

BUILDING AN URBAN E-GOVERNMENT IN HO CHI MINH CITY, VIETNAM

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Abstract. The Fourth Industrial Revolution has had a profound impact on all aspects of social life and human beings. This study assesses the importance of e-urban government deployment and delineates the accomplishments, constraints, and strategies to improve this paradigm. By examining the achievements and obstacles of e-government, we suggest ideas for its enhancement. The primary aim is to augment the efficiency of governmental administration and improve the quality of public services for citizens and enterprises. The research employs Ho Chi Minh City as a case study to exemplify the analyses and recommendations, offering insights into e-urban government advancement in a significant metropolitan center.

Keywords: *Urban e-government, Ho Chi Minh City, institutional solutions, PAPI.*

Reikšminiai žodžiai: *E-miesto valdžia, Hošiminas, viešasis valdymas, instituciniai sprendimai, PAPI indeksas.*

Introduction

• Overview of e-urban government

E-government is one of the new leadership and operation methods, adapting to changes in the context of the Fourth Industrial Revolution. Although most countries in the modern economy are building and implementing e-government, there are still many different approaches to this term:

From an organizational perspective, e-government is a government machine operating on the internet and through information technology. It is not merely the act of putting public services on the internet or executing administrative procedures on the internet, e-government requires a fundamental change in the view of policies, regulations, and operating procedures of the government and in considering how technology and new business models will impact and improve the internal performance of the government, as well as change the nature and quality of communication activities between the government and the people and between the government and businesses.

From a time perspective, e-government is the transfer of information services electronically to businesses and citizens 24 hours a day, seven days a week.

From a technology perspective, e-government is when government agencies use information technology, such as wide area network, internet, and mobile devices to relate to citizens, the business community, and the state administrative agencies themselves (Brys et al. 2023). From the above approaches, it can be understood that “e-urban government” is a model of e-government applied in urban management; the essence is the application of information technology, digital technology into the administrative reform process, aiming to operate more effectively and provide better services for urban residents. E-urban government includes the automation and digitization of current procedures and documents, and thereby will create a new leadership style and new ways in building and deciding strategy, doing business transactions, listening to community opinions, and organizing and providing information, aiming toward the highest goal for the benefit of urban residents. Building e-government in urban areas also needs to consider the characteristics of the urban area, such as synchronization and interconnection in management (Davies 2010). The level of socio-economic development, modern nature, and the growth rate in urban life, in particular, make the implementation of an e-government model in Ho Chi Minh City more urgent than in other regions. An e-urban government is a type of government with a proactive and open management structure with all participating subjects, aiming to maximize the economic, social, and ecological efficiency of cities, respond to negative impacts, and apply learnings from the development path in history. Therefore, to achieve the requirements for creating an e-urban government, it is necessary to transform the internal components of the government and also those of external organizations. E-urban government takes the factor of serving people as the center, focusing on users and on the relationship between people and other related parties. Therefore, to successfully build an e-urban government, the government subject needs to change the management method and facilitate the

connection between people in urban social life.

- **Overview of Ho Chi Minh City**

Ho Chi Minh City is a special urban area, a major center for economics, culture, education and training, and science and technology. It is a hub for international exchange and integration—it is the region's locomotive and driving force for progress. The city only accounts for 0.6% of the country's area, with a population of about 10 million people, but it contributes significantly to the overall economic development of the country (Vuong T. 2024). The urbanization process took place very quickly, bringing Ho Chi Minh City a breakthrough economic growth, resulting in it holding the position of “locomotive.” Thus, creating momentum for the development of the key economic region in the South, an international trading center, the urban nucleus of the region and the country, and the focal point of connection, linkage, and support for other urban areas in the region to develop together, holding a strategic position.

About 20% of Ho Chi Minh City's population originates from other provinces and is employed in the nation's primary economic sectors. Between 2016 and 2020, the city's economic sectors generated and addressed 1,516,430 labor shifts, resulting in the creation of 651,735 jobs. The unemployment rate decreased to 3.7% in 2020. Between 2016 and 2020, an average of 70 to 80 job transaction fairs were systematically and flexibly held annually in districts to facilitate the connection between labor supply and demand, assisting jobless individuals in swiftly securing appropriate employment. Over 11,000 enterprises participate in recruiting via the job transaction floor, resulting in 120,000 labor transitions and the recruitment of over 50,000 workers. Ho Chi Minh City has achieved diverse and effective international partnerships. Labor export firms and collaborative initiatives (such as issuing work permits for South Korean laborers, technical interns to Japan, and nurses to Germany) between Vietnam and other nations have enabled individuals from impoverished and near-impoverished families to increase their earnings and alleviate poverty. The city's unique status as a hub for foreign investment in company establishment renders job searching favorable, resulting in 10%–12% of the total labor force working abroad being registered residents of the city. Ho Chi Minh City has achieved notable triumphs in urban growth, yet it also faces some constraints: The nation's biggest population increase continues to burden the city.

Currently, with nearly 14 million people living in the locality, Ho Chi Minh City is considered the metropolis of Vietnam. After many years leading in socio-economic indicators, the city has recently been facing many instabilities. According to statistics from 1991–2010, within 20 years, the gross domestic product (GDP) growth rate of the city reached an average of 10.5%/year, which was higher than the average GDP growth rate of the whole country by about 1.5 times. However, over a period of about nine years, from 2011 to 2020, the GDP growth rate only reached 7.2%/year, which was higher than the average GDP growth rate of the whole country by about 1.2 times. In 2020, with the COVID-19 pandemic, the economic growth rate of Ho Chi Minh City was about 45% compared to the general growth rate of the whole country (1.4% compared to 2.91%), thus it was assessed that the ability to

face abnormal fluctuations of the economy is very weak (Du Lich, T. 2021).

Many complex social issues continue to arise, putting pressure on leadership, management, and administration activities. The dense concentration of residents in the city also poses significant challenges in ensuring employment for workers, as well as social security issues in the city. The situation of traffic congestion and flooding is becoming more complex with shortcomings in planning work, urban planning management, land use planning, and specialized planning. Progress in finding solutions to problems implementing housing programs (social housing, housing for rent workers, housing along canals, building new apartments to replace old ones, etc.) is still slow. Social networks have become an information environment and are used for the interaction of the majority of people, quickly and strongly affecting the thoughts, feelings, and behaviors of the people, which requires state management work to continuously adapt, inspire, guide, and correct thoughts and values. The demand for investment in transport infrastructure and cultural institutions to serve the people is increasingly large while the city's budget resources are limited, creating a challenge that requires creative thinking, ways of working, mobilizing resources from people, and businesses to participate in investment, etc.

The current administration of Ho Chi Minh City has resulted in a scarcity of human resources for the local government apparatus. The People's Committee of Ho Chi Minh City indicates that 90 out of 249 wards have populations above 30,000 inhabitants. Of these, 54 wards have populations ranging from 30,000 to under 50,000, 21 have populations from 50,000 to under 75,000, 12 have populations from 75,000 to under 100,000, and three have populations over 100,000. Ho Chi Minh City has an average population density of 14,000 individuals per square kilometer, escalating to 37,000 in the principal districts. On average, each ward in Ho Chi Minh City accommodates over 28,000 residents, approximately 1.9 times the stipulated limit of 15,000 individuals as per Article 8 of Resolution No. 1211/2016/UBTVQH13 dated May 25, 2016 of the Standing Committee of the National Assembly on criteria and classification of administrative divisions. In Ho Chi Minh City, one public worker serves a population of 1,343 individuals due to elevated population density. Civil workers are required to manage documents outside of official work hours in densely populated regions with a high concentration of households and commercial establishments. In 2021, authorities and civil workers in Bình Hưng Hòa A ward, Bình Tân district, the most populous region with 125,894 residents, reviewed 628 documents annually, averaging 52 per month, and processed 3,241 documents per year, equating to 270 per month. Cultural and social activities occurring after 5 PM every day impose stress on central personnel. The team of officials, civil servants, and volunteer campaigners may operate until 2 AM on holidays and weekends. (Nguyễn 2022).

Therefore, the realities of the urban social life context in Ho Chi Minh City have posed an urgent requirement to build an e-urban government—a smart city will allow the government of Ho Chi Minh City to change the management method to solve the problems posed by the current urban social life in the city.

- Some achievements in building an e-urban government in Ho Chi Minh City
 - Issuing plans and strategies to build an e-urban government

November 23 and 24, 2017, are important dates in Ho Chi Minh City's e-government development. The city government announced the "Project to Build Ho Chi Minh City into a smart city for the period 2017–2020, with a vision for 2025," and the National Assembly passed Resolution No. 54/2017/QH14 on piloting mechanisms and policies for special development. The project implements data system connectivity and utilities to help people and businesses participate in improving state management. It emphasizes four main topics: building a common data warehouse and open data ecosystem, building a smart urban operation center, building a simulation and socio-economic forecasting center, and building a city information security center. The Resolution of the 11th Party Congress of the City includes a dedicated section on "Building a Smart City," which clearly outlines the need to deploy advanced digital infrastructure and technologies to ensure the timely implementation of the Smart City Construction Project. It emphasizes the importance of effectively operating and utilizing the common data warehouse to support data-driven decision-making, and calls for continued investment in completing both the Smart Operation Center and the Forecasting Center, which are essential for enhancing urban management and predictive capabilities. Big data will modernize, reduce costs, and improve quality and forecasting in key areas for the city. Smart cities and creative cities can be deployed using artificial intelligence (AI). Universities and research institutes can pilot AI research into production and society. These breakthrough policies are political opportunities for the city to promote creativity, solidarity, Party Committee unity, and popular development. Additionally, the city's leaders have actively researched and gained practical experience deploying the smart city model in major cities around the world, and they have seen the effectiveness of modern social management (Long 2021).

On October 9, 2018, the People's Committee of Ho Chi Minh City held a conference to announce the framework of the e-government architecture. The e-government architecture of Ho Chi Minh City is an overall plan that helps to guide the unified and synchronous deployment of information technology in the city's state agencies. The architecture is built on new technologies of the Fourth Industrial Revolution, such as the Internet of Things (IoT), big data, AI, blockchain technology, virtual assistant technology, and smart robots.

As a result of the initiative, the e-government architecture has been implemented across the Office of the People's Committee of Ho Chi Minh City, as well as in all 24 district-level People's Committees, 322 ward-, commune-, and town-level units, and various departments and directly affiliated agencies. Ho Chi Minh City's e-government model includes three key portals: a centralized administrative information portal, an integrated online public services portal for processing citizen and business requests, and a public feedback and engagement portal. These components are designed to foster a collaborative working environment, enable service and data integration, support the development of specialized digital applications, and ensure robust information security (Nam 2018).

In addition, the People's Committee of the City issued Decision No. 2392/QĐ-UBND

dated July 3, 2020, on building and updating the e-government architecture of Ho Chi Minh City, according to which, the overall model of the e-government of Ho Chi Minh City viewed from the architectural aspect is divided into basic layers (HCM igov 2024): (1) users and external systems, (2) access channel, (3) electronic information portal, (4) online public services, (5) applications, (6) database, (7) e-government deployment platform (HCM LGSP), (8) technical infrastructure, (9) IoT infrastructure, and (10) orientation management.

- Building infrastructure and sharing electronic data to serve citizens and businesses

Currently, the e-government in Ho Chi Minh City has entered Phase 3, the stage in which complete transactions can be carried out without citizens having to go to administrative agencies. Examples of online services include the registration of income tax, registration of property tax, renewal/issuance of new licenses, visas, and passports, and online voting.

Information about the e-government in Ho Chi Minh City is provided through the city's general information portal, hochiminhcity.gov.vn. This is where information, news, and general plans from the city government are updated. From this website, you can access all other small information portals in the city. The administrative procedure information portal and the portal for receiving and processing online public service dossiers of the city are <https://dichvucong.hochiminhcity.gov.vn/vi/home-hcm> and <https://dichvucong.gov.vn>.

In 2018, the page dichvucong.hochiminhcity.gov.vn received nearly 480,000 online applications and processed more than 210,000, with a rate of 83% being processed on time. A survey of people using online public services was then conducted, showing that 509 individuals were satisfied with the service (accounting for 68%), and 41 individuals were not satisfied (accounting for 6%).

In 2020, the city government issued the Regulation on Integration and Operation of the Common Data Warehouse to create a legal corridor to integrate the city's existing databases into the Common Data Warehouse. At the same time, research was conducted on building a plan to connect the city's existing database with the databases of ministries and sectors. The Common Data Warehouse aims to serve the city's management and administration work, and at the same time, provide data exploitation utilities to support people and businesses. In 2022, Ho Chi Minh City implemented a comprehensive digital transformation, developing a digital economy and building a digital society and government. The city has designed, built, and put into operation a system of integration, connection, and interconnection of large databases (big data), which hold data on population, planning, health, education, insurance, businesses, land, and housing, to serve the operation and management work of the city as well as the life of the people (Phap Luat E-magazin 2022).

Ho Chi Minh City has currently deployed an integrated platform and shared data to officially connect the national integrated and shared data platform to the common data warehouse. The city also focuses on the field of administrative reform, providing public services, bringing benefits to people and businesses. In this regard, the city has deployed

applications to enhance the interaction between the government and the people. More than 900 units in the city, including state agencies, corporations, and public service units, have connected electronic documents through the integrated platform and shared data. In the fields of transportation, health, education and training, environment, urban planning, and public security, many applications have been deployed to serve professional work and provide services to the people (Phap Luat emagazin 2022).

The city's data portal (at the address <https://data.hochiminhcity.gov.vn/>) implements data sharing for departments, boards, and sectors to exploit and use. Through the portal, it is possible to deploy and integrate data on the drainage system, urban lighting, green spaces, wastewater treatment, bridge data layer, road, and traffic light signal to the city's common data warehouse.

The city also completes and connects software for document management and internal operation to ensure continuity from the city to wards, communes, and towns in the implementation of sending, receiving electronic documents; promote the application of specialized digital signatures and other contents as prescribed; promote the application of information technology in the management and operation of the city's leadership; to foster coordination between agencies and units, especially at ward, commune, and town levels; serve people and organizations; and expand the use on the smartphone platform (Minh, T. 2022). In addition, the city will expand the complaint system to departments, sectors, districts, and people's committees, deploying the use of digital signatures, electronic authentication in the internal activities of agencies and units, and implementing the reporting regime through the Government Office's Information Reporting System as required.

- Application of information technology in urban management

In September 2022, the People's Committee of Ho Chi Minh City held a ceremony to announce the Ho Chi Minh City Execution Management System on digital platforms (Phase 1). The system with three functions will change the way of directing, managing, and inspecting the operation of the city government, from procedures and paper document reports to management by an information system, with quick interaction: (1) Synthesize statistical indicators classified by field, presented in the form of charts, diagrams, and infographic illustrations, helping city leaders, departments, and districts grasp an overview of the city's socio-economic situation; (2) Management and administration—city leaders can grasp immediate information and give directions on socio-economic activities on the system; and (3) Supervision and interaction between people and the city government—city leaders can see the interaction time of people with the government, supervise the results of administrative procedure handling, and evaluate which unit handles its tasks on time, which unit handles its tasks late, and which unit handles its tasks directly through the system (Le 2023).

- Supplying online public services of the electronic city government in serving people and businesses

In 2022, the total number of records received and resolved by departments, boards, district-level people's committees, and commune-level people's committees was 16,657,884

records (including 12,638,816 paper-copy records received and 4,019,068 online records), of which 16,211,481 have been resolved and 466,403 are being resolved. Among the resolved records, there are 16,197,327 that were resolved on time (accounting for 99.85%) and 24,154 that were overdue (accounting for 0.15%).

In the first nine months of 2023, the percentage of administrative procedure records that were processed and returned electronically reached 22.48% for ministries and sectors, and 38.94% for localities. For comparison, during the same period in 2022, these rates were 8.78% and 13.14%, respectively. The conversion of paper records to electronic records at ministries and sectors reached 81.39% (the same period in 2022 reached 50.69%), and localities reached 70.24% (the same period in 2022 reached 38.84%), thereby, contributing to the construction and operation of national specialized databases for population, social insurance, business registration, electronic civil status, and driver's license data (Ngan 2023a).

The survey results from the Provincial Governance and Public Administration Performance Index (PAPI) show that the management effectiveness of the e-government of Ho Chi Minh City in the criterion of public service supply made significant progress from 2018 to 2022; the highest being in 2021, with 7.75 points out of 10 points.

Unit: Point

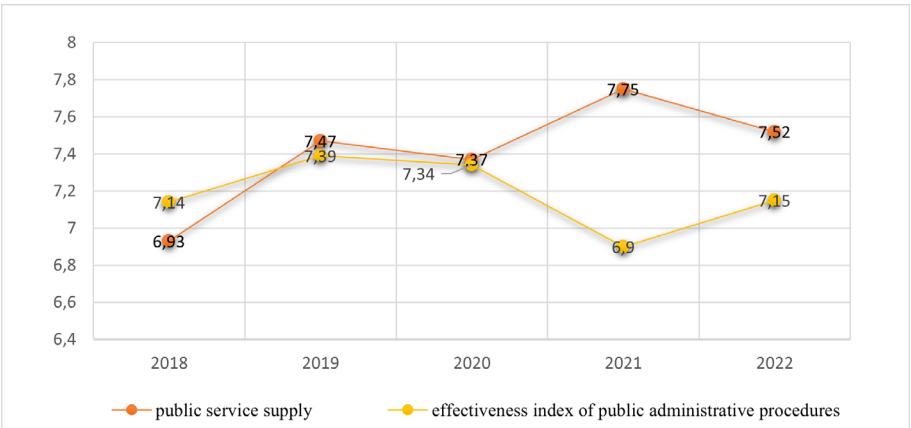


Figure 1. The effectiveness index of public service supply and the effectiveness index of public administrative procedures of Ho Chi Minh City from 2018 to 2022 (<https://papi.org.vn/bao-cao>)

The data reveals a discernible downward trend in both indices, with a particularly marked decline observed between 2021 and 2022. Multiple factors may have contributed to this observed deterioration. The COVID-19 pandemic likely engendered significant disruptions to public services and administrative procedures, with concomitant lockdowns, social distancing measures, and economic challenges potentially impeding the efficiency

of governmental operations. Concurrently, an economic downturn may have precipitated reduced public expenditure, thereby diminishing the quality and availability of public services. Moreover, extant systemic issues within the public administration framework, such as corruption, bureaucratic red tape, and lack of transparency, may have exacerbated the decline. The burgeoning population and consequent increased demand for services in this rapidly expanding metropolis may have outpaced the administrative capacity to deliver services effectively. Additionally, alterations in governmental policies or regulations may have inadvertently yielded negative repercussions on the efficiency of public services and administrative procedures. By addressing these fundamental issues and implementing targeted reforms (Ngan 2023b) Ho Chi Minh City has gradually improved the efficiency of public services and administrative procedures, thereby improving the quality of life for its people.

With the shift from traditional, manual management methods to electronic management methods, the e-government of Ho Chi Minh City has demonstrated increased local administrative capacity over time. The evaluation results of the satisfaction level of people and businesses in relation to the management activities of the e-government of Ho Chi Minh City from 2018 to 2022 show that the index of the satisfaction level of people and businesses with the city government increased from 71.91% (in 2018) to 86.56% (in 2022).

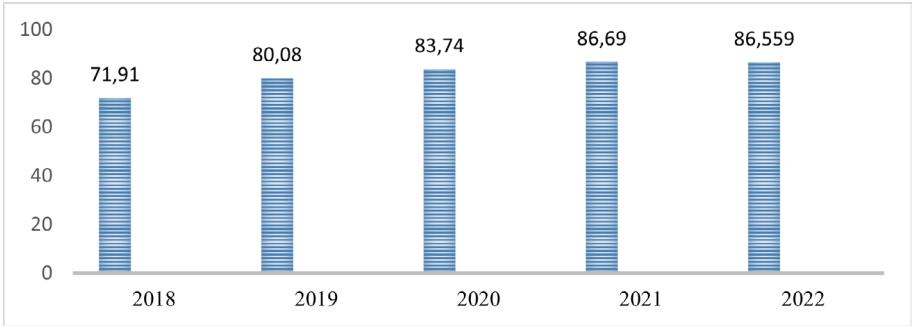


Figure 2. The satisfaction index of the people in relation to the service of the state administrative agencies from 2018 to 2022. (Nga et al. 2024)

- Correlation between the development of e-government and urban economic development in Ho Chi Minh City

The correlation between the development of electronic city government and economic development in Ho Chi Minh City shows that the enhancement of information and communication technology applications in the management and operation of the electronic city government has promoted economic development, especially the development of e-commerce. The E-commerce Index ranking will be synthesized from three pillars: (1) human resources and information technology infrastructure, (2) e-commerce transactions between businesses and consumers, and (3) e-commerce transactions between businesses.

The results of the E-commerce Index Report in Vietnam from 2018 to 2022 show that Ho Chi Minh City has a digital economic development index that continuously increases. In 2022, Ho Chi Minh City continued to lead the E-commerce Index ranking in Vietnam with 90.6 points, followed by Hanoi with 85.9—4.7 points less than Ho Chi Minh City (PAPI 2024).

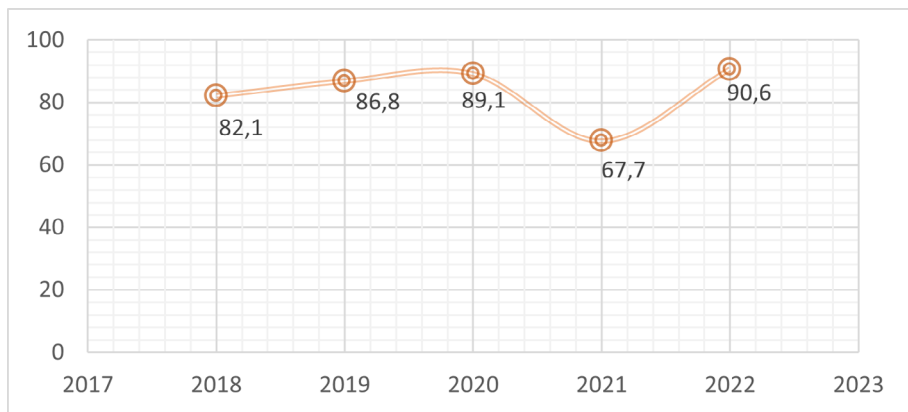


Figure 3. The E-commerce Index of Ho Chi Minh City from 2018 to 2022 (<http://ebi.vecom.vn/Trang-chu.aspx>)

Some limitations in building an e-government in Ho Chi Minh City

– Limitations on policy and law

Although in recent times, the National Assembly, the Government, and competent state administrative agencies have built and issued some legal documents, creating an important legal corridor to build and develop an electronic city government, the actual deployment in Ho Chi Minh City still encounters many difficulties and obstacles. There are still gaps in the regulations on management, connection, data sharing, electronic documents, storage of electronic documents of state agencies, legal value of electronic documents in administrative transactions and payments, and information security in the electronic environment.

There are some issues that need to be considered by ministries and sectors, such as the total number of records resolved and the data on the Online Public Service Portal that isn't synchronized with the city's data. The quantity and quality of public services are still low, and as of October 12, 2023, Ho Chi Minh City has 680/1,758 procedures (accounting for 38.7%) that have not been fully reviewed on the National Public Service Portal. There are about 450 administrative procedures that have not resulted in records in the past three years, which need to be reviewed. The rate of overdue administrative procedure settlement, according to statistics, has not reached 1% (Ngan 2023a).

In addition, one of many issues that Ho Chi Minh City has been facing is the security of personal user data in the context of a strong digital transformation. The electronic city government in Ho Chi Minh City is still lacking a strong legal framework to regulate new

social relationships and operations in the electronic environment, and the issue of human rights and personal data protection is becoming increasingly urgent.

- Limitations in the enforcement capacity of civil servants

In the context where Ho Chi Minh City is in the pilot phase of the Urban E-Government model, the city's human resources are streamlined. Therefore, work pressure also creates challenges for the city's civil servants. The biggest challenge comes from civil servants and public employees, the central characters in the operation of the e-government. Most civil servants have approached and used computers commonly, but, in reality, those considered computer literate just stop at the basic level of document editing and accessing information on the internet; however, they have not reached the level of proficient application of information technology to organize and manage work for effective business. Many civil servants, public employees, and workers in the state administrative system are still in the habit of using paper documents, hoarding data, not sharing information, and fearing the shift toward working in a digital environment.

- Limitations in the participation of citizens and businesses

In order to build and develop an municipal e-government, in addition to preparing for issues related to infrastructure, human resources, and support, the participation of citizens in this process is extremely important. However, currently, the awareness and readiness of citizens to actually participate in implementing the municipal e-government through online public administrative transactions are still limited. People are still hesitant to use technological elements. The survey results of PAPI show that the participation index of the city's residents is still limited. In 2020, the participation index of residents in the city only reached 4.45 out of a total of 10 points, especially in 2021, when it only reached 4.06/10 points, falling into the lowest level among a total of 63 provinces and cities nationwide.

- Limitations in infrastructure and financial and technological conditions

To build an municipal e-government, in addition to conditions related to human resources, institutions, and legal policies, it is necessary to ensure suitable physical infrastructure, finance, and technology conditions. The reality in Ho Chi Minh City shows that, although it is a locality currently enjoying the special mechanism of the State, the severe consequences of the COVID-19 pandemic in recent years have seriously affected the infrastructure and public investment in Ho Chi Minh City.

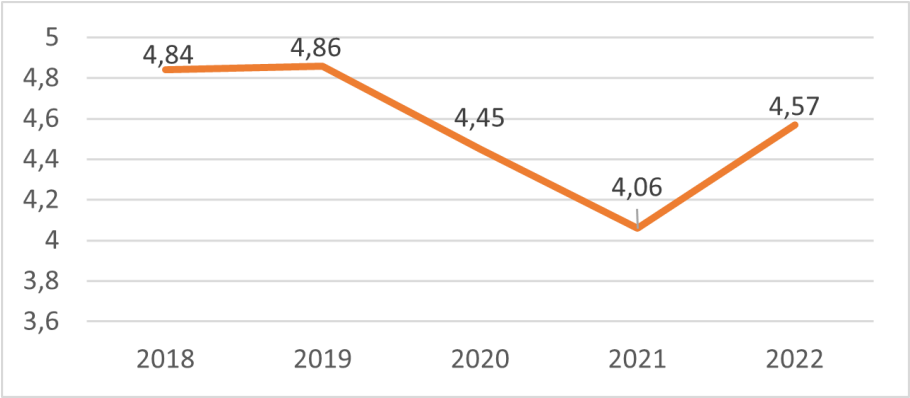


Figure 4. The index of citizen participation in the activities of the municipal e-government in Ho Chi Minh City (Ho Chi Minh City People’s Committee 2022)

Therefore, the lack of capital for investment in purchasing working equipment and applying modern technological factors in management somewhat affects the effectiveness of local administration. The abovementioned limitations have affected the management effectiveness of the municipal e-government over time. Survey results from PAPI show that Ho Chi Minh City had a trend of decreasing strengths in the years 2021 and 2022. The electronic governance index also shows a decrease (see Table 1).

Unit: Point

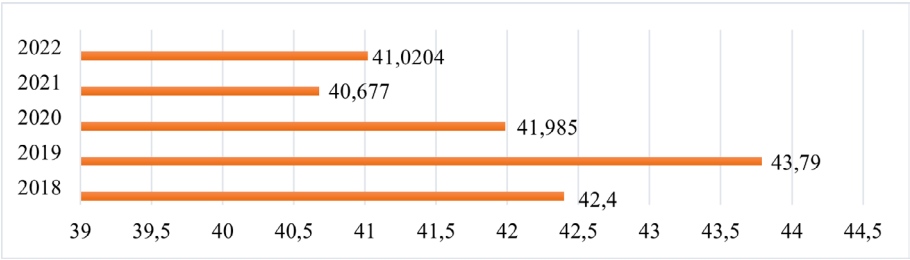


Figure 5. The Provincial Governance and PAPI of Ho Chi Minh City from 2018 to 2022

Table 1. E-governance index of Ho Chi Minh City from 2018 to 2022 (PAPI 2024)

Unit: Point

Electronic administration		Component point																			
		Use of the local government's electronic portal										Access and use of the internet locally						Response of the local government on the provincial electronic portal			
		2018	2019	2020	2021	2022	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022					
2018	2019	2020	2021	2022	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022		
3.99	4.33	3.46	4.43	3.32	0.62	0.41	0.41	0.29	0.41	1.73	2.55	2.66	2.63	0.51	0	1.37	0.4	0.42	0.39		

These shortcomings and limitations stem from one of the reasons why the city authorities have not yet publicly disclosed the progress and results of administrative procedure settlement at the district level on the city's public service portal: The disclosure of administrative procedures on the electronic information portal and on the national database on administrative procedures has not been uniform, not meeting the requirements of Decree No. 92/2017/ND-CP, Decree No. 61/2018/ND-CP.

Some solutions to improve the effectiveness of building an municipal e-government in Ho Chi Minh City

– Institutional solutions

The central and city-level authorities must collaborate to revise and issue clear and comprehensive legal documents regarding municipal government organization, thereby establishing a legal framework for the effective functioning of the municipal government in Ho Chi Minh City. Authorities must also review and incorporate city-specific legal regulations pertaining to the construction and development of electronic municipal governance. In June 2022, the government promulgated Decree 42/2022/ND-CP to govern the online information and public services of state agencies (Vietnam Government 2022). Central and local government entities were mandated to digitize public administrative processes and promote the utilization of central or provincial e-service portals by citizens and businesses. According to the 2023 National Digital Transformation Action Plan (Vietnam Government 2020), Vietnam intended to transition 50% of administrative procedures online, finalize the information system for managing administrative procedures across all ministries and provinces. These initiatives were brought about to diminish bureaucratic discretion, corruption, and governmental inefficiency. The PAPI indicators assess policy efficacy from the viewpoint of citizens.

– Human resource solutions

The city government needs to have a policy mechanism and a specific strategic plan for training and fostering the improvement of the capacity of civil servants and officials to meet the requirements set out in the operation of the municipal e-government. Accordingly, state administrative agencies need to regularly organize training for civil servants and officials that focuses on developing digital capacity, knowledge and skills for working in an electronic environment, skills to handle online administrative procedures for people and businesses, communication skills, and familiarity with behavior with mass media while ensuring compliance with administrative standards and civilization in the digital environment. The results of training need to be considered as one of the criteria for evaluating the capacity of civil service execution of civil servants of the city.

– Solutions to engage the participation of multiple entities

The city government needs to improve communication effectiveness to engage the participation of citizens and businesses in the operation of building the municipal government. This is very important in ensuring democracy and providing an information system with data for the municipal e-government. The more entities that participate in the process, the richer the data and the more accurate the predictions based on algorithms.

Accordingly, the city government needs to build a transparent public information system for the operation of the government, data, projects, and development plans, and provide information about online public services. At the same time, it is necessary to enhance the interaction between people and businesses to absorb their contributions, reflections, and suggestions in a timely manner to align management activities with reality, creating trust between people and businesses. It is also necessary to develop diverse communication channels, such as websites, social networks, and mobile applications to provide information and interact with people and businesses develop television and radio programs with information about municipal e-government, and enhance online interaction through chatbot/voicebot systems, for example to support people and businesses.

- Technological and financial solutions

Investing in physical infrastructure and equipment with information technology applications to serve the management of electronic urban areas in Ho Chi Minh City is considered the most important investment to ensure the effective management of urban areas. It is necessary to upgrade the network system and information technology infrastructure by expanding the optical cable network, increasing internet access speed, and improving the effectiveness of online public services. At the same time, building a data center to centrally store data of state agencies, businesses, and people and ensuring data safety and security as prescribed are also areas of priority. Developing a shared data system to collect and integrate data from state agencies, businesses, and individuals will create a unified data source to serve state management and socio-economic development. The development of a shared data system will contribute to the effective use of data and ensure safe and secure data sharing, thus protecting the privacy of citizens and businesses. It is also important to strengthen the use of modern technology software in urban management in Ho Chi Minh City, such as using AI in the field of public administration, and to enhance the use of management software, such as geographic information system technology application software and remote sensing in resource management (Vietnam News 2022).

The city government needs to have synchronous and specific solutions for financial investment to serve the construction of the municipal government. One of the necessary measures is to improve the effectiveness of socializing financial investment for the city. Therefore, there needs to be a suitable and specific mechanism and institution to attract the participation and financial contribution of citizens and businesses.

Conclusion

We have provided a comprehensive assessment of Ho Chi Minh City's advancement in the execution of electronic municipal governance, which recognizes significant accomplishments, including the formulation of strategic plans, improved IT applications in urban governance, optimized administrative processes, and the expansion of the digital economy. We have also identified significant challenges, such as deficiencies in legal frameworks,

constraints in civil servant capabilities, and obstacles in public participation. This thorough assessment increases understanding of the complexities related to digital transformation at the municipal level.

This study illustrates a significant relationship between the efficacy of public administrative processes and the advancement of Ho Chi Minh City's E-commerce Index. Optimized and effective administrative services enhance business operations, fostering e-commerce advancement. Inefficiencies in public services can obstruct business growth and adversely affect the city's digital economy. Enhancing e-government initiatives will likely augment the city's e-commerce sector.

The research findings offer a thorough evaluation of Ho Chi Minh City's progress in implementing electronic municipal governance. These recommendations highlight the need for institutional reforms, enhancement of civil servant competencies, advancement of IT applications, and increased participation from citizens and businesses. This study associates these concepts with the objective of enhancing local governance and urban quality of life, thereby integrating theoretical principles with practical policy ramifications.

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E-MIESTO VALDŽIOS DIEGIMAS HOŠIMINE, VIETNAME

Anotacija. Ketvirtoji pramonės revoliucija padarė didelį poveikį visiems socialinio gyvenimo ir žmonių veiklos aspektams. Šiame tyrime įvertinama e. miesto valdžios diegimo svarba ir apibrėžiami pasiekimai, suvaržymai ir strategijos, siekiant pagerinti šią paradigmą. Nagrinėdami elektroninės valdžios pasiekimus ir kliūtis, siūlome jos tobulinimo idėjas. Pagrindinis tikslas – didinti valdžios administravimo efektyvumą ir gerinti viešųjų paslaugų piliečiams ir įmonėms kokybę. Atliekant tyrimą Hošiminas naudojamas kaip atvejo tyrimas, skirtas analizei, išvalgomis ir rekomendacijoms apie e. miesto valdžios pažangą šiame reikšmingame didmiestyje pateikti.

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