

# Yashil IQTISODIYOT va TARAQQIYOT

Ijtimoiy, iqtisodiy, siyosiy, ilmiy, ommabop jurnal

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# TECHNOLOGICAL INNOVATIONS OF ELECTRONIC PAYMENT SYSTEMS

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**Abstract:** This article examines the technological innovations in electronic payment systems and their impact on the financial sector. It explores how electronic payment systems, including online banking, mobile payments, and cryptocurrencies, have revolutionized financial transactions. The discussion includes the benefits and challenges associated with these systems, their role in promoting economic development and financial inclusion, and the emerging trends in this field. The article also highlights the theoretical frameworks that explain the diffusion and adoption of these innovations.

**Key words:** electronic payment systems, fintech, financial inclusion, cryptocurrencies, cybersecurity, digital banking, economic development.

**Annotatsiya:** Ushbu maqola elektron to'lov tizimlaridagi texnologik innovatsiyalar va ularning moliyaviy sektorga ta'sirini o'rganadi. Maqolada onlayn banking, mobil to'lovlar va kriptovalyutalar kabi elektron to'lov tizimlarining moliyaviy tranzaksiyalarni qanday inqilobiy o'zgartirgani haqida so'z boradi. Ushbu tizimlar bilan bog'liq foyda va qiyinchiliklar, ularning iqtisodiy rivojlanish va moliyaviy inklyuziyani targ'ib etishdagi roli hamda ushbu sohadagi yangi tendensiyalar haqida muhokama qilinadi. Maqolada ushbu innovatsiyalarning tarqalishi va qabul qilinishini tushuntiruvchi nazariy doiralarni ham yoritilgan.

**Kalit so'zlar:** elektron to'lov tizimlari, fintech, moliyaviy inklyuziya, kriptovalyutalar, kiberxavfsizlik, raqamli banking, iqtisodiy rivojlanish.

**Аннотация:** В данной статье рассматриваются технологические инновации в электронных платежных системах и их влияние на финансовый сектор. Исследуется, как электронные платежные системы, включая онлайн-банкинг, мобильные платежи и криптовалюты, революционизировали финансовые транзакции. Обсуждаются преимущества и вызовы, связанные с этими системами, их роль в содействии экономическому развитию и финансовой инклюзии, а также новые тенденции в этой области. В статье также освещаются теоретические рамки, объясняющие распространение и принятие этих инноваций.

**Ключевые слова:** электронные платежные системы, финтех, финансовая инклюзия, криптовалюты, кибербезопасность, цифровой банкинг, экономическое развитие.

## INTRODUCTION

Money is a social phenomenon that makes trading between people and organizations more efficient and flexible. Without money, there would only be barter transactions – trading one good for another. This is inefficient, as a prerequisite to any trade is double coincidence of wants – existence of two parties that can provide goods or services the other party wants. Money appears as the subject of monetary systems and as the object of payment systems. A monetary system regulates the money supply. Governments are steering the money supply via a set of complex measures in a tiered, collateralized system – in these endeavors they are supported by resp. team together with independent, legally trusted, accountable institutions .

Payment systems implement the distribution and exchange of money. They are large-scale systems that consist of organizational and technical measures. Payment systems enable monetary systems; but must not be confused with them.

In today's digital economy, the landscape of financial transactions is continuously evolving, and at the forefront of this evolution are electronic payment systems. From enabling online shopping to contactless payments, electronic payment systems have revolutionized the way we handle money.

But what is an electronic payment system? This article explains how electronic payment systems work, the benefits of adopting electronic payment systems and macroeconomic trends impacting the growth of electronic payment systems today.





## LITERATURE REVIEW

Several economic theories explain the role of innovations in economic growth:

1. Schumpeterian Theory [1]: Joseph Schumpeter emphasized the role of entrepreneurs and technological innovation in driving economic development. He introduced the concept of “creative destruction,” where old industries and technologies are replaced by new ones, leading to economic progress.

2. Endogenous Growth Theory [2]: This theory, developed by economists such as Paul Romer and Robert Lucas, posits that economic growth is primarily driven by internal factors, such as human capital, innovation, and knowledge. It highlights the importance of R&D and education in fostering innovation.

3. Diffusion of Innovations Theory [3]: Proposed by Everett Rogers, this theory explains how, why, and at what rate new ideas and technologies spread through cultures. It identifies factors that influence the adoption of innovations, including relative advantage, compatibility, complexity, trialability, and observability.

Everett Rogers’ diffusion of innovations theory provides a framework for understanding how financial innovations spread through markets and societies [4]. According to Rogers, the adoption of innovations follows a predictable pattern, with different segments of the population (innovators, early adopters, early majority, late majority, and laggards) adopting new ideas at different rates. The theory identifies five key factors that influence the adoption of innovations: relative advantage, compatibility, complexity, trialability, and observability. Social networks and communication channels play a crucial role in the dissemination and acceptance of financial innovations.

Financial intermediation theory examines the role of financial intermediaries—such as banks, insurance companies, and investment funds—in facilitating financial innovation. These intermediaries perform critical functions, including risk management, liquidity provision, and information processing. Innovations in financial intermediation are often driven by competition, regulatory changes, and technological advancements. While financial intermediaries can enhance market efficiency and stability through innovative products and services, they can also introduce new risks and agency problems, necessitating robust regulatory oversight.

Table 1. Theories of Economic Innovation<sup>1</sup>.

Theory	Key Concepts	Drivers/Mechanisms	Impacts
Schumpeterian Theory	- Creative Destruction	- Entrepreneurial Role	- Economic Growth
	- Cycles of Innovation	- Innovation Cycles	- Market Transformation
Diffusion of Innovations	- Innovation Adoption Curve	- Social Networks	- Market Penetration
	- Five Factors Influencing Adoption	- Communication Channels	- Adoption Rates
Financial Intermediation	- Intermediation Functions	- Competition	- Risk Management
	- Innovation Incentives	- Regulation	- Liquidity Provision
	- Agency Problems	- Technological Advancements	- Information Processing
Market Efficiency Hypothesis	- Information Efficiency	- Enhanced Information Dissemination	- Improved Market Efficiency
	- Behavioral Anomalies	- Exploiting Behavioral Biases	- Arbitrage Opportunities
Agency Theory	- Incentive Alignment	- Design of Financial Instruments	- Mitigated Agency Problems
	- Corporate Governance	- Regulatory Changes	- Improved Governance Structures
Path Dependency Theory	- Historical Context	- Influence of Past Events	- Trajectory of Innovation
	- Lock-In Effects	- Critical Junctures	- Constrained Future Developments
Behavioral Finance	- Cognitive Biases	- Investor Sentiment	- Improved Decision-Making
	- Market Sentiment	- Behavioral Interventions	- Demand for Innovative Products

<sup>1</sup> table compiled by the author.



Theory	Key Concepts	Drivers/Mechanisms	Impacts
Technological Advancements	- Digitalization	- Technological Progress	- Enhanced Efficiency
	- Blockchain and Cryptocurrencies	- Innovation in Technology	- New Financial Instruments
	- Artificial Intelligence and Machine Learning		- Advanced Risk Management
Regulatory Changes	- Deregulation	- Relaxation of Constraints	- Increased Innovation and Competition
	- Regulatory Sandboxes	- Controlled Testing Environments	- Adaptation to New Products
	- Compliance Requirements	- Regulatory Frameworks	- Safe Deployment of Innovations
Market Demand	- Changing Preferences	- Evolving Consumer Needs	- Financial Inclusion
	- Competitive Pressure	- Market Integration	- Accessibility of Financial Services
	- Globalization	- Demand for Cross-Border Solutions	- Economic Growth
Impacts of Financial Innovation	- Economic Growth	- Improved Capital Allocation	- Increased Productivity
	- Financial Stability	- Enhanced Risk Management	- Systemic Risk
	- Social and Ethical Considerations	- Equity and Inclusion	- Consumer Protection
		- Ethical Standards	- Ethical Financial Practices

## METHODOLOGY

This study employs a mixed-methods approach, integrating both qualitative and quantitative analyses to comprehensively explore the technological innovations in electronic payment systems and their impact on the financial sector. This approach allows for a thorough examination of historical trends, technological advancements, economic implications, and future projections.

## ANALYSIS AND RESULTS

An electronic payment system is a digital infrastructure that enables the electronic transfer of funds between individuals or entities. It replaces traditional cash or check transactions with the digital equivalent, offering convenience, speed and security.

Electronic payment systems utilize various technologies such as online banking, mobile payment apps and electronic point-of-sale terminals. Security measures like encryption and authentication protocols ensure the integrity of transactions, protecting sensitive financial data.

Table 2. Types of electronic payment<sup>2</sup>.

Credit card	The payer borrows funds to pay for goods and services, which are then paid back, plus applicable interest, over time.
Debit card	Money is deducted directly from the payer's checking account to pay for goods and services.
Virtual credit card	These function like physical credit cards but generate different card numbers and expiration dates for each transaction, limiting fraud risk.
Online banking	Transactions are completed online via the payer's banking platform.

<sup>2</sup> table compiled by the author.



<b>Electronic funds transfer (EFT)</b>	Funds are electronically transferred directly from the payer's bank account to the payee's.
<b>Automated Clearing House (ACH)</b>	The ACH network electronically moves money between bank accounts in batches.
<b>Wire transfer</b>	Funds are electronically transferred between financial institutions.
<b>Real-time payments</b>	RTP and FedNow are platforms that allow instant transactions between businesses.
<b>Mobile wallet</b>	This includes mobile apps like Apple Pay or Venmo that store payment information to enable contactless transactions.
<b>Contactless payment</b>	Transactions are made by tapping or waving a card or smartphone near a payment terminal, transmitting the stored payment information using radio frequency identification (RFID) and near field communication (NFC) technology.
<b>Cryptocurrency</b>	Digital currency transactions conducted on blockchain networks.

Studying various systems of electronic payments, Koponen (2006) explained that there are a wide variety of online payment systems that have been developed in past few years and these systems can be broadly classified into account-based and electronic currency systems. Account-based systems allow users to make payments via their personal bank accounts; whereas the other system allows the payment only if the consumer possesses an adequate amount of electronic currency. These systems offer a number of payment methods that include:

- Electronic payment cards (debit, credit, and charge cards)
- E-wallets
- Virtual credit cards
- Mobile payments
- Loyalty and Smart cards
- Electronic cash (E-cash)
- Stored-value card payments

Paunov and Vickery (2006) gives a description of electronic payment methods in their report evaluating the online payment systems for e-commerce, a summary of this description is given here to look at various characteristic features of the most commonly used online payment services.

The most commonly used online payment mode so far was the use of credit cards. Initially, the security concerns hindered in the adoption of credit cards for making online payments but later with the provision of more secure features to protect every transaction made, customers developed trust on the use of credit cards. Applicability of credit cards is a strong factor that contributed to its wide use throughout the world. Credit card companies have established a wide network for their consumers ensuring a huge user base for a number of different transactions. However, it is considered a less-suitable method for small businesses and customers that need to make small payments due to high fees for credit cards [5]. Aggregation or cumulative payment solution can be a way to adapt credit card payment system for micropayments. One of the major advantages of credit cards is their easy to use functionality with making online transactions in no time and from anywhere. These cards are easy to obtain and use as customers don't need to purchase any extra software or hardware to work with them. Cardholder authentication procedure is also simple, with the provision of a name, credit card number, and expiry date. For the security of consumers' personal information, credit card companies have developed a number of complementary systems including MasterCard SecureCode and Verified by Visa. These systems allow users to create a password and use it when they shop online through their credit cards.

The bank credit card system represents a significant innovation in the realm of personal finance. In this system, banks credit the merchant's account as they receive sales slips and subsequently bill the cardholder at the end of a specified period. The cardholder can choose to pay the total amount due or opt for monthly installments, which include interest or carrying charges. The first national credit card plan, BankAmericard, was launched by Bank of America in California in 1958 and expanded to other states starting in 1966. It was rebranded as VISA in 1976–77. Many banks that initially started credit card programs on a local or regional level eventually joined major national plans as the services covered by credit cards (such as meals, lodging, and



store purchases) broadened. This expansion transformed personal credit by removing geographical limitations, allowing consumers to make credit card purchases nationally and internationally.

Key players in the global credit card industry include Mastercard (originally Master Charge in the U.S.), JCB (in Japan), Discover (which initially partnered with Novus and is mainly issued in the U.S.), and Barclaycard (serving the U.K., Europe, and the Caribbean). In these systems, cardholders may opt for installment payments, enabling banks to earn interest on the outstanding balances. This interest income often allows banks to waive annual fees for cardholders and charge lower service fees to merchants. Additionally, merchants benefit from prompt payments by depositing their sales receipts with the bank [8].

Store cards, a third type of credit card, differ as they are accepted only by the issuing retailer and thus lack the broad acceptance of bank or travel and entertainment cards.

In the late 20th century, credit card usage surged dramatically. Many consumers soon began spending beyond their earnings, and those unable to pay their monthly balances on high-interest cards faced substantial penalty fees and quickly defaulted. The global financial crisis of 2008–09, marked by recession and rising unemployment, further exacerbated the rate of defaults as consumers increasingly relied on credit. In response, the U.S. House of Representatives approved the Credit Card Holders' Bill of Rights in April 2009, aiming to offer additional consumer protections and curtail unfair or abusive credit card industry practices. Credit card debt is notably high in industrialized nations such as the United States, the United Kingdom, and Australia. Conversely, nonindustrialized countries and those with stringent bankruptcy laws, like Germany, tend to have lower levels of credit card debt [6].

The popularity of the debit cards is constantly rising and currently debit cards the most popular non-cash payments instrument globally. In contrast to credit cards, payments through debit cards are withdrawn directly from the personal account of the consumer instead of an intermediary account. This makes it difficult for consumers to handle payment disputes as their funds don't have an extra protection in a debit account. For debit payments, providing the account number is enough without the necessity of producing a physical card or card number. The use of debit cards is particularly high in most countries with a specific user base depending on the conditions and regulations attached to the issuance of credit cards. However, debit payments may not be popular on merchant websites as debit cards do not cater to the demand for payments made by international customers. Since there are lower costs for using debit cards unlike credit cards this method is suitable for micropayments. In addition, the overall security of debit card payments is found to be higher than that of credit card payments with extensive identification requirements demanded by the banks.

A virtual credit card is a digital counterpart of a traditional credit card, designed to enhance security and privacy during online transactions. These cards are typically offered by financial institutions and credit card companies as a feature of their existing credit card services. Virtual credit cards generate temporary, single-use card numbers that are linked to the cardholder's actual credit account, providing an additional layer of protection against fraud and unauthorized use.

Virtual credit cards generate unique, temporary card numbers for each transaction or a set period. This temporary number is linked to the cardholder's main credit account but can only be used for a specific transaction or within a specified time frame. By using a virtual credit card, the actual credit card number is not exposed during online transactions. This reduces the risk of the card number being stolen or used fraudulently.

Cardholders can set spending limits and expiration dates for each virtual card number, providing greater control over their online spending. This feature is particularly useful for managing recurring payments or one-time purchases.

Virtual credit cards can be easily generated through the card issuer's online banking platform or mobile app. Once generated, the temporary card number, expiration date, and CVV code are used like a regular credit card for online purchases.

If a virtual card number is compromised, it cannot be used for further transactions once it expires or reaches its spending limit. This minimizes potential losses from fraud.

Virtual credit cards can help maintain privacy by preventing merchants from storing the cardholder's real credit card information. This is especially beneficial when dealing with merchants who might have less robust security measures.

The Automated Clearing House (ACH) is a nationwide network in the United States that processes electronic payments and transfers between bank accounts. The ACH network is used for a variety of financial transactions, including direct deposits, bill payments, and other types of electronic payments. It is governed by the National Automated Clearing House Association (NACHA) and the Federal Reserve, ensuring secure, reliable, and efficient payment processing.

Types of ACH Transactions [7]:

1. Direct Deposit: Direct deposit is a common use of ACH, where funds are electronically deposited into a recipient's bank account. This is widely used for payroll, tax refunds, and government benefits.



2. Direct Payment: Direct payment through ACH involves electronically debiting funds from a payer's account to pay a bill or transfer money. This is commonly used for recurring payments like utility bills, mortgages, and subscriptions.

3. ACH Credit: In an ACH credit transaction, the payer initiates the transfer of funds to the payee's account. For example, an employer uses ACH credit to deposit salaries into employees' bank accounts.

4. ACH Debit: In an ACH debit transaction, the payee initiates the withdrawal of funds from the payer's account. For instance, a utility company might use ACH debit to collect monthly payments from customers.

Contactless payment is a secure and convenient method of payment that allows consumers to make transactions by simply tapping their payment card or mobile device near a point-of-sale terminal equipped with near-field communication (NFC) technology. This form of payment has gained widespread adoption due to its speed, ease of use, and enhanced security features. Contactless payments utilize NFC, a form of wireless communication that allows data exchange between devices that are close to each other, typically within a few centimeters. NFC is the core technology that enables contactless payment transactions.

Payment Process consist from:

The customer holds their contactless card, smartphone, or wearable device (such as a smartwatch) near the merchant's contactless-enabled terminal.

The terminal communicates with the card or device via NFC to complete the transaction. If the purchase amount is below the contactless limit, the transaction is approved without requiring a PIN or signature.

For higher amounts, additional authentication (such as a PIN or biometric verification) may be required.

Further, electronic payments can be broadly categorized into two main types: one-time payments and recurring payments. Each serves a unique purpose in facilitating transactions between customers and service providers or vendors.

Types of Electronic Payment System:

1. Credit and debit cards have become ubiquitous in our daily lives. They allow us to make purchases by simply swiping our cards at the point of sale. These cards are linked to our bank accounts, enabling us to spend within our financial means or borrow money (in the case of credit cards) for a limited period.

2. Electronic fund transfers, such as National Electronic Funds Transfer (NEFT) and Real Time Gross Settlement (RTGS), provide a quick and secure way to transfer money between bank accounts. NEFT is typically used for smaller transactions, while RTGS is reserved for larger, time-sensitive transfers.

3. Online bank transfers allow individuals to move money directly from their bank accounts to another party's account. This method is often used for bill payments and peer-to-peer transactions.

One example of online bank transfers is when you pay your monthly utility bills directly from your bank account through the utility company's online payment portal. It's a secure and convenient way to handle regular or recurring payments.

4. Virtual payment cards are digital versions of physical credit or debit cards. They can be used for online purchases without exposing your actual card details. Virtual cards enhance security and reduce the risk of fraud.

Imagine using a virtual payment card to make an online purchase from a new, unfamiliar website. By doing so, you're safeguarding your actual card details while enjoying the benefits of secure transactions, minimizing the risk of unauthorized use of your card.

5. Digital wallets, such as PayPal, Apple Pay, and Google Pay, have gained popularity for their convenience. Users can link their bank accounts or credit cards to these wallets and make payments with a simple tap or click on their smartphones.

Categorisation of Electronic Payments

1. One-Time Payments. One-time payments refer to individual, isolated transactions where a customer makes a single payment for a specific product, service, or any other purchase. This payment type is prevalent in various online transactions, such as purchasing a product from an e-commerce store, paying for a flight ticket, or buying digital content.

- Process for One-Time Payments:
- The customer initiates the payment by selecting the desired product or service and proceeding to the checkout or payment page.
- The electronic payment system processes the payment, securely collecting the payment details and authorizing the transaction.
- The specified amount is deducted from the customer's account and transferred to the vendor or service provider's account.

A confirmation of the successful transaction is sent to both the customer and the vendor.

2. Recurring Payments. Recurring payments involve regular, repetitive transactions where a customer authorizes a vendor or service provider to deduct a specified amount from their account at predefined intervals.





This is common for bills, subscriptions, memberships, or any service that requires periodic payments.

#### Process for Recurring Payments:

- The customer sets up a recurring payment schedule, specifying the frequency (e.g., monthly, quarterly, yearly) and the amount to be deducted for the service or subscription.
- The electronic payment system automates the process, deducting the predetermined amount from the customer's account at the agreed intervals without requiring manual authorization for each transaction.
- The funds are transferred to the vendor or service provider's account, and the transaction details are provided to both parties for record-keeping.
- Recurring payments provide convenience for both customers and service providers, ensuring timely payments and a seamless continuation of services or subscriptions.

**Table 3. Advantages and Disadvantages of Electronic Payment System<sup>3</sup>.**

Advantages of Electronic Payment System	Disadvantages of Electronic Payment System
24/7 Accessibility Global Accessibility Instant Transactions Faster Settlement Record-Keeping and Tracking Encryption and Authentication	Security Concerns Technical Issues Fraud Risk Privacy Concerns Transaction Fees

Electronic payment systems offer a plethora of advantages that have transformed the way we handle financial transactions. Here are some key benefits:

- Electronic payments are lightning-fast compared to traditional methods like cheques, which require manual processing and clearing. This speed ensures that funds are transferred quickly and accurately, reducing the risk of payment delays or errors.

- By eliminating the need for physical cheques and cash handling, electronic payment systems significantly reduce transaction costs for both individuals and businesses. There are no expenses related to printing cheques, postage, or the labour required to process paper payments.

- Security is a top priority in electronic payment systems. Robust encryption and authentication measures protect sensitive financial data, reducing the risk of fraud and unauthorized transactions. Users can also monitor their accounts in real-time, quickly spotting any suspicious activity.

- The convenience of electronic payments cannot be overstated. Whether you're shopping online, paying bills, or splitting a restaurant bill with friends, electronic payments offer unparalleled ease and accessibility.

- Electronic payment systems are accessible 24/7, allowing users to make transactions at any time, from anywhere with an internet connection. This accessibility is especially valuable for international transactions, as it eliminates geographical barriers.

## CONCLUSION

The evolution of electronic payment systems has significantly transformed the financial landscape, introducing unprecedented convenience, speed, and security in financial transactions. This transformation is driven by advancements in technology such as online banking, mobile payments, cryptocurrencies, and fintech innovations, which have revolutionized how individuals and businesses manage and transfer money.

The analysis reveals that electronic payment systems have played a crucial role in promoting financial inclusion, enabling access to financial services for underserved and remote populations. The adoption of these systems has led to increased economic activity, improved operational efficiency for financial institutions, and enhanced consumer experiences.

However, the rapid digitization of financial transactions also presents several challenges. Cybersecurity threats, regulatory compliance issues, and the need for continuous technological upgrades are significant concerns that must be addressed to ensure the secure and sustainable growth of electronic payment systems. Additionally, disparities in access to digital infrastructure and technological literacy can hinder the widespread adoption of these innovations, particularly in developing regions.

To mitigate these challenges and maximize the benefits of electronic payment systems, stakeholders must invest in robust cybersecurity measures, develop adaptive regulatory frameworks, and promote digital literacy and infrastructure development. Collaboration between governments, financial institutions, and technology providers is essential to create a secure and inclusive financial ecosystem.

<sup>3</sup> table compiled by the author.



Looking forward, the future of electronic payment systems will be shaped by emerging trends such as Central Bank Digital Currencies (CBDCs), enhanced data privacy measures, and global interoperability. These trends promise to further enhance the efficiency and accessibility of financial services, driving economic growth and fostering innovation in the financial sector.

In conclusion, electronic payment systems have fundamentally changed the way financial transactions are conducted, offering numerous benefits while also presenting new challenges. By addressing these challenges and leveraging technological advancements, the financial industry can continue to innovate and provide secure, efficient, and inclusive payment solutions for the global economy.

#### References

1. Schumpeter, J. A. (1942). *Capitalism, Socialism and Democracy*. Harper & Brothers.
2. Lucas, R. E. (1988). On the Mechanics of Economic Development. *Journal of Monetary Economics*, 22(1), 3-42.
3. Rogers, E. M. (2003). *Diffusion of Innovations* (5th ed.).
4. Rogers, Everett M. (1962). *Diffusion of Innovations*. 1st ed., Free Press.
5. Bezovski, Zlatko. (2016). The Future of the Mobile Payment as Electronic Payment System.
6. Britannica, The Editors of Encyclopaedia. "credit card." *Encyclopedia Britannica*, 25 Jun. 2024, <https://www.britannica.com/money/credit-card>.
7. Wonglimpiyarat, J. (2016). Technological change of the innovation payment system. *International Journal of Innovation and Technology Management*, 13(04), 1650014. <https://doi.org/10.1142/s0219877016500140>
8. Scheller-Kreinsen, D., Quentin, W., & Busse, R. (2011). Drg-based hospital payment systems and technological innovation in 12 european countries. *Value in Health*, 14(8), 1166-1172. <https://doi.org/10.1016/j.jval.2011.07.001>



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