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SMART GOVERNMENT AND M-COMMERCE: EFFECTIVENESS OF INTELLIGENT ECOSYSTEMS IN SOCIETY

In today's modern digital era, governments and businesses around the world are actively exploring ways to use technology to improve service delivery. The transition from traditional citizen and customer service systems to electronic ones has played a decisive role in increasing efficiency, transparency and accessibility. However, as mobile devices become more ubiquitous, there is a paradigm shift towards smart government (m-government) and m-commerce to further empower citizens and streamline governance. This article explores the concept of efficiency in the formation of new service delivery ecosystems in society.

Keywords: information technology, government services, mobile commerce

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СМАРТ-ПРАВИТЕЛЬСТВО И М-КОММЕРЦИЯ: ЭФФЕКТИВНОСТЬ ИНТЕЛЛЕКТУАЛЬНЫХ ЭКОСИСТЕМ В ОБЩЕСТВЕ

В современную цифровую эпоху правительства и бизнес во всем мире активно изучают способы использования технологий для улучшения предоставления услуг. Переход от традиционных систем обслуживания граждан и клиентов к электронному сыграл решающую роль в повышении эффективности, прозрачности и доступности. Однако по мере того, как мобильные устройства становятся все более повсеместными, происходит сдвиг парадигмы в сторону смарт-правительства (мобильного правительства) и м-коммерции для дальнейшего расширения возможностей граждан и оптимизации управления. В этой статье исследуется концепция эффективности формирования новых экосистем оказания услуг в обществе.

Ключевые слова: информационные технологии, государственные услуги, мобильная коммерция

Introduction

As governments expand their use of information and communications technologies, public demand for more efficient services increases. In response, the government strives to meet citizens' growing expectations for better and more comprehensive services by using innovative information technologies and various service delivery channels in addition to the Internet.

Information technology is changing modern life in terms of modern work methods, communication methods and learning. The information age offers states a huge range of opportunities for organizing government activities by creating comfortable living conditions for the population. Public management is being formed as a system of cooperation between state, municipal, non-profit and business structures that ensure the satisfaction of public interests and the solution of collective problems. The active development of information technology and the Internet creates fundamentally new conditions for business development. Recently, models for assessing the performance of smartphone applications, which are vital for mobile management and mobile business, have become relevant.

Research results

The active use of digital technologies continues in various sectors of the economy. An important factor in economic growth is the quality of government, which directly affects economic growth. In order for government policy to create favorable conditions for economic development, it is necessary to effectively provide public services to the population and ensure the protection of the population and business. A more transparent and flexible system of government regulation stimulates competition and the development of innovative potential in the country. Public administration using digital technologies has laid the foundation for the creation of e-government. Electronic government as a system the use of information and communication technologies (ICT) to provide government services, exchange information, conduct transactions and integrate pre-existing services and information portals, makes it possible to ensure transparent management, simplify the processes of interaction with government, citizens, organizations and companies at national, state and local levels (Table 1).

Table 1

Benefits of Electronic Government Operations

Sphere	Advantages
Interaction between government agencies and citizens	
Taxation, informing, healthcare, education	• comfort, • reduction in transaction costs, • increasing the personal focus of the service, • increasing public awareness of government services and policies, • increasing the inclusiveness of services and expanding the scope of management, • reduces the gap between citizens and government
Interaction between government agencies and business	
Support for development, regulation, taxation programs	• acceleration of interaction, • reduction in transaction costs, • reducing regulatory burden, • expanding the market and customer base beyond geographical barriers, • cost reduction through the use of a paperless economy, • accelerating the process of creating, maintaining and coordinating a business by reducing the number of physical requirements, • productivity increase
Interaction between government bodies	
Communications between departments and agencies, between central and local governments	• increasing the reliability of data and the efficiency of their application, • reducing transaction costs, • improving the use of knowledge bases, • cost savings on physical monitoring and administration, • increasing accountability, coordination and communication through effective information transfer and delegation of work, • improving accessibility through the use of online resources, • reducing problems of loss and duplication of information, • reducing time and resource costs

S o u r c e : [1].

As a rule, each new position associated with the expansion of the use of information technologies is associated with a certain list of risks, in particular: the risk of cybercrime and theft of personal data of individuals and the state; delays in the operation of devices supporting the Wi-Fi module ; insufficient digital infrastructure and the problem of the digital divide.

Taking into account the advantages and disadvantages of electronic government activities, various approaches to assessing the maturity of electronic government have been formed. When determining at what stage of development e-government is, it is important to focus on the goal (increasing the efficiency of public administration) and the means of achieving the goal (level of development of information technology, equipping government bodies with technical means of communication, etc.). At the first stages, the development of e-government is indeed strongly tied to the pace of ICT development, however, at higher stages, when a certain level of information and technical support has already been achieved, the problem of qualitative changes in the public administration processes themselves comes to the fore, the solution of which requires a change in the development architecture and government decision making [2].

Citizens expect the state to provide more advanced electronic formats for providing state and municipal services. Business, in turn, strives to build mutually beneficial relations with the state using an effective and well-functioning business-to-business (B2B) model. Innovative technologies are becoming the norm of business functioning and an integral part of the lives of citizens, therefore these processes are considered irreversible. Many states are carrying out reforms aimed at introducing promising information technologies into the work of governments, initiating various programs for transforming e-government into more advanced forms, such as Smart Government . The term "Smart Government " is quite often used in scientific discussions and research, describing their socio-economic, political and cultural strategy for the development of society based on widespread digitalization of all spheres of life. However, in this area, the term "smart government" is often simply synonymous with similar concepts: "electronic government" (e-government) and "electronic governance" (e-governance). Such uncertainty raises doubts about the uniqueness of the term, which creates difficulties for research in this direction [3]. There is a need for a more detailed study of the features and essence of the "Smart" terminology Government" (Table 2)

Table 2

Approaches to defining the essence of the term «Smart» Government»

Definition	Source
An advanced e-government based on open governance that harnesses the opportunities provided by ICT by connecting and integrating physical, digital, public and private environments to passively and actively interact and collaborate with citizens to better understand their needs and deliver creatively, efficiently and flexibly services anywhere and at any time, including predictively	[4]
Designation of a set of principles, factors and opportunities that represent a specific form of management capable of coping with the conditions and challenges of the transition to a knowledge society	[5]
It is "the implementation of a set of business processes supported by information technologies that allow information to flow smoothly between government agencies and programs and have an intuitive interface to provide high-quality services to citizens under all government programs, in all areas of government activity	[6]
It carries the possibility of developing certain decisions based on the analysis of certain data, i.e. there are prospects for creating a cyber-bureaucratic system with minimization of the human factor and greater automation and intellectualization of the management process	[7]
B involves improvising democratic procedures and changing the way government services are delivered. It is a modern way of governance, based on information and communication technologies, citizen-centric, data-driven and performance-oriented.	[8]

S o u r c e : [4—8].

Using technology and data-driven solutions, smart governments strive to improve efficiency, transparency and citizen participation in government. The emergence of Smart Government is changing the way government services are delivered, making them more accessible, convenient and efficient. The evolution of public services and how technology is being used to create governance that is more efficient is reflected in Table 3.

Table 3

Evolution of public services

STAGE	CHARACTERISTIC
Digital transformation	Governments are moving away from traditional paper-based systems and embracing digital technologies to deliver services more efficiently and transparently
E-government initiatives	Online portals and platforms are being developed to allow citizens to access government services and information anytime and anywhere
Automation and digitalization	Manual processes are replaced by automated systems, reducing administrative burden and ensuring faster service delivery
Data-driven decision making	Governments are harnessing the power of big data analytics to make informed policy decisions and improve service delivery
Mobile government	With the widespread adoption of smartphones, governments are developing mobile apps to provide citizens with quick access to information and services
Open Data Initiatives	Governments make data sets available to the public, allowing citizens to better understand government activities and participate in decision-making processes

S o u r c e : [9].

Using software solutions and innovative technologies with the development of the Smart system Government achieves transparency in the distribution of the budget (city, region, country), control of adopted laws and government decisions, and ensures the ability to quickly convey citizens' opinions on any issue to the administration. Citizens have the opportunity to quickly receive government services provided for by law (obtaining the necessary certificates, medical care, managing tax and insurance contributions, receiving benefits and allowances, doing business and submitting reports). The demand for digital and smart technologies as a result of technological improvements has led to a surge in investment in smart government technologies around the world. Government data collection has increased exponentially as a result of increased census data (an ever-growing population), collaboration with other regions, and implementation of new policies/initiatives. The increase in data from various sources allows governments to better prepare for digital transformation, leading to the adoption of smart technologies.

In this regard, the relevant issue is related to the formation of a system of indicators that evaluate the effectiveness of the implementation and use of smart government. The indicators proposed in Table 4 can become the basis for determining the level of development of smart government in each country. Using this indicator system accessible through online sites and any user around the world will be able to view the smart government ranking

Table 4

**Indicators for determining
the level of development of smart government**

INDICATORS	CHARACTERISTIC
The economic growth	The economic situation of a country is the foundation on which the government can build a smart government structure. The implementation of smart government requires more resources and attention from the government, so it is important that the country's government has already achieved the goal of meeting basic needs for citizens
Policy development	Evaluates a country's ability to develop and implement effective policies and regulations for the smooth implementation of smart government. The government of any country wishing to move towards a smart government must have a well-functioning policy development mechanism, since many smart government initiatives require changes in current processes that relate to the quality of education, the health sector, transport management, even the environment, etc. they all require a new approach to thinking on the part of government

Ending of the table 4

INDICATORS	CHARACTERISTIC
Citizen Engagement	Evaluates the ability of a country's government to use interactive ways to engage citizens and support or train them to successfully implement smart government. The motive of the indicator is important for the implementation of any initiative or project, since the people involved in it must be motivated and trained sufficiently to achieve the desired results. This is why the government of any country that wants to implement smart government must focus on strengthening communications between the government and citizens. There must be a bridge of interaction between the government and citizens so that the transition to smart governance is easy
Accountability	To make any initiative practical, it is necessary to receive real-time feedback and make changes to the project based on this feedback. The government should be open to any information to improve the results of the project
Key factors of innovation	Innovation and technological breakthroughs by countries are making progress in smart governance possible and keeping pace with the times for the sustainability of the Smart Government initiative
Smart service	Evaluates the ability of a country's government to have and provide ample capabilities for the smooth implementation of smart government. Citizens should have a variety of options that are in sync with current technological advancements thereby enhancing the use of smart government tools
Government efficiency	Evaluates the competence of a country's government to maintain quality and effectively engage citizens in the successful formation and use of a smart government system.

S o u r c e : [8; 9]

As governments expand their use of information and communications technologies, public demand for more efficient services increases. In response, governments are seeking to meet citizens' growing expectations for better and more comprehensive services by using innovative information technologies and a variety of service delivery channels in addition to the Internet. Smart government efforts aim to capitalize on the use of the most innovative forms of information technology, particularly web applications, to improve core government functions. fundamental functions of government. These functions are now being extended by the use of mobile and wireless technologies, creating a new trend: mobile government (m-government). M-government is defined as a strategy and its implementation involves the use of all types of wireless and mobile technologies, services, applications and devices to enhance benefits for parties involved in e-government, including citizens, businesses and all government departments. M-government has a significant influence on the formation of a set of comprehensive strategies and tools for the operation of e-government, as well as on their roles and functions. The number of people with access to mobile phones and mobile Internet is growing rapidly. Mobile access is becoming a natural part of everyday life and governments will have to transform their activities in accordance with this requirement [10].

What before the pandemic seemed like something unusual, applicable only in large cities or developed countries, turned out to be a reality in a matter of months. It is now possible in every city to transmit meter readings for water, gas, electricity, pay bills, obtain the necessary certificates from government agencies, make an appointment with a doctor, and solve many other problems using digital technologies. The advent of technologies such as mobile apps, big data analytics, and social media technologies have enabled citizens in various regions of the world to communicate with the government, further accelerating the growth of the market.

In the shortest possible time, a business line providing services for the delivery of any goods, including food and catering establishments, was formed and reached a leading position. Trade and catering have massively moved to the Internet, significantly changing not only the form of doing business, but the human environment.

In the era of information technology, commerce has entered a new stage of development. More and more organizations and companies are using the Internet to carry out their e-commerce activities. In the

digital economy, e-commerce has evolved from simple online shopping and logistics services to a platform for interaction and collaboration between businesses and consumers, businesses and other businesses, and businesses and government. E-commerce has reached a complete closed loop: from online traffic generation, offline experience, online purchases to offline delivery and consumer experience.

Promoting e-commerce platforms is an important approach to promoting corporate transformation and upgrading. In this regard, the government can facilitate the creation of an e-commerce ecosystem through measures such as financial support, tax incentives and infrastructure development. Innovative technologies and service models of e-commerce, creating cooperation and exchange platforms for various industries, and promoting the integration of e-commerce with traditional industries have the ability to stimulate the upgrading of traditional industries through the development of a smart government system [11].

Globally, much of the growth in e-commerce is driven by consumers using their mobile devices, phones and tablets to purchase goods and services. According to Market Insights from Statista, mobile e-commerce sales reached $2.2 trillion in 2023 and now account for 60 percent of all e-commerce sales worldwide. Mobile e-commerce's share of all e-commerce has been growing steadily, from 56 percent in 2018 to an expected 62 percent in 2027. Statista analysts expect mobile e-commerce sales to hit $3.4 trillion in 2027, a stark contrast to the $982 billion the segment generated back in 2018.

As consumers spend more time on their phones and tablets and begin to appreciate the convenience of checking off an ever-growing list of online purchases wherever they are — whether on the go or on the couch — mobile e-commerce sales are poised to surge grow further.

The sudden shift from in-store shopping to online shopping due to the pandemic has only accelerated the growth of mobile commerce. This has led to consumers making purchases on mobile devices more often than on other devices. The preference for mobile devices is especially true for younger users than for older ones. Other forms of mobile shopping, such as live shopping and WeChat shopping, are also gaining popularity. Mobile commerce will grow rapidly over the next few years, especially with the growing popularity of mobile devices and apps that make mobile shopping easier. Because of this, we can expect mobile commerce to grow at double-digit rates in 2024. Mobile commerce's share is expected to reach approximately half of the total e-commerce market share. The mobile commerce market is particularly strong in China, the USA and the UK [11].

Another important factor in the growth of mobile commerce is the development of technologies such as Apple Pay and Android Pay. Both technologies allow you to make cashless payments in-store or online. Many ATM providers have also started using Apple Pay and Android Pay, so users can withdraw cash from ATMs simply by using their phones. Mobile commerce has created many different industries and helped existing ones grow, such as: mobile money transfers; online ticket booking and boarding passes; purchasing digital content; mobile banking; in-app payments; geolocation services; mobile marketing, coupons and loyalty cards.

The use of digital payments is gaining momentum, driven by the need for contactless payment options. The outlook for digital wallet adoption is promising, with some countries expected to go cashless over the next few years. However, one of the major barriers to digital wallet adoption is consumer concerns about privacy and lack of knowledge about how digital wallets work (Table 5).

Table 5

Reasons why a user does not use a mobile wallet

CAUSES	Specific gravity,%
Security issues	65
Don't know how to access or use mobile wallets.	17
I don't know where mobile wallets are accepted	17

Ending of the table 5

CAUSES	Specific gravity,%
I don't know what mobile wallets are	15
I don't know how to pay in the store	15
Most stores I frequent don't choose this payment type	13
I don't know if my phone has a mobile wallet	13
Another	5

S o u r c e : [12].

The ease of use and flexibility of mobile banking has attracted a high percentage of online users to bank through a mobile device. However, before M-commerce service providers continue to be challenged to protect consumer privacy and provide personalized offers as consumers expect more from such apps. The performance of mobile control depends on the interaction of many players. The most important players are mobile technology developers, end users and developers of the platforms on which the technologies run. Mobile network providers and mobile application developers must work in unison with government interventions to improve the level of integration and support of mobile phone tools and applications among users.

Conclusion

When researching the effectiveness and efficiency of mobile management and mobile business, there is a clear belief that key attention needs to be paid to the feedback provided by end users, since they are the target consumers of mobile technologies. The success of an information technology platform in the context of mobile government-business interaction requires the participation of both IT service providers and business professionals. This is based on the fact that business professionals are responsible for developing an IT responsive environment that can enable them to easily improve the mobile responsive environment and mobile management. Security is also a factor that can be promoted through increased cooperation between companies and government.

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