INDIAN JOURNAL OF LEGAL REVIEW

ILE Publication House is the **India's Largest Scholarly Publisher**

DIGITAL TRANSFORMATION IN PUBLIC ADMINISTRATION

AUTHOR - LOGESHWARI P, STUDENT AT SCHOOL OF EXCELLENCE IN LAW, TAMILNADU DR.AMBEKAR LAW UNIVERSITY

ABSTRACT

Digital transactions in public administration have revolutionized the delivery of government services, offering increased efficiency, transparency, and convenience. By enabling electronic exchanges for tasks like payments, information sharing, and service requests, governments can reduce bureaucracy and enhance citizen engagement. Key applications include tax payments, social benefits, and regulatory processes. However, challenges such as cybersecurity risks, the digital divide, and accessibility need to be addressed. Overall, digital transactions hold great promise for improving public sector operations and fostering trust between governments and citizens.

Key words: Digital Transaction, public sector, block chain, transactions

INTRODUCTION

Digital transactions have become a pivotal aspect of modern public administration, fundamentally changing the way governments deliver services and interact with citizens. By utilizing digital platforms for payments, information exchange, and service provision, public administration can enhance efficiency, reduce operational costs, and increase transparency in governance. Services like tax payments, licensing, and social welfare distribution are now more accessible and streamlined through electronic means. These advancements not only reduce administrative burdens but also improve the overall user experience for citizens.[21]

However, the adoption of digital transactions also presents challenges, including ensuring data security, addressing the digital divide, and maintaining equitable access to services. Governments are increasingly focusing on robust cybersecurity measures and the development of inclusive policies to mitigate these risks and maximize the benefits of digital transactions in public administration[22]

CONCEPT OF DIGITAL TRANSACTION

Digital transactions refer to the exchange of goods, services, or information through electronic means, typically facilitated by the internet or digital platforms. This concept encompasses various forms of interactions, including online payments, electronic data interchange (EDI), and digital record-keeping. Digital transactions have transformed traditional methods of commerce and communication, allowing for quicker, more efficient exchanges and interactions.[23]

In the context of public administration, digital transactions streamline processes such as tax collection, license issuance, and social service distribution. They enable governments to deliver services more efficiently and transparently, reducing administrative costs and improving user experience. Additionally, digital transactions facilitate real-time monitoring and

---

[21] Gil-Garcia, J. R., & Helbig, N. (2006). E-government research: Review of findings, methods, and the future. Government Information Quarterly, 23(2), 245-260.

[22] United Nations. (2020). E-Government Survey 2020: Digital Government in the Decade of Action for Sustainable Development.

[23] Laudon, K. C., & Traver, C. G. (2021). E-commerce: Business, Technology, Society. Pearson.

reporting, enhancing accountability and reducing opportunities for corruption.

Despite their advantages, digital transactions also pose challenges, such as cybersecurity risks, privacy concerns, and the need for equitable access to technology. Addressing these challenges is crucial for maximizing the benefits of digital transactions while ensuring inclusivity and trust in digital systems.[24]

EVALUATION OF DIGITAL TRANSACTION IN THE PUBLIC SECTORS

The integration of digital transactions in the public sector has brought transformative changes, significantly improving efficiency, transparency, and accessibility in government services. This shift allows public institutions to streamline processes such as tax payments, benefits distribution, licensing, and regulatory compliance through digital platforms, reducing the time and costs associated with traditional methods. For instance, online tax filing and e-governance initiatives have shortened processing times and reduced manual paperwork, benefiting both citizens and government agencies alike.

• Efficiency Gains: One of the primary advantages of digital transactions is the ability to process large volumes of transactions quickly and accurately. Automated systems reduce the likelihood of human error and allow government departments to allocate resources more effectively, focusing on higher-value tasks. For example, India's Direct Benefit Transfer (DBT) system has substantially decreased delays in distributing subsidies and social welfare payments by eliminating intermediaries[25].

• Transparency and Accountability: Digital transactions enhance transparency by creating auditable electronic records that make monitoring and oversight easier. This contributes to reducing corruption and fraud in public administration. Countries like Estonia,

with its highly developed e-governance system, have shown how real-time tracking of services and finances can improve public trust and reduce inefficiencies [26].

• Challenges: Despite these benefits, several challenges hinder the full potential of digital transactions. Cybersecurity threats, such as hacking and data breaches, pose significant risks to sensitive government data and personal information. Furthermore, the digital divide remains a critical issue, as not all citizens have equal access to digital tools or the skills necessary to engage with online government services. Digital illiteracy, particularly in rural or underprivileged communities, can exacerbate social inequities.

HISTORICAL BACKGROUND OF DIGITAL TRANSACTION IN PUBLIC ADMINISTRATION

The concept of digital transactions in public administration has evolved over several decades, driven by advancements in technology and changing societal needs.

• Early Developments (1960s-1980s):
The origins of digital transactions can be traced back to the 1960s and 1970s, with the introduction of electronic data processing (EDP) in government operations. During this period, many public agencies began using mainframe computers for data management and processing, leading to increased efficiency in record-keeping and information retrieval. The introduction of the first electronic payment systems, such as Automated Clearing House (ACH) in the 1970s, allowed for electronic funds transfers, laying the groundwork for future digital transactions in the public sector.

• Emergence of E-Government (1990s):
The 1990s marked a significant turning point with the advent of the internet and the rise of e-government initiatives. Governments began to recognize the potential of online platforms to enhance citizen engagement and streamline service delivery. Countries like

[24] United Nations. (2020). E-Government Survey 2020: Digital Government in the Decade of Action for Sustainable Development.

[25] Margetts, H., & Dunleavy, P. (2013). The Impact of Digital Era Governance. Oxford University Pres

[26] Aichholzer, G., & Beikert, S. (2015). The Impact of Digital Technologies on Public Administration. International Review of Administrative Sciences, 81(3), 542-558.

Canada and the United States launched websites to provide access to government services and information. The Clinger-Cohen Act of 1996 in the U.S. emphasized the importance of information technology in improving government efficiency and service delivery.

- Expansion of Online Services (2000s):

The early 2000s saw a rapid expansion of digital transactions as governments increasingly adopted online service delivery models. E-payment systems became more prevalent, enabling citizens to pay taxes, fines, and fees electronically. The United Nations began publishing the E-Government Survey, assessing the progress of digital services worldwide. Countries such as Estonia emerged as leaders in e-governance, implementing comprehensive digital systems for government services, including e-residency and online voting.

- Advancements in Security and Interoperability (2010s):

As digital transactions became more widespread, concerns over data security and privacy grew. Governments started to implement stricter cybersecurity measures and regulations to protect sensitive information. Interoperability between different governmental systems also gained importance, leading to the development of standards and frameworks for seamless digital transactions across various agencies. The introduction of technologies like block chain began to influence public administration, offering potential solutions for secure and transparent transactions.

- Current Trends and Future Directions (2020s):

Today, digital transactions in public administration continue to evolve with advancements in artificial intelligence, big data, and mobile technology. The COVID-19 pandemic accelerated the adoption of digital services, prompting governments to expand online offerings rapidly. Issues like the digital divide and equitable access to technology are now at the forefront of discussions on digital governance. Governments are increasingly focused on creating inclusive digital platforms that cater to diverse populations, ensuring that all citizens can benefit from digital transactions.

IMPORTANCE OF DIGITALISATION IN MODERN PUBLIC ADMINISTRATION

Digitalization has become a crucial aspect of modern public administration, significantly transforming how governments operate and interact with citizens. The importance of digitalization can be summarized through several key points:

- Enhanced Efficiency:

Digitalization streamlines government processes, reducing paperwork and manual procedures. Automation of tasks, such as data entry and document processing, leads to quicker service delivery, allowing public agencies to operate more efficiently and focus on critical functions.

- Improved Accessibility:

Digital services make government resources more accessible to citizens, enabling them to interact with public agencies anytime and anywhere. This convenience increases citizen engagement and participation in governmental processes, promoting a more inclusive approach to public administration.

- Cost Savings:

By moving to digital platforms, governments can significantly reduce operational costs associated with paper-based processes, such as printing and mailing. This cost-efficiency allows for better allocation of resources to essential services and initiatives.

- Transparency and Accountability:

Digitalization promotes transparency by creating easily accessible electronic records of government transactions and services. This visibility helps to foster accountability in public administration, as citizens can track services and expenditures, thus reducing opportunities for corruption.

- Data-Driven Decision Making:

    The digitization of public administration allows for the collection and analysis of vast amounts of data. This information can be leveraged to inform policy decisions, improve service delivery, and respond more effectively to the needs of citizens.

- Enhanced Communication:

    Digital tools facilitate better communication between government agencies and citizens. Through online platforms, social media, and mobile applications, governments can provide timely information, gather feedback, and engage in two-way communication, thereby improving public relations.

TYPES OF DIGITAL TRANSACTION

Digital transactions in public administration encompass a variety of services and processes that utilize electronic means to facilitate interactions between government agencies and citizens or businesses. The following are key types of digital transactions commonly implemented in the public sector:

- ❖ E-Payments:

    E-payment systems allow citizens to pay taxes, fees, fines, and other government charges electronically. This includes online payment portals for income tax, property tax, and various licenses. These systems enhance convenience and reduce the administrative burden associated with cash handling and paper-based transactions. For instance, many countries have developed integrated e-payment platforms that allow multiple payment types in one location[27].

- ❖ E-Government Services:

    E-government services refer to the delivery of public services through digital channels. This includes online applications for permits, licenses, and registrations, such as driver's licenses or business permits. E-government services improve accessibility and

efficiency, enabling citizens to interact with government agencies from anywhere, at any time[28].

- ❖ Digital Records Management:

    The management of public records has transitioned to digital formats, allowing for easier storage, retrieval, and sharing of information. Digital records management systems enable government agencies to maintain comprehensive and secure records while facilitating public access to certain documents through online databases or portals.

- ❖ Online Voting:

    In some jurisdictions, digital transactions have expanded to include online voting systems, allowing citizens to cast their votes electronically in elections. This method aims to increase voter participation and streamline the electoral process. Countries like Estonia have successfully implemented online voting systems, ensuring secure and verifiable elections.

- ❖ E-Procurement:

    E-procurement systems facilitate the electronic purchasing of goods and services by government entities. These platforms streamline the procurement process, enhance transparency, and foster competitive bidding among suppliers. E-procurement allows for more efficient management of public spending and better accountability[29]

- ❖ Digital Identity Verifications

Digital identity systems are increasingly used for verifying the identities of citizens in various transactions, such as accessing government services or signing documents electronically. These systems often involve biometric data or digital certificates, enhancing security and reducing fraud.

---

[27] United Nations. (2020). E-Government Survey 2020: Digital Government in the Decade of Action for Sustainable Development.

[28] Margetts, H., & Dunleavy, P. (2013). The Impact of Digital Era Governance. Oxford University Pres

[29] Hodge, G. A., & Greve, C. (2007). Public–Private Partnerships: An International Performance Review. Public Administration Review, 67(3), 545-558.

❖ Social Welfare Disbursement:

Digital transactions are also used in the disbursement of social welfare programs, where funds are transferred directly to beneficiaries through electronic means. This method reduces delays and inefficiencies associated with traditional cash distribution methods, improving the timely delivery of essential services[30].

TECHNOLOGIES BEHIND DIGITAL TRANSACTION

Digital transactions are fundamentally enabled by a combination of technological advancements that enhance the efficiency, security, and accessibility of electronic exchanges. Key technologies include:

▪ Internet and Mobile Connectivity:

The widespread availability of the internet and mobile devices has made it possible for individuals to engage in digital transactions anytime and anywhere. This connectivity allows citizens to access government services and make payments seamlessly through online platforms and mobile applications.

▪ Secure Payment Gateways:

Payment gateways are crucial for processing electronic payments securely. They encrypt sensitive data, ensuring that financial transactions are safe from fraud and unauthorized access. Technologies such as Secure Socket Layer (SSL) and Payment Card Industry Data Security Standards (PCI DSS) help maintain secure transaction environments.[31]

▪ Block chain Technology:

Block chain offers a decentralized and tamper-proof way to record transactions. This technology is increasingly being explored in public administration for applications such as secure identity verification and transparent procurement processes. Its

ability to provide an immutable ledger enhances trust and accountability in digital transactions.[32]

▪ Digital Identity Systems:

Technologies such as biometrics (fingerprint and facial recognition) and digital certificates are used to verify identities electronically. These systems are essential for ensuring that only authorized individuals can access government services or perform sensitive transactions, thereby reducing the risk of fraud.[33]

▪ Cloud Computing:

Cloud technology enables scalable and flexible digital infrastructure for public administration. By hosting applications and data in the cloud, government agencies can enhance their service delivery capabilities and improve data management without the need for extensive on-premises hardware.

▪ Artificial Intelligence (AI):

AI and machine learning algorithms are increasingly used to analyze transaction data for patterns and anomalies, enhancing security and fraud detection. These technologies help streamline processes, predict user behavior, and personalize service delivery in public administration.

BENEFITS OF DIGITAL TRANSACTION IN PUBLIC ADMINISTRATION

Digital transactions in public administration offer several significant advantages that enhance the overall functioning of government services. Key benefits include.

1. Increased Efficiency:

Digital transactions streamline processes by automating workflows, reducing the time required for service delivery. This efficiency leads to faster

---

[30] Sharma, V. (2021). India's Direct Benefit Transfer: A Revolutionary Shift in Governance. Journal of Development Economics, 45(1), 112-125.

[31] PCI Security Standards Council. (2018). Payment Card Industry Data Security Standard.

[32] Tapscott, D., & Tapscott, A. (2016). Blockchain Revolution: How the Technology Behind Bitcoin Is Changing Money, Business, and the World. Penguin.

[33] Zetter, K. (2015). The Coming of the Digital Identity Revolution. Wired

processing of applications and payments, allowing public agencies to serve citizens more promptly.

2. Cost Reduction:

Transitioning from paper-based systems to digital transactions reduces operational costs associated with printing, mailing, and storage. This shift allows governments to allocate resources more effectively and reinvest savings into public services.

3. Enhanced Transparency:

Digital transactions create electronic records that are easily auditable, promoting transparency in government operations. This visibility helps reduce opportunities for corruption and fraud, fostering greater public trust in governmental institutions.[34]

4. Improved Accessibility:

Digital platforms enable citizens to access government services anytime and anywhere, enhancing accessibility, especially for those in remote areas. This convenience encourages higher participation rates in government programs.

5. Real-Time Data Monitoring:

Digital transactions facilitate real-time tracking and reporting of services and financial transactions. This capability enables better decision-making and resource allocation based on accurate data.[35]

6. Citizen Engagement:

By offering digital services, governments can enhance engagement with citizens, allowing for better feedback mechanisms and increased involvement in governance processes. This interaction can lead to improved

policy outcomes and a more responsive public administration.[36]

CHALLENGES IN DIGITAL TRANSACTION

While digital transactions in public administration offer numerous benefits, they also present several challenges that can hinder their effectiveness. Key challenges include:

➤ Cybersecurity Risks:

Digital transactions are susceptible to various cybersecurity threats, including hacking, data breaches, and identity theft. Ensuring the security of sensitive information is paramount, and governments must invest in robust cybersecurity measures to protect against these risks.

➤ Digital Divide:

The gap between individuals with access to digital technology and those without—often referred to as the digital divide—poses a significant challenge. Many citizens, especially in rural or underserved communities, may lack access to the internet or the necessary devices, limiting their ability to engage with digital government services.

➤ Digital Literacy:

A lack of digital literacy among certain segments of the population can hinder the effective use of digital transactions. Older adults and those with lower educational levels may struggle to navigate online systems, which can create barriers to access.

➤ Interoperability Issues:

Different government agencies may use various systems and platforms that are not compatible with one another, leading to difficulties in data sharing and integration. Ensuring that digital transaction systems are interoperable is crucial for providing seamless services across agencies

➤ Regulatory and Compliance Challenges:

[34] Pina, V., & Torres, L. (2003). E-Government and E-Governance: A Review of the Literature. Government Information Quarterly, 20(3), 235-242.
[35] Aichholzer, G., & Beikert, S. (2015). The Impact of Digital Technologies on Public Administration. International Review of Administrative Sciences, 81(3), 542-558

[36] Anttiroiko, A.-V., & Savolainen, R. (2016). The Role of Digital Platforms in Public Administration. International Journal of Public Administration, 39(5), 441-449.

The rapid pace of technological change often outpaces existing regulations, creating a need for updated policies and frameworks. Governments must navigate complex legal and regulatory environments to ensure compliance with data protection laws and digital transaction standards.

➢ Public Trust:

Concerns about privacy, data security, and the potential for misuse of information can lead to a lack of public trust in digital transaction systems. Building confidence among citizens regarding the safety and reliability of digital services is essential for their widespread adoption.

➢ Cost of Implementation:

While digital transactions can reduce operational costs in the long run, the initial investment required for technology infrastructure, training, and system development can be substantial. Governments may face budget constraints that limit their ability to implement these systems effectively.

CONCLUSION

Digital transactions in public administration represent a transformative shift towards more efficient, transparent, and citizen-centric governance. By leveraging technology, governments can streamline processes, enhance service delivery, and foster greater public engagement. While challenges such as cybersecurity risks and the digital divide remain, the benefits of digitalization—such as improved accessibility, cost savings, and data-driven decision-making—underscore its critical importance in modern public administration. As governments continue to embrace digital transformation, they will not only improve operational effectiveness but also build trust and accountability, ultimately leading to better outcomes for citizens and society as a whole.

REFERENCE

1. Felix. N, Fabian. M and Gibson .L.K, "The Impact of cash less policy on small scale business in ogoni land of Rivers state, Nigeria," IOSR Journal of Economics and Finance, e-ISSN: 2321-5933, Vol. No. 6, Issue No. 3, May-June 2015.
2. 5 turning points in the history of e-payments. (n.d.). Retrieved from Securion Pay: https://securionpay.com/blog/5-
3. Turning-points-history-e-payments/
4. Creehan, S. (2018, 2 28). India's Digital Payments: Growing Consumer Trust, but Merchants Needed.
5. 2019, from Fredral Bank of San Fransico: https://www.frbsf.org/banking/asia-program/pacific-exchange-blog/indias-
6. https/wikipedia.digital_transaction.in