currencies, with benefits including anonymity, security, and the capacity to conduct transactions without requiring a central authority. However, despite its potential benefits, cryptocurrency adoption has been slower and more uneven than some proponents predicted.

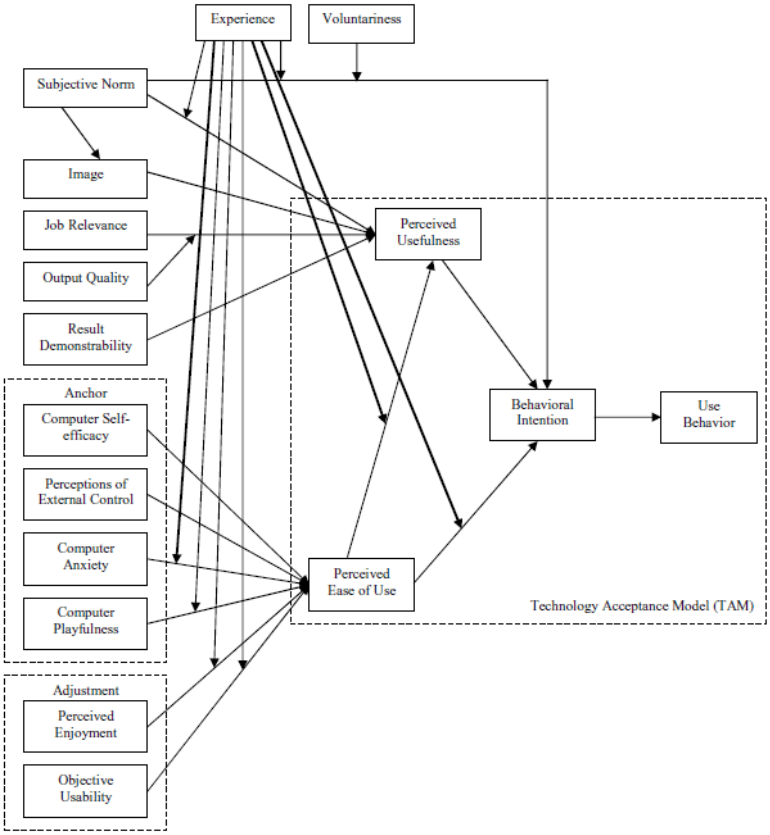
The research investigates the technological acceptance of cryptocurrency as an instrument of transaction and investment by people in Russia. Technology adoption theories can shed light on the factors that influence the adoption of cryptocurrencies. They can help us understand why some individuals and organizations choose to adopt cryptocurrencies while others do not. They can also help us identify the barriers to cryptocurrency adoption and suggest strategies to overcome these barriers. Several technology adoption theories could be applied to the study of cryptocurrency adoption. These include the Technology Acceptance Model (TAM), the Theory of Planned Behaviour (TPB), and the Diffusion of Innovations Theory (DOI), Unified Theory of Acceptance and Use of Technology (UTAUT). Each of these theories offers a different perspective on the factors that influence technology adoption, and each could provide valuable insights into the adoption of cryptocurrencies.

Technology Acceptance Model (TAM)

One of the most well-known frameworks for the study of technology adoption is the Technology Acceptance Model (TAM), which was developed by Davis in 1989. This paradigm contends that perceived usability and usefulness are the main determinants of a technology's adoption. An individual's perception of how using a particular technology will improve their work performance is referred to as perceived usefulness. The user's perception of the amount of effort needed to use the technology, on the other hand, is related to perceived ease of use (Davis, 1989).

Perceived usefulness refers to the idea that using technology will result in better performance, whereas perceived ease of use is the idea that using the technology won't cause any frustration (Scherer et al., 2019). The TAM provides an invaluable framework for comprehending user adoption in the context of cryptocurrency. The idea states that the main elements affecting a technology's appeal are perceived usefulness and perceived usability (Sagheer et al., 2022). Koksalmis et al. (2022), for instance, used the TAM to examine the factors influencing the adoption of Bitcoin. When it comes to cryptocurrencies, people are more likely to adopt them if they believe they are useful and simple to use. The research also showed that people's intentions to use Bitcoin were highly influenced by their perceptions of its usefulness, ease of use, and risk.

Figure 1: Technology acceptance model 3



Source 4: Venkatesh and Bala, 2008

Theory of Planned Behavior (TPB)

The Theory of Planned Behavior, introduced by Ajzen (1991), is a well-known framework in research on the adoption of new technologies. The TPB suggests that individual behavior is driven by behavioral intentions, which are influenced by attitudes toward the behavior, subjective norms, and perceived behavioral control. Applying the TPB to cryptocurrency adoption, a study by Norisnita et al. (2022) found that attitudes toward the use of cryptocurrency, subjective norms, and perceived behavior control significantly influence the intention to use cryptocurrency. Additionally, the research by Anser et al. (2020) used TPB and perceived risk to understand the factors influencing Bitcoin adoption. The research explored the role of social media usage and individuals' intentions toward adopting Bitcoin which provide to have a significant positive effect on the intention to use.

Diffusion of Innovations Theory (DOI)

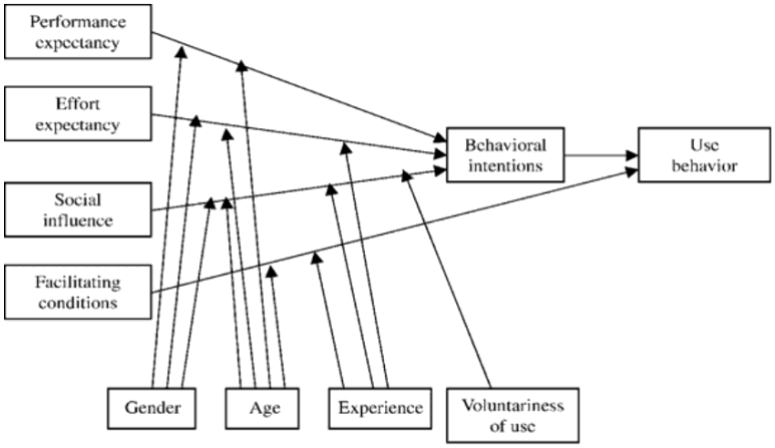
The DOI, proposed by Rogers (1983), provides a perspective on the broader social and cultural factors that influence technology adoption. It suggests that the characteristics of an innovation, such as its relative advantage, compatibility, complexity, trialability, and observability, can influence its rate of adoption (James, 2012). This could help us understand the broader social and cultural dynamics that influence cryptocurrency adoption. In case cryptocurrencies are perceived to have a clear advantage over traditional currencies (relative advantage), are compatible with existing values and practices (compatibility), are not overly complex to understand and use (complexity), can be experimented with on a limited basis (trialability), and the results of using them are visible to others (observability), they are more likely to be adopted (Foka Nzaha et al., 2022).

Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT) model suggests that the acceptance and adoption of technology are primarily influenced by Behavioral Intention (BI), which is shaped by four key factors: Social Influence (SI), Effort Expectancy (EE), and Facilitating Conditions (FC). The model further proposes that variables such as gender, age, experience, and voluntariness of usage strengthen the relationship between these factors and BI. Effort Expectancy, which relates to the perceived ease of use of a technology, consists of five components and is influenced by gender, age, and experience. Notably, Venkatesh et al. (2003) found that this factor had a stronger impact on younger women. Facilitating Conditions, on the other hand, represents the presence of organizational and technical support for implementing the system and encompass three factors (Mohammad, 2014). Social Influence directly affects users' intentions and behaviors toward technology, reflecting their perception of its societal value (Davis, 1989). This construct comprises three variables that can be influenced by other contextual factors. The UTAUT model, originally formulated by Venkatesh, was designed to elucidate the intention to utilize an information system and its subsequent usage. Although primarily considered a model for organizations, numerous studies have shown that the UTAUT model can explain factors affecting technology adoption 20-30% more effectively than the Technology Acceptance Model (TAM) (Venkatesh et al., 2003; Al-Smadi, 2012).

The UTAUT model has been employed in various studies aiming to explain the adoption of emerging fintech technologies such as E-commerce, crowdfunding, payment authentication, mobile banking, and mobile payment (Alalwan et al., 2017; Dwivedi et al., 2020).

Figure 2: Unified theory of acceptance and use of technology model



Source 5: Venkatesh et al., 2003

CHAPTER 2. DEVELOPMENT OF THE RESEARCH MODEL

The following chapter presents a research model that investigates the adoption of cryptocurrency in a rapidly changing economic landscape in Russia. The model is grounded in the Unified Theory of Acceptance and Use of Technology (UTAUT), a widely recognized theoretical framework in technology adoption studies. This model will be adapted to suit the specific context of cryptocurrency adoption, taking into account the unique characteristics of this technology and the specific socio-economic and regulatory environment in Russia. The development of this research model is a crucial step in our study. It provides a structured approach to our investigation, guiding the selection of variables to be studied, the formulation of hypotheses, and the design of the research methodology. By grounding our study in a well-established theoretical framework, we aim to ensure that our findings are robust and valid, and contribute to the existing body of knowledge on technology adoption.

The chapter will begin by discussing articles that describe the factors influencing the intention to use cryptocurrencies, as well as factors that moderate this relationship. Afterward, the chosen methodology, research model, and assessment technique will be described, followed by the development of a questionnaire and specified data collection. The purpose of this chapter is to provide a clear and comprehensive roadmap for our investigation, setting the stage for the empirical work that will follow.

2.1. Research Approach

The research's conceptual framework is based on the UTAUT model, which states that four fundamental components influence technology adoption and use: performance expectation, effort expectation, social influence, and facilitating conditions. Four moderators influence these constructs: gender, age, experience, and level of education. The UTAUT model offers a broad and adaptable framework for our research. It enables us to analyze a wide range of elements that may influence cryptocurrency adoption, ranging from individual perceptions and attitudes to social influences and contextual factors. Moreover, by including moderators in the model, we can explore how the effects of these factors may vary across different groups of users, providing a more nuanced understanding of cryptocurrency adoption. However, while the UTAUT model provides a solid starting point for our investigation, it needs to be adapted to the specific context of cryptocurrency adoption. Cryptocurrencies are not just another type of technology; they represent a new form of financial system that challenges traditional norms and practices. Therefore, our conceptual framework will incorporate additional factors that are particularly relevant to this context, such as trust in the cryptocurrency system, perceived risk, and regulatory considerations.

As the research intends to investigate the factors influencing cryptocurrency adoption in Russia, this paper aims to answer the following research questions:

RQ1: What factors are significant predictors of intention to adopt cryptocurrencies as a means of transaction in Russia?

RQ2: How do experience, age, and gender influence the intention to adopt cryptocurrencies as a means of payment?

RQ3: How policy-makers and organizations can use the identified factors to increase cryptocurrency adoption?

2.2. Research Model Constructs

Perceived Risk

When attempting to understand why a customer might opt to purchase a product or service, one important issue to examine is the level of perceived risk involved. This relates to the level of ambiguity as well as the potential negative repercussions of utilizing or purchasing the goods (San Martn and Camarero, 2009). According to Khan et al. (2021), two key characteristics are directly

related to perceived risk: customer behavioral intention and technical awareness. Consumers who are less familiar with technology and perceive less danger are more inclined to accept new technologies, according to the study. This, in turn, increases their motivation to use it (Chen and Aklikokou, 2020).

A recent study by Hileman and Rauchs (2017) found that in order to enhance the use of this technology, consumers must feel less danger when utilizing cryptocurrencies. Two major factors determine this risk perception. For starters, many consumers link cryptocurrencies with speculative fraud and scams, making them appear riskier than standard payment methods. This is due to the apparent complexity of the technology, as well as users' lack of knowledge in encryption and computer science. Second, consumers are unfamiliar with new payment methods, which might offer risks and induce anxiety when interacting with them. 2002 (Stocklmayer and Gilbert). The research carried out by Ayedh et al. (2020), states that Perceived risk is a crucial and deciding element influencing the intention of people to the adoption of cryptocurrency. Therefore, we can drive the conclusion that if the perceived risk can be decreased, individuals will be more willing to opt for this tool as a means of payment or a medium of exchange. Therefore, it is hypothesized that:

H1: Perceived Risk negatively influences the behavioral intention to use cryptocurrency

Social Influence

The Unified Theory of Acceptance and Use of Technology (UTAUT) model, developed by Venkatesh et al. (2003), aims to explain why people choose to use certain information systems and how their behavior towards those systems is influenced. In the UTAUT model, Social Influence refers to the extent to which individuals perceive that important people in their lives believe they should use the new system. It takes into account the opinions and influence of not only peers but also superiors, colleagues, and social networks. This factor is particularly relevant for people who value collective decision-making and for those who are not very familiar with the technology. Many researchers have explored the impact of Social Influence on the adoption of new technologies in the fintech field. For example, Moon and Hwang (2018) found that Social Influence positively encourages people to use crowdfunding platforms. Similarly, Kim et al. (2018) discovered that Social Influence has a positive effect on the intention to use a biometric payment authentication system. In the sphere of mobile banking, Farah et al. (2018) observed that Social Influence plays a significant role in shaping users' intentions. When it comes to cryptocurrency, the influence of Social Influence is less straightforward. Mendoza-Tello et al. (2018) found weak or no direct links between Social Influence and the intention

to use cryptocurrency for electronic payments. However, Schaupp and Festa (2018) conducted a study showing that Social Influence does have a significant impact on cryptocurrency adoption.

The research by Xia et al. (2023) discusses the influence of social norms and experience on the adoption of fintech services. The authors found that social norms significantly influence the intention to use fintech services. They also found that experience moderates the relationship between social norms and intention to use. A study on the perception of investing in cryptocurrency in India used the UTAUT model and considered social influence as one of the parameters (Shah, 2021). Another study on Islamic social financing and efficient zakat distribution in Malaysia integrated social influence into the UTAUT2 model (Ahmad & Yahaya, 2022). Similarly, a study on customer behavior in using fintech as a business media also included social influence as a significant determinant of technological behavior (Mulyana et al., 2020).

A study on the intention to use cryptocurrency from a social and religious perspective used the Theory of Planned Behavior (TPB) and found that subjective norms, which are closely related to social influence, have a positive effect on attitudes toward cryptocurrency (Koeswandana & Sugino, 2023). Another study on perceived trust and confidence for cryptocurrency adoption found that individuals' public perceptions of trust and confidence significantly contribute to cryptocurrency adoption (Liew et al., 2022). Overall, we can develop the following hypothesis to test:

H2: Social Influence positively influences the behavioral intention to use cryptocurrency.

This hypothesis suggests that individuals who perceive a higher level of social influence (i.e., they believe that important others think they should use cryptocurrency) are more likely to have a higher intention to use cryptocurrency. By testing this hypothesis, you can gain insights into the role of social influence in the adoption of cryptocurrency in Russia and contribute to the development of the theoretical framework and research proposition for your study.

Facilitating Conditions

In the Unified Theory of Acceptance and Use of Technology (UTAUT) methodology, facilitating conditions refer to the extent to which individuals assume there is organizational and technical support and aid in place to enable the use of a certain technology (Zhou et al., 2019). These conditions include aspects such as the accessibility of resources, assistance, and infrastructure or equipment that make it simpler for consumers to embrace and use the technology. Facilitating

conditions can have a substantial impact on the uptake of fintech and cryptocurrency. They can include components such as technical help, education, and the availability of the resources needed for adoption to be effective (Tomi et al., 2022). It has been discovered in the field of fintech and cryptocurrency that facilitating conditions have a positive and considerable effect on the desire to use digital payment methods and e-money (Rahmiati & Susanto, 2021). Based on this research, we can assume that conducive conditions influence the propensity to adopt cryptocurrencies in Russia. Individuals who believe there is adequate technical support, possibilities for training, and available resources for Bitcoin adoption are more inclined to have positive intentions to use cryptocurrencies.

While there are limited studies specifically focusing on facilitating conditions in the context of fintech and cryptocurrency adoption, some research has incorporated this construct in their technology adoption frameworks. For example, a study on the adoption of mobile fintech services in Indonesia used the UTAUT model and included facilitating conditions as one of the factors influencing user acceptance. Another study on the adoption of eWallets integrated facilitating conditions into the UTAUT model and found that they significantly influenced the intention to use eWallets (Yohanes et al., 2020). A study on the use of electronic money found that facilitating conditions, along with effort expectations and social influences, had a major impact on behavioral intentions (Wulandari et al., 2016).

H3: Facilitating conditions positively influences the behavioral intention to use cryptocurrency

This hypothesis suggests that individuals who perceive a higher level of facilitating conditions (i.e., they believe that there is adequate support and infrastructure for using cryptocurrency) are more likely to have a higher intention to use cryptocurrency. Thus, by testing a proposed hypothesis, you can gain insights into the role of facilitating conditions in the adoption of cryptocurrency in Russia and contribute to the development of the theoretical framework and research proposition for your study.

Effort Expectancy

The Unified Theory of Acceptance and Use of Technology (UTAUT) model introduced the idea of effort expectancy, which is the perceived ease of use or the degree to which an individual believes that utilizing a certain system would be effortless (Venkatesh et al., 2003). This idea is a critical factor in user acceptance and usage behavior.

In the world of financial technology and cryptocurrencies, effort expectation is crucial in determining a user's view of the ease of use of a cryptocurrency platform or technology. The user interface design, the complexity of the transaction process, the availability of customer service, and the clarity of instructions and information offered, for example, all contribute to effort expectation. Consider a user-friendly cryptocurrency exchange platform with a basic, straightforward UI. The user does not need to spend much effort to comprehend how to use the site, which makes the transaction procedure simple and uncomplicated. This low effort expectation can influence a user's willingness to embrace and use the platform (Kim et al., 2018). A platform with a difficult interface, poor instructions, and a lack of customer service, on the other hand, can increase the effort expectation. The platform may appear difficult to use to the user, discouraging them from adopting the technology (Li et al., 2017). Overall, we can develop the following hypothesis to test:

H4: Effort expectancy positively influences the behavioral intention to use cryptocurrency.

This hypothesis suggests that if potential users perceive that using cryptocurrency is easy and does not require much effort, they are more likely to adopt and use it. This could be particularly relevant in the Russian context, where the adoption of cryptocurrency might be influenced by factors such as the complexity of the technology, the level of digital literacy, and the availability of user-friendly platforms and tools.

Effect Of Financial Restrictions

The Effect of Financial Restrictions is a unique construct introduced in our model to encapsulate the distinct circumstances surrounding the adoption of cryptocurrency in Russia. This construct pertains to the influence of external financial constraints, such as sanctions, restrictions on international transactions, and limitations on access to traditional banking services, on the intention to use cryptocurrency.

The inclusion of this construct in our model is driven by the specific socio-economic and regulatory context in Russia. In 2022, Russia faced a series of international sanctions that significantly impacted its financial sector (Sindreu, 2022). These prohibitions have limited the ability of Russian banks to access international capital markets, leading to increased financial isolation (Reinsch & Palazzi, 2022). Furthermore, Russia has been barred from making debt payments using foreign

currency held in US banks and major Russian banks have been removed from the international financial messaging system SWIFT (BBC, 2023). These financial restrictions have created a challenging environment for the Russian economy, but they have also opened up new opportunities for alternative financial systems, such as cryptocurrencies (Redbord, 2023).

Cryptocurrencies offer a potential solution to circumvent these financial restrictions, enabling transactions that are not subject to government control or international financial restrictions imposed on citizens and organizations. As such, the Effect of Financial Restrictions is hypothesized to be a significant factor influencing the intention to use cryptocurrency in Russia. This construct assesses the likelihood of individuals intending to use cryptocurrency due to the financial restrictions that have been imposed (Europe. eu, 2023). The importance of this construct lies in its potential to explain the unique dynamics of cryptocurrency adoption in Russia. While the UTAUT model provides a general framework for understanding technology adoption, it does not account for the specific effects of financial restrictions, which are a key feature of the Russian context (Auer & Claessens, 2018). By including this construct in our model, we aim to capture these effects and provide a more accurate and nuanced understanding of cryptocurrency adoption in Russia. Therefore, the hypothesis is formulated as follows:

H5: Effect of financial restrictions positively influences the behavioral intention to use cryptocurrency

This hypothesis suggests that as the severity of financial restrictions increases, so does the intention to use cryptocurrency. This relationship will be empirically tested in the subsequent stages of this research. The next sections will continue with the description of the remaining constructs in the model and the development of corresponding hypotheses.

Table 4:The constructs incorporated in the theoretical model

Variable	Definition	Theort of technology adoption	Type
Facilitating Conditions	The degree to which a person believes that the existing technical infrastructure can support the use of technology	Unified Theory of Acceptance and Use of Technology (UTAUT)	Scale
Social Influence	The degree to which an individual perceives that important others believe he or she should use the new system	Unified Theory of Acceptance and Use of Technology (UTAUT)	Scale
Perceived Risk	The degreed to which a person believe that ussage of a certain technology is associated with risks.	Unified Theory of Acceptance and Use of Technology (UTAUT)	Scale
Behavioural Intention to Use	The extent to which an individual is inclined to adopt and engage with cryptocurrencies in various aspects of their lives.	Unified Theory of Acceptance and Use of Technology (UTAUT) / Technology Adoption Model 3 (TAM)	Scale
Effort Expectancy	The extent to which an individual perceives the ease of use and the required effort to learn and interact with cryptocurrencies.	Unified Theory of Acceptance and Use of Technology (UTAUT)	Scale
Effect of Financial Restrictions	The extent to which an individual's attitude and behavior towards cryptocurrency adoption is influenced by the 2022 financial restrictions.	—	Scale

Source 6: Developed by author

Other Factors To Consider

Perceived Ease of Use (PEU) is a word that expresses the user's perception of the ease with which new technology can be adopted. In the context of cryptocurrencies, it symbolizes the widely held belief that incorporating such cutting-edge technology can improve ordinary living. PEU, as recently noted in research (Kumail Abbas Rizvi et al., 2018), is a critical component of the Technology Acceptance Model (TAM). It has a direct impact on both behavioral intention (BI) and technological awareness (TA). In the past, numerous researchers have used the concept of perceived ease of use to assess users' behavioral intentions. According to (Abrahão et al., 2016; Shankar & Datta, 2018), there is a substantial positive relationship between intention to use and perceived ease of use for mobile payments. It is also considered that PEO of mobile payments positively influences BI to use cryptocurrency related tools, such as mobile and web platforms (Sagheer et al., 2022). In light of this, several studies state that in order to increase engagement in cryptocurrencies, it’s required to lower the technological entry barrier, simplifying the interaction with the technology (Nadeem et al., 2021). Additionally, several studies have found a clear connection between how easy it is to use a cryptocurrency and a person's willingness to invest in it. The findings are based on the theory of planned behavior (Johar et al., 2021). This can be further supported by the recent report by Financial Conduct Authority report (2021), according to which nearly half (45%) of young investors

in the 18-29 age range began their investment journey with cryptocurrencies as their first investment choice.

Another factor that influences the behavioral intention of people to accept or reject an innovative technology is Perceived Usefulness (PU). According to research by Daud et al. (2018), it refers to whether or not a person can perform better using new technologies. In other words, it refers to whether or not a person can perform better using new technologies. In other words, it level to which a person believes that utilizing a certain technology or system would be advantageous and helpful to them, and could enhance their overall performance in a given activity, as noted by Venkatesh (2000). According to recent research, due to increased awareness and perceived usefulness of technology, users are more likely to intend to adopt an application (Robey, 1979). They believe that embracing new technology will enhance their skills and abilities, which in turn influences their intention to adopt new technology. According to a recent study by Granic and Marangunic (2019), PU is the quality of a product or service that is linked with consumer awareness of technology and their intention to use it. Over the past decade, studies have shown that perceived usefulness can have a positive effect on customers' likelihood to make a purchase (Ng & Kwok, 2017). With regards to studies specifically on cryptocurrency, considers that PU is a critical factor affecting the intention to use virtual currencies as a payment method (Ferreira et al., 2018).

2.3.Construct Operationalization

In this research, constructs were operationalized through a well-designed online survey that followed consumer behavior research practices. The survey was distributed through snowball sampling, where respondents were encouraged to share it with their colleagues, friends, and relatives. Similarly, a proposed model was evaluated through an online survey, which aligns with the practices of consumer behavior research. Survey-based data collection is also commonly employed in adoption-related research. The survey was divided into six distinct parts, each serving a specific purpose in the research.

The first part of the survey served as an introduction to the research and provided a brief overview of the topic of cryptocurrency. This section was designed to set the stage for the subsequent parts of the survey. It included a friendly introduction and a broad description of cryptocurrency, focusing on its transactional aspect. This approach was taken to ensure that all respondents had a common understanding of the term "cryptocurrency," without imposing any subjective opinions. The introduction also included examples of popular cryptocurrencies to provide respondents with a clearer

picture of the topic. This part of the survey was crucial in setting the tone for the rest of the survey and ensuring that respondents were adequately informed about the topic.

The survey's second section focused on two major constructs: perceived usefulness and perceived ease of use. These constructs are important to technology adoption models such as the UTAUT model. The degree to which an individual believes that utilizing a given system will increase their job performance is referred to as perceived usefulness. Perceived Ease of Use, on the other hand, is the degree to which an individual believes that using a given technology will require minimal effort. Each of these dimensions was investigated using five questions, each evaluated on a seven-point Likert scale, to provide a thorough knowledge of the participants' attitudes about these constructs.

The survey's third part focused on two constructs: Facilitating Conditions and Social Influence. The degree to which a person feels that an organizational and technological infrastructure exists to facilitate the use of the system is referred to as the Facilitating Conditions. The extent to which a person believes significant others believe they should use the new method, on the other hand, is referred to as social influence. Each of these constructs was investigated using four questions, each of which was graded on a seven-point Likert scale. These constructs are critical to the UTAUT model because they provide insight into external influences that may influence a participant's intention to utilize cryptocurrency.

The fourth section of the survey inquired about two concepts: perceived danger and effort expectation. The chance of losing money while pursuing a goal is referred to as Perceived Risk, but the degree of ease associated with using the system is referred to as Effort Expectancy. Each of these constructs was studied using five questions evaluated on a seven-point Likert scale. These structures give light on the perceived problems and efforts associated with cryptocurrency adoption.

The fifth part of the survey focused on two constructs: The effect of Financial Restrictions and Behavioural Intention to Use. The former refers to the financial constraints that may influence a respondent's intention to use cryptocurrency, while the latter refers to the respondent's overall behavioral intention toward using cryptocurrency. These constructs were examined through four and five items, respectively, on a seven-point Likert scale. These constructs provide insights into the financial and behavioral factors that may influence cryptocurrency adoption.

The sixth and last section of the survey asked respondents for demographic information. This information is critical for understanding the sample's characteristics and doing subgroup analyses.

Gender, age, amount of education, experience with cryptocurrencies, and level of financial literacy were among the demographic questions. This section's questions were all closed-ended, allowing for simple data analysis.

The study adopted the constructs of Perceived Usefulness and Perceived Ease of Use to better understand respondents' perspectives toward the utility and usability of cryptocurrencies. While these constructs were not included in the final model, they provided useful insights that may be used to guide future research and practice.

Finally, the operationalization of components in this study was accomplished by a thorough and well-structured online survey. The poll was aimed to collect information on a wide range of factors that may influence bitcoin adoption in Russia, offering useful insights that can improve future research and practice.

2.4. Data Collection

The aim of this master's thesis is to integrate previously conducted research with empirical research methods in order to test the stated research hypotheses on empirical evidence. The comparative analysis of existing studies on the adoption of electronic banking channels revealed that these studies can be categorized into qualitative, quantitative, and mixed methods of research (Hanafizadeh et al., 2014). As this study aims to estimate and assess the relationships among factors connected to the adoption or rejection of advanced technology, quantitative research methods are applied. These methods allow for the use of numerical data as a basis for statistical analysis and approval or rejection of statistical hypotheses. The two main types of design for such a study are survey and observation (Malhotra, et. al., 2012). Given that surveys are a more targeted and convenient way of obtaining quantitative information, this study utilizes an online survey tool due to its cost-effectiveness and better potential geographical reach (Malhotra, et al., 2012).

The study seeks to identify the factors influencing cryptocurrency adoption in Russia. To ensure a rigorous examination, the research methodology was designed with particular attention to sampling techniques and data collection procedures. In line with established research practices in technology acceptance studies employing SEM, we adopted a dual sampling approach that combines non-probability convenience sampling and quota sampling. This method ensured a gender distribution that accurately represents the population and caters to specific interests. The data collection took place over a 15-day period in April 2023.

To broaden our reach, we employed both traditional and innovative distribution methods, such as the use of Telegram to privately contact friends and family members. This approach facilitated a snowballing effect, attracting additional participants with an interest in luxury brands, thereby minimizing potential bias and misinterpretation. The collected data were subjected to rigorous scrutiny, including the identification of outliers, disengaged responses, and contentious statements. As all questions were mandatory, the dataset contained no missing data. Initially, the study utilized a 7-point Likert scale, which was later adjusted to a 5-point scale, as detailed in the Appendix. The gathered responses were evaluated for skewness and kurtosis values exceeding 5, which may contribute to complications. However, no such instances were detected. After data screening, a total of 293 cases qualified for further examination, encompassing demographic and measurement analyses.

The final dataset consisted of 136 female participants (46.4%) and 157 male participants (53.6%). Interestingly, 170 respondents (58%) reported no prior experience with cryptocurrencies, while the remaining participants had engaged with this technology in the past. For a comprehensive overview of the collected data, please refer to the table below.

Table 5: Descriptive statistics of the eligible sample.

Statistic	Item	Frequency	Percentage
Gender	Female	136	46,4
	Male	157	53,6
Age	18-25	129	44,0
	26-35	68	23,2
	36-45	65	22,2
	45-65	29	9,9
	>66	2	0,7
Education	High shool	99	33,8
	Bachelor's degree	65	22,2
	Master's degree	54	18,4
	Higher specialist degree	61	20,8
	Postgraduate degree	14	4,8
Experience with cryptocurrency	Use regularly (more than once a week)	16	5,5
	Use infrequently (from once a month to once a week)	34	11,6
	Use rarely (less than once a month)	64	21,8
	I have never used cryptocurrency	170	58,0
	I have cryptocurrency, but never used it	9	3,1
Percieved financial literacy (1-lowest, 7-highest)	1	3	1,0
	2	8	2,7
	3	39	13,3
	4	84	28,7
	5	113	38,6
	6	36	12,3
	7	10	3,4

Source 7: Developed by author

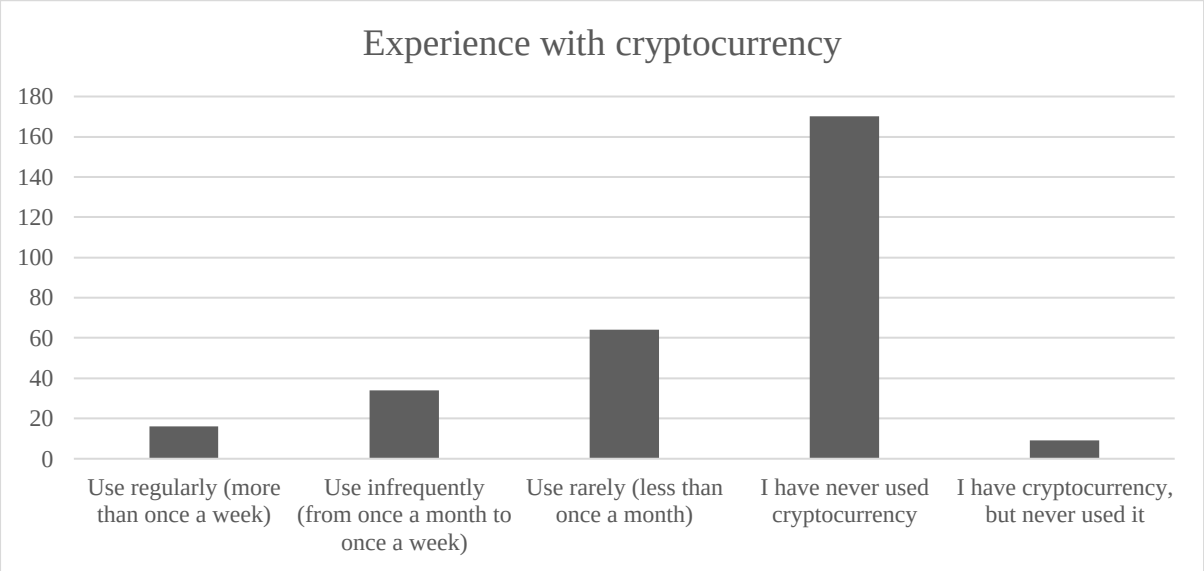
Study introduces a metric to assess experience with cryptocurrency, allowing for multi-group analysis and the evaluation of the influence of prior experience on behavioral intentions to use cryptocurrency. This metric also facilitates an understanding of potential influences on perceived risk, as individuals with prior experience are more likely to possess a heightened awareness of the risks associated with using a particular technology. Furthermore, it may reveal insights into the impact on facilitating conditions, as increased familiarity with the technology could lead to a more comprehensive understanding of the subject.

To capture the varied nature of experience with cryptocurrency, we designed an abstract scale ranging from "I have never used cryptocurrency" to "Use regularly (more than once a week)" This approach mitigates potential bias, as it focuses on the frequency of use over time, such as weekly or monthly occurrences. Additionally, we included a category for "I have cryptocurrency, but never used it" to encompass the full range of possible experiences, as some respondents might own cryptocurrency without actively utilizing it for transactions.

By incorporating this metric into the research, we can gain a deeper understanding of the role of experience in shaping cryptocurrency adoption behaviors. Moreover, this approach allows us to identify potential moderating factors and examine the relationships between experience, perceived risk, and facilitating conditions. This information is invaluable for practitioners and policymakers seeking to promote cryptocurrency adoption and foster a conducive environment for this emerging technology in Russia.

In future research, it may be beneficial to explore additional dimensions of experience, such as the specific types of cryptocurrencies used, the frequency of transactions, and the reasons for using or not using cryptocurrency. These insights could further enrich our understanding of the factors influencing cryptocurrency adoption and offer more targeted recommendations for fostering its growth in various contexts.

Figure 3:: Experience with cryptocurrency distribution



Source 8: Developed by author.

Research Procedure

The research focuses on exploring the relationships between various factors, including perceived risk, effort expectancy, social influence, facilitating conditions, and the impact of financial restrictions on Russian consumers in 2022. To achieve this goal, the study employs a quantitative approach, starting with a comprehensive review and analysis of existing academic literature. The findings of the literature review inform the development of a research model for hypothesis testing using Structural Equation Modeling (SEM), as explained in Chapter 1 of the paper.

Previous research in the field of consumer behavior has extensively employed structural equation modeling (SEM) as an analytical method. SEM is known for its reliability in measuring abstract concepts and accuracy in observing relationships and effects between factors (Lowry & Gaskin, 2014). In our analysis, we utilized covariance-based SEM, which leverages observed covariance matrices and estimated parameters to replicate and predict covariances. This method is considered superior to PLS-SEM in terms of precision and accuracy. To establish the credibility of our data, we performed both discriminant validity and convergent validity analyses. These analytical procedures began with Exploratory Factor Analysis (EFA), particularly as new scales were being developed for this study. Subsequently, we conducted Confirmatory Factor Analysis (CFA) to assess the reliability of our measurement model. The final stage involved hypothesis testing in SEM, which analyzed the structural model. SEM is a preferred methodology for explanatory research focused on established phenomena. According to Kline (2005), covariance-based SEM requires a minimum of 100 observations for small samples and 200 or more for large samples. Our study comprised a final sample of 293 cases, which meets even the most stringent criterion for SEM analysis. This robust sample allowed us to produce interpretable and relevant analyses of both the measurement and structural models, further enhancing the validity and reliability of our findings.

As our research progresses, we will continue to refine our methodology and analytical techniques to ensure the highest level of rigor and professionalism in our investigation. Our ultimate goal is to contribute valuable insights and knowledge to the growing body of literature on cryptocurrency adoption, with a particular focus on the Russian context.

Summary

The proposed model tests the relationships between social influence (SI), perceived risk (PR), facilitating conditions (FC), effort expectancy (EE), and the effect of financial restrictions (EFR) on the endogenous variable of behavioral intention to use (BI). This model was developed based on an extensive literature review and recent industry developments.

Primary research methodology involves the utilization of confirmatory and explanatory quantitative analysis through SEM. To ensure the robustness of our findings, covariance-based SEM was employed for hypothesis testing and theory confirmation. In accordance with Kline's (1998) recommendations, the analysis starts with Exploratory Factor Analysis (EFA) to verify the constructs under examination. Following this, Confirmatory Factor Analysis (CFA) was performed and based

on its results the model has be alternated to satisfy the model fit criteria for data validity and reliability.

By adhering to these analytical procedures, the research aims to effectively evaluate the relationships between the key variables and uncover insights into the factors affecting cryptocurrency adoption in Russia. Additionally, this approach allows us to better understand the nuances of these relationships, as well as the potential moderating and mediating effects of other variables.

Figure 4: Research questionnaire

Variable	Definition	Question	Reference
Facilitating Conditions	The degree to which a person believes that the existing technical infrastructure can support the use of technology	The tools and resources needed to use cryptocurrencies in Russia are readily available. I believe I have access to the necessary resources in order to be able to use cryptocurrency. The infrastructure in Russia is well-suited to support cryptocurrency transactions. Cryptocurrency are compatible with the devices or technology I already use.	Venkatesh, Morris, Davis, & Davis, 2003
Social Influence	The degree to which an individual perceives that important others believe he or she should use the new system	I often hear positive feedback about cryptocurrencies from people I know. People that are close to me consider that I should use cryptoccurency. Cryptocurrency usage is widespread among my friends and colleagues. cryptocurrency.	Venkatesh, Morris, Davis, & Davis, 2003
Perceived Risk	The degreed to which a person believe that ussage of a certain technology is associated with risks.	I am concerned about the price volatility of cryptocurrencies. I worry about the security of my digital assets. I am concerned about the legal implications of using cryptocurrencies in Russia. I fear losing my investments in cryptocurrencies due to market fluctuations. I am worried about potential scams and fraud in the cryptocurrency market.	Venkatesh, Morris, Davis, & Davis, 2003
Behavioural Intention to Use	The extent to which an individual is inclined to adopt and engage with cryptocurrencies in various aspects of their lives.	I am likely to use cryptocurrencies for everyday transactions in the future I am likely to invest in cryptocurrencies in the coming years It is likely that I will use cryptocurrency for different purposes I am likely to recommend cryptocurrencies to friends and family. I am open to exploring new cryptocurrencies and digital assets.	Venkatesh, Morris, Davis, & Davis, 2003
Effort Expectancy	The extent to which an individual perceives the ease of use and the required effort to learn and interact with cryptocurrencies.	I believe that learning how to use cryptocurrencies is not difficult. I think the effort required to use cryptocurrencies is reasonable compared to the benefits they provide I am willing to invest time and energy into learning about cryptocurrencies and their applications. It is easy to remember how cryptocurrencies function. I believe that interaction with cryptocurrencies would be user-friendly and effortless	Venkatesh, Morris, Davis, & Davis, 2003
Effect of Financial Restrictions	The extent to which an individual's attitude and behavior towards cryptocurrency adoption is influenced by the 2022 financial restrictions.	The 2022 financial restrictions have increased my interest in using cryptocurrencies as an alternative to traditional financial service The 2022 financial restrictions have significantly influenced the overall adoption of cryptocurrencies in Russia Considering the 2022 financial restrictions, I believe cryptocurrencies play a crucial role in ensuring financial freedom and independence. I am likely to use cryptocurrencies to circumvent or mitigate the effects of the 2022 financial restrictions on my personal financial budget.	Developed by author
Perceived Ease of Use	The degree to which aperson believes that using a particular system would enhance his or her job performance	I believe that I can understand how to use cryptocurrency I often become confused when I think about the use of cryptocurrency. It's easy to find information about using cryptocurrencies in Russia I believe that cryptocurrencies are easy to use for transactions I feel confident in my ability to effectively use cryptocurrencies.	Davis, F. D., 1989
Perceived Usefulness	Subjective perception of users where they believe that using certain technologies can improve the performance of their work	Cryptocurrencies are useful for managing my finances. Cryptocurrencies can enhance my financial security. Using the cryptoccurency for payments is time-saving and helps me to complete tasks more quickly. Cryptocurrencies are useful for international transactions Cryptocurrencies offer better investment opportunities than traditional assets.	Davis, F. D., 1989

Source 9: Developed by the author

CHAPTER 3. MODEL ANALYSIS

This chapter provides a thorough analysis of the statistical methods used to study cryptocurrency adoption in Russia. The analysis includes a reliability check of the data, exploratory and confirmatory factor analyses, testing of hypotheses, and multi-group analysis. The research examines the normality of the data, ensures the reliability of the measurements, and identifies and rules out any collinearity within the data set. The exploratory factor analysis verifies item loadings on the factors expected based on previous studies and literature, and the confirmatory factor analysis tests the measurement model constructed, ensuring that the factors are indeed distinct. The structural model tests hypotheses and evaluates the model's explanatory power regarding cryptocurrency adoption. Lastly, additional tests were conducted to identify potential differences among groups based on various criteria such as cryptocurrency experience, age, and gender.

3.1 EFA, CFA & Reliability Analysis

Reliability Analysis

We assessed the normality of our data by examining its skewness and kurtosis, with a skewness value of less than 2.0 and kurtosis not exceeding 7.0 being considered normal for a sample size greater than 100, according to Kim (2013). Our sample's skewness values fell within the required range of -1.118 to 0.521, while the kurtosis values were between -1.285 and 1.054, both of which are acceptable. As a result, we can conclude that our data is symmetric.

Table 6: Reliability analysis table

Construct	Item	Mean	Std. Deviation	Skewness	Kurtosis
Facilitating conditions	FC1	2,75	0,99	0,407	-0,976
	FC2	3,05	1,09	0,059	-1,285
	FC3	3,13	1,10	-0,045	-1,092
	FC4	3,63	0,95	-0,679	-0,299
Social Influence	SI1	3,21	1,16	-0,460	-0,852
	SI2	3,29	0,99	-0,564	-0,274
	SI3	2,29	1,01	0,521	-0,352
	SI4	2,62	1,21	0,249	-1,170
Perceived Risk	PR1	3,54	1,07	-0,825	0,239
	PR2	3,71	1,05	-0,974	0,701
	PR3	3,42	1,16	-0,591	-0,524
	PR4	3,83	1,04	-1,118	1,054
	PR5	3,77	1,10	-0,847	0,060
Effort Expectancy	EE1	3,13	1,14	-0,009	-1,209
	EE2	3,47	1,00	-0,898	0,158
	EE3	3,17	1,18	-0,333	-1,090
	EE4	3,20	1,07	-0,045	-1,108
	EE5	2,83	0,99	0,180	-0,768
Effect of Financial Restrictions	EFR5	3,21	1,27	-0,154	-1,138
	EFR2	3,21	1,21	-0,188	-1,098
	EFR3	3,54	1,02	-0,661	-0,198
	EFR4	3,72	0,99	-0,666	0,120
Behavioural Intention to Use	BI1	3,50	1,07	-0,618	-0,237
	BI2	3,12	1,19	-0,194	-1,014
	BI3	3,40	1,10	-0,727	-0,252
	BI4	3,02	1,21	-0,004	-0,815
	BI5	3,72	1,11	-1,005	0,310

Source 10: Developed by author

Cronbach's alpha values for all factors were above 0.7, indicating reliable item measurements. As shown in the table below, no significant correlations were observed between factors, and collinearity was not detected, with all variance inflation factor measures falling below 3.

Figure 5:Cronbach alpha coefficients for constructs

Construct	Number of items	Cronbach's Alpha Coefficients
Facilitating conditions	4	.844
Social Influence	4	.799
Perceived Risk	5	.819
Effort Expectancy	5	.803
Effect of Financial Restrictions	4	.857
Behavioural Intention to Use	5	.926

Source 11: Developed by author

Exploratory Factor Analysis

Analysis began with an exploratory factor analysis (EFA) to verify item loadings on anticipated factors and to assess correlation reliability and validity of the data, along with correlation and collinearity metrics. Constructs formulation was done based on the existing studies and literature, with some measurement items undergoing modifications in rephrasing and translation into the Russian language. In particular, the questions related to the effect of financial restrictions (EFR) are based on peer research and partially by the author, given the absence of similar studies in contemporary research.

Our factor analysis employed the maximum likelihood (ML) extraction method, which is also used in confirmatory factor analysis (CFA) and SEM for estimating model fit and regression weights. An orthogonal Varimax rotation was applied as the rotation technique. The rotated factor matrix revealed that some factors, such as SI2 and EFR1, did not demonstrate significant loadings on any factors. These factors were removed during the EFA analysis. Items EE1 and BI5 exhibited cross-loadings or factor loadings below 0.4, and therefore, were removed during the CFA stage.

The final set of items yielded a KMO of 0.821. Communalities for variables exceeded 0.5 and Bartlett's Test of Sphericity was confirmed to be significant. The final item selection maintained 20 items, with no factors comprising fewer than two.

Confirmatory Factor Analysis

After the model modifications made during the Exploratory factor analysis (EFA) stage, the convergent validity of all constructs was assessed. Confirmatory factor analysis was conducted with maximum likelihood in order to test the measurement model containing 20 indicators of 6 constructs.

Composite Factor Reliability (CR) was calculated to establish convergent validity, with all factors demonstrating values exceeding the minimum requirement of 0.7.

Figure 6: Constructs' Scale Reliability, Convergent Validity, and Composite Reliability.

Construct	Item	Unstd	S.E.	t-value	P	Factor loading	CR	AVE
SI	SI1	1				0,723	.79	.51
	SI4	0,822	0,089	9,205	***	0,623		
	SI3	0,931	0,095	9,766	***	0,663		
	SI5	1,013	0,093	10,941	***	0,753		
FC	FC1	1				0,626	.85	.59
	FC2	1,52	0,133	11,4	***	0,876		
	FC3	1,45	0,128	11,315	***	0,859		
	FC4	1,164	0,119	9,744	***	0,689		
EFR	EFR5	1				0,763	.86	.60
	EFR4	0,894	0,065	13,657	***	0,759		
	EFR3	0,772	0,057	13,572	***	0,788		
	EFR2	0,859	0,061	14,187	***	0,798		
PR	PR1	1				0,523	.81	.50
	PR2	1,238	0,13	9,496	***	0,701		
	PR3	1,143	0,15	7,647	***	0,629		
	PR4	1,613	0,194	8,323	***	0,907		
	PR5	1,127	0,149	7,554	***	0,616		
EE	EE4	1				0,499	.78	.50
	EE2	1,402	0,179	7,842	***	0,714		
	EE3	1,976	0,236	8,36	***	0,877		
	EE5	1,3	0,145	8,966	***	0,632		
BI	BI1	1				0,868	.93	.76
	BI2	1,03	0,051	20,289	***	0,873		
	BI3	1,054	0,048	21,952		0,91		
	BI4	1,024	0,056	18,431	***	0,829		

Source 12: Developed by author

Furthermore, the Average Variance Extracted (AVE) exceeded Hair's (2017) recommended threshold of 0.5. The discriminant validity was evaluated by comparing the square root of AVE to the values of inter-construct correlation. As the square root AVE values exceeded the correlation values, all of the retained components demonstrated discriminant validity. This confirmation of discriminant validity ensures that the components supposed to be unconnected are, in fact, distinct and measure distinct concepts.

Figure 7: Discriminant Validity

Construct	CR	AVE	SI	FC	EFR	PR	EE	BI
SI	.75	.60	**.714**					
FC	.853	.66	.398	**.812**				
EFR	.86	.67	.499	.498	**.819**			
PR	.784	.56	.122	.022	.034	**.748**		
EE	.67	.51	.491	.276	.539	.177	**.632**	
BI	.913	.78	.601	.450	.674	.212	.622	**.883**

Source 13: Developed by author

To test the measurement model containing 20 indicators of 6 constructs, we conducted confirmatory factor analysis using maximum likelihood. We evaluated the overall model fit using multiple indices, such as the goodness of fit index (GFI), the comparative fit index (CFI) and incremental fit index (IFI), adjusted goodness of fit index (AGFI)f. Additionally, we need to review chi-square to degrees of freedom (df) ratio, standardized root mean square residual (SRMR) root mean square error of approximation (RMSEA). In general, a satisfactory model fit is indicated by an AGFI of .85 or higher, a GFI of .90 or higher, a CFI value of .95 or higher, an IFI value of 0.9 or higher, SRMR value of 0.08 or lower, an RMSEA value of .06 or lower. After confirming the results of fit indices, it can be concluded that developed model demonstrates satisfactory construct validity and reliability

Figure 8: Structural model fit

Fit Indices	Suggested	Actual	Result	Refference
CMIN/DF	<3	1.900	Satisfied	Chau & Hu, 2001
GFI	>0.9	0.902	Satisfied	Chau & Hu, 2001; Hair et al., 2010
AGFI	>0.85	0.856	Satisfied	Chau & Hu, 2001
SRMR	>0.08	0.062	Satisfied	Chau & Hu, 2001
RMSEA	<0.6	0.056	Satisfied	Hair et al., 2010; Hu & Bentler, 1999
CFI	>0.95	0.95	Satisfied	Jui-Sheng, 2013
IFI	>0.9	0.94	Satisfied	Benamati & Lederer, 2008

Source 14: Developed by author

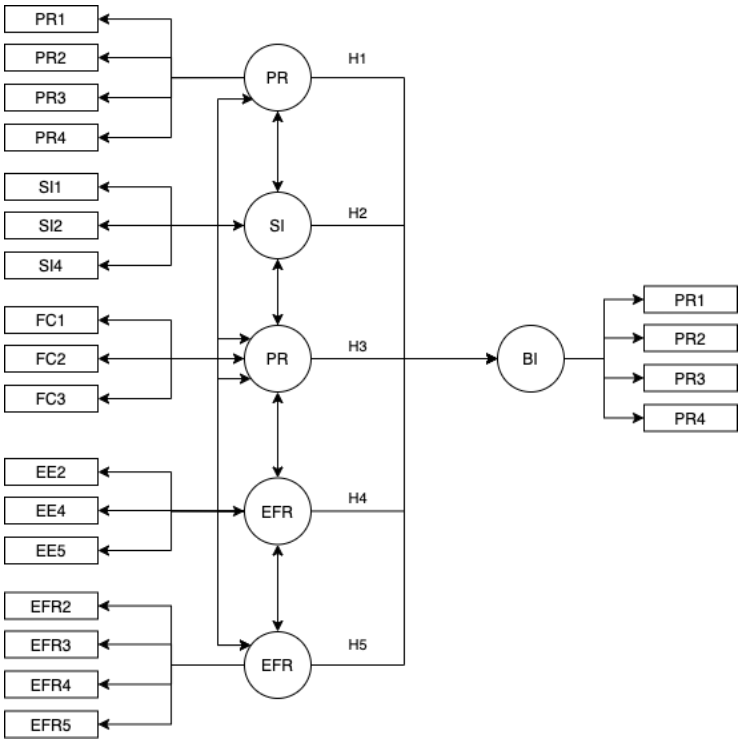
3.2 Structural Model

Upon completing the confirmatory factor analysis (CFA) and verifying that the model meets the necessary criteria for goodness-of-fit and reliability, the hypotheses were tested and the explanatory power of the model was evaluated. The Squared Multiple Correlations (R2) of the

constructs were used to determine the explanatory value of the measurements, resulting in the suggested model accounting for 68% of the variance in the behavioral intention to use cryptocurrency.

The model's estimations are robust, as the R2 values exceed the threshold of 50% recommended by Hair et al. (2010). This outcome demonstrates the model's ability to offer valuable insights into the factors influencing cryptocurrency adoption in Russia, providing valuable information for stakeholders and policymakers in the field.

Figure 9: Structural equation model



Source 15: Developed by author

The results of hypothesis testing from the structural model are summarized in the table below. Out of the six hypotheses proposed, five were accepted.

According to H1, perceived risk has an insignificant negative effect on the intention to use, with a low p-value of 0.929 and a beta coefficient (β) of -0.006. H2 suggests that social influence has a positive effect on the intention to use, with a significance level of 0.11 and a beta coefficient of 0.215. However, H3 is insignificant, with a p-value of 0.209, suggesting that the effect of facilitating conditions on the intention to use is not significant. H4 indicates that the effect of financial restrictions

has a positive impact on the intention to use, with a p-value lower than 0.001 and a β of 0.353. Finally, H5 suggests that effort expectancy has a positive effect on the intention to use, with a p-value lower than 0.001 and an estimate of 0.790.

Figure 10: Hypothesis overview

Hypothesis	p-value	C.R.	β	Result
H1: *Percieved risk negatively affects intention to use*	.929	-0.089	- .006	Rejected
H2: *Social influence positively affects intention to use*	.011	2.531	.215	Accepted
H3: *Facilitating conditions positively affects intention to use*	.209	1.258	.088	Rejected
H4: *Effect of financial restrictions positively affects intention to use*	***	4.974	.353	Accepted
H5: *Effort expectancy positively affects intention to use*	***	5.186	.790	Accepted
*** - p-value < 0.001, ** - p-value < 0.01, * - p-value < 0.05				

Source 16: Developed by author

Multi-group Analysis

In an effort to delve further into our data, we carried out additional tests to understand the multi-group moderation effects. We were interested in uncovering any unexpected patterns within our dataset. We executed four tests in total, with three yielding successful outcomes. However, one attempt did not go as planned, a circumstance we detail in the limitations section of our research. We sought to identify potential differences among groups and to do so, we divided the categorical variables and controls based on their original values. We also separated our respondents into groups according to their experience with cryptocurrency. If a participant had used or was currently using cryptocurrency, they were allocated to one group. Conversely, those who had not used cryptocurrency were assigned to a different group. As a result, we computed new binary variables for each subset of the participant pool. Out of the four models we investigated, three satisfactorily met the criteria for structural equation modeling. This allowed us to identify differences in the relationships between factors and enabled us to interpret our results. All four models underwent a consistency test using the CMIN/DF comparison method, which resulted in a p-value exceeding 0.05.

Table 7: Multi-group analysis by experience

Path	p-value (No Exp.)	Estimate (No Exp.)	p-value (Exprienced)	Estimate (Exprienced)	Result
H1: *Percieved risk negatively affects intention to use*	0,382	-0,066	0,049	0,226	Different
H2: *Social influence positively affects intention to use*	0,432	0,072	0,002	0,682	Different
H3: *Facilitating conditions positively affects intention to use*	0,721	0,026	0,242	0,14	Same
H4: *Effect of financial restrictions positively affects intention to use*	***	0,472	0,524	0,079	Different
H5: *Effort expectancy positively affects intention to use*	***	0,679	0,046	1,187	Same
*** - p-value < 0.001, ** - p-value < 0.01, * - p-value < 0.05					

Source 17: Developed by author

In terms of experience with cryptocurrency, the impact of perceived risk on the intention to use cryptocurrency is statistically significant for individuals who have prior experience with cryptocurrency. However, for those without such experience, this effect is not statistically significant. Furthermore, social influence has a significant influence on the behavioral intention to use cryptocurrency for those with prior experience, but this is not the case for those without experience. Interestingly, the effect of financial restriction exhibits a significant influence on the intention to use cryptocurrency for those without prior experience, while its impact is not significant for those with experience.

In investigating the influence of social factors on the intention to use cryptocurrency in different age groups, it was found that such influence is significant for the younger demographic but not for the older demographic. In order to facilitate the research, the age variable was transformed into a binary format, assuming the feasibility and logic of such transformation despite the ten-year gap in-between the groups. This transformation was implemented during the exploratory phase to gain additional insights. However, it is important to exercise caution when interpreting the results of this analysis. While all other variables maintain a consistent level of significance across age groups, there are slight non-statistically significant differences in the p-values and estimates.

Regarding gender, the only variation observed in this multi-group analysis was related to social influence. For males, social influence has a significant impact on the intention to use cryptocurrency, whereas, for females, this effect is not significant. All other variables maintain a consistent level of significance across genders, despite minor differences in the p-values and estimates, which are not considered statistically significant.

3.3 Discussion

The integration of cryptocurrency into the financial system is becoming an increasingly important area of focus for governments, corporations, and consumers. This is due to the rapid evolution of the underlying technology, which is gradually permeating various aspects of societal life. An increasing number of shops, businesses, and individuals are beginning to adopt cryptocurrency as a method of transactions and payments, indicative of the swift progression of this industry. Combined with global political and economic instability, the demand for this technology is predicted to continue its upward trajectory.

In this study, a hybrid approach was employed, consisting of an adjusted UTAUT model and a consideration of earlier research on the behavioral intention to use, alongside studies on the impact of sanctions. Structural Equation Modelling (SEM) analysis was used for the estimation of the structural model and the examination of the hypotheses, most of which were corroborated. The model was modified to include four constructs from the UTAUT model and introduced an additional suggested construct. Due to inadequate or chaotic loadings in other factors, elements from the TAM model were excluded from the research. The theoretical and practical implications that were derived, as well as the limitations and prospects for further research, are elaborated upon later in this chapter.

Theoretical Implications

While numerous studies have been conducted on the adoption of cryptocurrencies in various developed countries, there remains a clear deficit in research focused on the Russian Federation. The purpose of this study is to address this research gap and provide a basis for future examinations. The outcomes of this study may prove useful for future research investigating the determinants that affect the intention to adopt digital currencies.

The current study introduces a modification of the Unified Theory of Acceptance and Use of Technology model (UTAUT), initially formulated by Venkatesh et al. (2003). This revised model integrates a new construct, the impact of financial restrictions (EFR), with the aim of exploring the elements contributing to cryptocurrency adoption in Russia in 2023, considering recent societal and economic changes. The adjusted model clarifies the role of behavioral intention in the adoption of cryptocurrency, using five UTAUT constructs along with EFR as explanatory factors. The empirical evidence from this study supports the strong predictive ability of the modified model, as has been previously discussed.

Within the structural equation model, two out of the four factors from the UTAUT model impact behavioral intention. The first is the expectancy of effort, identified as a major variable in the acceptance of financial technologies related to cryptocurrency in Russia. This factor positively impacts cryptocurrency adoption, aligning with previous research (Schaupp and Festa, 2018; Shahzad et al., 2018). It retains high significance and the maximum β value ($\beta = 0.79$) amongst all factors, demonstrating a strong direct effect on behavioral intention (BI). Various multi-group analyses confirm its continued significance, endorsing it as the dominant predictive variable in the model.

The second factor, social influence, also significantly forecasts usage intent. Despite some studies, like one on electronic payments with cryptocurrencies, considering the social norm's influence as non-significant, other research finds it significant (Schaupp and Festa, 2018; Shahzad et al., 2018). Our outcomes reinforce these findings, confirming the role of social influence in adoption. This factor exhibits a significant p-value and medium β (p-value = 0.011; β = 0.215), with a strong direct impact on BI. The significance of this factor varies with gender, experience, and age, with social influence proving more substantial for males. Due to the binary distinction of the age variable, its impact is less definitive.

Thirdly, the study analyzed the factor of facilitating conditions, anticipated to be a significant predictor of BI. While some studies validate its influence (Khan et al., 2017; Hussain et al., 2018; Arias-Oliva et al., 2019), others found no supporting evidence (Farah et al., 2018). Our results partially align with the academic view of it having an insignificant influence on BI, leading to the rejection of the hypothesis. This hypothesis speculated that facilitating conditions would be significant due to the unique conditions in Russia, as detailed in the hypothesis development section.

The model, fourthly, takes into account the effect of financial restrictions, a significant predictor of user intent. Despite many studies investigating this factor in the context of cryptocurrency adoption under different demographic, social, technological, and political conditions, it remains challenging to relate their findings to ours. Our research and Ronaghi (2022) found that financial restrictions or sanctions significantly predict adoption.

Lastly, the perceived risk factor has low significance across the whole valid sample. This appears to contradict the intuitive presumption of it being a vital predictor of behavioral intention to use cryptocurrency. The low variability of the explanatory variable (perceived risk) leads to its ineffectiveness in explaining the variability in the intent to use cryptocurrencies. Although risk plays a critical role in cryptocurrency acceptance, it doesn't influence the intention to use cryptocurrencies due to the common assumption that their usage is risky. This is supported by Shaikh et al. (2018), Farah et al. (2018), and Moon and Hwang (2018). However, when previous experience with cryptocurrencies is considered, the perceived risk factor gains significance. This novel approach of applying multi-group analysis to test the moderating effect of experience on model constructs provides a theoretical contribution to the research. The experience variable notably influences three out of the five observed factors, indicating a strong moderating effect on the model. Another construct that changes with experience is social influence, which holds no significance for inexperienced users,

but is significant for experienced ones. Lastly, the factor of financial restrictions effect is also influenced by the moderating effect of experience. This variable holds significance for inexperienced individuals, while the inverse is true for experienced ones.

Practical Implications

The study reveals several factors that substantially influence the propensity to utilize cryptocurrency in the Russian market. The imposition of financial restrictions in 2022 is a crucial determinant, indicating that the sanctions limiting fund transfers to and from the Russian Federation and its citizens have inadvertently boosted cryptocurrency's adoption as an alternative financial instrument. It's important to acknowledge, however, that fewer than half of our survey respondents have prior experience with cryptocurrency, indicating a mixed level of technological familiarity amongst the population.

Prior to these financial restrictions, the Russian Federation had initiated cryptocurrency regulation, as seen in the enactment of Federal Law 259 (259-FZ) in 2020 (Consultant.ru, 2022), which legalizes cryptocurrency within the country. This law endorses the use of cryptocurrency for non-domestic transactions and investments, implying acceptance of cryptocurrency as a viable supplement to conventional financial systems in the face of global restrictions. While the adoption of cryptocurrency could help navigate the current financial restrictions, it's imperative for the government to introduce comprehensive safeguards to ensure the stability and transparency of this emerging financial system. The introduction of cryptocurrency may pose numerous risks by expanding the unregulated space for money transfers, potentially compromising state oversight of financial transactions. Despite ongoing efforts to increase regulation, traditional financial systems still possess more effective monitoring mechanisms. Our study hence recommends to state and policy-makers the development of a robust transparent monitoring system for cryptocurrency transactions. This proposal should cover the mandatory disclosure of cryptocurrency assets, as well as gains and losses from investments. It should also establish a transparent regulatory framework for the cryptocurrency industry within the country. Although Rosfinmonitoring, as claimed by the head of the organization Yuri Chikhanchin (Reuters, 2022), already has a system in place for this purpose, it is advised that the state address the current limitations. These limitations include the narrow scope of blockchains and cryptocurrencies that are tracked, as well as the difficulty in cooperating with other states, which restricts the state's ability to monitor all possible addresses (Reuters, 2022). The aim of improving this system is to mitigate potential risks arising from the growing volume of

cryptocurrency transactions by Russian citizens and to respond to the increasing interest in alternative financial instruments in the market, which the government needs to oversee and control.

Furthermore, it's vital to explore the perceived risk factor and its implications for the state. Even though the risk factor was deemed insignificant for the entire sample, experience modulates this perception, making it more significant for those with previous cryptocurrency dealings. This indicates that individuals with any form of interaction with cryptocurrency associate its use with greater risks compared to those who lack such experience. Hence, if the state intends to further develop the regulatory framework for this industry, keeping the technology legal, it should evaluate the potential risks involved. Minimizing these risks could enhance the intent of experienced users to continue using cryptocurrency as a transactional medium, thereby making cryptocurrency a more competitive alternative to traditional financial tools and entities, such as Visa, Mastercard, and other payment processing organizations, which face challenges operating in Russia due to sanctions on major banks, hampering international money transfer. Our analysis shows that a significant proportion of respondents express concern over the potential legal repercussions of using cryptocurrency, indicating that the field is not yet regulated to a point where individuals feel secure using the technology. Furthermore, the risk of scams is a prominent issue for users. Although this can't be completely eradicated by the state, the government and policy-makers should create a register of companies authorized to deal with this digital currency to impose additional obligations to reduce potential risks resulting from market misbehavior. Despite the development of a “whitelist” of companies that operate with cryptocurrency in Russia, this does not serve as a register, and does not include all companies operating in the Russian market utilizing cryptocurrency. These are the primary implications for the state derived from our research.

This study offers valuable insights for businesses operating in the Russian market that engage with cryptocurrency or supply cryptocurrency-related products and services. Such businesses include cryptocurrency exchanges, which are centralized entities facilitating the purchase, storage, and exchange of cryptocurrency, and are significant market players due to the volume of transactions they process. Yet, centralized exchanges are not the only methods available for processing cryptocurrency transactions. Users can handle their transactions using decentralized exchanges, which bypass the need for KYC compliance with AML requirements. However, to initially acquire cryptocurrency, users must employ crypto payment providers, which exchange fiat currency for cryptocurrency and usually require KYC if they operate legally within a country. To access these exchanges, people employ cryptocurrency wallets.

As mentioned, perceived risk is a significant factor only for individuals with cryptocurrency experience. Therefore, it's advisable for companies in this sector to convey their risk mitigation strategies to users, which could be a decisive factor for numerous potential users. If a company can reassure experienced clients that interacting with their platform or product is risk-free, these clients are more likely to engage with the platform and become regular users. One of the risk elements was the fear of losing cryptocurrency due to market fluctuations. Hence, a company should highlight the option of maintaining cryptocurrency in stablecoins, which are less vulnerable to market fluctuations. This could also present an opportunity for businesses in Russia to create a Russian stablecoin, pegged to the Russian ruble. As of 2023, there are no currencies functioning as a Russian stable coin, despite the existence of stablecoins in USD, EUR, and GBP. This represents a potential market niche, as there seems to be a demand for currencies that are not subject to market fluctuations among Russian consumers.

The model identified social influence as another significant predictor, meaning people tend to value the opinions of relatives or close acquaintances before engaging with cryptocurrency. Companies should utilize this factor by encouraging their clients to recommend their specific product to people they know. This approach could increase a company's likelihood of attracting new clients, as product feedback plays an important role in consumer decision-making. Hence, businesses in this field are advised to implement a referral program geared towards recommending their product to other users. Additionally, a significant number of users indicated that social media influences their attitudes toward cryptocurrency. Thus, companies should capitalize on this communication channel to address potential concerns of prospective clients.

Effort expectancy is another significant factor according to the model, implying a statistically significant positive correlation between these two variables. From this, we infer that the easier a person perceives cryptocurrency to be, the higher their likelihood of intending to use it. A considerable proportion of individuals indicated a willingness to invest time in learning how the technology works and believe that it will be easy to remember how it functions. However, our survey reveals that people don't view cryptocurrency as an easy-to-use technology. Therefore, if companies want to stimulate cryptocurrency use via their products, they should emphasize ease of use. Despite its inherent complexity, technology, and market products are evolving rapidly, offering services and products that don't require significant knowledge of cryptocurrency. Therefore, companies should tap into users' willingness to learn about cryptocurrencies and promote the simplicity of using this technology. Alternatively, a company could invest more in improving its product's UX, making it

resemble traditional financial tools like mobile banking. This approach could lower the barrier for users to try their products or services, increasing the likelihood of acquiring new users.

The increased interest in cryptocurrencies due to financial restrictions could also present an opportunity for companies. As revealed by multi-group analysis, this factor is primarily significant for inexperienced individuals. We can infer that imposed sanctions don't stimulate experienced users as strongly since they had already chosen this type of transaction before. Therefore, companies can communicate the value of cryptocurrency to novices by highlighting its potential to help them overcome financial restrictions and serve as an alternative to traditional financial tools they previously used, such as bank transfers. This factor could be significant in attracting new users to try company services, such as buying cryptocurrencies, storing them, processing cryptocurrency transactions, and depositing cryptocurrencies into international banks and accounts. However, it should be noted that highlighting such transactions could pose an increased risk if a company operates outside Russia, as it might become the target of international sanctions that could jeopardize their operations. Consequently, it's recommended for companies to carefully assess potential operational risks, despite the potential for attracting additional clients and adding value to the firm.

This report outlines the implications for the state and organizations in Russia and provides practical suggestions based on the model's results. The research does not address implications at the individual level, as that was beyond the initial scope of the study.

Limitations and Further Research

The theoretical contributions of this study primarily revolve around the exploration of factors influencing the adoption of cryptocurrency, with a specific focus on the Russian market. The majority of the hypotheses were accepted, illuminating the relationships between perceived risk, social influence, effort expectancy, facilitating conditions, and behavioral intention. However, given the complexity and novelty of cryptocurrency as a technology, further investigations are warranted. Despite the model's satisfactory fit, two factors were found to be insignificant, suggesting the need for further exploration in future research. Specifically, the factor of perceived risk was found to have low significance as predictor despite its relevance to the adoption. The nature of this is explained in the model part, and in academic literature. For the factors of facilitating conditions, future research could delve into the reasons behind this discrepancy, potentially exploring differences between the environment in Russia and other countries where this factor has been found to be significant. Similarly, the factor of facilitating conditions was also found to be insignificant, aligning with the

results of other peer-reviewed papers. Despite the initial assumption that facilitating conditions in Russia for the usage of cryptocurrency are high, it appears that this factor is not a strong predictor for intention to use and may not need to be included in future research.

The demographic coverage of the survey, spanning ages 18 to 65, is another area for potential improvement. While the survey included representatives from each age group, the distribution was skewed towards the 18-25 age group. Future research should aim to develop a cross-generational study with more evenly represented age groups.

The survey methodology, employing snowball techniques and the Yandex Toloka survey service, may have resulted in a geographically homogenous sample, which could be considered a limitation. Future research could aim to conduct studies across different geographical areas, as this could affect variables such as experience with cryptocurrency, a significant moderator in the model. A cross-cultural analysis could also be beneficial to further investigate the impact of geographical location on perception and intention to use.

The study is grounded in the UTAUT (Unified Theory of Acceptance and Use of Technology) model, which serves as the fundamental theoretical framework. However, future investigations could consider incorporating elements from other prominent technology adoption models, such as TAM (Technology Acceptance Model) or TRB (Theory of Reasoned Behavior). Examining the impact of "Attitude" and "Perceived Trust" on the Intention to use cryptocurrency could yield supplementary insights.

Furthermore, it is important to note that while the study explores the influence of various factors on the intention to use cryptocurrency, it does not encompass the aspect of Actual Use. The exclusion of the Actual Use factor in the model is attributed to the current limited adoption and awareness of cryptocurrency technology. To address this limitation, it is recommended that future research incorporates the Actual Use factor within the model and considers the use of Behavioral intention to use as a mediating variable.

Summary

The chapter begins with a reliability analysis, confirming the normality and reliability of the data. Exploratory factor analysis is then conducted to verify item loadings and assess the reliability and validity of the data. Following this, a confirmatory factor analysis is performed to test the

measurement model and establish convergent and discriminant validity. The structural model is then evaluated, testing the hypotheses, and assessing the explanatory power of the model. The results indicate that the model accounts for a significant proportion of the variance in the intention to use cryptocurrency. The chapter then moves on to a multi-group analysis, which uncovers interesting patterns within the data. The analysis reveals significant differences in the relationships between factors for different groups, providing valuable insights into the factors influencing cryptocurrency adoption in Russia. The chapter concludes with a discussion of the findings and their implications for the adoption of cryptocurrency in Russia, providing valuable information for stakeholders and policymakers in the field.

The study employed a modified UTAUT model to analyze factors contributing to cryptocurrency use in Russia, notably expectancy of effort and social influence, the latter more significant among males. Perceived risk and facilitating conditions didn't significantly affect intention to use cryptocurrencies, except when considering users' previous crypto experience. Financial restrictions also played a significant role in adoption, with a unique analysis method examining the moderating effect of experience. The research provides practical implications for cryptocurrency adoption in Russia. It advises the government to implement safeguards for stability and transparency due to increased interest in cryptocurrencies, especially given the 2022 financial restrictions. It also recommends a robust crypto transaction monitoring system. For businesses like cryptocurrency exchanges, the focus should be on risk mitigation strategies and ease of use, utilizing user willingness to learn about cryptocurrencies to overcome financial limitations.

CONCLUSION

This master thesis fills a significant gap in the academic understanding of cryptocurrency adoption in Russia, where it's being used as a transactional tool rather than an investment. The uniqueness of this study lies in its holistic approach, addressing the socio-cultural, behavioral, and economic dimensions influencing cryptocurrency adoption rather than limiting the scope to purely technical or economic aspects. By applying the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) to this context—a novel application of these models—the study offers fresh insight into the factors influencing cryptocurrency adoption. The findings are relevant not only for advancing academic understanding, but also for providing policymakers, financial institutions, and businesses with valuable insights as they navigate the evolving landscape of digital currencies in Russia. Thus, this study contributes to both the scientific discourse and practical applications within the domain of cryptocurrency.

The central goal of our research was to elucidate the factors influencing the adoption of cryptocurrencies in Russia—a pursuit deemed of great importance in light of the growing global interest in cryptocurrencies. The study successfully met this goal, answering the research questions established at the onset. This was achieved through a multi-faceted approach: we first conducted an extensive literature review to identify key themes and gaps in existing research. Subsequently, we developed a theoretical framework and formulated hypotheses, which were then rigorously tested in a real-world context using primary data collected through surveys among Russian citizens. This data was further interpreted using AMOS SPSS, leveraging the structural equation modeling and multi-group analysis. The data was successfully tested for reliability and validity. The result was a comprehensive understanding of both the general and demographic-specific factors influencing cryptocurrency adoption in Russia. Despite initial challenges, such as the anticipated difficulty of reaching cryptocurrency users due to relatively low adoption levels in Russia, our study effectively navigated these hurdles to accomplish its research objectives, thus significantly contributing to the growing body of knowledge on this crucial topic.

The research aimed to clarify the factors influencing cryptocurrency adoption in Russia, employing a comprehensive methodology with a strong emphasis on the operationalization of constructs and data collection. A well-structured online survey was utilized to operationalize constructs, divided into six sections, each investigating specific constructs such as perceived usefulness, perceived ease of use, facilitating conditions, social influence, perceived risk, effort

expectancy, effect of financial restrictions, and behavioral intention to use. Each construct was examined through items rated on a seven-point Likert scale, with the final section collecting demographic information for a more thorough analysis. The survey also introduced a new metric to assess experience with cryptocurrency, contributing to a deeper understanding of cryptocurrency adoption behaviors. The data collection process entailed integrating prior research with empirical research methods to test research hypotheses based on empirical evidence. The methodology adopted a quantitative approach using an online survey, given its efficiency, cost-effectiveness, and wide geographical reach. The sampling strategy combined non-probability convenience sampling and quota sampling to ensure an accurate gender distribution and cater to specific interests. Traditional and innovative distribution methods were used, leading to a broad participant reach. The responses were then evaluated and subjected to rigorous scrutiny to maintain the quality of the dataset. In the analysis phase, the research employed Structural Equation Modeling (SEM) for hypothesis testing, beginning with Exploratory Factor Analysis (EFA) and followed by Confirmatory Factor Analysis (CFA) to assess the reliability of the measurement model. The model tested relationships between several key factors affecting cryptocurrency adoption, ensuring the robustness and reliability of the findings.

This thesis addressed a critical gap in existing literature, contributing valuable insight into cryptocurrency adoption in the Russian Federation using a modified Unified Theory of Acceptance and Use of Technology model (UTAUT). The findings reinforced the significant role of 'effort expectancy' and 'social influence' in driving behavioral intention towards cryptocurrency adoption. Additionally, this study highlighted the influence of 'financial restrictions', a construct previously underexplored in the context of the Russian Federation. Conversely, the perceived 'facilitating conditions' were found to have an insignificant influence on behavioural intention, despite expectations to the contrary. The study also presented an intriguing counterpoint to the common belief about perceived risk as a significant deterrent, suggesting that its effect is mitigated by the broader acceptance of cryptocurrencies as inherently risky. Notably, this study added depth to the academic discourse through its novel application of multi-group analysis to observe the moderating effect of experience on model constructs. It demonstrated that experience significantly influenced 'effort expectancy', 'social influence', and 'financial restrictions'. The impact of 'social influence' was particularly notable, where its effect shifted from insignificant to significant with the user's increasing experience with cryptocurrencies. Similarly, 'financial restrictions' held more significance for inexperienced users, whereas the opposite was true for experienced ones. This research, therefore, contributes an enriched perspective to the understanding of cryptocurrency adoption behavior,

especially in the unique socio-economic context of the Russian Federation, and presents promising avenues for further investigation.

This research delivers substantial managerial implications, pinpointing areas of strategic focus for businesses operating within the cryptocurrency sector in the Russian market. Central to these recommendations is addressing the heightened perceived risk among experienced cryptocurrency users, making risk mitigation an essential narrative in any communication strategy. By emphasizing the protective measures in place, businesses can alleviate these concerns and improve user engagement. Additionally, companies could consider introducing Russian stablecoins, providing a safe, less volatile cryptocurrency option for users wary of market fluctuations. Recognizing the impact of social influence, businesses should also look at leveraging referral programs and robust social media strategies to drive user adoption and engagement. The importance of ease-of-use, as suggested by the significant role of 'effort expectancy', mandates a user-centric approach in product development and service design. Companies should invest in enhancing user experience (UX), making their products as intuitive as possible and aligning them with familiar financial tools. They should also capitalize on users' willingness to learn about cryptocurrencies and emphasize the simplicity of using the technology. Lastly, given the influence of financial restrictions on adoption, particularly among novices, businesses could underscore cryptocurrency's potential to bypass such limitations. However, they should weigh this against potential risks, especially the possibility of becoming the target of international sanctions. In summary, this study provides a roadmap for businesses in the Russian cryptocurrency space to navigate the unique challenges and opportunities in this rapidly evolving market, driving user adoption and managing risk effectively.

The current research provides an in-depth exploration of the factors impacting the adoption of cryptocurrency in the Russian market, yet it opens up numerous avenues for future investigations. Of immediate interest are the factors of perceived risk and facilitating conditions, which were found insignificant contrary to expectations or other findings. Future studies should delve into the reasons behind these discrepancies and potentially examine the impact of different environments, notably comparing Russia to other countries. In addition, the demographic and geographical coverage of the study could be improved, with a focus on achieving a more balanced age distribution and increasing the diversity of the sample across different geographical regions. Consideration should also be given to extending the theoretical framework by incorporating elements from other models, such as TAM or TRB, to glean additional insights. Finally, the transition from intention to the actual use of cryptocurrency presents an exciting research frontier, with recommendations to include actual use in

future models and consider the role of behavioral intention as a potential mediating variable. Thus, this study not only advances our understanding of cryptocurrency adoption in the Russian context but also paves the way for future research to expand this knowledge in a variety of ways.

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GLOSSARY

Term	Definition
Altcoins	Cryptocurrencies that serve as alternatives to Bitcoin. They often present themselves as modified or improved versions of Bitcoin.
Binance	One of the largest and most popular cryptocurrency exchanges in the world.
Binance Smart Chain	A blockchain network built for running smart contract-based applications, with the aim to enable developers to build decentralized applications (DApps) and help users manage their digital assets cross-chain with low latency and large capacity.
Bitcoin	The first decentralized cryptocurrency, created in 2009. It operates on a peer-to-peer network and transactions take place between users directly, without an intermediary.
Blockchain	A decentralized and distributed digital ledger that records transactions across many computers in such a way that the registered transactions cannot be altered retroactively.
Central Bank Digital Currencies (CBDCs)	A digital form of central bank money that offers a digital alternative to cash. It is issued and regulated by a country's central bank.
Coin (cryptocurrency)	A type of cryptocurrency that operates independently of any other platform. Bitcoin and Ethereum are examples of coins.
Consensus mechanism	The method by which a blockchain network reaches consensus on the state of the ledger. Examples include Proof-of-Work (PoW), Proof-of-Stake (PoS), and Delegated Proof-of-Stake (DPoS).
Crypto	Short for cryptocurrency, it refers to digital or virtual currencies that use cryptography for security.
Cryptocurrencies	Digital or virtual currencies that use cryptography for security. They are decentralized and typically operate on technology called blockchain.
Cryptocurrency exchanges	Platforms where you can exchange one cryptocurrency for another cryptocurrency or for fiat currency.
Cryptocurrency mining	The process by which transactions are verified and added to the public ledger, known as the blockchain. It also refers to the process through which new cryptocurrency coins are created.
Cryptocurrency mixers	Services that mix potentially identifiable or 'tainted' cryptocurrency funds with others, to obscure the trail back to the original source.
Cryptography	The practice and study of techniques for secure communication in the presence of third parties called adversaries.
DeFi	Short for "Decentralized Finance," it's a term for a variety of financial applications in cryptocurrency or blockchain geared toward disrupting financial intermediaries.
Delegated Proof-of-Stake (DPoS)	A consensus algorithm developed to secure a blockchain by ensuring representation of transactions within it. DPoS is designed as an implementation of technology-based democracy, using voting and election process to protect blockchain from centralization and malicious usage.
DEXs	Decentralized exchanges. They are cryptocurrency exchanges which operate without a central authority.
Digital currencies	A type of currency available in digital form. It exhibits properties similar to physical currencies, but allows for instantaneous transactions and borderless transfer-of-ownership.

Double-spending	A potential flaw in a digital cash scheme in which the same single digital token can be spent more than once.
Electronic Money	Digital money that is stored on a computer or a server. It is a claim on the issuing institution, not a liability of a central bank.
Encryption algorithms	Procedures that convert plaintext into encrypted text, ensuring data security.
Ethereum	An open-source, blockchain-based platform that enables developers to build and deploy decentralized applications. It has its own cryptocurrency called Ether (ETH).
Ethereum 2.0	An upgrade to the Ethereum blockchain. The upgrade aims to enhance the speed, efficiency, and scalability of the Ethereum network by introducing features like Proof-of-Stake and shard chains.
Fiat currency	Type of currency that is issued by a government and is not backed by a physical commodity, like gold or silver. The value of fiat money is derived from the relationship between supply and demand and the stability of the issuing government, rather than the value of a commodity backing it.
Gaz (in Ethereum)	The internal pricing for running a transaction or contract. It's the mechanism that allows Ethereum to allocate resources on its network.
Hashing	A process that transforms input data of any size into a fixed-size output. It is a one-way function, meaning that the data cannot be retrieved from the hash.
Interoperable protocols	These are protocols that enable different blockchain networks to communicate and interact with each other.
KYC (Know Your Customer)	The process of a business verifying the identity of its clients. In the context of cryptocurrencies, it often refers to the identity verification processes used by exchanges and other services.
Layer-2	A secondary framework or protocol that is built on top of an existing blockchain network. The main goal of these protocols is to solve the transaction speed and scaling difficulties that are being faced by the major cryptocurrency networks.
Litecoin	A peer-to-peer cryptocurrency that was created by Charlie Lee in 2011. It was built on the same basic structure as Bitcoin, but with several key differences, such as a shorter block generation time and a different hashing algorithm.
Markets in Crypto-assets (MiCA)	A proposed regulation by the European Commission aimed at crypto-asset markets. It aims to provide legal clarity and certainty for crypto-asset issuers and providers.
Nodes	In the context of blockchain, nodes are computers that participate in the blockchain network. Each node maintains a copy of the entire blockchain and follows the protocol for validating new blocks. Nodes can be full nodes, which store the entire blockchain, or lightweight or SPV (Simple Payment Verification) nodes, which store only a subset of the blockchain.
Polygon (previously Matic Network)	Polygon is a protocol and a framework for building and connecting Ethereum-compatible blockchain networks. It can be considered as a Layer-2 solution for Ethereum, aiming to provide faster and cheaper transactions.
Prediction markets	These are speculative markets that are created for the purpose of making predictions. Assets that are traded in these markets are created based on the outcome of future events. In the context of cryptocurrencies, prediction markets can be built using smart contracts on Ethereum.

Public-private key pairs	In cryptography, a public key is a cryptographic key that can be utilized by any party to encrypt a message. Another party can then receive the message and using a key that is only known to that individual or group, decode the message. In the context of cryptocurrencies, public-private key pairs are used to create addresses where funds can be deposited, and to sign transactions that spend those funds.
Ripple	Ripple is both a digital payment protocol and a cryptocurrency (XRP). The Ripple network is designed to allow fast, low-cost international transactions.
SEC (Securities and Exchange Commission)	The U.S. Securities and Exchange Commission (SEC) is a large independent agency of the United States federal government that was created following the stock market crash in the 1920s to protect investors and the national banking system. In the context of cryptocurrencies, the SEC has been involved in regulating the ICO (Initial Coin Offering) market and determining whether certain cryptocurrencies should be classified as securities.
Smart contracts	Smart contracts are self-executing contracts with the terms of the agreement directly written into code. They automatically execute transactions if certain conditions are met. Ethereum is well-known for implementing smart contracts.
Solana	High-performance, open-source project implementing a new, high-speed, secure blockchain. It is designed for decentralized applications and crypto-currencies. Solana aims to improve blockchain scalability by using a combination of Proof of Stake (PoS) and Proof of History (PoH) consensus mechanisms.
Stablecoins	Stablecoins are a type of cryptocurrency that are designed to maintain a stable value, as opposed to the highly volatile nature of most cryptocurrencies. This is usually achieved by pegging the stablecoin to a reserve of assets, often a fiat currency like the US dollar.
Tokenized Assets	Tokenized assets are real-world assets that are represented by a digital token on the blockchain. These can be physical assets, like real estate or gold, or intangible assets like intellectual property.
Transactions per second (TPS)	TPS is a measure of how many transactions a blockchain network can process each second. It's a key metric when comparing the scalability of different blockchain protocols.
Unsecured Cryptocurrencies	These are cryptocurrencies that do not have any form of collateral backing them. Bitcoin and Ethereum are examples of unsecured cryptocurrencies, as their value is not pegged to any underlying asset.
WBTC (Wrapped Bitcoin)	Wrapped Bitcoin (WBTC) is an ERC-20 token on the Ethereum blockchain that represents Bitcoin. Each WBTC is backed 1:1 with Bitcoin.
Zero-knowledge proof protocols	These are cryptographic methods where one party (the prover) can prove to another party (the verifier) that they know a value x, without conveying any information apart from the fact that they know the value x.
Federal Law 259	This is a law related to digital financial assets and digital currency in the Russian Federation. It provides legal definitions and sets out rules for the creation, issuance, storage, and circulation of digital financial assets, as well as the rights and obligations of participants in digital financial transactions.
EVM (Ethereum Virtual Machine)	The EVM is the runtime environment for smart contracts in Ethereum. It is completely isolated from the main network, which makes it a perfect sandbox for running untrusted code.
Blockchain explorers	These are search engines for blockchain, allowing users to retrieve information about specific blocks, transactions, or addresses.

APPENDICIES

Appendix 1. Multi-group tables

Table 8: Multi-group analysis by gender

Path	p-value (Female)	Estimate (Female)	p-value (Male)	Estimate (Male)	Result
H1: *Percieved risk negatively affects intention to use*	0,834	-0,02	0,649	0,037	Same
H2: *Social influence positively affects intention to use*	0,589	0,097	0,02	0,258	Different
H3: *Facilitating conditions positively affects intention to use*	0,589	0,047	0,154	0,178	Same
H4: *Effect of financial restrictions positively affects intention to use*	***	1,248	***	0,36	Same
H5: *Effort expectancy positively affects intention to use*	***	0,392	0,008	0,447	Same

*** - p-value < 0.001, ** - p-value < 0.01, * - p-value < 0.05

Table 9: Multi-group analysis by age

Path	p-value (Young)	Estimate (Young)	p-value (Old)	Estimate (Old)	Result
H1: *Percieved risk negatively affects intention to use*	0,96	0,004	0,969	-0,004	Same
H2: *Social influence positively affects intention to use*	0,031	0,228	0,209	0,187	Different
H3: *Facilitating conditions positively affects intention to use*	0,376	0,067	0,534	0,122	Same
H4: *Effect of financial restrictions positively affects intention to use*	***	0,342	0,005	0,387	Same
H5: *Effort expectancy positively affects intention to use*	***	0,873	0,007	0,644	Same

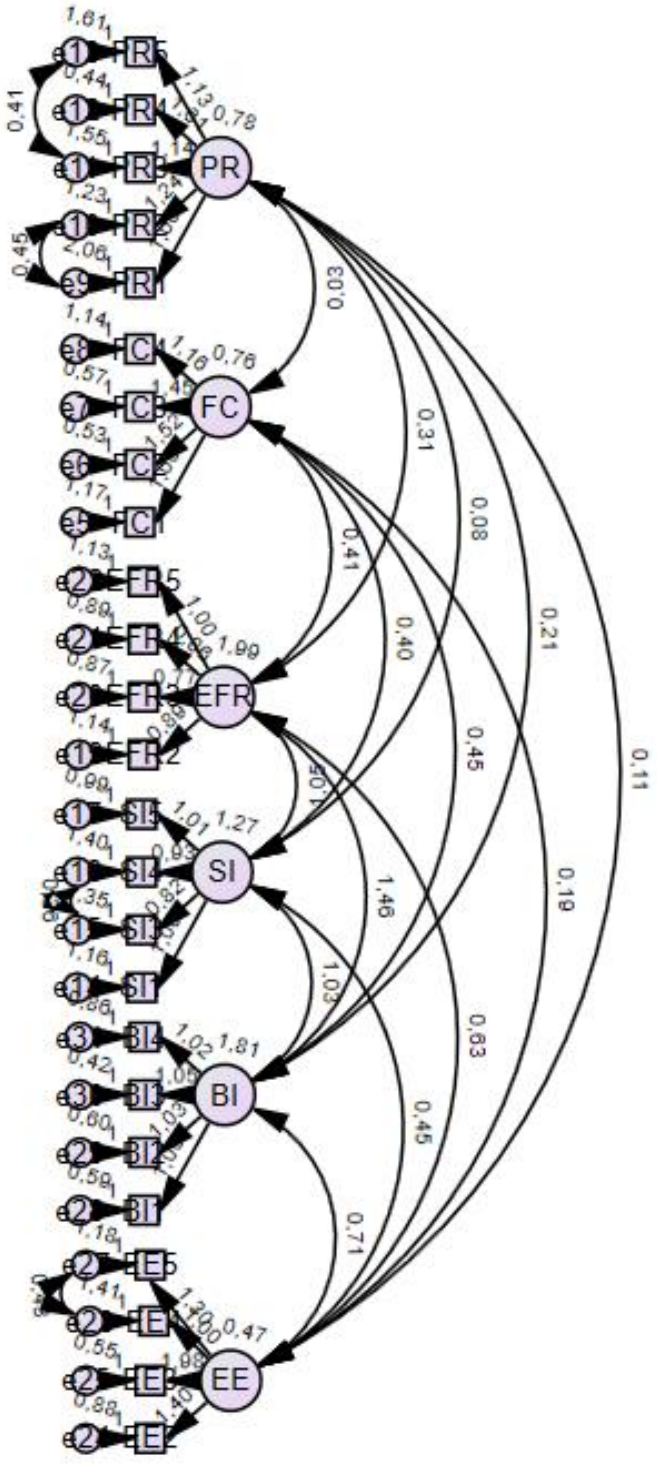
*** - p-value < 0.001, ** - p-value < 0.01, * - p-value < 0.05

Table 10: Multi-group analysis by level of education

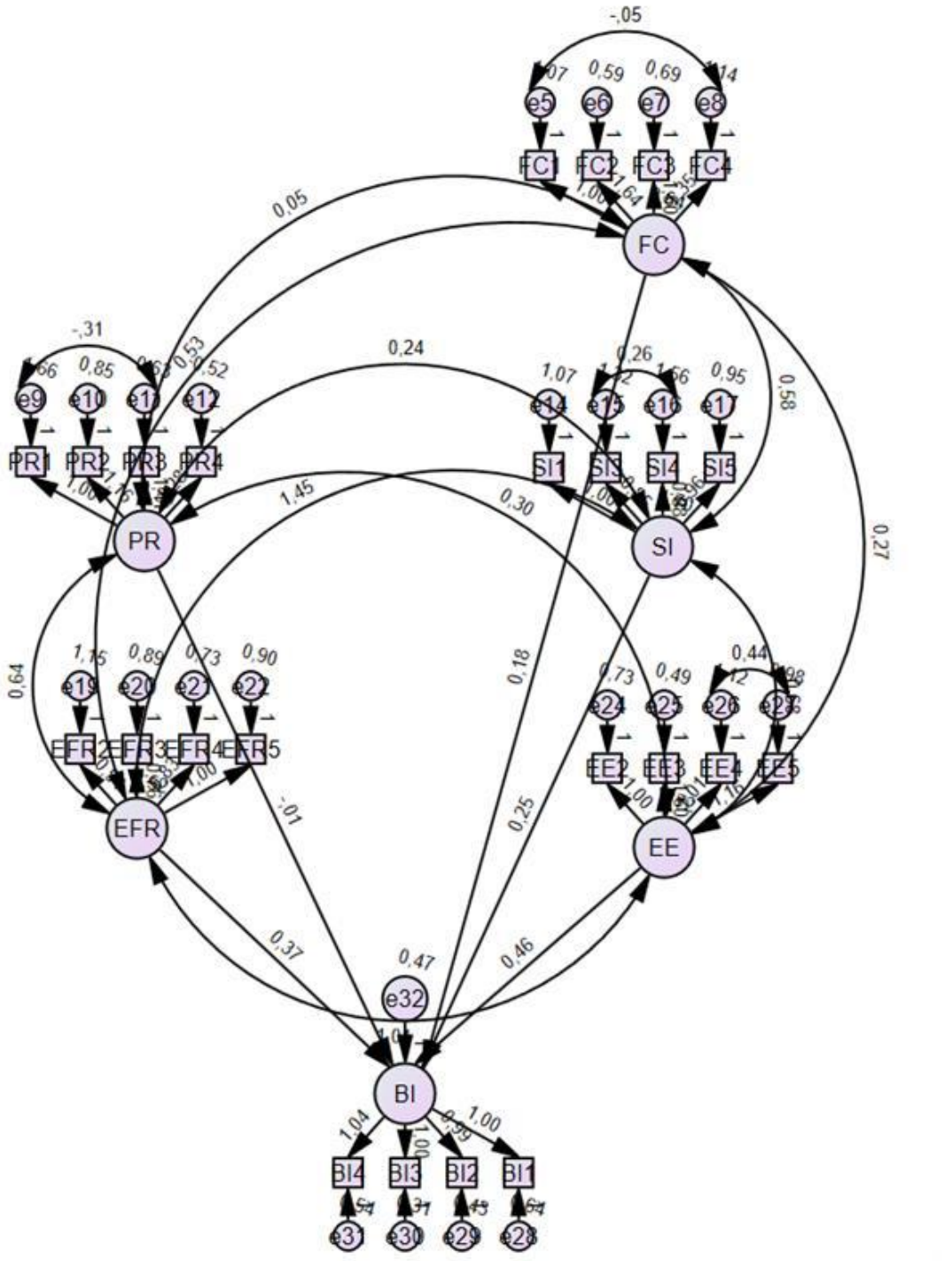
Path	p-value (Low Ed)	Estimate (Low Ed)	p-value (High Ed)	Estimate (High Ed)	Result
H1: *Percieved risk negatively affects intention to use*	0,877	-0,015	0,847	0,018	Same
H2: *Social influence positively affects intention to use*	0,072	0,185	0,082	0,279	Same
H3: *Facilitating conditions positively affects intention to use*	0,186	0,116	0,734	0,044	Same
H4: *Effect of financial restrictions positively affects intention to use*	***	0,389	0,006	0,322	Same
H5: *Effort expectancy positively affects intention to use*	***	0,61	***	1,098	Same

*** - p-value < 0.001, ** - p-value < 0.01, * - p-value < 0.05

Appendix 2. CFA AMOS Output



Appendix 3. SEM AMOS Output



Appendix 4. Translated questions used in the survey

Variable	Question	Interpreted questions in Russian language
Facilitating Conditions	The tools and resources needed to use cryptocurrencies in Russia are readily available.	Инструменты и ресурсы, необходимые для использования криптовалют в России, легко доступны
	I believe I have access to the necessary resources in order to be able to use cryptocurrency.	Я считаю, что у меня есть доступ к необходимым ресурсам, чтобы иметь возможность использовать криптовалюту
	The infrastructure in Russia is well-suited to support cryptocurrency transactions.	У меня есть возможность для использования криптовалют в России.
	Cryptocurrency are compatible with the devices or technology I already use.	Криптовалюта совместима с устройствами или технологиями, которые я уже использую
Social Influence	I often hear positive feedback about cryptocurrencies from people I know.	Я часто слышу положительный отзыв о криптовалютах от людей, которых знаю.
	People that are close to me consider that I should use cryptoccurency.	Близкие мне люди считают, что я способен использовать криптовалюту
	Cryptocurrency usage is widespread among my friends and colleagues.	Использование криптовалют распространено среди моих друзей и коллег
	cryptocurrency.	Люди с ценным для меня мнением хорошо относятся к криптовалюте
Perceived Risk	I am concerned about the price volatility of cryptocurrencies.	Меня беспокоит ценовая волатильность криптовалют.
	I worry about the security of my digital assets.	Я беспокоюсь о безопасности своих цифровых активов.
	Russia.	Меня беспокоят юридические последствия использования криптовалют в России
	I fear losing my investments in cryptocurrencies due to market fluctuations.	Я опасаюсь потери своих инвестиций в криптовалюты из-за колебаний рынка.
	I am worried about potential scams and fraud in the cryptocurrency market.	Меня беспокоят возможные мошенничества в криптовалютном рынке.
Behavioural Intention to Use	I am likely to use cryptocurrencies for everyday transactions in the future	В будущем я, вероятно, буду использовать криптовалюты для повседневных транзакций.
	I am likely to invest in cryptocurrencies in the coming years	В ближайшие годы я, вероятно, инвестирую в криптовалюты
	It is likely that I will use cryptocurrency for different purposes	Вполне вероятно, что я буду использовать криптовалюту для разных целей
	I am likely to recommend cryptocurrencies to friends and family.	Я, вероятно, буду рекомендовать криптовалюты друзьям и семье.
	I am open to exploring new cryptocurrencies and digital assets.	Я открыт к изучению новых криптовалют и цифровых активов.
Effort Expectancy	I believe that learning how to use cryptocurrencies is not difficult.	Я считаю, что обучение использованию криптовалют не является сложным.
	I think the effort required to use cryptocurrencies is reasonable compared to the benefits they provide	Я считаю, что затраты усилий на использование криптовалют разумны по сравнению с предоставляемыми ими преимуществами.
	I am willing to invest time and energy into learning about cryptocurrencies and their applications.	Я готов инвестировать время и энергию в изучение криптовалют и их применения.
	It is easy to remember how cryptocurrencies function.	Легко запомнить, как функционируют криптовалюты.
	I believe that interaction with cryptocurrencies would be user-friendly and effortless	Я считаю, что взаимодействие с криптовалютами будет удобным и понятным.
Effect of Financial Restrictions	The 2022 financial restrictions have increased my interest in using cryptocurrencies as an alternative to traditional financial service	Финансовые ограничения 2022 года увеличили мой интерес к использованию криптовалют в качестве альтернативы традиционным финансовым услугам.
	The 2022 financial restrictions have significantly influenced the overall adoption of cryptocurrencies in Russia	Финансовые ограничения 2022 года значительно повлияли на общее распространение криптовалют в России.
	Considering the 2022 financial restrictions, I believe cryptocurrencies play a crucial role in ensuring financial freedom and independence.	Учитывая финансовые ограничения 2022 года, я считаю, что криптовалюты играют важную роль в обеспечении международных переводов.
	I am likely to use cryptocurrencies to circumvent or mitigate the effects of the 2022 financial restrictions on my personal financial budget.	Я, вероятно, буду использовать криптовалюты для обхода или смягчения последствий финансовых ограничений 2022 года
Perceived Ease of Use	I believe that I can understand how to use cryptocurrency	Я считаю, что могу понять, как использовать криптовалюту
	I often become confused when I think about the use of cryptocurrency.	Я часто путаюсь, когда думаю об использовании криптовалюты.
	It's easy to find information about using cryptocurrencies in Russia	Мне кажется, что найти информацию об использовании криптовалют в России легко
	I believe that cryptocurrencies are easy to use for transactions	Мне кажетя, что криптовалюты легко использовать для проведения транзакций
	I feel confident in my ability to effectively use cryptocurrencies.	Я уверен что способен эффективно использовать криптовалюты.
Perceived Usefulness	Cryptocurrencies are useful for managing my finances.	Криптовалюты полезны для управления моими финансами
	Cryptocurrencies can enhance my financial security.	Криптовалюты могут повысить мою финансовую безопасность.
	Using the cryptoccurency for payments is time-saving and helps me to complete tasks more quickly.	Использование криптовалюты для международных транзакций экономит время и усилия.
	Cryptocurrencies are useful for international transactions	Криптовалюты полезны для международных транзакций.

Appendix 5. Translated survey design

Часть 1: Вступление
Добро пожаловать! Это опрос о факторах принятие потребителями криптовалют - процесс постепенного начала использования технологии. Опрос состоит из пяти разделов, а прохождение опроса займет 5-7 минут. Опрос можно пройти не имея глубоких знаний о криптовалюте. Его результаты будут использованы для написания магистерской диссертации на соответствующую тему. Криптовалюта - это любой вид валюты в цифровой или виртуальной форме. Не существует центрального органа по выпуску или регулированию криптовалют. Примеры криптовалюты: Биткоин, Эфириум, Лайткоин, Рипл. По мере прохождения опроса вам будут даны подсказки. * Все ответы собираются анонимно. Пожалуйста, не закрывайте опрос, не пройдя его до конца, опрос будет считаться пройденным только после того как вы нажмете кнопку Отправить.
Часть 2: Вопросы связанные с воспринимаемой легкостью использования и воспринимаемой полезностью криптовалюты
Я считаю, что могу понять, как использовать криптовалюту
Я часто путаюсь, когда думаю об использовании криптовалюты.
Мне кажется, что найти информацию об использовании криптовалют в России легко
Мне кажетя, что криптовалюты легко использовать для проведения транзакций
Я уверен что способен эффективно использовать криптовалюты.
Криптовалюты полезны для управления моими финансами
Криптовалюты могут повысить мою финансовую безопасность.
Использование криптовалюты для международных транзакций экономит время и усилия.
Криптовалюты полезны для международных транзакций.
Часть 3: Вопросы связанные с социальным влиянием и облегчающими условиями при использовании криптовалют.
Инструменты и ресурсы, необходимые для использования криптовалют в России, легко доступны
Я считаю, что у меня есть доступ к необходимым ресурсам, чтобы иметь возможность использовать криптовалюту
У меня есть возможность для использования криптовалют в России.
Криптовалюта совместима с устройствами или технологиями, которые я уже использую
Я часто слышу положительный отзыв о криптовалютах от людей, которых знаю.
Близкие мне люди считают, что я способен использовать криптовалюту
Использование криптовалют распространено среди моих друзей и коллег
Люди с ценным для меня мнением хорошо относятся к криптовалюте
Часть 4: Вопросы связанные с воспринимаемым риском и ожидаемые усилиями.
Меня беспокоит ценовая волатильность криптовалют.
Я беспокоюсь о безопасности своих цифровых активов.
Меня беспокоят юридические последствия использования криптовалют в России
Я опасаюсь потери своих инвестиций в криптовалюты из-за колебаний рынка.
Меня беспокоят возможные мошенничества в криптовалютном рынке.
Я считаю, что обучение использованию криптовалют не является сложным.
Я считаю, что затраты усилий на использование криптовалют разумны по сравнению с предоставляемыми ими преимуществами.
Я готов инвестировать время и энергию в изучение криптовалют и их применения.
Легко запомнить, как функционируют криптовалюты.
Я считаю, что взаимодействие с криптовалютами будет удобным и понятным.

Часть 5: Вопросы связанные с финансовыми ограничениями 2022 года* и намерением использовать криптовалюты.

В будущем я, вероятно, буду использовать криптовалюты для повседневных транзакций.

В ближайшие годы я, вероятно, инвестирую в криптовалюты

Вполне вероятно, что я буду использовать криптовалюту для разных целей

Я, вероятно, буду рекомендовать криптовалюты друзьям и семье.

Я открыт к изучению новых криптовалют и цифровых активов.

Финансовые ограничения 2022 года увеличили мой интерес к использованию криптовалют в качестве альтернативы традиционным финансовым услугам.

Финансовые ограничения 2022 года значительно повлияли на общее распространение криптовалют в России.

Учитывая финансовые ограничения 2022 года, я считаю, что криптовалюты играют важную роль в обеспечении международных переводов.

Я, вероятно, буду использовать криптовалюты для обхода или смягчения последствий финансовых ограничений 2022 года

Часть 6: Вопросы связанные с демографией респондентов.

Укажите свой пол

- Мужчина
- Женщина

Укажите ваш возраст

- <18
- 18-25
- 26-35
- 36-45
- 45-55
- 56-65
- >66

Какой у вас самый высокий уровень образования?

- Среднее
- Бакалавриат
- Специалитет
- Магистратура
- Аспирантура
- Докторантура

Как бы вы оценили свой уровень финансовой грамотность?

- 1
- 2
- 3
- 4
- 5
- 6
- 7

Выберите утверждение, которое лучше всего описывает вас:

- Я использую криптовалюту регулярно (чаще 1 раза в неделю)
- Я нерегулярно использовую криптовалюту (от 1 раза в месяц до 1 раза в неделю)
- Я редко использовую криптовалюту (реже раза в месяц)
- Я никогда не использовал криптовалюту
- У меня есть криптовалюта, но я ею не пользуюсь