UNIVERZITA PAVLA JOZEFA ŠAFÁRIKA
v Košiciach
FAKULTA VEREJNEJ SPRÁVY

2/2024
ročník XXV.
ISSN 2453-9236

VEREJNÁ SPRÁVA A SPOLOČNOSŤ

PUBLIC ADMINISTRATION AND SOCIETY

VEREJNÁ SPRÁVA

A

SPOLOČNOSŤ

PUBLIC ADMINISTRATION

AND SOCIETY

Open Access:

Indexovaný v:/Indexed in:

2/2024

ročník XXV.

Verejná správa a spoločnosť

Verejná správa a spoločnosť je vedecký časopis fakulty, ktorý uverejňuje vedecké príspevky, príspevky do diskusie a recenzie obsahovo orientované na teóriu a prax verejnej správy. Poslaním časopisu je publikovať významné výsledky vedeckého výskumu z oblasti verejnej správy a príbuzných disciplín súvisiacich so študijným profilom a vedeckým zameraním fakulty. Časopis vychádza v elektronickej verzii.

Public Administration and Society

Public Administration and Society is a scientific journal publishing scientific academic articles, contributions to discussion and reviews having the content orientation on the theory and practice of Public Administration. The mission of the Journal is to publish significant results of the scientific scholarly researches regarding the area of public administration and related disciplines which are connected with the study profile and scientific bias of our Faculty. The Scientific Journal is issued in electronic version.

Adresa redakcie:
Verejná správa a spoločnosť
Univerzita Pavla Jozefa Šafárika v Košiciach
Fakulta verejnej správy
Popradská 66, P.O.BOX C-2
041 32 Košice
Tel.: 055 / 788 36 17
Fax: 055 / 788 36 65

ISSN 2453-9236 (online)
https://doi.org/10.33542/VSS2024-2-0

Verejná správa a spoločnosť vychádza 2x ročne ako vedecký časopis.

Vydavateľ: Univerzita Pavla Jozefa Šafárika v Košiciach, Vydavateľstvo ŠafárikPress
Šrobárova 2, 041 80 Košice
IČO: 00 397 768

Sídlo vydavateľa: Šrobárova 2, 041 80 Košice

Adresa redakcie:
Verejná správa a spoločnosť
Univerzita Pavla Jozefa Šafárika v Košiciach
Fakulta verejnej správy
Popradská 66, P.O.BOX C-2
041 32 Košice
Tel.: 055 / 788 36 17
Fax: 055 / 788 36 65
E-mail: fvs-vss@upjs.sk

Vydanie periodickej tlače: december 2024

ISSN 2453-9236 (online)

CONTENTS

SCIENTIFIC PAPERS

The Path of Digitalization for Public Healthcare Institutions in the Province of Annaba (Eastern Algeria)

Aboubaker Khoualed, Abdelghani Lebza, Mouloud Khoualed, Djihed Boumankar

https://doi.org/10.33542/VSS2024-2-1

Abstract

This study attempts to discuss the digitalization of Algeria's health care sector, focusing on public hospital institutions operating in Annaba province as a case study. To achieve the aforementioned objective, a descriptive methodology was employed, utilizing various data, statistics, and reports relevant to the topic, obtained through fieldwork conducted at the Directorate of Health and Population in the province of Annaba. The results of the field study indicated that considerable efforts had been made to digitize public hospital institutions in Annaba province, which had contributed to improving the digitalization of public hospital institutions in the province to nearly 50 per cent. However, many challenges remain in the digitalization process in the province's health-care sector, most of which are technological, administrative, human, financial and legislative in nature, and must be addressed with rapid solutions.

Keywords: *digitalization, healthcare, hospital Institutions, patients, Province of Annaba*

Introduction

Most countries consistently strive to achieve stability and continuity, with the health of individuals being one of the highest priorities for governments. Many nations have invested their material and human resources to enhance healthcare, especially in a world currently experiencing significant changes across all levels and various fields. One of the most recent and impactful of these changes is the COVID-19 pandemic, which had severe repercussions, compelling most systems to enter the realm of digitalization to keep pace with scientific and technological advancements across all vital sectors, particularly healthcare.

Algeria is also facing these challenges, making it essential to adopt a specialized digital information system for managing public hospitals that aligns with rapid technological developments. The Algerian government, through the Ministry of Health, is making substantial efforts to modernize the healthcare sector and digitize public hospital institutions. This initiative aims to accelerate and simplify the management process of the healthcare sector by implementing a dedicated digital system. In light of the ministry’s recommendations to expedite

the digitalization of the healthcare sector, it can be said that digitizing public hospitals is not only an urgent necessity but also represents the future of the healthcare system as a whole. To achieve this, continuous efforts must be made to improve healthcare services by leveraging technology and digitizing the healthcare sector. In this context, this study attempts to assess the current state of digitalization in public hospital institutions in the province of Annaba, identifying the key efforts and obstacles to their digitalization, with the aim of providing recommendations that could support the digitalization of the Algerian healthcare sector as a whole.

1. Literature Review

If we look back just five years, we find that local studies addressing digitalization were quite scarce, comprising only a few research papers and theses written in French or Arabic. However, starting in 2020, the Ministry of Higher Education and Scientific Research in Algeria adopted digitalization as one of the key pillars of reform for the higher education sector in the country. This led to the establishment of research laboratories and centers focused on digitalization, as well as encouraging Algerian researchers to study digitalization and apply it to various economic, social, human, political, scientific, and artistic fields. As a result, today, there is a significant number of previous studies conducted by Algerian researchers in English on the subject of digitalization in general. In the economic domain, many local studies have focused on uncovering the reality and impacts of digitalization on the local economy and various macroeconomic variables. Among the most recent of these studies are those by Bouberka, Fadel, & Derrar (2013), Djeddi & Ferkoul, (2023), Tiour, Koridjidj, & Khalifa, (2024), and Boutarfa (2024).

There are also numerous other local studies that have explored the applications of digitalization across different sectors and industries in Algeria, particularly following the global COVID-19 pandemic, which saw a significant boom in digitalization both globally and locally, as it became the optimal tool for implementing lockdowns and social distancing measures. Some of the key local sectors that Algerian researchers have focused on in their digitalization studies include the telecommunications sector (Ouchene & Belkaci, 2022), (Nedil, Zerouli, & Khouatra, 2014), the banking sector (Boukrouh, 2022) (Adnane, 2014), (Khanoussa & Fodil, 2024), commerce and marketing (Chaabna & Wang, 2015), (Bensaad & Annabi, 2024), tourism and hospitality (Guemide, Benachaiba, & Maouche, 2019), (Azizi, Benbordi, & Derbal, 2024), and education (Zermane & Aitouche, 2020), (Abderrezzak & Dahmani, 2024)

Regarding previous local studies that have addressed the topic of digitalization in the Algerian healthcare sector, they are very limited. Among the most recent is a study by Benmoussa & Boubechiche (2024), which aimed to clarify the role of e-health in the management and governance of healthcare institutions in Algeria. To achieve this objective,

the researchers conducted a field study at the Ras El Ouyoun Clinic in Batna, focusing on the uses of the GMAO platform, a digital healthcare platform in Algeria. The study concluded that this digital platform plays a significant role in shaping the strategies and directions of healthcare institutions concerning the acquisition and maintenance of medical equipment.

Another recent study conducted Cherroun & Debla (2024) aimed to discuss a new form of digitalization-based healthcare service, namely Hospital at Home (HAH). To achieve this objective, the researchers used interviews with the head of the HAH service and the medical staff at a hospital in Algeria providing this service, specifically Hakim Saadan Hospital in the province of Biskra (southern Algeria). The study concluded that there is increasing interest in this service, given the large number of patients who need it, as it is an innovative tool for providing high-quality and cost-effective care, particularly for the elderly and those with chronic diseases. However, there are noticeable shortcomings, particularly in the inadequacy of equipment for the medical staff providing this service.

The study by Ben Toumi (2023) aimed to explore the role of health information technology in mitigating the effects of the COVID-19 pandemic. To achieve this objective, the researcher conducted a survey-based study using a questionnaire tool on a random sample of 73 doctors and administrators at private hospitals operating in the province of M'sila (eastern Algeria). The study found that the private hospitals under study make good use of health information technology, which helped reduce the negative impacts of the COVID-19 pandemic by 44.89%.

Bentlemsani (2023) conducted a study aimed at understanding the contribution of digitalization to the management of the Algerian healthcare sector during the COVID-19 pandemic. To achieve this objective, the researcher conducted a field study at the Mohamed Boudiaf Public Hospital in the province of Médéa (central Algeria), using interviews to gather opinions from a group of administrators and doctors at the healthcare institution under study. This study ultimately demonstrated the role of digitalization in mitigating the effects of the COVID-19 pandemic on the healthcare sector in Algeria. However, the biggest challenge facing digitalization, according to the study's results, is updating patient data at the hospital, which typically takes a long time.

In the same year, Kherraz (2013) conducted a study aiming to shed light on the use of information and communication technology (ICT) in developing healthcare in Algeria as a case study. The study also aimed to propose better ways to use technological advancements to overcome the challenges facing Algeria's healthcare system. The researcher divided the study into several parts, the first of which addressed the state of healthcare concerning the use of digital technologies in accessing, processing, and storing information. The study then highlighted the various drawbacks of the misuse of ICT in healthcare settings, identifying causes and consequences.

Another study Brahimi & Dergal (2022) aimed to evaluate the initial steps of digitizing Algeria's healthcare sector. To achieve this objective, the researcher conducted an analytical study of one of the most prominent digitalization projects in Algeria's healthcare sector, adopted by the Ministry of Health—the "SIHATIC" project. Using a questionnaire tool, the researcher surveyed a random sample of 53 employees from healthcare institutions in the province of Oran (western Algeria). The study concluded that there is significant use of digital technology in the healthcare institutions under study. However, the results of digitalization implementation in Algeria's healthcare sector have not been satisfactory so far, indicating the need for further efforts in this area.

2. Theoretical Framework

2.1 Basic Concepts of Digitalization

Digitalization is a modern concept that emerged with the development and evolution of information and communication technology. The term refers to the use of digital technologies to transform business models and processes, creating new opportunities for wealth (value) generation (Jovanović, 2020, p. 66).

Digitalization also represents various procedures that allow the transformation of available intellectual content from traditional physical storage media into an electronic (digital) format that can be circulated and reduced to numbers and codes (Frenzel, Muench, Bruckner, & Veit, 2021, p. 02).

Digitalization is defined as a technical process that converts previously created paper-based data from analog format to digital format using binary systems (Rittera & Pedersen, 2020, p. 181). This process enables the immense capability to store, process, and transmit this information via computers (Chen, Despeisse, & Johansson, 2020, p. 03).

Digitalization is characterized by several key features, summarized as follows:

- **Time Reduction:** This refers to the ease and speed of accessing stored information through electronic media (Plesner, Justesen, & Glerup, 2018, p. 03).
- **Space Reduction:** Digitalization eliminates geographical boundaries, effectively making all locations adjacent (Päivi , Maarit , Jukka , & Susanna , 2017, p. 64).
- **Formation of Communication Networks:** A collection of technology and information-based equipment unite to form communication networks, which enhances the flow of information among users and allows the exchange of information with various other activities.
- **Interactivity:** Users of this technology can be both receivers and senders simultaneously. Participants in the communication process can exchange roles, creating interaction between individuals, institutions, and various actors (Päivi , Maarit , Jukka , & Susanna , 2017, pp. 64-65).

- **A synchronicity:** Digitalization allows users to receive messages at any time, meaning they can use the system whenever it suits them (Khan, Khan, & Aftab, 2015, p. 140).

The general importance of digitalization is reflected in (Azim, Yatin, Jensonray, & Mansor, 2018, p. 172):

- Ease and speed of obtaining information from its sources.
- Wide and in-depth access to information.
- Reduction of information acquisition costs.
- Ability to print stored information when needed.
- Provision of storage space, along with the protection of information.

2.2 The Nature of Digitalization in the Healthcare Sector

The digital and information revolution is one of the significant events that the world witnessed during the last two decades of the twentieth century. The focus on information and communication technology has become an urgent necessity to keep pace with the developments that characterize our current era, which have impacted all fields (Frączkiewicz-Wronka, 2021, p. 25). Amidst all these changes and increasing competition, the healthcare sector, like other service sectors, strives to adopt various strategies that will digitalize the healthcare sector and improve the quality of healthcare services provided (Panchbudhe, Pund, Jha, & Bankar, 2021, p. 115).

Healthcare professionals face a set of challenges that complicate the management of patients' health, among the most significant of these challenges is the absence of an electronic record that ensures the informational documentation of patients and their treatment paths. Consequently, citizens are compelled to maintain paper documents related to their medical files (prescriptions, medical analyses, radiological images). Additionally, the healthcare sector also suffers from a lack of documented data regarding health operations and their beneficiaries, whether in the public or private sector (Frączkiewicz-Wronka, 2021, p. 26).

Digital health or the digitalization of the healthcare sector is a relatively modern term used to describe the dual use of electronic information and communication technologies in the healthcare sector. It refers to providing consultations, information, and medical services to patients through electronic media, enabling the patient to follow up on medical examination results, laboratory analyses, and access information and services through hospital local network applications or the internet (Rajan & Shalini, 2019, p. 242).

The digitalization of the healthcare sector relies on applications of artificial intelligence, cloud computing, and electronic health records. The latter is a record designed to display all activities related to an individual's medical health, such as patient data, appointment scheduling, prescription requests, health information, medical communication with clinics, and prescription renewals in an electronic format. It also allows the patient to participate in the

preparation of their medical record, which should be designed to include all activities related to the patient's medical affairs (Blix & Levay, 2018, pp. 07-08).

The digitalization of the healthcare sector contributes to making information accessible to a larger number of stakeholders through digital platforms, facilitating access to healthcare services. It also simplifies searching through digital databases and retrieving information in various ways, enabling accurate diagnosis and follow-up of medical conditions. Additionally, it improves the quality of healthcare services and reduces their cost. Moreover, it eases communication between healthcare sector professionals and the exchange of expertise among them. Digitalization also enables the continuous updating of information and the provision of original data. Furthermore, it aids in monitoring and geographically and demographically tracking epidemics (as was the case during the COVID-19 pandemic) (Rajan & Shalini, 2019, pp. 242-243).

3. Methodology

The primary purpose of this study is to analyze the digitalization trajectory of public healthcare institutions operating in the province of Annaba. This analysis is conducted by discussing several key points, including the nature of the health map in Annaba, the current state of digitalization in public healthcare institutions in the province, and analyzing the various efforts and obstacles in the digitalization of the healthcare sector within the province. The discussion of the various aforementioned points provides us with a clear understanding of the trajectory of digitizing the healthcare sector in Algeria, which began relatively late compared to other global healthcare systems. The first attempts at digitizing the healthcare sector in Algeria date back to the early 2000s, progressing slowly until the global COVID-19 pandemic accelerated the pace of this digitization process.

Furthermore, this study aims to raise awareness among the officials of the Algerian Ministry of Health and managers of public hospitals in Algeria, particularly at the local level, about the importance of digitalizing the healthcare sector as a necessary tool for better governance and improving the quality of healthcare services. Another equally important objective of this study is to draw attention to the topic of healthcare digitalization in Algeria and to provide a preliminary study on this subject, which is relatively new for Algerian researchers, with previous local studies in this area being very scarce.

To achieve the aforementioned objective, this study primarily utilized a descriptive approach, analyzing and discussing the results of previous studies in the theoretical part of this paper. For the practical part, the study relied on a guided interview with the Health Director of Annaba province. Several open-ended questions were raised, closely related to the subject of the study, such as the strategies adopted for digitizing the healthcare sector, the efforts undertaken to achieve this goal, and the obstacles hindering the successful implementation of this process,

in addition to analyzing all data, statistics, and reports pertinent to the subject, which were obtained from the Health and Population Directorate of Annaba province. These documents were originally in French, and we translated them for use in the analysis. These documents included: plans for the digitization of the public health sector in Annaba Province, the status of the health map of Annaba Province, the annual reports of the Directorate of Health and Population of Annaba Province, and statistical bulletins related to the digitization of the healthcare sector in Annaba Province.

It Is worth noting that the Health”and ’opulation Directorate of Annaba province is a decentralized state service under the supervision of the Minister of Health, Population, and Hospital Reform and the provincial governor. It was established by Executive Decree No. 97/261 dated July 14, 1997, which defines the specific rules for the organization and operation of provincial Health and Population Directorates. The organizational chart of the Health and Population Directorate in the province was established by the joint ministerial order dated May 12, 1998, and comprises six main departments and eighteen offices. These departments include: the Human Resources and Legal Affairs Department, the Planning and Resources Department, the Infrastructure and Health Professions Department, the Prevention Department, the Population Department, and the Health Activities and Pharmaceutical Products Department.

The Health ’nd Population Directorate of Annaba province is involved in carrying out the following tasks: implementing health laws and regulations, executing national and local health programs, providing treatment and promoting healthcare, combating drug addiction, managing the sector’s human and financial resources, conducting social communication and awareness activities, collecting, analyzing, and managing health, epidemiological, and demographic data, managing healthcare infrastructure, providing emergency and disaster response services, monitoring and evaluating health investment programs, implementing health education programs, and overseeing professional competitions and examinations.

4. Results and Discussion

4.1 Overview of the Health Map of the Province of Annaba

The health map is a tool used within the national health system to comprehensively plan health services across the country in general, and at the local level in particular. This map aims to guide and coordinate all resources and activities dedicated to ensuring complete healthcare coverage.

The health map enables the identification of health needs and the implementation of necessary improvements in both the public and private health systems. This includes the appropriate distribution of resources and the correction of any regional or local imbalances. It also contributes to monitoring and controlling costs to effectively meet the health needs of the

population. Multiple factors are considered in this process, such as epidemiological data, demographic data, geographical data, and socio-economic data. Additionally, the orientations of the national territorial planning scheme are taken into account.

Annaba is located in the northeast of Algeria, approximately 600 km east of Algiers and 150 km from Constantine, and about 80 km west of the northeast Tunisian border. According to the most recent general census of housing and population in 2020, the population of Annaba is 802,768. The population is rapidly increasing, particularly in the districts of Annaba and El Bouni, which imposes a demand on the local authorities in the province of Annaba to provide health facilities and institutions capable of meeting the needs of the residents. The local authorities in the province have focused on establishing and organizing public hospitals, with a total of 10 structures including a university hospital center, specialized healthcare institutions, and public primary health institutions, among others, to ensure coverage for the entire population of the province. The following figure illustrates the types and number of public hospitals in the province of Annaba:

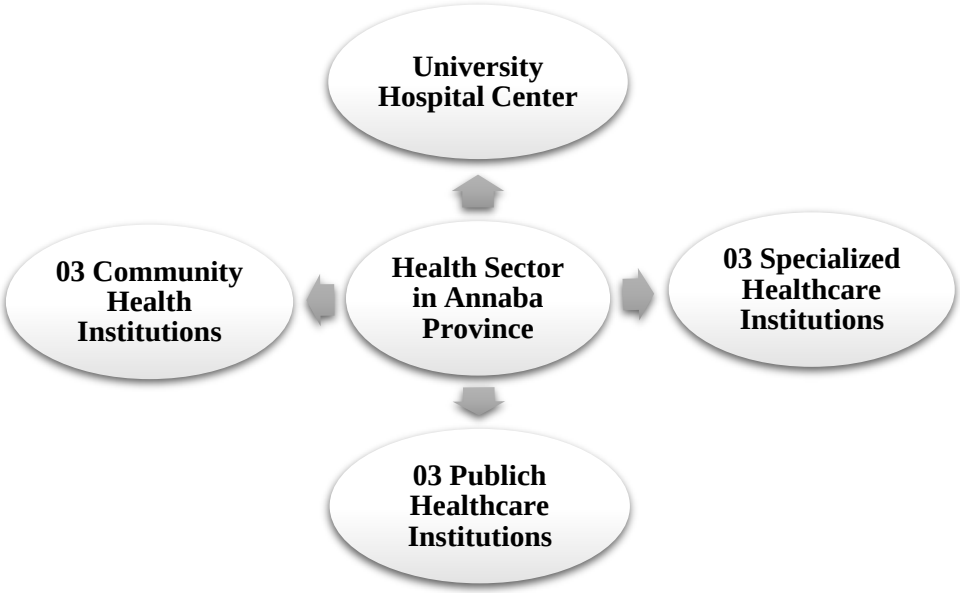

Figure 1: Structure of the Public Health Sector in Annaba Province

Source: Data from the Directorate of Health and Population of Annaba Province

Accordingly, the local authorities have worked to distribute their healthcare structures fairly, ensuring that all citizens benefit equally from the provided health services, thereby upholding the principle of equality before public services. The following map illustrates how health institutions are distributed across Annaba Province:

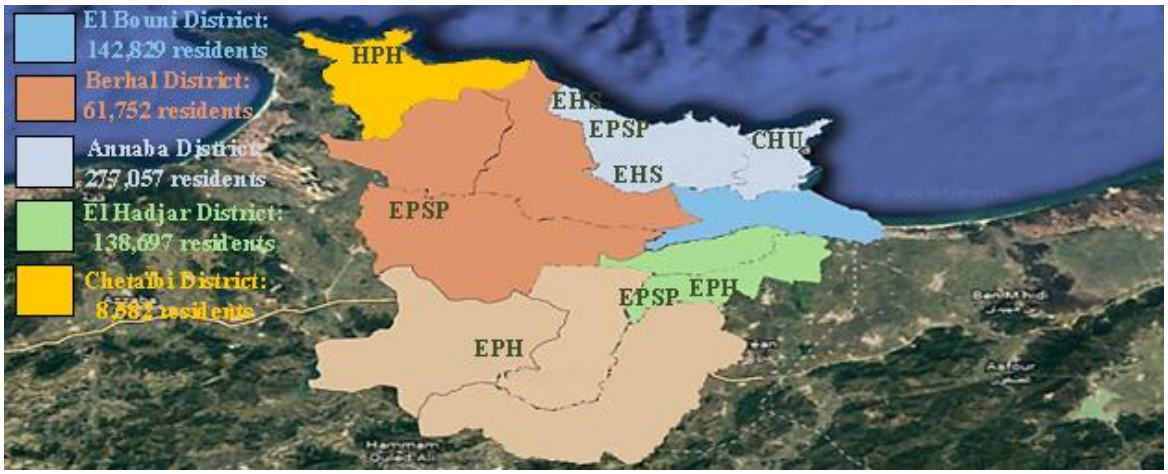

Figure 2: Percentage of Digitalization in the Health Sector in Annaba Province

Source: Data from the Directorate of Health and Population of Annaba Province

What is observed from the health map of the province is the local authorities' effort to distribute health services equally according to pre-established and approved criteria. This effort begins with the university hospital center, which is established with a regional focus. The term "regional" here refers to geographical regions rather than political or social regions. To clarify, each group of specific eastern provinces, namely Annaba, El Tarf, Skikda, Souk Ahras, and Tébessa, shares one university hospital center.

As for the specialized hospital institutions, of which there are four, they have been established in the two largest districts of the province, with two institutions each in the El Bouni and Annaba districts. It is worth noting that these types of hospital institutions are specialized in treating a specific type of disease or a specific category of patients from the entire province, as well as from the previously mentioned neighboring provinces.

Regarding public hospital institutions, the standard practice is to have one public hospital for every 80,000 inhabitants. For example, although the population in both the Ain Berda district and the Shattibi district does not reach the required threshold, each has its own district hospital, contributing to better healthcare services. Meanwhile, the El Hadjar district, with a population of 138,697, has only one public hospital. This is due to the presence of a community health institution within the same district, creating a balance between the two institutions.

However, what is noticeable from the health map of the province of Annaba is that the two largest districts, Annaba and El Bouni, lack public hospital institutions. The local authorities have instead relied on community health institutions and the university hospital center, which creates pressure on the previously mentioned institutions, especially since the combined population of the two districts is 419,886, accounting for 65% of the province's total population.

Additionally, the local authorities recognize that certain areas with populations exceeding 5,000 inhabitants, which are somewhat isolated—such as Saroul, Ain Jbara, El Kantra, Bou Sdera, Bou Zarroura, and Ain Sayd—require attention. As a result, the local authorities have begun constructing treatment rooms in these areas, with operations expected to start soon.

Furthermore, the local authorities have initiated studies to establish three more hospital institutions in the Berrahal and El Bouni districts. This initiative aims to reduce the pressure and burden on the hospital institutions in both Annaba and El Bouni districts.

4.2 The Reality of Digitalization in Public Hospital Institutions Operating in the Province of Annaba

The health sector in the province of Annaba is experiencing a significant delay in digitalization. According to the latest statistics conducted by the Directorate at the beginning of 2023, in response to a directive from the relevant ministry, the overall digitalization rate of the sector reached 50.3%. This percentage does not reflect the efforts made by the local authorities at the provincial level. The following figure illustrates the pace of digitalization in the health sector across the province of Annaba:

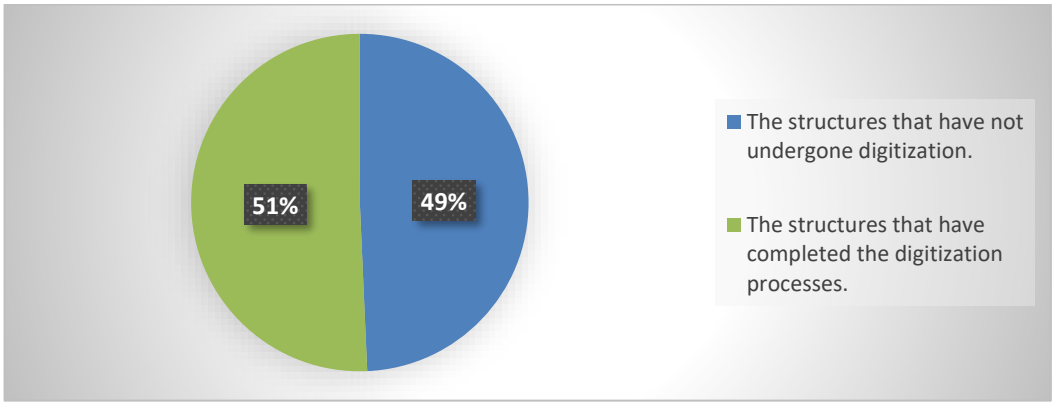

Figure 3: Digitalization Rate of the Health Sector in the Province of Annaba

Source: Data from the Directorate of Health and Population of the Province of Annaba

As previously mentioned, the percentage of 50.3% reflects the shortfall the sector faces in digitalization, particularly since the project of digitizing public hospitals is not a recent initiative but has been ongoing for several years. This project aims to improve the overall performance of the sector and to build and support an information system infrastructure specific to the Ministry of Health. The digitalization of public hospitals has been a primary goal of the ministry for years.

Analyzing the performance of public health structures in the province in terms of sector digitalization reveals that most of the delay originates from community health institutions. There

are three such institutions located in the Annaba, Berrahal, and El Hadjar districts. The following figure illustrates the progress in digitizing all health structures across the province:

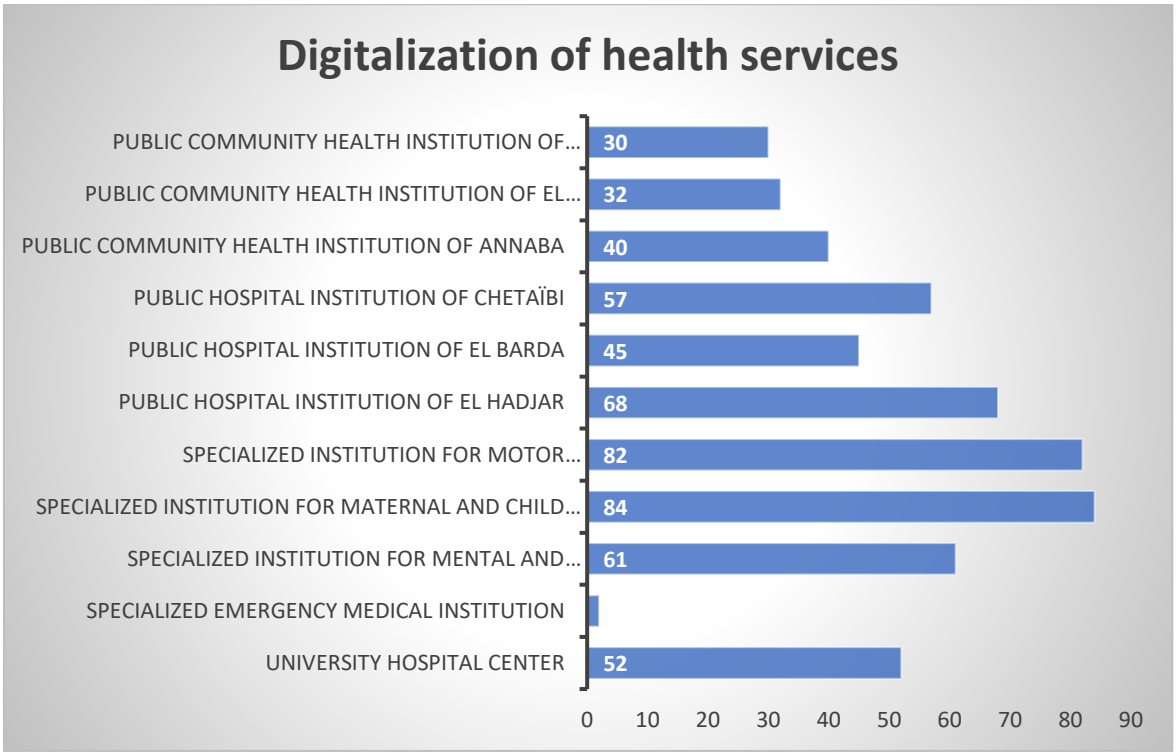

Figure 4: Progress Rates in Digitizing Public Hospitals Operating Annaba

Source: Data from the Directorate of Health and Population of the Province of Annaba

Here, we find that the three specialized hospital institutions—Specialized Hospital for Maternal and Child Health, Specialized Hospital for Motor Rehabilitation, and Specialized Hospital for Mental and Psychological Diseases—have surpassed a 60% digitalization rate, with the three hospitals recording rates of 84%, 82%, and 61%, respectively. These are the highest rates recorded in the overall sector digitalization, in addition to the El Hadjar Public Hospital, which recorded a progress rate of 68%. The university hospital center, meanwhile, reached a digitalization rate of approximately 52%, which is a significant figure considering the number of hospitals under its management (Ibn Rushd Hospital, Dorban Hospital, Ibn Sina Hospital, Sainte Thérèse Hospital, Ophthalmic Surgery Hospital, Cancer Treatment Hospital). The Shattibi Public Hospital and El Hadjar Public Hospital recorded rates of 57% and 45%, respectively. However, community health institutions recorded the lowest digitalization rates in the sector overall, with the community health institution in Annaba district achieving the highest rate among them at 40%. The other two institutions, located in El Hadjar and Berrahal districts, recorded lower rates of 32% and 30%, respectively.

Sector officials attribute this delay in digitalization within community health institutions to the difficulty of coordinating between the various structures of each institution. The three community health institutions are responsible for a total of 78 treatment rooms, 25 multi-service

clinics, and 23 school health units. Additionally, most of the treatment rooms, multi-service clinics, and school health units in El Hadjar and Berrahal districts, in particular, were established in municipalities and areas that already suffer from a lack of local development and infrastructure. For example, multi-service clinics in Ain Jbara, El Kantra, Bou Sdera, and Ain Sayd are all located in remote and somewhat isolated areas, far from the provincial center. Thus, the priority for these areas is to provide health services that cover all their residents, with digitalization efforts to follow.

The lowest digitalization rate is found in the Specialized Emergency Medical Hospital, which has not exceeded 5%. This is because the hospital was initially planned to start offering services at the beginning of 2025. However, due to increased pressure on the university hospital center, which is the primary facility for emergency surgical intervention in the province of Annaba and neighboring provinces, local authorities, in coordination with the relevant ministry, decided to allow the hospital to start offering some of its services within the available capacities. At the same time, efforts continue to equip it with the necessary equipment and supplies so that it can be fully operational in the coming years.

Returning to the digitalization rates recorded in the hospitals, sector officials also attribute the low rates to the lack of resources in medical analysis laboratories and MRI services, which require specialized and costly equipment for digitalization. The following figure illustrates the shortcomings in the digitalization of medical analysis laboratories and MRI services.

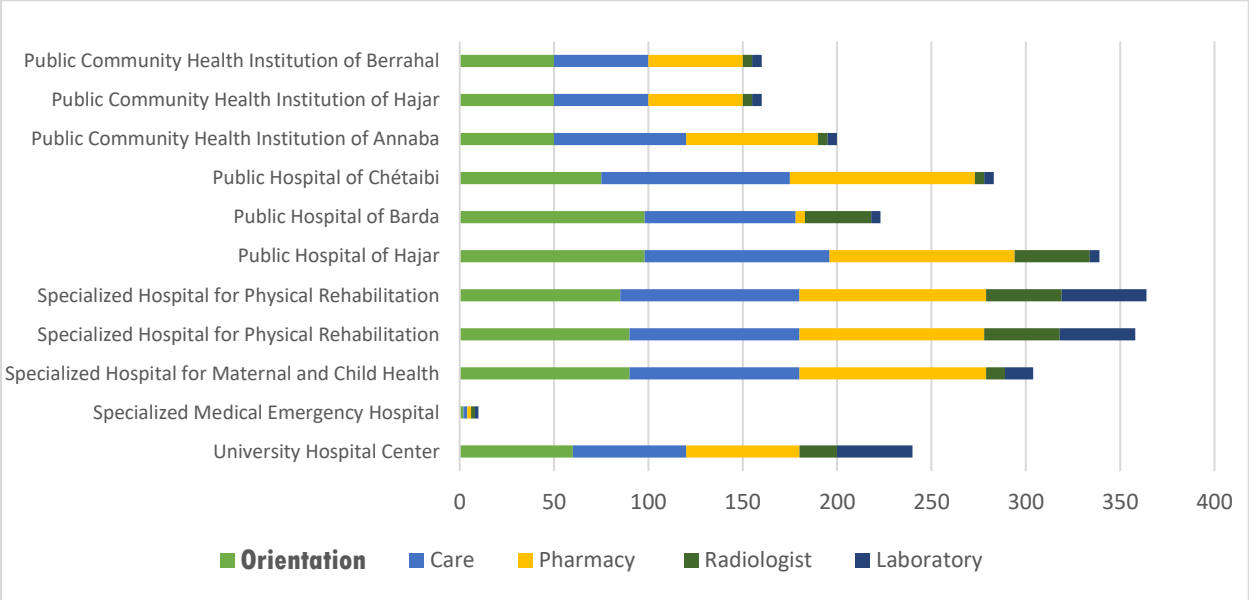

Figure 5: Digitalization Rates of Hospital Services Operating in the Province of Annaba

Source: Data from the Directorate of Health and Population of the Province of Annaba

From the previous figure, we observe that the pace of digitalization is significantly higher in the areas of reception (orientation), treatment (care), and hospital pharmacies compared to medical analysis laboratories and MRI services. This difference is due to the fact that digitizing reception, treatment, and pharmacy services does not require extensive equipment; it only involves using a good-quality computer to input patient-related information, with human intervention being necessary to enter the data into the system. On the other hand, for medical analysis laboratories and MRI services, the process is more complex. It not only involves data entry but also requires advanced equipment that can automatically transfer medical analysis results and MRI images directly to the physician without human intervention. This technology is not yet available in most hospitals across the province, leading to manual processing in medical laboratories and MRI services, which demands more effort and time until the necessary equipment for digital processing is provided.

4.3 Efforts to Digitize Public Hospital Institutions Operating in the Province of Annaba

Modern technology is a vital foundation for the development and improvement of the healthcare sector, as digitalization enhances service efficiency and leads to a qualitative transformation in the advancement of medical care. In this context, the province of Annaba is moving toward a digital health future by taking active steps to improve the performance of its public hospital institutions through digitalization. Below are the key efforts made to accelerate the pace of sector digitalization in general:

Development and Launch of Several Important Digital Health Applications

- Electronic Medical Record DEM-DZ: A digital medical record that contains all the patient's personal and administrative information, diagnostic details, medical history, vital signs, treatment procedures undertaken, approvals for these procedures, laboratory data, and radiological images.
- Maintenance Information System GMAO-DZ: A program for the electronic management, maintenance, and monitoring of medical and paramedical equipment and devices. The goal of this program is to enhance and monitor daily operations related to the maintenance of these devices and equipment, as well as inventorying them and providing regular reports on their status.
- Mandatory Reporting of Infectious Diseases Information System MDO: A system for counting individuals with infectious diseases such as measles and viral hepatitis. The aim of this system is to gather extensive information about patients and their surroundings to monitor their treatment status and compliance with recovery. It also aims to limit the spread of infectious diseases by tracking their prevalence among the province's population.
- Human Resources Information System RH-SANTE: An application for managing human resources specifically for the public health sector in Algeria. It enables the management of

employee data, salaries, and other benefits, as well as tracking performance and evaluations, and provides a range of tools to efficiently manage human resources within public hospital institutions.

Establishment of Digital Training Teams in Each Hospital Institution

With the emergence of digital transformation in hospital institutions, local authorities issued an instruction requiring the establishment of digital training teams. These teams are tasked with training users within their institutions and should include individuals with expertise in their respective fields, as well as prior knowledge of using technological tools such as computers and tablets. The training teams themselves will receive specialized training at the Health Directorate of the province of Annaba. The teams will exclusively include the following categories: general practitioners, specialists, engineers, assistant engineers, biologists, MRI specialists, and administrative managers. Each hospital institution will determine the number of team members according to its needs.

Creation of a Monitoring and Oversight Team for the Digitalization Process in Hospitals

To ensure the smooth progress of digitalization in public hospital institutions in the province of Annaba, local authorities decided to establish a team consisting of the Secretary-General of the Health Directorate, engineers from the Directorate, and four additional employees selected as needed. The primary task of this team is to monitor the digitalization process in public hospitals and report any violations related to the non-use of recommended digital applications by the relevant ministry. This team conducted more than 20 field visits to the main health structures in the province.

Conducting Training Courses on How to Use the Current Digital Applications

In 2023, the Health Directorate of the province of Annaba, in coordination with the concerned hospitals, conducted 50 training courses for 1,520 employees on the applications used in public hospitals. Most of the courses focused on how to use the electronic medical record and how to solve certain technical issues related to the application. In the same context, the Secretary-General of the Health Directorate confirmed that an open training day was scheduled in coordination with Badji Mokhtar University of Annaba for 300 employees of the university hospital center on December 27, 2023, to train them on how to use the current digital applications.

Allocating Part of the Equipment Budget for Hospital Digitalization:

In 2023, a total of 3.15 billion DZD was spent by public hospital institutions to revive the digitalization project and renew digital equipment. In this context, the Secretary-General of the Health Directorate of the province of Annaba confirmed that all public hospitals in the province are required to re-equip their structures using the budget allocated to them. The process of renewing digital equipment for public hospitals is being implemented gradually to avoid

excessive expenses that could impact other operations, such as acquiring much-needed MRI machines and scanners, which are in short supply in the province.

Establishment of Digital Equipment Maintenance Teams in Each Public Hospital Institution

To ensure the smooth operation of all hospital institutions in the province, local authorities issued a decision to form maintenance teams within each hospital. In this regard, recruitment began for specialists in information technology. The Secretary-General of the Health Directorate of Annaba also noted that the number of IT engineers and technicians increased by more than 30% in 2023 compared to 2022.

Creation of an Evaluation Team for the Infrastructure and Digital Equipment of Hospital Institutions

To develop a well-structured future plan for digitizing the entire sector, a team was established to evaluate the infrastructure of hospitals and assess the readiness of their equipment for digitalization. This evaluation includes assessing the quality of digital equipment, the quality of infrastructure related to telephone and internet lines, and based on the assessments, determining the actual needs of each hospital and its capacity to implement digitalization effectively, moving away from traditional practices.

4.4 Challenges to Digitizing Public Hospital Institutions Operating in the Province of Annaba

While the world is rapidly moving towards digital transformation in healthcare, several challenges clearly hinder the digitalization of public hospital institutions in the province of Annaba, including:

4.4.1 Internet-Related Challenges

The internet network in the province of Annaba has experienced significant fluctuations, negatively affecting the efforts to digitize public hospitals locally. These challenges include inconsistent internet quality, with the network suffering from significant fluctuations in speed and service quality. This inconsistency hinders the ability of public hospitals to provide services as planned, making it difficult to meet patients' needs effectively.

Additionally, outdated infrastructure presents another challenge, as the telephone network in the province still relies primarily on copper cables instead of modern fiber optics. This issue poses a significant barrier to improving connection quality and speed. Furthermore, frequent service interruptions delay patient registration, causing inconvenience and delays in reception and treatment processes, especially in emergencies.

Another issue is that the monopoly of Algeria Telecom in the telecommunications market has been a major reason for the low quality of internet service both nationally and locally. This lack of competition and market monopoly has contributed to the problem.

4.4.2 Technological Challenges

The technological challenges faced by public hospitals are twofold: first, the electronic equipment used, and second, the digital applications employed in public hospitals. Regarding the first aspect, most of the computers and digital tablets used in public hospitals, as well as some other technological equipment, are outdated and not compatible with current-generation technology. For instance, most of the computers used have processors with speeds no higher than 2 GHz, which is insufficient even to run the Windows operating system. This limitation creates numerous issues when running applications and computers.

On the other hand, the health applications used in public hospitals were not designed with the technical and human capabilities available at the national or local level in mind. Some applications exceed 6 GB in size, which is incompatible with the capacity of most electronic equipment available in hospitals. Moreover, many of the applications contain numerous windows and options that are not currently activated or used, which increases their size and creates problems when running them. This issue arises because the applications are not locally made and therefore do not align with the current goals and plans set by the Ministry of Health.

In response, public authorities recognized this issue and established the National Agency for the Digitalization of the Health Sector. This agency has been exclusively tasked with overseeing the digitalization process in the health sector, including designing locally-made applications that take into account all technical and human aspects, as well as information security concerns, which will be discussed later.

4.4.3 Information Security Challenges

Information security challenges pose a significant threat to public hospitals, particularly concerning the privacy of health information and the overall local health system. There are fears of potential breaches of the information systems in public hospital institutions, which could compromise patient data and their privacy. Such breaches could damage the administrative information system, especially sensitive information like medical records and appointment schedules.

Moreover, most patients are uncomfortable with sharing all of their health information and are reluctant to disclose it, fearing that it might be used by other entities, such as employers. This reluctance highlights the lack of trust in digital technology and transactions due to concerns about privacy and security in electronic health services.

4.4.4 Administrative Barriers

These barriers stem from several reasons, including:

- Weakness in Planning and Administrative Coordination: This refers to shortcomings in planning and coordination by senior management regarding digital transformation programs. This includes the failure to implement the necessary organizational changes to facilitate this transformation, such as not establishing departments dedicated to digitalization within hospitals and instead merely forming committees or task forces. This creates the impression that hospital digitalization is a temporary and transient idea rather than a strategic initiative for the entire health sector.
- Lack of a Clear Strategic Vision: There is a deficiency in the clarity of the strategic vision concerning the digitalization of hospitals. This lack of clarity makes the transition toward future digital hospitals more challenging due to the absence of clear and directed guidelines for this transformation, as well as the absence of short-term, medium-term, or long-term plans and objectives. Furthermore, there are no clear indicators to evaluate the performance of public hospitals in the field of digitalization. For example, a short-term goal for hospitals could be to achieve a 30% completion rate in the overall hospital digitalization project, in addition to reaching a 20% digitalization rate for all medical records of citizens in the province of Annaba.
- Employee Resistance to Change: There is resistance among hospital staff to adopting modern technologies due to fears of changes in positions and future career paths. Additionally, they perceive the implementation of digitalization itself as an additional burden on hospital staff, including doctors and nurses, especially given the severe shortage of digital equipment and their lack of qualification to work with these technologies.
- Adherence to Traditional Administrative Methods: The continued use of traditional administrative methods that do not align with the requirements and challenges of the digital age hinders the ability to transition to digitalization in all areas. For instance, most administrative transactions in hospitals are still conducted in their traditional paper-based form, which is due to the lack of actual activation of electronic authentication and signature.

4.4.5 Human Resource Barriers

The challenges of digitalization in improving public hospitals in Algeria also include a range of human-related obstacles. These obstacles are characterized by weak technical and cultural awareness within hospitals on both social and organizational levels, as well as a lack of training programs covering modern technologies in the medical field. This is attributed to the

weak expertise in modern technologies among leaders and the lack of financial incentives provided to them. Moreover, there is resistance among some employees, particularly older ones, to using modern technologies due to their inability to adapt to them and their weak language skills, which delays the digitalization process. Additionally, the shortage of highly skilled technicians and administrators presents further obstacles to adapting to the digital environment in the healthcare sector in the province of Annaba.

One of the most notable observations is that the training programs and courses in hospital digitalization in the province included 1,520 employees in 2023, representing only 12.58% of the total 10,500 employees in the health sector. This percentage is considered insufficient, especially given that the digitalization of public hospitals encompasses all aspects of hospital operations, whether related to providing healthcare services to patients or the administrative work itself.

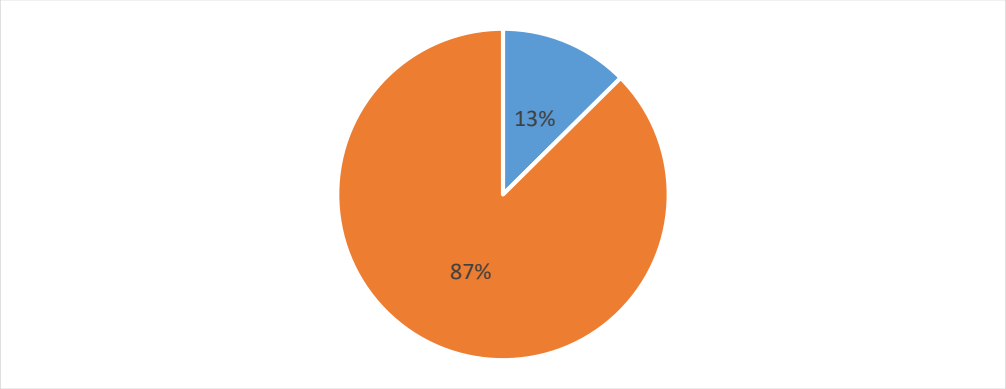

Figure 6: Percentage of Trained Public Health Sector Employees in Annaba

Source: Data from the Directorate of Health and Population of the Province of Annaba

4.4.6 Legislative Barriers

The electronic legal system in Algeria, in general, is characterized by weaknesses and shortcomings in several aspects, most notably in relation to electronic authentication and signature. Therefore, the legal system must align with the requirements of digitalization by establishing an electronic legal framework that protects and documents all electronically conducted activities. This can be achieved through:

- Developing Legislation and Regulations: Digital operations require improving current systems and regulations to be more effective and suitable for application in the digital arena, considering the rapid technological changes.
- The Need for Effective Regulatory Bodies: Establishing regulatory bodies that listen to reports from committees specialized in digital transformation and take the necessary actions to enhance digital readiness, ensuring compliance with security standards.
- Enhancing a Secure Digital Work Environment: It is essential to establish clear conditions for securing the digital work environment and impose deterrent penalties on those who

breach or jeopardize digital programs, thereby contributing to strengthening security and trust in the digital environment.

4.4.7 Financial Barriers

Public hospital digitalization projects face significant financial challenges, which manifest in various ways, most notably the lack of financial resources allocated for renewing and upgrading equipment and departments equipped with the necessary computers and digital devices for hospitals. Additionally, there are limited financial resources required for essential training and qualification processes, and the very high cost of purchasing electronic medical devices presents another obstacle for public hospitals in acquiring such equipment.

The health sector budget for the province of Annaba reached 105 billion centimes in 2023, with 75% of it allocated to operating expenses, primarily for paying health sector employees' salaries. Meanwhile, 25% was allocated to equipment expenses, of which only 3% was designated for the public hospitals' digitalization project, equivalent to approximately 3.1 billion centimes. This amount was allocated for revitalizing digital equipment and infrastructure across all healthcare facilities in the province, which include a university hospital center, four specialized public institutions, three public hospital institutions, and three public health institutions. This percentage is insufficient to cover the shortages that public hospitals face in terms of digital equipment and infrastructure. This explains why the public hospital digitalization project at the provincial level encounters several barriers related to internet speed, the readiness of digital equipment, and their capacity to handle the volume of digital applications used in public hospitals.

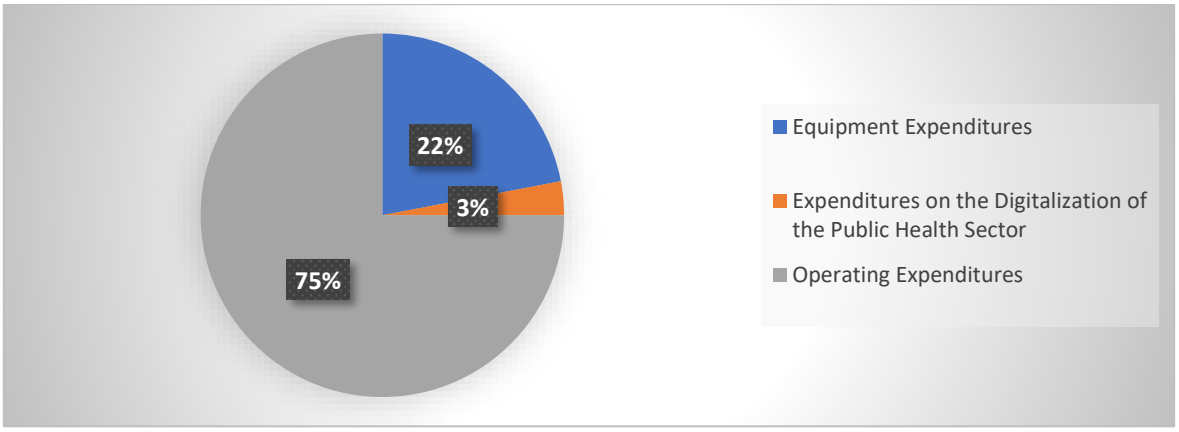

Figure 7: Health Sector Budget for the Province of Annaba

Source: Data from the Directorate of Health and Population of the Province of Annaba

Conclusion

The widening digital divide in many countries and organizations has prompted them to adopt integrated digital strategies and projects that align with their institutional structures. This transformation relies on recognizing the importance of digitalization, the need to renew focus on management, and the pursuit of integrating the digital environment using available resources and capabilities, especially in vital sectors such as healthcare.

The advancement and modernization of healthcare institutions depend on their readiness to adopt modern management methods and requirements. This management must align with current transformations, moving from traditional management to modern management. Additionally, human resources must be valued as a key element contributing to the development of healthcare institutions and the improvement of their performance and the quality of public services.

The Importance of digitalization In the healthcare sector lies In achieving the desired goals for the sector, where the system plays a vital role in improving efficiency in healthcare institutions and adapting to global developments. This requires the creation of leadership competencies capable of fully leveraging this technology to develop electronic health practices. The digitalization of the healthcare sector reflects a significant interest from decision-makers in Algeria in digitalization issues in general, and the digitalization of the healthcare sector in particular, and its contribution to providing modern healthcare services. This is a positive indicator of the quality of the healthcare sector's outputs in Algeria.

The results of the field study have shown that significant efforts have been made to digitize public healthcare institutions in the province of Annaba. These efforts include the launch of several important digital health applications, the formalization of committees to monitor hospital digitalization and maintain their digital equipment, training of health sector employees, allocation of necessary funding for digitalization, and other efforts that have contributed to improving the digitalization rate of public healthcare institutions in the province to approximately 50%. However, many barriers still hinder the digitalization process in the province's healthcare sector, most of which are technological, administrative, human, financial, and even legislative in nature, and these must be addressed and resolved promptly.

This study has concluded with a set of important recommendations, including:

- Valuing the Proposal to Reorganize the IT Function in the Healthcare Institution: This includes activating a specific law for the IT sector and establishing an organizational structure that aligns with the digitalization system.
- Creating a Reference Guide to Achieve Healthcare Compatibility (Interoperability): This will contribute to achieving integration between systems.
- Full Implementation of Electronic Signatures: As a necessary requirement.

- Establish virtual private networks (VPNs): To connect Algeria‘s public healthcare institutions of various classifications (CHU, EHS, EPH, EPSP) with one another and with the Ministry of Health and Population‘s data centers. This would ensure the secure exchange of sensitive medical data.
- Develop a dedicated health cloud: For securely and reliably storing medical data at the Ministry of Health and Population level, while allowing local health and population directorates to access the data from anywhere and at any time.
- Implement an integrated network management system: To monitor network performance, troubleshoot issues, and improve efficiency.
- Apply the latest cybersecurity solutions: To protect data from breaches and cyberattacks, including the use of firewalls, intrusion detection systems, and data encryption.
- Enhancing the Level of Employees Involved in Digitalization: To improve their competencies.
- Raising Awareness and Involving Stakeholders in the Field of Digitalization: To ensure broader engagement.
- Encouraging the Private Sector and Private Clinics: To participate in efforts to develop digitalization.
- Opening Opportunities for Startups to Provide Technical Solutions: For the implementation of the digitalization project, through public-private collaboration, with a dedicated financial envelope.
- Collaborating with Legal Experts: To establish the appropriate legal framework for implementing the digitalization project in the healthcare sector.
- Allocating Necessary Financial Resources: To build the infrastructure in healthcare institutions, considering the costs of these technologies.
- Intensifying Awareness Campaigns about the Importance of Digitalization in the Healthcare Sector: Including introducing relevant partners.
- Establishing a Platform to Receive Client Suggestions: To contribute to the modernization and success of the digitalization project.
- Strengthening Exchanges with Countries Experienced in Implementing Digitalization Projects in the Healthcare Sector: To benefit from their expertise.

References

ABDERREZZAK, B., & DAHMANI, F., 2024. The Significance of Digitalization Projects in the Algerian Higher Education Sector for Enhancing Educational Quality. *Afak for Sciences Journal, 9*(3), pp. 90-101.

ADNANE, A., 2014. Management of Banking Operations and the Impact of Technology on the Future Banks (Case Study of Algerian Banks). *International Journal of Economic Performance, 7*(1), pp. 180-205.

ARRIBI, C., & BOUTARFA, S., 2024. Digital Transformation: Opportunities and Challenges of Digitalization in Algeria. *Economic Researcher Review, 12*(1), pp. 37-55.

AZIM, N., YATIN, S., JENSONRAY, S., & MANSOR, S., 2018. Digitization of Records and Archives: Issues and Concerns. *International Journal of Academic Research in Business and Social Sciences, 08*(09), pp. 170-178.

AZIZI, A., BENBORDI, H., & DERBAL, S., 2024. The Reality of Digital Marketing in the Hotel Sector: New Day Hotel Case Study in Algeria. *Education & Administration: Theory and Practice, 30*(6), pp. 3587-3602. doi:10.53555/kuey.v30i6.6214

BEN TOUMI, S., 2023. The Role of Health Information Technology in Eliminating the Effects of the COVID-19 Pandemic in Private Hospital Establishments: A Study of a Sample of Doctors and Officials' Perspectives at Private Hospital Establishments in M'sila. *Journal of Economic Papers, 14*(1), pp. 1-16.

BENMOUSSA, S., & BOUBECHICHE, R., 2024. The Role of E-Health in Health Institutions Governance in Algeria: A Case Study of the GMAO Platform at the Public Institutions for Approximate Health, Ras El-Ayoun. *Management & Economics Research Journal, 6*(2), pp. 230-254.

BENSAAD, K., & ANNABI, B., 2024. Digital Marketing and Its Impact on SMEs' International Expansion in Algeria. *Management & Economics Research Journal, 6*(2), pp. 508-525.

BENTLEMSANI, Z., 2023. Digitalization of the Health Sector During the Corona Pandemic - Case Study of the Public Hospital Mohamed Boudiaf in Medea. *Journal of Legal Studies, 9*(2), pp. 803-827.

BLIX , M., & LEVAY, C., 2018. *Digitalization and Health Care.* The Expert Group on Public Economics.

BOUBERKA, M., FADEL, S., & DERRAR, H., 2013. Digitalization and the information society in Algeria: Digital Transformation Actors and Key Variables. *Ekonometria, 27*(2), pp. 21-44. doi:10.15611/eada.2023.2.02

BOUKROUH, B., 2022. E-Payment Adoption in the Era of Digital Transformation: The Case of the Algerian Banking System. *Journal of Contemporary Economics Studies, 7*(2), pp. 487-496.

BRAHIMI, M. A., & DERGAL, H. M., 2022. Towards the Digitalization of the Health Sector? Case of the SIHATIC Project in the Context of the COVID-19 Pandemic. *The Journal of MECAS, 18*(1), pp. 68-82.

CHAABNA, S., & WANG, W., 2015. Analysis of the State of E-Commerce in Algeria. *International Journal of Marketing Studies, 7*(2), pp. 44-58. doi:10.5539/ijms.v7n2p44

CHEN, X., DESPEISSE, M., & JOHANSSON, B., 2020. Environmental Sustainability of Digitalization in Manufacturing: A Review. *Sustainability*(12), pp. 1-31.

CHERROUN, R., & DEBLA, F., 2024. Hospital at Home: A New Model of Healthcare Services Innovation - Case Study of Hakim Saadane Hospital, Biskra City, Algeria. *Universal Journal of Public Health, 12*(1), pp. 17-27. doi:10.13189/ujph.2024.120102

DJEDDI, S., & FERKOUL, F., 2023. Algeria Economy (2000-2020): Reconciling Growth, Sustainability, and Digitalization. *Journal of Contemporary Issues in Business and Government, 29*(4), pp. 166–178. doi:10.47750/cibg.2023.29.04.011

FRĄCZKIEWICZ-WRONKA, A., 2021. Digitalization Of Healthcare Sector as a tool FOR Implementation Of Competition Policy. *ECONOMICS, ENTREPRENEURSHIP, MANAGEMENT, 08*(02), pp. 25-34.

FRENZEL, A., MUENCH, J., BRUCKNER, M., & VEIT, D., 2021. Digitization or digitalization? – Toward an understanding of definitions, use and application in IS research. *Twenty-Seventh Americas Conference on Information Systems (*pp. 1-10). Montreal: Association for Information Systems.

GUEMIDE, B., BENACHAIBA, C., & MAOUCHE, S., 2019. Integrating ICT-Based Applications for Sustainable Tourism Development in Algeria. *Journal of Tourism and Hospitality, 8*(5), pp. 1-11. doi:10.35248/2167-0269.19.8.415

JOVANOVIĆ, J., 2020. Digitalization Of Special Events Projects During The Crisis. *European Project Management Journal, 10*(02), pp. 66-71.

KHAN, S., KHAN, S., & AFTAB, M., 2015. DIGITIZATION AND ITS IMPACT ON ECONOMY. *International Journal of Digital Library Services, 05*(02), pp. 138-149.

KHANOUSSA, A., & FODIL, L., 2024. The Role of Financial Technology in Developing Islamic Banking: The Experience of Al Salam Bank of Algeria. *Journal of Economics and Finance, 10*(2), pp. 241-254.

KHERRAZ, M., 2013. Towards an Effective Integration of ESP in Healthcare ICTS: Challenges and Strategies - The Case of Algeria. In *Advanced Bioinspiration Methods for Healthcare Standards, Policies, and Reform* (pp. 260-275). doi:10.4018/978-1-6684-5656-9.ch014

NEDIL, L., ZEROULI, M., & KHOUATRA, S., 2014. Proposal of a Digital Product Manager Process as an Aid to the Development Performance of a Public Company in the Telecom Sector in Algeria. *NeuroQuantology, 20*(6), pp. 7165-7178. doi:10.14704/nq.2022.20.6.NQ22720

OUCHENE, D., & BELKACI, K., 2022. The Use of AI Applications in Corporate Communications of Algerian Public Institutions: The Directorate-General of Algeria Telecommunication as a Case Study. *Aleph, 9*(4), pp. 1-19.

PÄIVI , P., MAARIT , T., JUKKA , K., & SUSANNA , T., 2017. Tackling the digitalization challenge: how to benefit from digitalization in practice. *International Journal of Information Systems and Project Management, 05*(01), pp. 63-77.

PANCHBUDHE, S., PUND, P., JHA, R., & BANKAR, N., 2021. Digital Innovation in Health Care: A Review Article. *Annals of Medical and Health Sciences Research, 11*(3), pp. 115-117.

PLESNER, U., JUSTESEN, L., & GLERUP, C., 2018. The Transformation of Work in Digitized Public Sector Organizations. *Journal of Organizational Change Management, 05*(31), pp. 1-26.

RAJAN, M., & SHALINI, S., 2019. A study on Impact of Digitalisation on services in the Healthcare Industry. *International Journal of Research and Analytical Reviews, 06*(01), pp. 241-245.

RITTERA, T., & PEDERSEN, C., 2020. Digitization capability and the digitalization of business models in business-to-business firms: Past, present, and future. *Industrial Marketing Management*(86), pp. 180-190.

TIOUR, S., KORIDJIDJ, B., & KHALIFA, H., 2024. The Reality of Digital Transformation on Algerian Macroeconomic Variables: An Analytical Study. *Economics & Law, 4*(1), pp. 18-36. doi:10.37708/el.swu.v6i1.2

ZERMANE, H., & AITOUCHE, S., 2020. Digital Learning with COVID-19 in Algeria. *International Journal of 3D Printing Technologies and Digital Industry, 4*(2), pp. 161-170. doi:10.46519/ij3dptdi.776978

Contact address

Aboubaker Khoualed
https://orcid.org/0009-0004-0042-0184
Badji Mokhtar University, Annaba, Algeria
Department of Economic Sciences
Ibn Badis Complex, Badji Mokhtar University BP 12 Annaba 23000, Algeria
E-mail : aboubaker.khoualed@univ-annaba.dz

Abdelghani Lebza
https://orcid.org/0009-0005-1104-8653
Kasdi Merbah University, Ouargla, Algeria
Department of Management Sciences
Kasdi Merbah University, BP 511 Ouargla 30000, Algeria
E-mail: lebza.abdelghani@univ-ouargla.dz

Mouloud Khoualed
Abdelhafid Boussouf University Center Mila, Algeria
Department of Economic Sciences
Abdelhafid Boussouf University Center, BP 26 Mila 43000, Algeria
E-mail : mouloud.khoualed@centre-univ-mila.dz

Djihed Boumankar
Badji Mokhtar University, Annaba, Algeria
Department of Management Sciences
Ibn Badis Complex, Badji Mokhtar University BP 12, Annaba 23000, Algeria.
E-mail : djihed.boumenkar@univ-annaba.org

State Insureds in the Czech Republic as a Ball and Chain of Future Public Budgets

Adam Šimčík

https://doi.org/10.33542/VSS2024-2-2

Abstract

Czech healthcare is financed through a system of universal and compulsory health insurance based on solidarity. In last years, due to the covid-19 pandemic, there has been an unprecedented expansion of fiscal space for health services through increased payments for state-insured individuals. The article aims to highlight this increasingly important part of the Czech health insurance companies' revenues and the possible implications for the shape of the Czech health system and for 'he country's future budgets. The significant increase in financing health services through tax redistribution is gradually shifting the Czech health system back toward a national health system model. The existence of (several) health insurance companies is thus slowly but surely losing its key importance thanks to the described mechanism of constant increase of direct payments to the state.

Keywords*: health, health care, health insurance companies, state insured, state budget expenditures*

Introduction

Across the world, ensuring accessible and needs-based healthcare stands as a fundamental objective within health policy. Remarkably, this objective is universally embraced by developed countries, each having incorporated it in some form or another. We can assert that access to high-quality healthcare has evolved into a complex and universal issue over time. In fact, access to health services is now widely recognized as a fundamental human right (Morgan, 2008). Health protection is enshrined as a guaranteed and protected right also for inhabitants of the Czech Republic. The Czech constitution explicitly places the right to health protection among economic, social, and cultural rights. Consequently, the task of public administration is unequivocally to ensure equitable access to quality healthcare for all Czech citizens. The concept of solidarity is paramount in contemporary Czech health policy. However, the actual content of health policy extends beyond mere rhetoric. Health policy encompasses a range of activities that impact the health of diverse social groups and the overall state. Health policy is essentially an ongoing quest to identify the most effective methods for providing and financing healthcare services (Gladkij & Strnad,2002, Walt, 1994).

The crux of any effective health policy revolves around three key questions:

- What health services should be provided?
- How should these services be delivered?
- What financing mechanisms should be employed?

The specific design of individual health policies and health systems varies significantly from country to country. Factors such as historical context, geography, economic opportunities, and other contextual elements play a pivotal role. However, at its core, each health system represents a blend of responses to the questions above. These responses are intricately woven into the structure of health systems, which, in turn, are shaped by various elements, relationships, and management schemes (de Looper & Lafortune, 2009). This article focuses on the third question.

Fiscal Space and Sustainability in Government Budgets

Fiscal space, in its broadest sense, refers to the availability of budgetary resources that allow governments to allocate funds for desired purposes without compromising the overall financial stability. Creating fiscal space involves making additional resources accessible for government spending or potential tax reductions. The motivation behind expanding fiscal space lies in the potential for such spending to support medium-term growth and, ideally, yield future fiscal revenues.

Key Assumptions for Fiscal Sustainability (Heller, 2005):

- **Short-Term and Future Expenditure:** Any increase in short-term expenditure and related future spending must be financed from current and future revenues. If debt is used, the government must ensure sufficient revenues for repayment.
- **Medium-Term Implications:** Consider the medium-term impact of spending programs. Determine whether expanded fiscal space will primarily address near-term needs or if it will also accommodate future requirements. For sustainable programs, fiscal space should be consistently created over subsequent years.
- **Holistic View of Spending Priorities:** Fiscal space decisions should align with a comprehensive medium-term expenditure framework. If today's additional spending cannot be replicated in the future, governments may face underfunding of new initiatives or cuts in other areas. Fiscal space transcends sector-specific issues, even though debates often focus on perceived value, such as health spending. Balancing spending across sectors is essential to avoid crowding-out effects.

1. Health expenditures

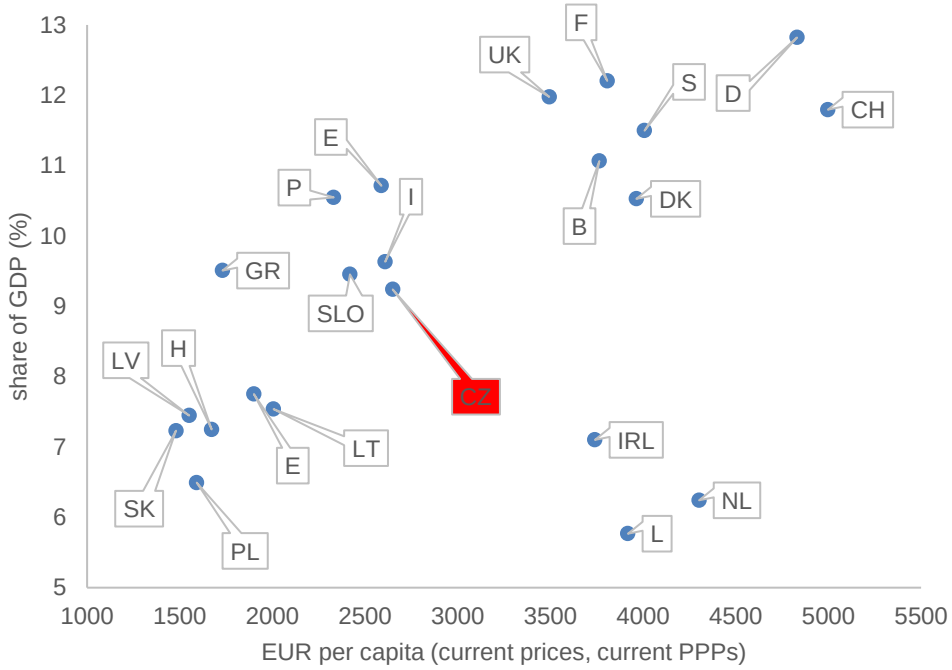

Figure 1: Healthcare expenditures in selected OECD countries in 2020
Source: OECD, 2023

The average per capita expenditure in the Czech Republic in 2020 was EUR 2,648.9. This figure was nearly doubled in Switzerland and Germany, where it exceeded almost EUR 5,000, while in the Slovak Republic, the average expenditure did not reach EUR 1,500 per capita. Therefore, within the EU, the Czech healthcare system can be considered less costly. Another method of assessing the level of health service provision in countries is to express total health expenditure as a percentage of GDP. As shown in the chart above, according to the OECD, health expenditure accounted for the largest share of GDP in Germany (11.82%) and France (12.21%), while it contributed the least to GDP in Luxembourg (5.77%). With health expenditure accounting for 9.24% of GDP, the Czech Republic aligns with the average of the selected countries.

Eurostat's 2022 data reveals that from 2015-2019, healthcare expenditure per individual rose across all current European Union countries. The Czech Republic saw a 42% increase, marking the fourth highest per capita spending rise in the EU, while Romania experienced an even greater surge of over 65%. Countries with a healthcare GDP share around 10% (France, Finland, Italy, Denmark) saw slower growth of up to 10%, and Greece, despite its 2009-2018 debt crisis, saw a 2% increase.

Generally, health spending escalates with a country's population income but is also influenced by other factors like technological advancements and an aging population. Public health expenditure is not only steadily rising in absolute terms but also as a GDP share across

all European countries. Concurrently, public healthcare spending is among the largest and fastest-growing government expenditure items.

When comparing health service provision approaches across different countries, merely comparing total expenditure relative to a country's population or GDP is insufficient. A detailed analysis would be required to determine the effectiveness or ineffectiveness of individual policies, which is beyond this paper's scope. The focus here is to highlight the importance and significant growth rate of health spending. This spending growth appears symptomatic and sustained for this sector. Given healthcare's importance, it's evident that securing adequate healthcare resources will become an increasingly pressing issue for every country's economic policy, including the Czech Republic. The chart below, affirming the above statement, displays the structure of health spending in EU countries by funding source.

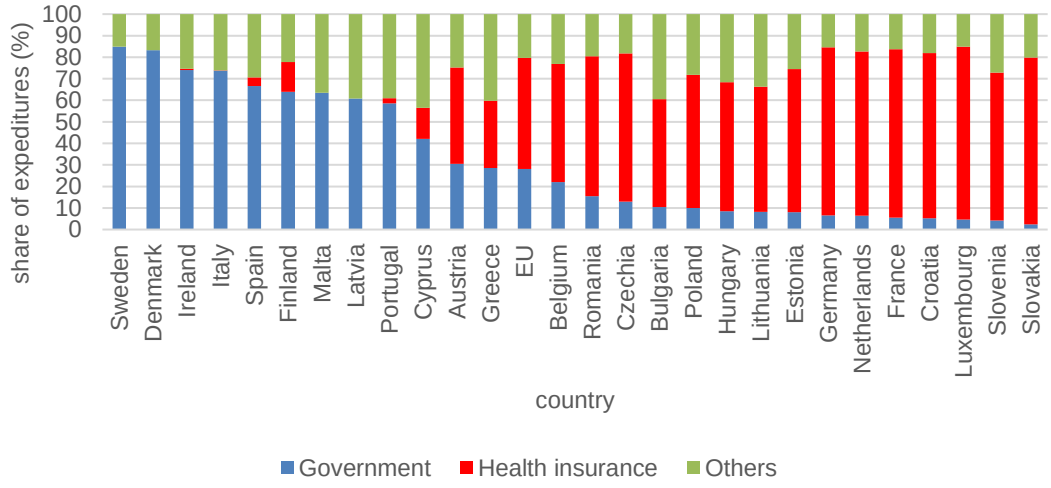

Figure 2: Healthcare expenditures in EU countries in 2019 by the type of financing
Source: Eurostat, 2022

The chart above is divided into two sections. The left section represents countries where healthcare is primarily funded directly from the state budget. The right section, on the other hand, illustrates countries where healthcare expenditure is predominantly financed through health insurance.

Healthcare financing in the EU is largely covered by public sources, either directly from state budgets or compulsory insurance funds. Countries with the lowest public healthcare financing include Cyprus (55.51%), Latvia (60.12%), and Bulgaria (60.59%). Conversely, Sweden (85.12%), the Czech Republic (84.99%), and Luxembourg (84.96%) have the highest levels of health financing through taxes and quasi-taxes.

2. Healthcare in the Czech Republic

Healthcare in the Czech Republic is primarily financed through universal and compulsory health insurance. This Bismarck model of financing, a shift from the previous state healthcare (Semashko model), was implemented in 1992. The Czech Republic, along with Austria, Greece, and Luxembourg, relies on public basic insurance coverage while also using market mechanisms at the provider level (Joumard et al., 2010). Private care providers play a significant role, offering users a wide choice of providers. However, limited information on quality and pricing results in little competitive pressure on providers. State supervision and regulation are characteristic of the Czech healthcare system, including setting insurance premiums based on individual income. The collection of premiums, fund distribution, and efficiency control of healthcare facilities are entrusted to non-governmental organizations, i.e., health insurance companies. The network of health service providers comprises state hospitals in Prague and regional cities, hospitals established by regions, municipalities, private entities, or churches, and general practitioners and specialist practices spread across the country.

Currently, seven health insurance companies participate in the Czech Republic's public health insurance system. These public corporations finance healthcare by collecting premiums and distributing them to providers. The insurance is universal, covering any Czech Republic citizen or permanent resident. The insurance and premium collection are regulated by legal norms.

Public health insurance premiums are paid to the health insurance company with which the insured person is insured. The payers of health insurance premiums are employees, employers, self-employed persons, persons without taxable income and the state. Insurance premiums for employees is paid one-third by the employee and two-thirds by the employer, who pays the total amount of premiums for himself and his employees to the individual insurance companies. The premiums collected for public health insurance are the source of the insurance company's basic fund, which is used to pay for health services, to make allocations to the operating fund and to cover the costs of the health insurance company's activities, to make allocations to other funds and to cover other payments provided for by law. Very illustrative is the relationship reported by Mertl (2021):

$HR = E + G_T$

The total health insurance revenue (HR) corresponds to the sum of the revenue from compulsory insurance (E) and the government payment (G_T), which is covered by general taxes. The E component is cyclical in terms of the level of economic activity and depends on the tax base (the volume of wages or taxable income). In contrast, the G_T component depends on political decisions.

The total revenue from state payments ($G_{T)}$ can be expressed as a multiple of the administratively determined rate of the total number of state insured persons.

Health insurance companies are responsible for ensuring their insured have access to health services, including local and timely availability. They contract with health service providers to offer these services to the insureds and reimburse the providers from the collected premiums.

As per the Ministry of Health (2022), the public health insurance system in 2021 reported revenues of CZK 407.1 billion against expenditures of CZK 419.6 billion, resulting in a deficit of about CZK 12.5 billion. The total cost of health services in 2021 saw an increase of CZK 46 billion from 2020, indicating a rise in health service costs for all health insurance companies.

3. State insured persons

Public health insurance premiums for individuals, for whom the State is the payer, are paid through the Ministry of Finance. These individuals are explicitly listed in the Public Health Insurance Act (included are pensioners, children, job seekers, recipients of parental allowance, incarcerated individuals, and others). The funds for these premiums are in the State budget chapter 398 - General Treasury Administration, under the indicator Transfers to central government budgets and the heading Health insurance premium appropriations - payment to the State. The assessment base or the insurance premium amount for each State insured person from 1993 to the present is detailed in the subsequent table.

Table 1: Assessment base and calculation of premiums (VZP, 2023)

Period	Calculation basis (CZK)	Insurance premiums (CZK)
from January 2023	14,074	1,900
September 2022–December 2022	11,014	1,487
January–August 2022	14,570	1,967
January–December 2021	13,088	1,767
June–December 2020	11,607	1,567
January–May 2020	7,903	1,067
January–December 2019	7,540	1,018
January–December 2018	7,177	969
January–December 2017	6,814	920
January–December 2016	6,444	870
July 2014–December 2015	6,259	845
November 2013– June 2014	5,829	787
January 2010–October 2013	5,355	723
January 2008–December 2009	5,013	677
January–December 2007	5,035	680
April 2006–December 2006	4,709	636
February 2006–March 2006	4,144	560
January 2006	3,798	513
January–December 2005	3,556	481
January–December 2004	3,520	476
January–December 2003	3,458	467
July 2001–December 2002	3,250	439
July 1998–June 2001	2,900	392
January–June 1998	2,120	287
July 1996–December 1997	2,000	270
January–June 1996	1,625	220

January 1994–December 1995	1,430	194
January–December 1993	1,694	229

From 2020, there was a significant rise in state insurance payments. However, this increase was less due to the pandemic and more due to the prioritization of the health sector, driven by public health concerns and the need to motivate healthcare staff. This period saw a sharp decline in health sector output as many scheduled procedures were postponed. The surge in total health spending was primarily due to increased salaries for doctors and nurses. Doctors' wages rose by 10.6% between 2019 and 2020, and by an additional 12.9% between 2020 and 2021. Similarly, wages for general nurses and midwives increased by 16.5% between 2019 and 2020, and by another 15.6% between 2020 and 2021 (ČSÚ, 2022).

It is almost certain that payment for the state insured will not return to pre-pandemic covid-19 levels, nor can such a return be expected in the future (Mertl, 2022). Hence, it is essential to point out that such an expanded fiscal space for health care can no longer be eliminated. In expanding it, all the principles of fiscal sustainability set out by Heller (2005) as described above have been violated:

- The financing of higher health expenditure (allegedly related to the covid 19 pandemic) has not been financed by current or future revenues, but exclusively through debt, and the state has not yet secured any of the necessary revenues to repay it.
- The (expanded) fiscal space created in the health sector has been directly petrified by the change in the law, and certainly no one today is contemplating a retroactive reduction in the payment for the state insured to pre-pandemic covid-19 levels. Future governments will very soon find that they will be forced by the swelling size of the payment for the state insured to either underfund their initiatives or cut other areas of spending in the future.
- The medium-term expenditure framework did not play a significant role in this case (especially in view of the ongoing pandemic). The expansion of fiscal space in this case was conceived strictly as a sector-specific issue. The initiative may thus ultimately have a crowding-out effect on other spheres.

Another important point that is forgotten when discussing the increased payment for the state insured is that such a drastic increase in the share of the state budget in the financing of the Czech health care system moves country (back) to the model of state health care.

At first glance, it might seem that there is no fundamental problem, since public spending on health care is increasing everywhere, regardless of the health care model being applied. Unfortunately, this would be a very simplistic view. Shifting the responsibility for ensuring that

health services are sufficiently funded from health insurance companies to the state undermines the very reason for the existence of health insurance companies in the first place, and at the same time does not benefit the state for the funds provided a corresponding share of the responsibility for the availability of health care, which still rests on the shoulders of the health insurance companies. This raises the question of whether the existence of (seven) health insurance companies is justified at all.

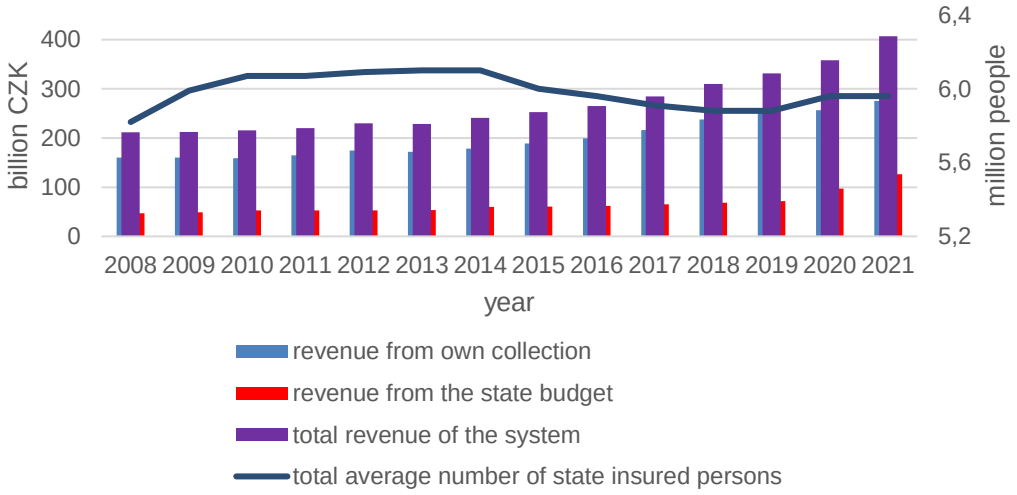

Figure 3: Revenues of Czech public health insurance system 2008–2021
Source: Ministerstvo zdravotnictví, 2022

In general, the payment for state insured persons within the financing of the Czech health care system should be only supplementary and should not violate the principle of self-sufficiency of this system. Its purpose lies only in a certain counter-cyclical function. If there is a significant increase in the number of unemployed persons who (in the short term) lose their income, A jump in the rate of premiums paid in this way while the number of state insured persons does not fall has exactly the opposite effect. In the past, only cosmetic adjustments to this rate (in the order of units and later tens of CZK) were made. However, at present, this part of the Czech healthcare system's income is becoming an increasingly important source, even though the number of state insured is not growing and has remained very stable in the long term, as can be seen in the chart above. On its main axis, it is possible to distinguish between growing revenues in CZK billion and on the secondary axis the number of state insured persons, which is not growing.

There is nothing in the constitution about the state being obliged to pay premiums for (some) citizens. Rather, the wording of Article 31 of the Charter of Fundamental Rights and Freedoms quoted above suggests that the system itself should be able to provide care for all persons. However, there will always be a certain group of people who will not be able to pay the premiums. However, for the functioning of the system, based on solidarity, it is not possible

for the income for these persons to represent an ever-increasing proportion of the total income collected in premiums. This share should be very stable over time and ideally minimal. If the share of premiums paid by the state were to exceed, for example, 50% of the Czech health system's income, the Bismarck model as we have described it above could no longer be discussed at all. In such a case, a complete overhaul of the system would necessarily be necessary, which would not be beneficial to the Czech healthcare system or to Czech citizens. The necessary changes (legislative, social and economic) would have far-reaching consequences and such destabilization is certainly not to be recommended.

Now let us take a closer look at the actual spending of the state budget under the relevant heading for the so-called state insured. According to the State Final Account for 2020 (2021), this item of expenditure was used in 2020 as follows: the budgeted amount – CZK 99,149.608 mil., the budgeted amount after amendments – CZK 98,099.608 mil., the real sum of payments – CZK 97,262.133 mil. The use of appropriations for this purpose in 2020 was significantly affected by the unclear situation related to the development of the COVID-19 pandemic and unpredictable macroeconomic conditions. Overall, however, the conditions were more favorable than expected and the number of jobseekers on the labor office's register was lower.

As of 1 January 2020, the amount of the assessment base increased from CZK 7,540 to CZK 7,903 per calendar month (Act No. 297/2017 Coll.). This represents an increase in the monthly payment per person of CZK 49 from CZK 1,018 to CZK 1,067. Furthermore, Act No 231/2020 Coll., which amended the Act No. 592/1992 Coll., on public health insurance premiums, this assessment base was significantly increased from CZK 7,903 to CZK 11,607 per calendar month as of 1 June 2020. This represented an increase in the monthly payment per person of CZK 500 from CZK 1,067 to CZK 1 567. From 1 January 2021, the amount of the assessment base was increased from CZK 11,607 to CZK 13,088 per calendar month. This represented a further increase in the monthly payment per person of CZK 200 from CZK 1,567 to CZK 1,767. The amount of the payment from the state budget to the health insurance system in relation to GDP is shown in the following graph.

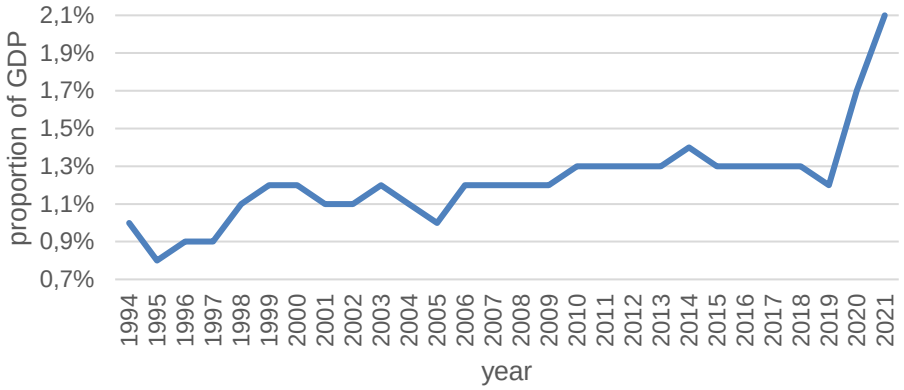

Figure 4: Payment from the state budget to the insurance system as a proportion of GDP

Souce: Ministerstvo zdravotnictví, 2022

The significant growth of this ratio in 2020 and 2021 is influenced by an unprecedented increase in the state payment and, on the other hand, by a decrease in the denominator of the share (GDP). In this context, it should be noted that each increase in the payment by CZK 100 per person per month represents approximately CZK 7.15 billion, which the state must subsequently spend from the state budget, given the current 5.96 million state insured persons.

The average total revenue of the insurance system per insured person in 2021 was CZK 38 578 (a year-on-year increase of 13.7%). On the other hand, the total expenditure per insured person amounted to CZK 39,765 (a year-on-year increase of 19.1%) (Ministerstvo zdravotnictví, 2022). It is clear from the above figures that even the ad hoc expanded fiscal space does not cover consumption. However, a more detailed analysis of the above costs would have been useful to assess which of the above costs were necessary and which were artificially created in the system to reward the sector for fighting the pandemic, as we have outlined above. Be that as it may, the idea of a significant reduction in costs in the health sector is hard to imagine, as we have said above, because the health sector is a segment with steadily rising costs. As we can demonstrate for the Czech environment in the following graph.

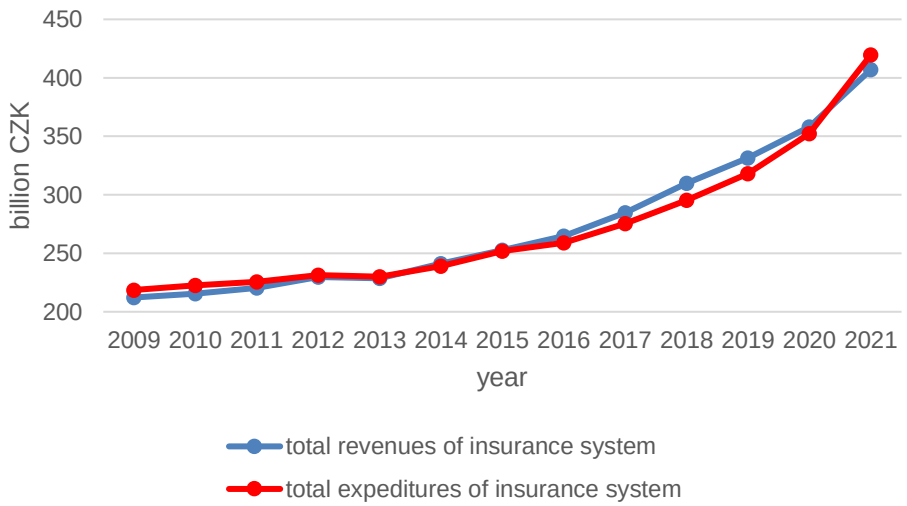

Figure 5: Development of revenues and expenditures of the public health insurance system 2009–2021
Source: Ministerstvo zdravotnictví, 2022

The chart above shows that the system is experiencing a steady increase in expenditure. However, as the next graph illustrates, the increase in premium income has not kept pace with this growth and the income has been increasingly saturated by direct payments to the State in recent years.

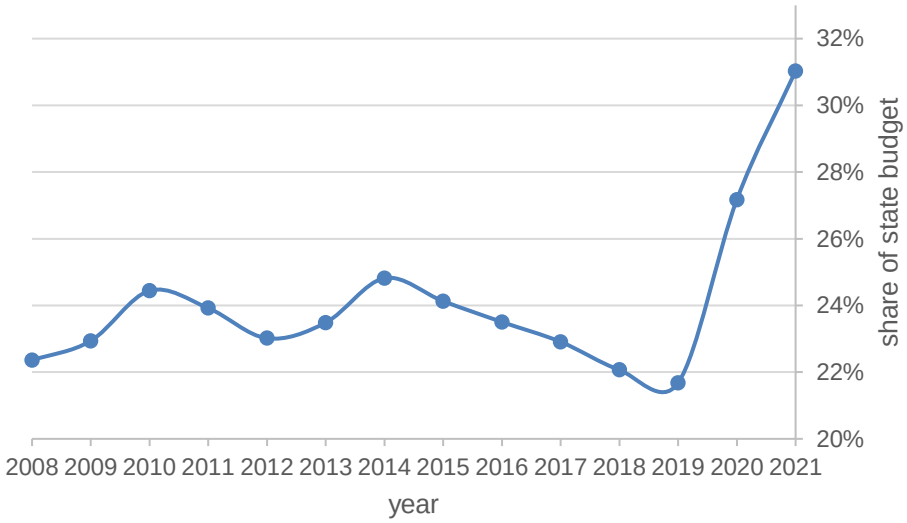

Figure 6: Share of the state budget in the financing of the Czech public health insurance system 2008–2021
Source: Ministerstvo zdravotnictví, 2022

Some authors (Bryndová & Šlegerová, 2021, Maaytová et al., 2018), argue that given the expected future increase in healthcare spending, it is necessary to seek additional sources of public health insurance to ensure its functioning, including opening the discussion on higher levies or further increases in state payments, even at the cost of compromising other priorities in the state budget. However, further increases in payments for the state insured, while their

number is not growing, are not an appropriate alternative for Czech healthcare system, although it is certainly the most politically feasible way.

Discussion and conclusions

This pandemic in the Czech environment has highlighted the problem of health care financing, or rather the problem of its sustainability. In the Czech Republic, where healthcare is largely financed through the system of general and compulsory health insurance, there has been an unprecedented increase in payments for the state insured in recent years in connection with the covid-19 pandemic, which will break out in 2020.

To reward the health sector, Czech government has expanded fiscal space, violating all the principles theoretically necessary for its creation. This expanded fiscal space has not only been given no consideration in the medium term and has been covered only by deepening the national debt without any prospect of additional resources. At the same time, its creation has grossly affected the distribution of the Czech health sector's revenue sources with long-term consequences.

At any shortfall on the revenue side of public health insurance system, the political representation immediately comes up with a solution to increase the payment for the state insured. However, it must be remembered that every 100 CZK increase in the rate will trigger a mandated expenditure of more than CZK 7 billion. Generally, increasing the payment for state insurers is accepted as an alternative to increasing the premium rate paid by the economically active population, which is politically very unpopular. Unfortunately, however, these considerations do not consider all the consequences of this relatively simple and politically certainly the most viable solution to the alleged lack of finances in the Czech healthcare system.

It’s almost certain that payments for state-insured individuals won’t return to pre-covid-19 levels. This expansion of fiscal space for healthcare, financed through debt, violates all theoretical principles of fiscal sustainability. The law has solidified this expanded fiscal space, and future governments may face budgetary constraints due to these increased payments.

This shift towards state healthcare financing in the Czech Republic raises questions about the role and necessity of health insurance companies. While public healthcare spending is increasing globally, the responsibility shift from health insurance companies to the state undermines the purpose of these companies. They still bear the responsibility for healthcare availability, but without a corresponding share of the funds provided by the state. This situation prompts the question of whether the existence of seven health insurance companies is justified.

Thanks to these ad hoc political decisions, a discrepancy is slowly but surely emerging in the Czech Republic between the model of financing health care, which was introduced in

the Czech Republic soon after the fall of the Iron Curtain and has been applied in practice up to the present day, and the fact that the state already covers almost a third of the revenues of the general health insurance system by paying for state insured persons. Paying for these people thus becomes an imaginary iron ball and chain for future governments to drag along with every future budget.

For Czech health insurance companies, this could be a warning signal that their days are beginning to shorten and that national or state health care is in sight in the Czech Republic again.

Acknowledgements

This paper was published with the support of the subsidy granted the Internal Grant Agency of the Prague University of Economics and Business, Project number VSE IGS F5/11/2024.

References

BRYNDOVÁ, L. & ŠLEGEROVÁ, L., 2021. Zásah nutný: dopady budoucího ekonomického vývoje a pandemických opatření na příjmy a výdaje systému veřejného zdravotního pojištění. *Studie IDEA*, 5/2021. Praha: Národohospodářský ústav AV ČR, v. v. i.

ČESKÝ STATISTICKÝ ÚŘAD = ČSÚ. 2022. *Mzdy ve zdravotnictví* – 2012–2021 [online]. https://www.czso.cz/csu/czso/mzdy-ve-zdravotnictvi-20122021

DE LOOPER, M. & LAFORTUNE, G., 2009. Measuring Disparities in Health Status and in Access and Use of Health Care in OECD Countries. *OECD Health Working Papers*, No. 43. Paris: OECD Publishing.

Eurostat. 2022. Database [online]. https://ec.europa.eu/eurostat/data/database

GLADKIJ, I. & STRNAD, L., 2002. *Zdravotní politika, zdraví, zdravotnictví*. Olomouc: Univerzita Palackého.

HELLER, P. S., 2005. Understanding Fiscal Space. *IMF Policy Discussion Paper*, PDP/05/4. International Monetary Fund.

JOUMARD, I., ANDRÉ, C. & NICQ, C., 2010. *Health Care Systems: Efficiency and Institutions*. OECD Economics Department Working Papers, No. 769. Paris: OECD Publishing.

MAAYTOVÁ, A., GAJDOŠOVÁ, E. & LÁCHOVÁ, L., 2018. Změny v demografické struktuře a výdaje zdravotnictví ČR. *Český finanční a účetní časopis*, roč. 13, č. 4, pp 19–31. Praha: Vysoká škola ekonomická.

MERTL, J., 2021. Zdroje veřejného zdravotního pojištění v kontextu epidemie covid-19. *Fórum sociální politiky*, 15(4), pp 2-11.

MERTL, J., 2022. Konstrukce a financování univerzální a volitelné části zdravotnických systémů. Sborník vědeckých textů z mezinárodní konference Sociální politika 2021. Praha: Národohospodářská fakulta VŠE v Praze a Nakladatelství Oeconomica.

MINISTERSTVO ZDRAVOTNICTVÍ. 2022. *Hodnocení vývoje systému veřejného zdravotního pojištění v roce 2021*.

MORGAN, M., 2008. What is the goal of access to health care?. *Journal of law and medicine*, 15(5):742-51. North Ryde: Law Book Co.

OECD. 2023. OECD Health Statistics [online]. https://www.oecd.org/en/data/datasets/oecd-health-statistics.html.

VŠEOBECNÁ ZDRAVOTNÍ POJIŠŤOVNA = VZP. 2023. *Vyměřovací základ a výpočet pojistného* [online]. https://www.vzp.cz/platci/informace/stat/vymerovaci-zaklad-a-vypocet-pojistneho

WALT, G., 1994. *Health Policy: An Introduction to Process and Power*. London: Zed Books.

Contact address

Adam Šimčík, PhD student
ID ORCID: 0009-0002-8644-4202
Prague University of Economics and Business
Faculty of Economics
Department of Regional Studies
nám. W. Churchilla 1938/4 130 67 Praha 3, Czech Republic
E-mail: adam.simcik@vse.cz

Development, Reforms, and Challenges of Japan's Digital Economy

Jiandong Shi

https://doi.org/10.33542/VSS2024-2-3

Abstract

Japan's digital economy, the fourth largest globally, has undergone significant transformation. This article explores its development from early stages to the current digital era, highlighting advances in infrastructure and global trade contributions. Despite its progress, Japan faces challenges such as an aging population, digital talent shortages, and slow digital transformation. Recent government reforms under the Kishida administration aim to enhance competitiveness and bridge gaps with leading digital economies like the US and China. Continued investment and policy support are crucial for sustaining growth and addressing these challenges.

Keywords: *Japan, digital economy, digital transformation, ICT, policy reforms*

Introduction

Japan's digital economy, currently the fourth largest in the world, has been a driving force in shaping the nation's economic landscape. With a foundation dating back to the 1960s, Japan's journey in digital transformation has evolved through distinct phases, from the incubation of early digital tools to the widespread adoption of internet technology. Today, Japan’s advanced ICT infrastructure supports high levels of connectivity, from broadband penetration to mobile networks. However, despite these advancements, Japan encounters significant challenges such as an aging population, digital skills shortages, and comparatively slower adoption of transformative technologies like 5G. These issues hinder its ability to compete with digital frontrunners such as the United States and China.

Under the Kishida administration, Japan has introduced substantial policy reforms, including the ambitious "Digital Garden City Nation Concept," aimed at promoting digital innovation across all sectors. This article examines Japan’s digital economy from its inception to the present day, focusing on its development trajectory, the impacts of government policies, and the major barriers to its progress. It provides insights into how Japan can leverage its strengths while addressing these challenges to enhance global competitiveness and sustain long-term economic growth.

1. Literature review

Japan's digital economy, ranking as the fourth largest globally, has experienced substantial growth over several key phases: an initial "incubation phase" in the 1960s, a "development phase" in the 1980s driven by corporate intranets and digital technology, and an "acceleration phase" starting in the 1990s with widespread internet and communication technologies. Since then, Japan's digital economy has expanded significantly in parallel with advancements in information and communication technology (ICT), promoting comprehensive digitalization across industries and society. Despite these advancements, Japan faces persistent challenges in its digital transformation, including a rapidly aging population, a shortage of skilled digital professionals, and relatively slow progress in digital transformation within both corporate and governmental sectors. These challenges place Japan behind global digital leaders such as the United States and China, even though Japan maintains an advanced ICT infrastructure, including high fixed and mobile broadband connection rates. To address these limitations, the government has introduced substantial reforms, most notably the "Digital Garden City Nation Concept" under the Kishida administration, which aims to utilize digital solutions to tackle socioeconomic challenges, particularly in rural areas. Japan's digital economy currently holds a crucial role in driving GDP growth and economic output; however, slow adoption of technologies like 5G and a lack of investment in cutting-edge digital applications continue to restrict its competitiveness. Despite these hurdles, Japan's digital economy, deeply integrated with its industrial manufacturing sector, holds significant potential. With increased investment and reform, particularly in ICT infrastructure and digital talent development, Japan could leverage its digital economy to regain global competitiveness and potentially establish itself as a leader in digital transformation in the coming years (Cabinet Office of Japan, 2021; IMD, 2022; Japan Center for Economic Research, 2021; Ministry of Internal Affairs and Communications, 2022; Mio & Kang, 2022; Nakano, 2021; OECD, 2019; Statistics Bureau of Japan, 2022; UNCTAD, 2021; World Bank, 2022; American Chamber of Commerce in Japan & McKinsey, 2021; China Academy of Information and Communications Technology, 2020; McKinsey Global Institute, 2020; Japan Cabinet Office, 2020).

2. The development history of Japan's digital economy

Incubation Phase (Before 1979)

The concept of the digital economy was first proposed in 1996 and has since been widely adopted. However, the world's first general-purpose electronic computer, ENIAC, appeared in 1946. Over the following two to three decades, people began to store various types of information using binary form. Before this, digital information was stored by a small number of people using tools. The storage capacity was small, and the analysis tools were complex, so it had not yet become a factor of production. However, the binary form of

information storage during this period laid the foundation for the formation and development of the digital economy. Subsequently, the expansion of information storage and the development of computing carriers facilitated the significant progress of the digital economy. During this stage, major universities and national research institutions in Japan began using computers for research applications, creating the groundwork for Japan's subsequent digital development.

Development Phase (1979-1993)

After the late 1960s, digital information began to be used as a production factor in economic activities, indicating that the digital economy had entered a new stage. Along with the construction of intranets for large enterprises and the development of specialized data software (such as CRM, ERP, and EDI), the efficiency of corporate production activities significantly increased. Economic activities during this phase were characterized by clear divisions of labor and well-defined structures, reducing transaction costs through the establishment of external boundaries and division of work. Japan officially introduced mobile communication systems in 1979, marking the country's experience with the 1G era. During Japan's 1G era, communication methods used analog signals, with a maximum download speed of 2.4-10 kbps. At this time, the proportion of people using communication devices was small, primarily consisting of communication equipment companies and related professionals, who mainly used fixed telephones for information exchange and transmission. The development and construction of communication infrastructure during this phase laid the foundation for the subsequent network era. The development during this phase expanded the scope of economic activities, enabled real-time dynamic transmission of demand information, fostered demand-oriented production methods, altered traditional supply chain structures, and further blurred the boundaries between production and consumption.

Acceleration Phase (1993-Present)

In 1993, Japan gradually transitioned from 1G infrastructure to the 2G era, changing the transmission mode from analog signals to digital forms. The acceleration of Japan's digital economy marked the beginning of the internet's transition to a digital stage. In addition to fixed telephones, the internet, feature phones, faxes, and other communication tools gradually gained market share. Download speeds increased from the original 2.4-10 kbps to 11.2-28.8 kbps, and the user base expanded to include ordinary households and personal communications. During the subsequent 4G and 5G periods, communication download speeds rapidly increased from 11.2-22.8 kbps to 0.04-1 Gbps in the 4G era. During this stage, feature phones gradually exited the market, replaced by smartphones and smart internet devices. From this stage onwards, digital information gradually leveraged its dynamic, replicable, and low-cost advantages. Digital information transformed traditional economic activities and fundamental rules through the internet, marking the entry of the digital economy into the

network stage.

Compared to earlier stages, this phase saw significant changes in the digital economy, with information and communication technology becoming the foundation for life, industry, and social communication. Globally, international enterprises operating across platforms, regions, and industries began to emerge, with internet-based digital production and services gradually increasing, leading to a flourishing of global digital trade. Currently, the construction of digital infrastructure based on the new generation of digital technologies is expanding, which will further enhance the value-added of networks and drive the digital network to the next stage of development.

3. Current state of Japan's digital economy

Japan's domestic digital infrastructure is relatively advanced, and the digital trade industry chain still holds significant advantages. According to a report by the Organisation for Economic Co-operation and Development (OECD), Japan leads OECD countries in mobile broadband connections, with a fiber optic connection rate of 77% for fixed broadband, ranking second among OECD countries in 2019. Japan's manufacturing robot density is second only to South Korea, with 47% of enterprises using cloud computing services. In 2021, Japan's internet penetration rate reached as high as 93%. Technologically, Japan held about 50% of the global semiconductor industry chain in the 20th century. Although this has fallen to around 10%, Japan still maintains a leading position in wafers, high-end chemicals, and manufacturing equipment within the semiconductor supply chain.

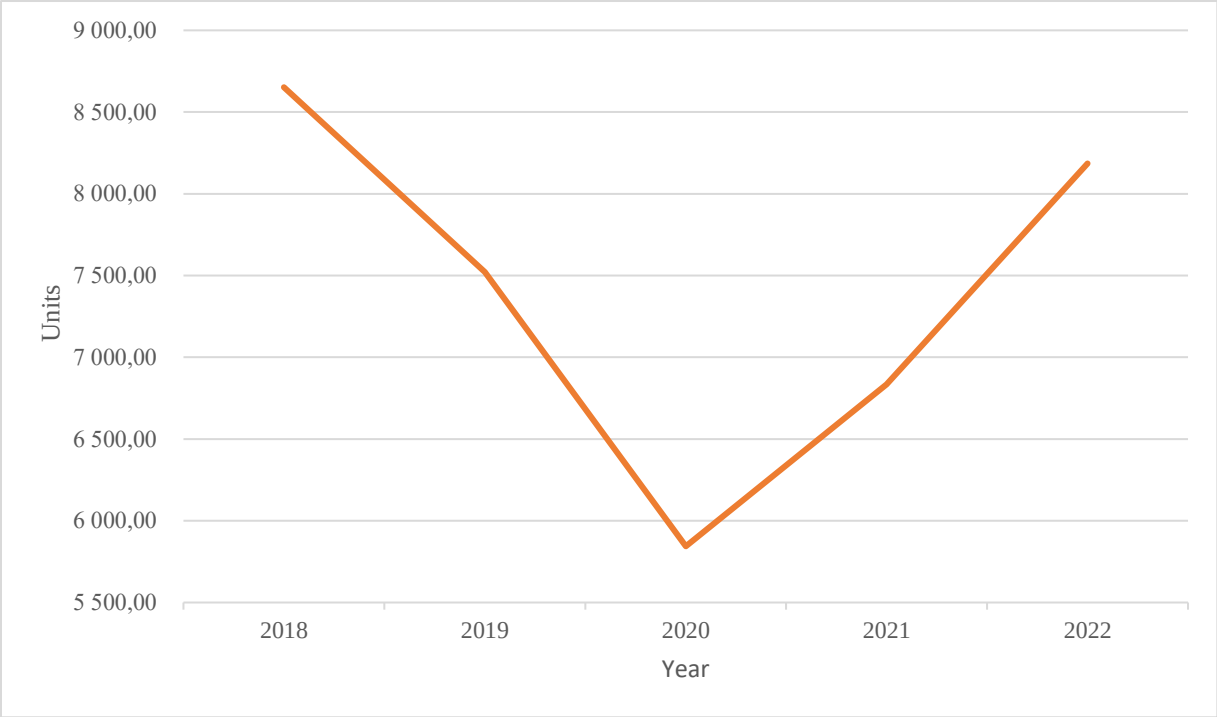

Figure 1: 2018-2022 Industrial Robot Installations in Japan's Metal and Machinery Manufacturing

Source: own compilation based on data from the International Federation of Robotics

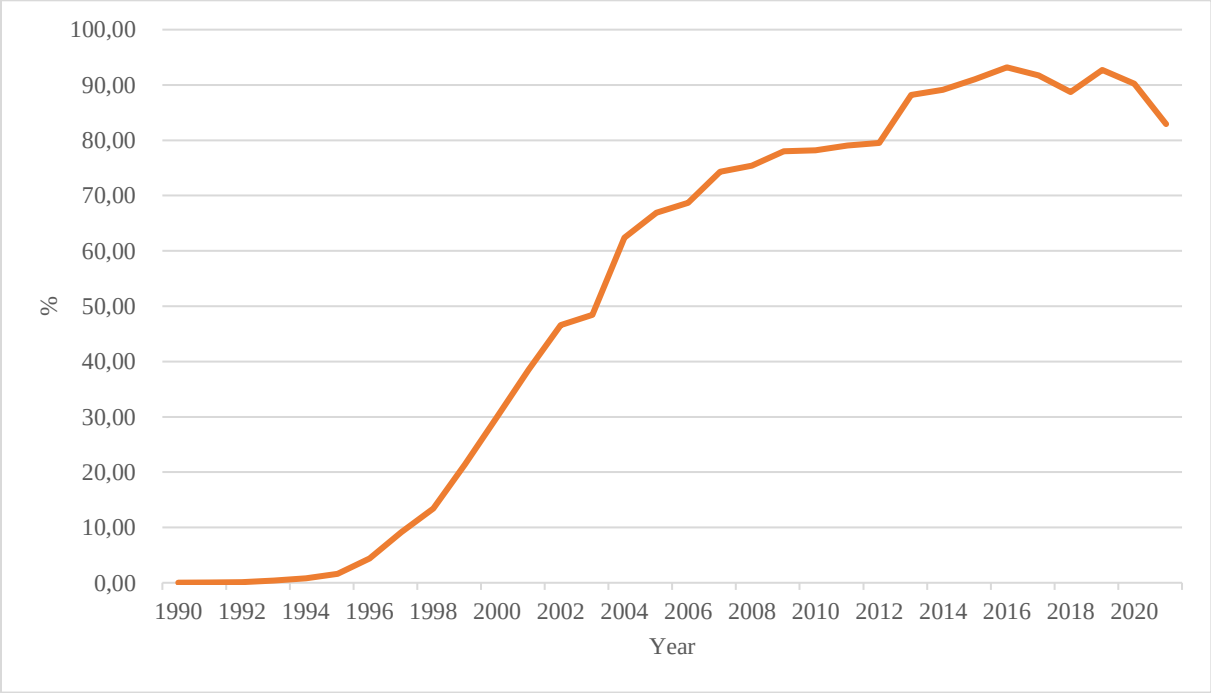

Figure 2：1990 to 2020 the Proportion of Individual Internet Users to Total Population in Japan

Source: own compilation based on data from the World Bank

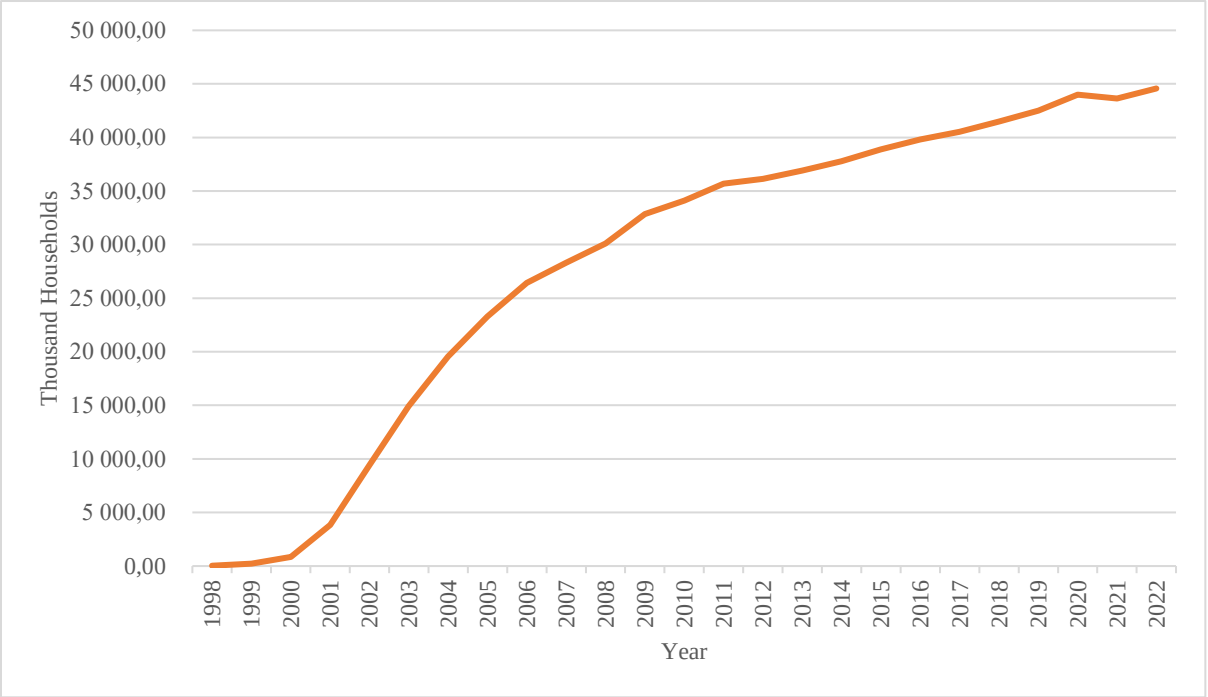

Figure 3: 1988-2022Number of Fixed Broadband Subscribers in Japan

Source: own compilation based on data from the World Bank

The competitiveness and development speed of Japan's digital economy lag behind those of China and the United States, mainly due to factors such as Japanese consumer preferences, corporate culture, and management structures. According to data from the United Nations Conference on Trade and Development (UNCTAD), in 2021, Japan's exports of ICT goods, services trade, and digitally deliverable services trade were $65.2 billion, $10.2 billion, and $122.3 billion, respectively, far below those of China and the United States. In the 2022 IMD World Digital Competitiveness Ranking published by the IMD in Lausanne, Switzerland, Japan ranked 29th, down two places from 2020. During the same period, China and the United States ranked 17th and 2nd, respectively. In terms of the share of ICT goods in merchandise exports, Japan was at 8.6% in 2021, while China and the United States were at 25.5% and 9.1%, respectively. Japan's digitally deliverable services trade was three times that of China in 2005, but has been lower than China since 2017, indicating that Japanese companies have been relatively slow in adopting digital technologies. In 2021, Japan's share of global exports of digitally deliverable services was 3.2%, while China and the United States were at 5.1% and 16.1%, respectively. A McKinsey report shows that Japanese residents' usage rates for online retail and financial services are only in the single digits, and the proportion of public cloud service spending in IT spending is very low. From 1995 to 2020, Japanese companies' ICT investment spending remained largely unchanged, while during the same period, ICT investment spending by companies in the United States and France tripled. The aging of management in Japanese companies is a significant reason for the slowdown in investment.

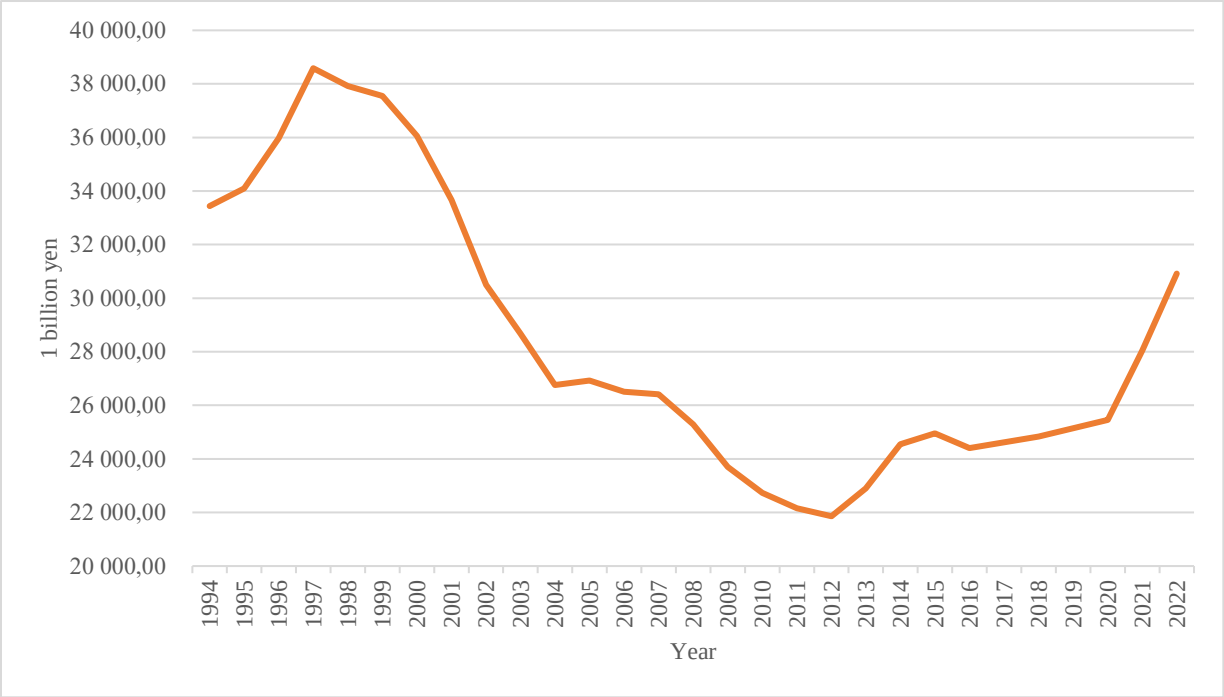

Figure 4: Machinery and ICT Equipment in Japan's National Balance sheet for Non-Financial Productive Fixed Assets 1994-2022

Source: own compilation based on data from the Cabinet Office of Japan

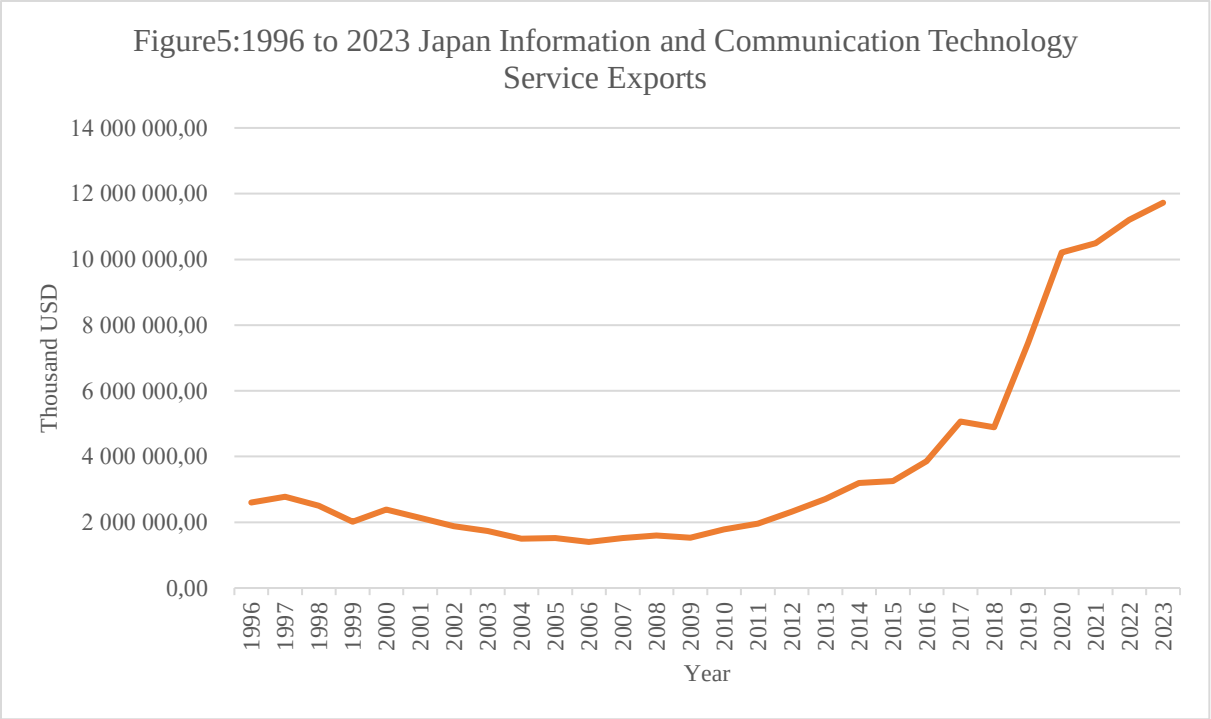

Figure 5: 1966 to 2023 Japan Information and Communication Technology Service Exports

Source: own compilation based on data from the World Bank

The digital transformation of the Japanese government and companies is lagging, and there is a lack of leading digital enterprises. The global COVID-19 pandemic further exposed the shortcomings in the digital transformation of the Japanese government and regulatory mechanisms, such as manual case counting by government departments and heavy reliance on paper documents for administrative procedures. Data shows that during the pandemic, the growth rate of digital services usage in Japan, such as online entertainment at home, food delivery, online meetings, and remote education, was even lower than in India. In terms of leading digital enterprises, Japan lacks digital giants capable of competing with Google's, Apple's, Facebook's, and Amazon's of the US, and Baidu's, Alibaba's, and Tencent's of China. The digital transformation of its traditionally strong industries has been slow. However, Japan's digital trade has enormous potential. A report jointly written by the American Chamber of Commerce in Japan (ACCJ) and McKinsey (2021) pointed out that if the Japanese government is determined to implement comprehensive and robust digital reforms, and promote digital transformation of Japanese companies, it still has the opportunity to leverage digital technology to maintain its inherent advantages and enhance global competitiveness. It is estimated that in 2017, Japan's digital trade-related national economic output was 12 trillion yen (110 billion USD), accounting for approximately 2.2% of Japan's GDP. The impact covers major industries, with channels of influence including productivity improvement, cost reduction, and the creation of new revenue sources. By 2030, the economic impact of Japan's digital trade is expected to increase to 57 trillion yen (506 billion USD). In 2017, Japan's exports of digital-related products and services were approximately 1.9 trillion yen (17 billion USD), accounting for 2.6% of Japan's total exports, equivalent to Japan's ninth-largest export industry. By 2030, exports are expected to grow to 8.8 trillion yen (79 billion USD).

4. Digital transformation

On one hand, the Japanese government has prioritized policies supporting the development of the digital economy as a core aspect of its governance. In September 2021, the Digital Agency was officially established. This new institution is seen as a powerful integrated digital coordination center and a central institution for formulating digital economy strategies. Its functions include formulating basic guidelines for digital strategy, overseeing national information systems, and connecting local public body information systems. The Digital Agency is directly under the Cabinet, with the Prime Minister as its highest leader. This indicates that the Kishida administration has elevated digital economy policies to a strategic level crucial to national development. While continuing to lead the implementation of related digital policies at the central level, the Kishida administration launched the "Digital Garden City Nation Concept" to invigorate local areas and connect the world. It aims to address local economic and social issues such as uneven population distribution and aging through digital

policies. Regular meetings of the "Digital Garden City Nation Concept" and the Digital Temporary Administrative Investigation Committee are held to promote local digital transformation, coordinate digital reform, regulatory reform, and administrative reform, and reduce regional disparities. The Kishida government intends to balance the digital transformation process between the central and local levels, using government policies to guide the widespread adoption of the "digital disruptive effect" throughout society.

On the other hand, the Japanese government has further increased budgetary support for investments in the digital economy and 5G infrastructure communication equipment. In November 2021, the Kishida administration released documents related to promoting "New Capitalism," proposing a "Science and Technology Nation" strategy, with a 10 trillion-yen investment fund for higher education institution reforms, focusing on digital, green, artificial intelligence, and quantum science fields. The Kishida administration emphasized the need to boldly invest in cutting-edge technology research and development in digital, green, artificial intelligence, and quantum science, and to promote private investment. This indicates that the Kishida administration views investment in the digital economy and related infrastructure as a "catalyst" for Japan's economic recovery, with increasing policy financial support for the digital economy. Based on this, the Kishida administration's investment in digital economy construction is "comprehensive," summarized as a series of digital projects or systematic policy initiatives aimed at improving overall economic efficiency and achieving structural economic changes in Japan, essentially triggering the "digital disruptive effect" in Japan's social and economic sectors. From this perspective, the Japanese government's investment in the digital economy and ICT-related infrastructure is expected to bring significant economic and social "positive spillover returns," and is anticipated to enhance production efficiency across industries and drive structural economic reform throughout society.

To overcome structural barriers in the development of the digital economy, the Japanese government has proposed a range of strategies, including substantial investments in 5G infrastructure and funding for digital technology research. Furthermore, the government has introduced tax incentives to accelerate corporate digital transformation, such as tax reductions for companies adopting cloud computing and artificial intelligence technologies. Additionally, a dedicated fund has been established to support digital skills training for employees, aiming to enhance the overall quality of the workforce. These initiatives are expected to strengthen corporate competitiveness and enable Japan to secure a larger share of the global digital market.

5. Challenges facing Japan's digital economy

Japan has a deeply aging population, with over 29% of its population aged 65 and above as of 2022.This not only increases the difficulty of empowering the elderly workforce

through the digital economy but also limits the labor supply for the digital economy. On one hand, empowering the workforce through the digital economy requires digital literacy and skills. However, as Japan's population continues to age, the elderly workforce often lags in skill and knowledge updates. Due to age limitations and the lack of experience in computer programming and data analysis in traditional occupations, the elderly workforce may have lower acceptance and mastery of new technologies. This makes it difficult for them to meet the demands of the digital economy and take on high-skill positions. Additionally, many of Japan's digital industries lack adequate measures to support aging, and the integration of the elderly into the digital economy faces issues such as the digital divide and slow adaptation. This results in the reemployment of the elderly workforce being insufficient to fill the gaps in Japan's labor market. On the other hand, the deep level of population aging in Japan poses challenges to the labor supply and quantity reserves needed for digital economy development. Population aging leads to structural changes, resulting in a large number of retirees in the labor market, squeezing out skilled elderly workers. Furthermore, Japan's low birth rate leads to insufficient reserves of young talent, exacerbating the shortage of digital talent in companies. According to the 2022 Information and Communications White Paper released by the Ministry of Internal Affairs and Communications, 68% of Japanese companies reported a shortage of digital talent, and over 30% stated a severe shortage of professionals in artificial intelligence and data analysis.

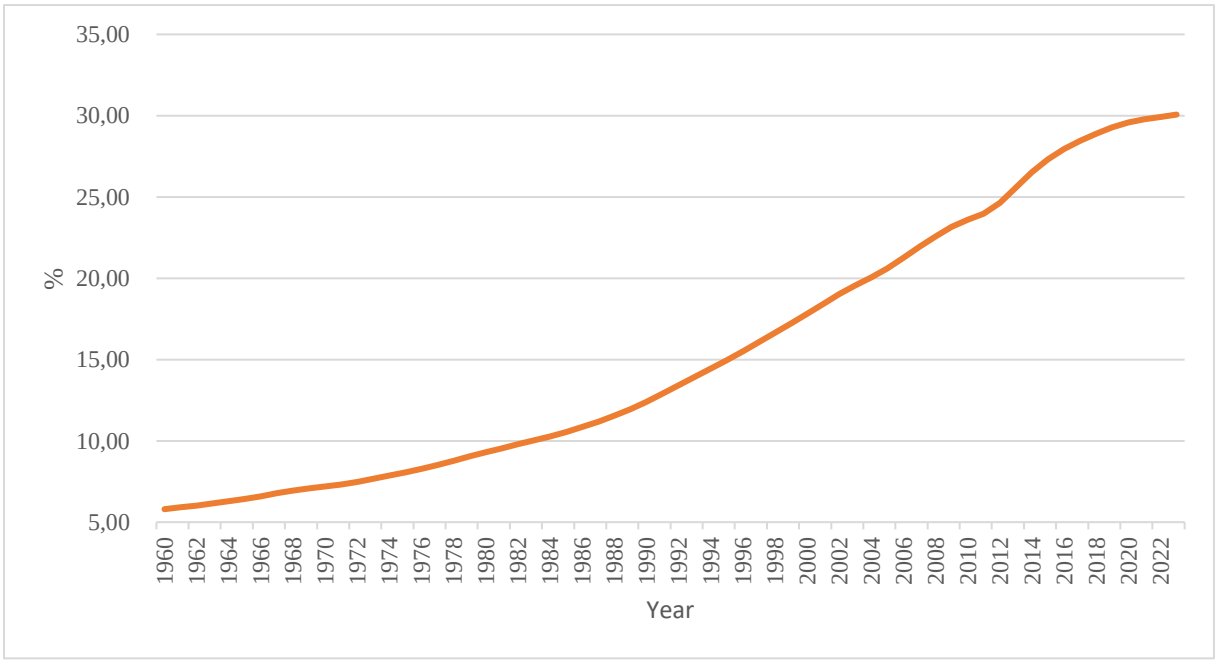

Figure 6: 1960-2022 Proportion of Population Aged 65 and over in Japan

Source: own compilation based on data from the World Bank

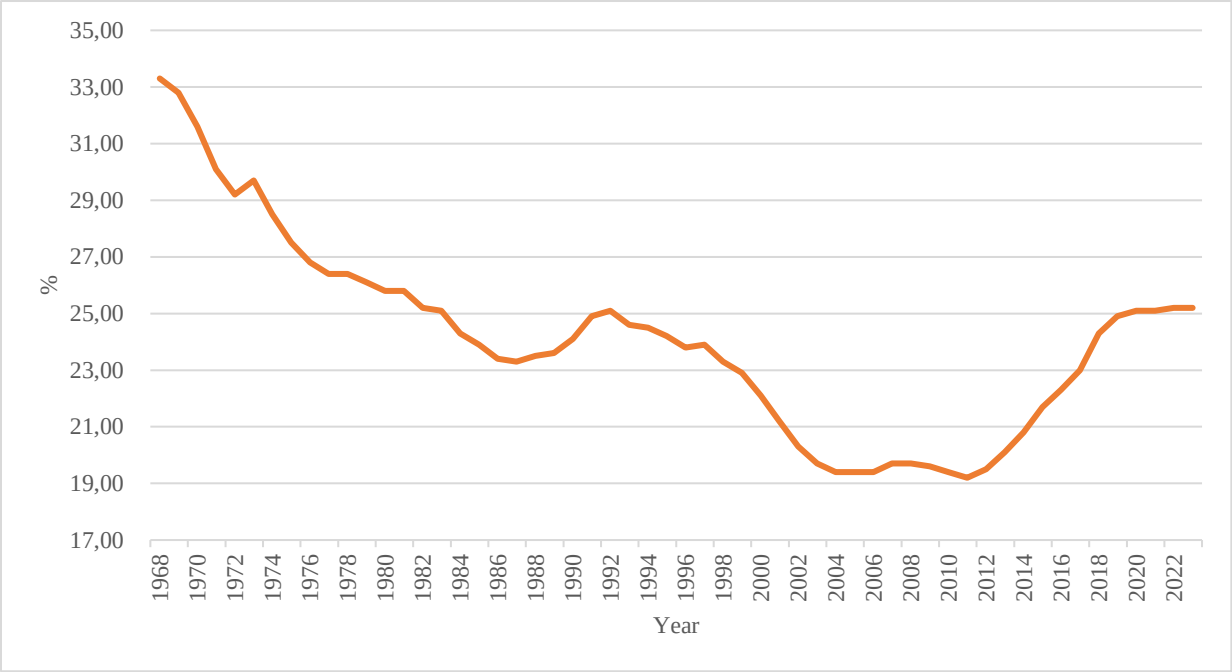

Figure 7: 1968-2022 Employment Rate of Population Aged 65 and over in Japan

Source: own compilation based on data from the Statistics Bureau of Japan

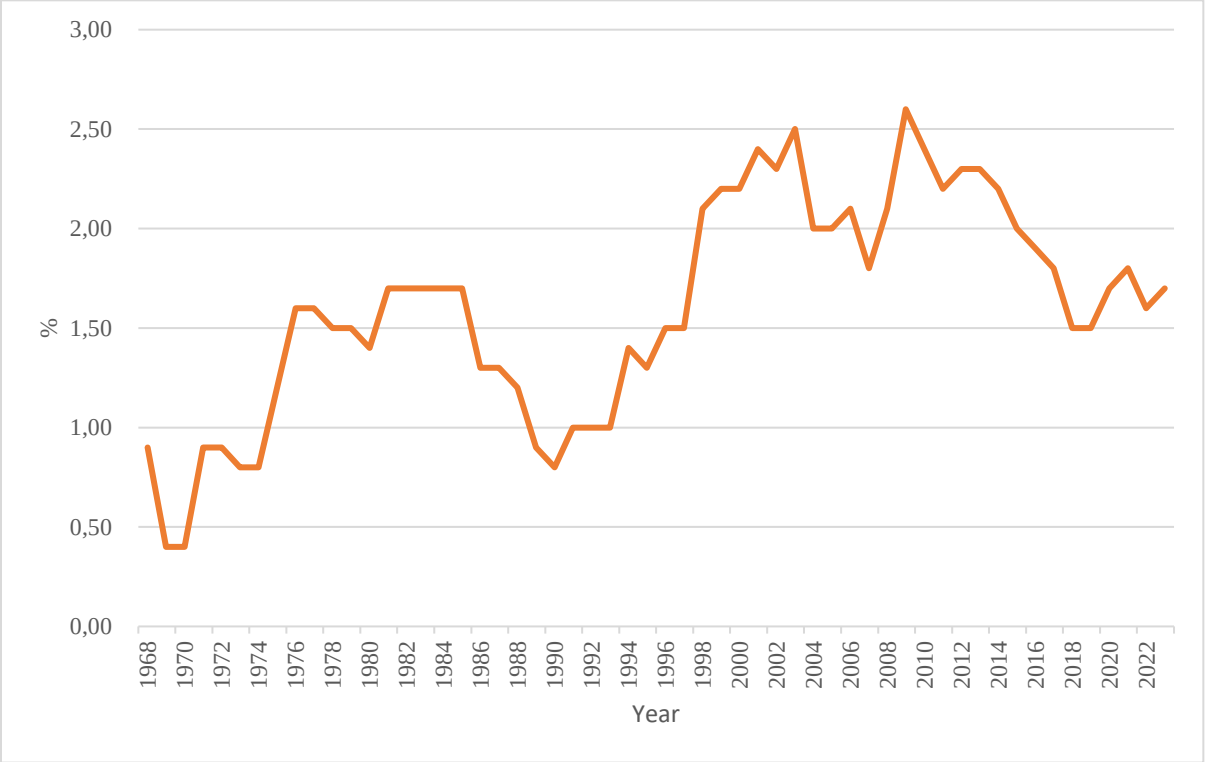

Figure 8: 1968-2022 Unemployment Rate of Population Aged 65 and over in Japan

Source: own compilation based on data from the Statistics Bureau of Japan

The Japanese government's digital economy policies also face uncertainties and challenges. Specifically, the first challenge is that the Kishida administration must sustain long-term governance for its digital economy policies to advance deeply. Second, the Japanese government's numerous large-scale fiscal and monetary stimulus policies during the pandemic may accelerate the "bubble" trend of the Japanese economy, potentially triggering a "stagflation" crisis, which could hinder the development of the real economy and digital industries. Third, uncertainties in the evolution of the international landscape and the geopolitical dilemmas in East Asia may also have more negative impacts on the development of Japan's digital economy. In summary, the Japanese government's governance cycle, domestic economic development trends, and international and regional geopolitical security issues could become obstacles to the deep advancement of Japan's digital economy policies. According to estimates by the Japan Center for Economic Research, Japan's nominal GDP per capita will be surpassed by South Korea in 2027, due to the slow pace of digitalization and stagnant labor productivity growth. The Japan Center for Economic Research believes that digital transformation is crucial for labor productivity growth, highlighting the urgency and necessity for the Japanese government to accelerate reforms in the digital economy and enhance policy support capabilities.

To address the challenges of an aging population and declining birth rates, the Japanese government introduced a series of policies in 2024, including increased childcare subsidies, extended paid parental leave, and the launch of the "Family Support and Work-Life Balance Initiative." These measures aim to alleviate the financial and logistical burdens of child-rearing, encouraging young individuals to marry and have children. Simultaneously, the government has sought to enhance childcare services and promote flexible employment models to enable greater workforce participation in the digital economy. The implementation of these policies is expected to expand Japan's labor supply in the future and inject renewed vitality into the country's digital economy.

Conclusion

Japan is the world's fourth-largest digital economy. According to estimates by the China Academy of Information and Communications Technology, from 2018 to 2020, Japan's digital economy exceeded $2 trillion and continued to grow, with the digital economy accounting for nearly 50% of GDP. Despite the long-term sluggishness of the Japanese economy, the digital economy has performed remarkably, becoming a significant driver of GDP growth. In terms of industrial digitalization, Japan relies on its highly developed industrial manufacturing sector, continuously deepening the integration and mutual promotion of digital technology and manufacturing, with industrial digitalization accounting for over 80%. In the area of 5G commercialization, Japan started the development and construction of 5G relatively late but

has been continuously strengthening policy support and increasing financial investment to accelerate its progress.

Japan's digital reform began in 2000, evolving from initially focusing on digital infrastructure construction to emphasizing information and communication technology applications, and now to the current stage of digital applications. Japan's economic digital reform has progressed from focusing on digital infrastructure reforms to a comprehensive digital reform strategy under the Kishida administration. The planning and implementation of Japan's digital reform in terms of digital technology innovation and digital economy development began during former Prime Minister Shinzo Abe's tenure. However, Abe's economic policy, "Abenomics," focused more on enhancing and revitalizing the economy through increased fiscal spending and eased financial regulations. The implementation of "Abenomics" did lead to economic growth and increased employment at one stage, but the "IT New Reform Strategy" and other digital technology innovation strategies mentioned in the "growth strategy" were not effectively promoted and implemented. This lack of thorough execution led to a slowdown in Japan's digital economy development after 2010, widening the gap with other countries in digital economic growth. The Kishida administration has fully recognized the importance and necessity of advancing digital reform in Japan. It is actively implementing digital economic reform measures across various fields, aiming for comprehensive planning, accelerated development, and thorough implementation of digital reforms. The goal is to narrow the digital gap with other countries, achieve world-leading digital capabilities, and enhance digital competitiveness.

Japan faces the challenges of declining birth rates, an aging population, and economic stagnation, while also contending with a shortage of digital technology human resources and intensified global competition for digital talent. Consequently, Japan's digital technology policies and digital economy strategies, including measures to develop digital infrastructure, have become crucial drivers of digital construction and transformation. According to the Ministry of Internal Affairs and Communications' "Survey on the Latest Trends in R&D and Digital Application of Information and Communication Technologies at Home and Abroad" (2022), 67.60% of respondents cited a lack of talent as a major challenge in promoting digital applications, a figure significantly higher than that of the United States, China, and Germany. This indicates a significant shortage of digital talent in Japan, necessitating measures such as training, recruitment, and updates to enhance the talent pool. Japan faces the challenges of declining birth rates, an aging population, and economic stagnation, while also contending with a shortage of digital technology human resources and intensified global competition for digital talent. Consequently, Japan's digital technology policies and digital economy strategies, including measures to develop digital infrastructure, have become crucial drivers of digital construction and transformation. According to the Ministry of Internal Affairs and

Communications' "Survey on the Latest Trends in R&D and Digital Application of Information and Communication Technologies at Home and Abroad" (2022), 67.60% of respondents cited a lack of talent as a major challenge in promoting digital applications, a figure significantly higher than that of the United States, China, and Germany. This indicates a significant shortage of digital talent in Japan, necessitating measures such as training, recruitment, and updates to enhance the talent pool.

Japan has formulated a comprehensive training plan for nurturing domestic digital talent. This plan starts with basic education in primary and secondary schools, introducing courses on programming and development to identify and further educate young students with digital talents. The plan includes improving ICT education environments, introducing digital remote courses, and offering various digital knowledge classes to ensure nationwide basic digital education, thereby laying a solid foundation for digital talent. At the university and graduate levels, various digital courses are introduced, and special scholarships are established to encourage in-depth research and exploration in the digital field. For young researchers, PhD students, and postdoctoral fellows, special research funds and living allowances are provided, along with post-graduation employment guidance to alleviate their concerns during their research. For working professionals, continuous learning courses are offered to help them enhance their skills even after employment. The plan promotes industry-academia-research collaboration, digital academic exchange activities, and the establishment of digital competitions. This comprehensive talent development plan covers all stages from basic education to university education and employment education, creating a fertile environment and providing more professional and effective stage-specific education for talent development.

References

American Chamber of Commerce in Japan & McKinsey & Company. *Japan Digital Agenda 2030*. Tokyo: McKinsey & Company, 2021. [Accessed: 2025-01-22]. Available at: https://www.accj.or.jp/japan-digital-agenda-2030

Cabinet Office of Japan.Annual Report on the Japanese Economy and Public Finance 2024: Toward a Vibrant New Economic Stage. Tokyo: Government of Japan, 2024. [Accessed: 2025-01-22]. Available at: https://www5.cao.go.jp/keizai3/whitepaper-e.html

IMD. World Digital Competitiveness Ranking 2022. Lausanne: International Institute for Management Development, 2022. [Accessed: 2025-01-22]. Available at: https://www.imd.org/centers/world-competitiveness-center/rankings/world-digital-competitiveness/

Japan Center for Economic Research.Japan's GDP and Digital Economy Analysis. Tokyo: JCER, 2021. [Accessed: 2025-01-22]. Available at: https://www.jcer.or.jp/english/japans-gdp-and-digital-economy-analysis

McKinsey Global Institute.*The Challenge of Digital Transformation in an Aging Society*. New York: McKinsey & Company, 2020. [Accessed: 2025-01-22]. Available at: https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/how-japan-can-make-digital-big-moves-to-drive-growth-and-productivity

Ministry of Internal Affairs and Communications of Japan. 2022. *White Paper on Information and Communications in Japan.* Tokyo: Ministry of Internal Affairs and Communications, 2022. [Accessed: 2025-01-22]. Available at: https://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2022_outline.pdf

MIO, K., & KANG, J., 2022. Evolution of Japan's Digital Economy. *Asian Economic Journal*, vol. 36, no. 3, pp. 127–145. ISSN 1467-8381.

NAKANO, M., 2021. "The Role of ICT in Japan's Economic Development." *Journal of Technology and Society*, vol. 29, no. 1, pp. 58–70. ISSN 0973-0796.

OECD. *Japan's Digital Economy: Progress and Challenges*. Paris: Organisation for Economic Co-operation and Development, 2019. [Accessed: 2025-01-22]. Available at: https://www.oecd.org/digital/japan-digital-economy-progress-and-challenges.htm

Statistics Bureau of Japan. *Digital Economy and Labor Market Report*. Tokyo: Statistics Bureau of Japan, 2022. [Accessed: 2025-01-22]. Available at: https://www.stat.go.jp/english/data/report.html

UNCTAD. *Digital Economy Report 2021: Japan's Position in Global Digital Trade*. Geneva: United Nations Conference on Trade and Development, 2021. [Accessed: 2025-01-22]. Available at: https://unctad.org/webflyer/digital-economy-report-2021

World Bank. *ICT Investment and Digital Transformation in Japan*. Washington, D.C.: The World Bank, 2022. [Accessed: 2025-01-22]. Available at: https://data.worldbank.org/country/japan

World Bank. *Japan Data*. Washington, D.C.: The World Bank, 2022. [Accessed: 2025-01-22]. Available at: https://data.worldbank.org/country/japan

Contact address

Jiandong Shi, PhD
Researcher, Center for International Economy
Mathias Corvinus Collegium
3-7 Tas Vezer Street, Budapest, 1113, Hungary
E-mail: shijiandonge37upb@gmail.com

Labour Relations as an Exemption from Public Procurement and Their Analysis in a Selected Case from Slovak Application Practice

Michal Roháč, Róbert Gyuri

https://doi.org/10.33542/VSS2024-2-4

Abstract

This paper analyzes the possibility of applying an exemption from public procurement in the form of employment relations, focusing on the specific case of the City of Nitra. The analysis begins with the decision of the Public Procurement Office from April 14, 2023 (No. 12409-6000/2022-OD/6), which questioned the legitimacy of applying this exemption to public contracts. However, this decision was overturned on September 11, 2023 (No. 9766-9000/2023), when the Chair of the Office confirmed no deliberate circumvention of procurement rules. The article also explores relevant legal frameworks and principles surrounding exemptions under European Union law, examining their application in the context of employment relations. It further provides insights into how exemption rules align with European directives, analyzing their practical use in employment contracts.

Keywords: *public procurement, employment relations, Public Procurement Office, Court of Justice of the European Union*

Introduction

Decisions of the Public Procurement Office (hereinafter 'the Office or Authority') have a significant influence on both professional circles and contracting authorities, directly shaping their procedures and decision-making. For the purposes of this paper, the term 'contracting authority' will also encompass entities defined under Section 8 of Act No. 343/2015 Coll. on Public Procurement and its Amendments (hereinafter referred to as 'the PPA' or 'the Act'), unless the context specifies otherwise. These decisions play a crucial role in ensuring the uniform interpretation and correct application of the Act. By fostering a systematic and consistent decision-making practice, the Office enhances legal certainty and predictability, thereby minimizing the risk of legal disputes and misapplication of the law by contracting authorities, promoting the consistent application of legislation in practice.

The Office's consistent decision-making practice fosters a stable environment in which all participants in public procurement can reliably anticipate the consequences of their actions. This not only bolsters confidence in the public sector but also contributes to reducing corruption and enhancing the efficient use of public funds. Ultimately, the Office's decisions serve not

only as a tool to ensure legal compliance but also as a means to promote fair competition, which is vital for guaranteeing equal opportunities for all suppliers.

One of the Office's recent decisions, specifically Decision No. 12409-6000/2022-OD/6 of April 14, 2023, regarding the application of the exemption for concluding labour contracts, has garnered significant attention and raised concerns among contracting authorities. Questions have been posed about whether the current procedures for concluding employment contracts comply with legislative requirements and align with the Office's established decision-making practice.

1. Exemption from public procurement - employment relations

Current modern trends and the direction of global society gradually require changes in the functioning and approach of the state and public administration as a whole. In this context, we see the state as a guarantor of various economic, social and political certainties through a well-functioning public administration. Of course, we are aware that even today there is no unified model of public administration, not only in the European Union. This also applies to the legislative and standard-setting sphere, the introduction of new qualitatively adapted approaches towards the performance of the state's functions, with a challenge for the entire public sector to achieve the implementation of state policy in such a way that the public interest is highlighted by taking into account the reform processes in society. The fulfilment of these considerations must inevitably be followed by the fulfilment of an important task, i.e. the provision of a 'personnel substrate' that will be the fertile ground for the fulfilment of the objectives of public administration. In this context, it is essential that the legal arrangements for the employment of persons in the public service reflect flexibility and appropriate legal governance. Only in this way can we believe that the public administration will be competitive in producing qualified and professional experts in the various areas of public administration (Žofčinová, 2021, p. 23).

The conclusion of employment contracts, agreements for work performed outside the employment relationship or similar employment relationships constitutes one of the exemptions listed in Article 1(2)(e) of the PPA, to which the provisions of this Act do not apply. These legal acts do not qualify as public procurement because they concern individual employment relationships between an employer and an employee. Specifically, these are situations where the contracting authority directly concludes employment contracts or agreements with natural persons in accordance with labour law, and these contracts are not subject to the public procurement procedures applicable to the procurement of goods, services or works.

This legislative exemption provides employers with the necessary flexibility to enter into employment relationships, thereby avoiding these relationships being subject to formal and

time-consuming procurement processes that are otherwise binding on the use of public funds. The main reason for its implementation is the need for efficient and adaptable management of internal staff capacity, which allows for a prompt and effective response to the organisation's current staffing requirements.

2. Application of the exemption from public procurement in the form of employment relations in Slovak application practice

For a more detailed analysis of the application of the exemption from public procurement in the form of labour relations in the conditions of the Slovak Republic, it is necessary to point out the case of the dispute between the City of Nitra and the Public Procurement Office on the application of this exemption (Decision of the Office No. 12409-6000/2022-OD/6 and Decision of the Chair of the Office No. 9766-9000/2023).

On 17.10.2019, pursuant to Section 7(1)(b) of the PPA, the contracting authority (hereinafter referred to as "the audited party", "the city" or "the municipality") concluded on the same day work performance agreements with three different natural persons, all of whom had identically defined work tasks. Simply put, the subject-matter of those agreements was the preparation of partial graphic and textual documents as instructed by the employer for the preparation of the single-stage design documentation for the construction project.

All three agreements were concluded for a fixed period of time, with the same duration, and provided for identical remuneration for the work performed. In concluding these agreements, the local authority applied the exemption from the PPA under Article 1(2)(e) of the Act. Prior to the conclusion of the agreements, a public procurement procedure entitled 'Preparation of project documentation for the Creative Industries Centre' was carried out. This was a subcontract aimed at providing services for the preparation of project documentation with an estimated value of EUR 217 333,00 excluding VAT (the invitation to tender was published on 30.07.2019 in the Public Procurement Bulletin No 152/2019 under reference 20410 - WYS. In November 2022, the Office notified the auditee of the initiation of the procedure for the review of its actions after the conclusion of the contract, on its own initiative. The aim of this procedure was to thoroughly assess the objective state of affairs on the basis of the documentation provided by the auditee and to verify the compliance of the auditee's procedure with the law.

In the first instance administrative proceedings, the Office concluded that the City of Nitra had unlawfully applied the exemption from the PPA by concluding work performance agreements with three natural persons without applying the prescribed procurement procedure under the provisions of the PPA, thereby violating the applicable legal standard. The Authority also found that this identified infringement had an impact on the outcome of the procurement procedure, as the unjustified application of the exemption did not result in the use of the

statutory procedures for the award of contracts, namely the procedure for sub-limit contracts, which allows for competition. This practice restricted competition as other potential tenderers and service providers were not able to participate or take part in the procurement process.

The City argued that it had concluded the work performance agreements with individuals in accordance with the Labour Code and Section 1(2)(e) of the PPA, which permit such contracts. The remuneration for the work was agreed in accordance with the Labour Code, on the basis of the tasks actually performed and was approved by the supervisor. Upon completion of the agreements, the City issued the relevant taxable income certificates and paid the remuneration from its own resources. For the sake of completeness, we would like to add that the Labour Inspectorate, as the competent authority, assessed the Agreements in question as compliant with the Labour Code.

The City supported its argumentation by reference to Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement (hereinafter referred to as "Directive 2014/24/EU"), recalled the conclusions of the judgment of the Court of Justice of the European Union (hereinafter referred to as "CJEU"), namely the Judgment of the CJEU of 25 February 2014, and the judgment of the Court of Justice of the European Union (hereinafter referred to as "CJEU") of 25 February 2014. 260/17 Anodiki Services EPE v. Oi Agioi Anargyroi, in which the CJEU addressed the application of Directive 2014/24/EU to the conclusion of fixed-term employment contracts in the first question referred for a preliminary ruling) and submitted a methodological guidance to the Authority. This strengthened its defence and provided a legal framework for its arguments. The local authority stressed that the agreements concluded did not serve to commission or provide the services of drawing up project documentation, but their object was to draw up partial graphic and textual documents according to the employer's instructions. The City explained that the decision to conclude these agreements was an internal management decision taken in response to the failure of the tender, as the successful tenderer's bid or its actions did not lead to the performance of the contract (the successful tenderer did not provide the necessary cooperation to sign the contract for the subject matter of the contract within the specified time limit). Therefore, the municipality decided to prepare the project documentation through its own staff in cooperation with the Department of Investment Construction and Development.

In view of the above, it can be concluded that the audited entity proceeded to the conclusion of three work performance agreements due to the need to provide supporting documents (project documentation for the reconstruction of buildings) within a specific timeframe. This deadline was affected by the cancellation of the tender for the provision of design documentation services due to the failure of the successful tenderer to provide assistance in concluding the contract. In view of the time pressure and the associated risk of

not meeting the deadline for completion of the single-stage design documentation, the City decided to take the solution in-house.

The management of the City of Nitra has decided to keep the consultation on the project details within the relevant departments of the Municipality and to maintain direct managerial influence on the completion of the project documentation. In their view, this would have been complicated when working with an external partner, especially given the timeliness of completing the documentation, which was no longer realistic with external processing. They therefore entrusted the processing of the project documentation to their own staff, who have the necessary qualifications and authorisations for such activities. The contracting authority stated that a similar procedure for the preparation of project documentation by in-house experts is also used by larger municipalities for major projects. As the processing of the project documentation was to be carried out within a few weeks, due to the need to submit it in the application for the grant of a non-repayable financial contribution (NFA), the City of Nitra employed the approached specialists for the preparation of certain graphic and textual documents in the form of a work performance agreement.

In this context, it should be stressed that it is unacceptable for exemptions to be used purposely in order to avoid transparent and competitive procurement procedures without objective reasons. It is an administrative offence to abuse exemptions or to avoid the application of the law in cases where it should have been applied. The use of exemptions must therefore be treated restrictively, with the burden of proof on the contracting authority invoking them to justify their use. This means that the contracting authority which, by reason of the use of an exemptions, has not acted in accordance with the law, has the burden of proving the justification for such action (see, for example, judgment of the CJEU in Case C-340/02 Commission of the European Communities v French Republic). In the light of the above, it is essential that the contracting authority carefully considers the use of any exemptions to the procurement process in the light of the specific factual circumstances. The Authority has stressed that labour law constitutes a separate branch of law with specific rules concerning the conclusion of employment contracts, the establishment and termination of employment relationships, changes in working conditions or remuneration. It is clear that there is a substantial substantive difference between an employment relationship and a contract. An employment relationship is a relationship between an employee and an employer, the object of which is the performance of dependent work. That dependent work may be performed exclusively in an employment relationship or a similar employment relationship, and only exceptionally, under the conditions laid down by law, in another employment relationship. The employment relationship shall be established on the basis of an employment contract. It follows that dependent work cannot be performed in a contractual civil or commercial relationship. On

the contrary, a contract within the meaning of the PPA is predominantly a commercial (in some cases civil) relationship between two independent contractual partners.

According to the reasoning of the first instance authority, there is an improper use of the exemption when contracting authorities enter into special purpose employment relationships in order to circumvent the obligation to comply with the law. In such cases, it is legitimate for the Authority to address the question of whether the legal prerequisites for the application of the exemption have been met. Although this exemption does not have financial limitations, in practice, the Authority considers that it is often abused in a way that violates the principle of the prohibition of circumvention of the rules under Article 1(15) of the TFEU. According to that provision, the contracting authorities and contracting entities may not award a contract, concession or use a design contest pursuant to paragraphs 2 to 13 with a view to avoiding the application of the procedures and rules under this Act. An example would be a work performance agreement at an hourly rate significantly above the employer's normal standard, which is more in line with the market prices of external suppliers.

The Authority considered that the individual activities, although they are partial graphic or textual works on documents (e.g. summary technical report, general situation of the building, fire safety project, water and gas connection, storm water drainage, photovoltaics, interior design, etc.), ultimately form a single whole - the project documentation of the building. Staff was required to prepare this design documentation in accordance with the relevant legislation, including the Building Act. According to the Office, in the case of agreements on work performed outside the employment relationship, the Labour Code does not specify what specific activity may be covered by the type of work defined in these agreements. However, this possibility must be seen in the context of the principle of exceptionality of the use of such agreements. Although the Labour Code does not define the criteria of exceptionality, this does not mean that an employer may use agreements on work performed outside the employment relationship on a standard and regular basis.

For the sake of comprehensiveness, it should be added that the City of Nitra concluded not only a performance agreement but also an employment contract with the employee. This employment contract was intended for broader professional activities, such as consultation and coordination of the completion of the documentation. The aim of the contract was to ensure the efficient completion of the project in cooperation with other departments of the municipality. It is interesting to note, however, that the first-instance administrative authority expressed doubts as to the real reason for the conclusion of the performance agreements, which related to the cancelled tender and the time delay in the outsourcing of the project documentation. This situation should have been linked to the need for a timely submission of the application for a non-reimbursable financial contribution (NFA), which should have justified the need to conclude these agreements. However, the Authority was not satisfied with the deadlines and

the timing of the sequence of steps, which raised questions about the justification for this procedure (the City of Nitra stated that the deadlines given by the Authority were not correct and disagreed in principle with the assessment).

In the context of the agreed remuneration, the decision states that the City, by entering into the work performance agreements, has fully entered into the position of an employer, which obliges it to fulfil all the obligations arising therefrom. At the same time, it must comply with the principle that it is not possible to agree on a more favourable remuneration for such an employee than that which results from the employment relationship. In the Authority's view, the fulfilment of these obligations, as well as all other obligations connected with the employment relationship, may be a decisive indication of the real intention of the audited entity.

For this reason, the Authority compared the amount of remuneration paid to employees (so-called 'contingent workers') on the basis of agreements with the average tariff salary of a professional officer in the Chief Architect's department or a separate professional officer - architect. It concluded that the remuneration agreed for one staff member was disproportionately high in relation to the duration of the contract and the tasks carried out, and was clearly out of proportion to the average salary of an internal staff member in the same or a similar position, or far above the normal market standard in the relevant field. The Authority also noted that the price of EUR 127 000 for the preparation of the design documentation submitted by the successful tenderer in the previous procurement procedure was almost the same as the total remuneration paid under the three agreements concluded. It concluded that the City had entered into special purpose employment relationships, thereby circumventing the obligation to award the contract for the provision of design documentation services for the reconstruction of selected buildings under the procedure laid down in the PPA.

In the conclusion of the decision, the Office finds that the contracting authority has not fulfilled the conditions for a justified use of the exemption, as the purpose of its use has not been fulfilled. The audited entity only formally concluded the agreements, while its action was not directed towards the conclusion of employment relationships with the aim of implementing active labour policy.

In view of all the above, the Office finds that the procedure followed by the audited entity in concluding the agreements in question did not fulfil the purpose of the application of the exemption, thereby de facto avoiding the rules and procedures laid down by law. In the present case, the Authority has not established that the controlled entity has legitimately used the chosen exemption, since the City has not borne the burden of proof and has not demonstrated the legitimacy of its use pursuant to Article 1(2)(e) of the PPA in accordance with the legis lata. This conduct infringed Article 10(1) of the PPA, resulting in a restriction of competition (which did not take place) and, according to the findings of the first instance

authority, had an impact on the outcome of the procurement procedure. The Authority's decision became final on 25.04.2023.

One of the objectives of the application of the PPA is to promote effective competition in the award of contracts. The Authority generally states that opening up to the widest possible competition is in the interest not only of the EU objective of free movement of goods and services, but also in the self-interest of the contracting authority concerned, which will thus have a wider choice of the most advantageous tender that best meets the needs of the public concerned (CJEU, SECAP and Santorso, C-147/06 and C-148/06, paragraph 29). The objective of the principle of equal treatment is to promote the development of healthy and effective competition between entities participating in public procurement. Compliance with this principle must ensure an objective comparison of tenders and applies at all stages of the procurement procedure. The principle of transparency is reflected in a fair and transparent procurement procedure which ensures that the objective of free undistorted competition and the principle of equal treatment are respected, in particular by avoiding that one competitor obtains an undue advantage over the others. The CJEU has also specified the scope of the transparency obligation in Telaustria and Telefonadress, C-324/98 and Parking Brixen, C-458/03. According to the CJEU, the aim of this obligation is essentially to ensure that there is no risk of preference and arbitrariness on the part of the contracting authority. This obligation consists in ensuring an adequate degree of publicity for each potential tenderer to enable the tender to be made available to tenderers and to check its impartiality.

Review of a final decision of the Authority

At the outset of the legal assessment of the issues related to the decision under review, the Chairman of the Office pointed out that the audited entity did not raise any legally relevant objections to the Office's findings concerning the infringement of the FVO during the proceedings before the Authority as the first instance administrative authority. Moreover, it did not even avail itself of the possibility to lodge an appeal against the Authority's decision as a proper remedy, although it had been duly informed of this right. Consequently, the Authority's decision became final.

In general, therefore, if the audited entity sought protection of its rights and legally protected interests for the first time only by means of an application for review of a final decision of the Office pursuant to Section 177(1) of the PPA, in the opinion of the Chairman of the Office, it should not have been granted legal protection in this extraordinary remedy procedure. The legally relevant way of contesting infringements of the PPA in the procedure for the review of post-contractual acts of the inspected party is the statement of the inspected party on the facts established in the procedure for the review of post-contractual acts of the inspected party before the decision pursuant to Section 173(1) of the PPA is issued. If, in the circumstances,

the auditee only raised its claims by lodging a complaint for review of a final decision, such a procedure should not generally have led to the facts set out in the complaint (which it could have already raised in the proceedings before the Authority or on appeal) justifying a change in the Authority's decision, which was already final.

In this context, the Chairman of the Office appropriately emphasises that the instrument provided for in Section 177 of the PPA should not be used as a normal means of challenging decisions of first instance, nor should it replace the ordinary remedies which the inspected party has not availed of during the review of its actions. This extraordinary remedy is not intended to remedy omissions or inaction on the part of the party subject to review at earlier stages of the procedure. In support of this approach, the Chairman of the Office referred to the principle of vigilantibus iura scripta sunt, which has been in force since Roman law, which means 'rights belong only to the vigilant'-that is, to those who take active care to protect and exercise their rights and exercise their procedural rights in a timely and diligent manner. In a free society, it is above all the responsibility of rights-holders to protect and take care of their rights; otherwise, by undervaluing or neglecting them, they may forfeit their property, personal or other rights. This is similarly true when using the procedural provisions of the law, as stated in the resolution of the Supreme Court of the Slovak Republic of 8 November 2011, Case No 1Sžr/38/2011. Following this, it can be argued that it is necessary to interpret the wording of Section 177(1) of the PPA in such a way that the Chairman of the Office is obliged to review a final decision of the Office on his/her own initiative, especially in cases where the illegality of the Office's decision is evident or at least highly probable (Košičiarová, 2013).

In the light of the above, we submit that the decisive reason for initiating proceedings for review of the final decision of the Authority was not the arguments set out in the complaint of the audited entity, but the manifest illegality of the decision itself, as identified by the Chairman of the Office. In the review of the decision in question, the facts set out in the inspected party's complaint were not taken into account, since, as we have already mentioned above, the inspected party had the opportunity to put forward its arguments earlier in the proceedings before the Office or in the appeal proceedings which it could have initiated. For the sake of completeness, however, we will take the liberty to set out some of the arguments put forward by the auditee.

In its submission, the City of Nitra stated that, similarly to the decision of the Council of the Authority to cancel the tender for cleaning services (Decision of the Council of the Authority No 1829-9000/2021), it had to cancel the tender due to the lack of cooperation of the successful tenderer and the time delays incurred. The City further criticised the procedure followed by the Office, in particular its questioning of the amount of remuneration paid under the performance agreements and the comparison of these remunerations with the competitive bids, which included taxes and levies. In the City's view, such a comparison was not objective,

as the tenderers' offers represented total prices which were not directly comparable to the gross salaries of the employees. The City also stressed that the decision whether to provide the services by in-house staff or to outsource them through a competitive tender process was entirely within the contracting authority's discretion. The city authority underlined that it acted as a good economic operator and rejected legal formalism.

Furthermore, the City of Nitra objected to the fact that the Procurement Office examined the amount of remuneration agreed between the employer and the employee, while the Labour Inspectorate in Nitra did not raise any objections to these remunerations. The city considered the authority's action to be an excess of its powers under section 167(1) of the PPA and section 3(1) of the Administrative Procedure Code. It also argued that the Authority's procedure was contrary to the Constitution of the Slovak Republic. The City further argued that it saw no reason why an employee could not be remunerated at an amount comparable to the remuneration charged by successful bidders in commercial relationships and that the PPA did not set any limits on the conclusion of employment contracts or on remuneration per hour of work.

It was also apparent from the above that there were divergent views among the professional community on the application of the exemption and it was therefore necessary for the Chairman of the Office to provide a clear conclusion in order to stabilise interpretation and decision-making practice. According to Mr Tkáč and Mr Griga, the legislator did not set a maximum financial limit for the application of this exemption. Thus, a contracting authority may conclude a work performance agreement even for large sums of money, while such a procedure would not be contrary to the PPA. Nevertheless, in practice, other laws, such as the Financial Regulation Act, may apply which limit such conduct in the interests of efficiency and economy. Thus, such a procedure might not contravene public procurement rules if it complies with other relevant regulations, while in the public sector, for example, salary scales prevent exceeding reasonable remuneration (Tkáč, Griga, 2016). On the other hand, J. Azud, L. Plaváková and P. Bartoš point out that the absence of a financial limit may lead to incorrect application of the exemption. Contracting authorities may abuse the exemption to enter into employment relationships for the purpose of circumventing the obligation to award contracts through public procurement. Particularly problematic are situations where the remuneration for the arrangement is significantly higher than normal standards, leading to unreasonable hourly rates. The above-mentioned authors stress the need for a restrictive interpretation of the exemption and recommend that controlling authorities carefully examine whether the law is being circumvented (Azud, Plaváková, and Bartoš, 2019).

Application of the public procurement exemption in the case under analysis according to the case law of the CJEU

A number of legally binding EU acts have been transposed into the PPA, which are directives that, although they do not have direct effect at national level (as is the case with regulations as sources of EU law, none of which, however, directly affect the area of public procurement), EU Member States have an obligation to adapt their national legislation to the principles and principles contained in the directives and, through it and its application, to achieve the objectives expressed in the directives. In disputed situations, the provisions of the PAA must always be interpreted in such a way as to respect the fundamental principles and principles which derive precisely from the individual EU Directives, which are such principles as to lead to an efficient, economically justified, transparent and non-discriminatory award of any public contract. The principles of efficiency of the whole process, economically justified selection of the winner of the tender, transparency and non-discrimination are principles derived from EU law which can be argued and practically used in the interpretation of the individual provisions of the PPA.

In practice, the normative text of the law must always be used as a basis, but its interpretation cannot be disregarded in the light of the rules arising from the directives, which leads to the so-called Euroconform interpretation. The focus of the PPA itself is on the precise procedure for awarding public contracts, i.e. the set of mandatory steps constituting the legal procedure for awarding public contracts. In general, these are the steps to be followed during the period in which the acts leading to the conclusion of a contract are carried out, on the basis of which performance is to be made against payment from public funds. The main purpose of such highly formalised but still private law contracting, which is supervised by the Authority under the public law regime, is the efficiency of the use of public funds and their direct or indirect saving and the assurance of effective competition." (Judgment of the Regional Court in Bratislava, Case No. 2S/250/2009 of 08.02.2012).

At the outset of the analysis of the issue which is the subject of the Authority's decision under review, it is necessary to refer to recital 5 of Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC (hereinafter also referred to as the Directive), which states, quote, "It should be recalled that nothing in this Directive obliges Member States to outsource or outsource the provision of services which they wish to provide themselves or to organise by means of non-public contracts within the meaning of this Directive. This Directive should not apply to the provision of services resulting from laws, regulations or employment contracts. In some Member States, this could be the case for certain administrative and governmental services, such as executive and legal services, or the provision of certain public services, such as foreign affairs services, justice services or compulsory social security services.

This recital is fundamental to the interpretation of the exemptions to the Directive, as it confirms that employment relationships, such as employment contracts or performance agreements, are excluded from public procurement under the PPA. This means that if a Member State chooses to carry out its tasks through in-house staff, it is not obliged to apply public procurement procedures under the PPA. This approach is based on the principle of subsidiarity and respect for national legal frameworks relating to labour relations. Professional publications and sources often stress that this article of the Directive is intended to ensure that public authorities have flexibility in organising the provision of their services. The second instance decision is also based on the judgment of the Court of Justice of the European Union in Case C-260/17, the conclusions of which are briefly summarised below.

In accordance with the settled case-law of the CJEU, the requirement of uniform application of Union law implies that if a provision of Union law does not contain any reference to the law of the Member States in relation to a concept, that concept requires, in principle, an autonomous and uniform interpretation throughout the European Union. That interpretation must take account of the wording of the provision in question, as well as its context and the objective pursued by the legislation in question (see, in particular, the judgments of 19 December 2013, Fish Legal and Shirley, C 279/12, EU:C:2013:853, paragraph 42, and of 19 June 2018, Baumeister, C 15/16, EU:C:2018:464, paragraph 24, to that effect). In this context, on the one hand, it follows from recital 5 of Directive 2014/24 that that Directive does not oblige Member States to supply or outsource the provision of services which they wish to provide themselves or to organise by means of non-public contracts within the meaning of that Directive, and that that Directive should not apply to the provision of services resulting from laws, regulations or employment contracts.

It follows that the conclusion of employment contracts constitutes a means for the public authorities of the Member States to provide services themselves and is therefore excluded from the public procurement obligations laid down by that Directive. Contrary to what Anodiki Services states in its written observations, this possibility for public authorities to provide themselves with some of their needs by concluding employment contracts is not limited to the cases referred to in the last sentence of the above recital. In this connection, the fact that the recital specifies, in relation to this possibility that the public authorities should have, that 'this could be the case' for the services which it exhaustively lists after this part of the sentence, is sufficient to show that this definition is not intended to be exclusive.

On the other hand, it must be stated that the conclusion of an employment contract by its nature establishes an employment relationship between the employee and the employer. In the broader context of European Union law, it is settled case-law that the characteristic feature of an employment relationship is the fact that a person carries out, for a certain period of time, for the benefit of and under the direction of another person, activities for which he

receives remuneration (see, in particular, judgments of 3 July 1986, Lawrie Blum, 66/85, EU:C:1986:284, paragraph 17, and 19 July 2017, Abercrombie & Fitch Italia, C 143/16, EU:C:2017:566, paragraph 19, and the case-law cited above). It follows from those considerations that the concept of 'contracts of employment' within the meaning of Article 10(g) of Directive 2014/24 covers all contracts under which a public authority employs natural persons for the provision of its own services and which create an employment relationship under which those persons carry out, for a specified period, activities for the benefit of and under the direction of that public authority, for which they receive remuneration. For the purposes of this definition, the manner in which those persons are employed is therefore irrelevant.

In particular, although an employment relationship may undoubtedly be based, as Anodiki Services submits in its written observations, on a special confidential relationship between employer and employee, it cannot be inferred that only contracts concluded on the basis of subjective criteria in relation to persons recruited, with the exemption of contracts resulting from a selection made on the basis of purely objective criteria, constitute 'contracts of employment' within the meaning of that provision. Moreover, in so far as, in accordance with the definition of 'employment relationship' recalled in paragraph 28 of that judgment, the employee provides activities for the benefit of the employer, under the direction of the employer, 'for a fixed period', fixed-term employment contracts cannot be excluded from the concept of 'contracts of employment' within the meaning of Article 10(g) of Directive 2014/24, on the ground that the duration of the employment relationship which they create is limited in time.

Examination of the case of the dispute between the City of Nitra and the Office for the Application of the Exemption

In his review decision, the Chairman of the Office confirmed that the application of the exemption under Section 1(2)(e) of the PPA requires strict adherence to the rules, while it is important that the exemption is not abused to circumvent the public procurement procedure. The exemption allows employment relationships, such as employment contracts or performance agreements, to be concluded without the obligation to follow the public tender rules. He also stressed that the application of the exemption must be based on objective circumstances.

In his assessment, the Chairman of the Office analysed in detail whether the audited entity (the City) fulfilled the legal prerequisites for the application of the exemption from the PPA, stating that it was necessary to examine whether the case was not a case of purposeful conduct aimed at circumventing the public procurement obligation. The Chairman agrees that the Authority was entitled to examine whether the law was circumvented by the fact that the

auditee entered into formal employment relationships with natural persons with the intention of circumventing the obligation to award a contract for the preparation of project documentation by means of a public procurement procedure.

The key issue was whether the employment agreements were validly concluded under the Labour Code or whether they were formal relationships designed to circumvent the law. In this respect, the Chairman of the Office stressed that the Office was not entitled to assess labour relations in the light of the Labour Code, as this area fell within the competence of the Labour Inspectorate. The Chairman of the Office stated that the Labour Inspectorate Nitra, which was competent in the matter, did not find any violation of labour law in its report. This protocol was to be binding on the Office and there was therefore no reason for the Office to further examine the validity of these employment relationships from the point of view of the Labour Code.

In paragraph 55 of the decision, the Chairman of the Office expressed doubts about the legal approach applied by the Office in this case, since the Office, while respecting the conclusions of the Labour Inspectorate, did not take them into account when assessing the lawfulness of the inspected party's procedure under the LIA. In his decision, the Chairman literally stated that this was an "unsustainably created legal context", since the Office, on the one hand, respected the findings of the Labour Inspectorate but, on the other hand, did not use them as relevant in assessing the amount of remuneration and the compliance of the employment contracts with the public procurement procedure. As a result, the Authority found a breach of the PPA on the basis of alleged non-compliance with labour law, which the Chairman found to be unjustified.

The Chairman of the Office also pointed out that the examination of labour relations in the context of the PPA does not fall within the competence of the Office. The Authority's Interpretative Opinion No 3/2016 clearly states that the Office is only to assess compliance with the PPA and not with the Labour Code or other legislation governing labour relations (according to which the examination of the compliance of contractual terms with commercial, civil or other public law falls under the protection of other specialised state authorities and according to which the Office interferes to a limited extent with the contractual freedom and freedom of contract of the contracting authority, contracting entity or person under Section 8 of the Public Procurement Act. It is true that the above interpretative opinion refers to the absence of the Authority's power to review the contractual terms and conditions laid down in the public procurement procedure (in the draft contract which is to be the result of the public procurement procedure), but in the present case it is also applicable per analogiam to the present case, where the Authority has reviewed the terms and conditions laid down in the work performance agreement, even though that power is conferred on other specialised bodies of the public administration, or on the courts in labour disputes.

If the interpretative opinion, which has long been accepted by the Authority and the Council of the Authority,[1] should not be applicable in the present case, according to the Chairman of the Office as well as to us, absurd situations would arise where the same body (the Authority) would not assess the contractual terms and conditions set out in the public procurement from the point of view of specific regulations, but in other cases of assessment of private law relations (e.g. The Authority should limit itself to examining whether an exemption has been applied in accordance with the PPA and not interfere in labour law issues which fall within the competence of other specialised state authorities.

In conclusion, the Chairman of the Office stated unequivocally that there was no reason for the Office to examine the validity of the employment agreements from the point of view of the Labour Code, as this issue had been assessed and concluded by the competent authority - the Labour Inspectorate Nitra. The only objective criterion that had to be demonstrated was the valid conclusion of the employment relationship, which was fulfilled in the present case. Therefore, there were insufficient grounds for concluding that the auditee had attempted to circumvent the public procurement rules by formally concluding an employment relationship.

Following a review of the Office's decision by the Chairman of the Office, it appeared that insufficient grounds had been established to find that the auditee had deliberately circumvented the rules and procedures of public procurement in order to favour a particular economic operator. In his assessment, the Chairman of the Office concluded that it had not been established that there had been a purposeful circumvention of the procedures under the PPA in this particular case.

In relation to the entire reasoning of the Office's decision, the Chairman of the Office critically assessed that the Authority tried to "force" the audited party to provide the performance by means of an external contractor through public procurement. However, the fact that the auditee had previously attempted to procure the project documentation through public procurement and that it had subsequently made use of the employment relationship was not a sufficient reason to consider that the use of the exemption was unlawful. The Chairman of the Office made it clear that the auditee had every right to decide whether to secure the project documentation internally or externally and was under no obligation to re-tender.

On the basis of the above, the Chairman of the Office decided that the decision of the Office lacks a convincing and sufficiently reasoned finding of a breach of the PPA. He therefore reversed the Authority's final decision pursuant to Section 177(3) of the PPA. The key reason

[1] See, e.g., Authority Council Decision No 7929-9000/2019 of 17.06.2019, Authority Council Decision No 8543-9000/2021, 11316-9000/2021 of 20.09.2021, Authority Council Decision No 6733-9000/2020 of 02.06.2021, Authority Council Decision No 6733-9000/2020 of 02.06.2021, Authority Council Decision No 6733-9000/2020 of 02.06.2019. 18010-9000/2017 of 21.02.2018, Authority Council Decision No. 13114-9000/2021 of 23.12.2021 or Authority Council Decision No. 14105-9000/2021, 14265-9000/2021 of 18.03.2022.

for this change was that the decision did not contain reviewable and objective reasons that would prove the illegality of the use of the exemption by the audited party.

This conclusion in the decision emphasizes the respect for the legal autonomy of public procurement entities in deciding how to fulfill their needs. The Office cannot force the procuring entity to outsource if it has legitimate reasons to use its internal capacity, which in this case was adequately justified and justified.

Conclusion

The decision of the Chairman of the ÚVO dated September 11, 2023 (No. 9766-9000/2023) represents a key legal analysis regarding the application of the exemption pursuant to § 1 par. 2 letters e) PPA. The subject of this decision was the examination of the legality of using this exemption when concluding work performance agreements with natural persons for the preparation of project documentation. Chairman of the Office changed the decision of the first-instance body and stated that it was not proven that the audited entity had committed a violation of the law, nor that it was a purposeful circumvention of procurement rules. At the same time, the decision emphasizes the importance of legal certainty and a clear definition of the competences of the Public Procurement Office when investigating labor relations, which are primarily the competence of labor inspectorates. This case thus provides a precedent for the interpretation and application of exemptions in the context of public procurement and emphasizes the need for transparent and objective assessment of public procurement.

Also in view of the above, when analyzing the case of the dispute between the city of Nitra and the Public Procurement Office regarding the application of the exemption, we come to the conclusion that the possibility of applying the exemption from the PPA must always be interpreted restrictively, and that the conditions for using the exemption according to § 1 par. 2 letters e) PPA should be assessed with a view to preventing circumvention of public procurement rules. As we analyzed in detail, the head of the office came to the conclusion that the key issue is the validity of the conclusion of labor relations. The only objective criterion when examining the legality of the application of this exemption was the confirmation that the labor relations were concluded validly according to the labor law regulations.

Moreover, even if the public contracting authority used labor relations to secure a specific work, for example project documentation, the mere fact of concluding these relations cannot automatically be evidence of purposeful circumvention of the Public Procurement Act. The argument that the amount of the agreed remuneration for the creation of the work can be evidence of circumvention of the law was also marked as unfounded, because the similarity of the value itself does not prove the expediency of this procedure. We consider it important and appropriate that the head of the office drew attention to the fact that if the Nitra Labor

Inspectorate, which is the competent authority in the field of labor regulations, did not find any violations of the Labor Code in the concluded agreements, the office did not have the authority to review and cancel these agreements only on the basis of presumed non-compliance with labor regulations. It is wrong for the office to examine issues beyond its competence and at the same time ignore the opinion of other competent authorities.

A similar opinion is taken by the Public Procurement Office contained in its Interpretive opinion no. 3/2016, which confirms that the office does not have the authority to examine the compliance of labor relations with labor law. The office should only monitor compliance with the obligations arising from the Public Procurement Act. This conclusion is in accordance with the principle of the rule of law, where each institution has its own specific authority and competences (in accordance with the principle of ultra vires). Considering the interpretation of the jurisprudence of the Court of Justice of the EU and the previous decision-making practice, it is therefore clear that the use of employment contracts in such cases is not unjustified, as long as the contracting authority can prove that these relationships were concluded properly and in accordance with legal regulations.

References

AZUD, J., PLAVÁKOVÁ, L., BARTOŠ, P., 2019. *Zákon o verejnom obstarávaní*. Komentár. Bratislava: C. H. Beck., pp. 1816, ISBN 978-80-89603-75-6.

KOŠIČIAROVÁ, S., 2013. *Správny poriadok - komentár*. Šamorín: Heuréka, pp. 357, ISBN 978-80-89122-85-1.

Decision of the Chairman of the Public Procurement Office no. 9766-9000/2023 dated 11 September 2023 on the review of the valid decision of the office.

Decision of the Public Procurement Office no. 12409-6000/2022-OD/6 dated April 14, 2023 on the unauthorized application of the exemption pursuant to § 1 par. 2 letters e) of the Act on Public Procurement.

Judgment of the Regional Court in Bratislava, no. stamp 2S/250/2009 dated February 8, 2012.

Judgment of the Court of Justice of the EU Parking Brixen, C-458/03.

Judgment of the EU Court of Justice SECAP and Santorso, C-147/06, point 29.

Judgment of the Court of Justice of the EU Telaustria and Telefonadress, C-324/98.

Judgment of the Court of Justice of the EU in Anodiki Services EPE v GNA, O Evangelismos – Ofthalmiatreio Athinon – Polykliniki, Geniko Ogkologiko Nosokomeio Kifisias – (GONK) "Oi Agioi Anargyroi", C-260/17

Judgment of the Court of Justice of the EU in the case Commission of the European Communities v Italian Republic, C-385/02

Judgment of the Court of Justice of the EU in the case Commission of the European Communities v. Italian Republic, C-57/94

Judgment of the Court of Justice of the EU in the case Commission of the European Communities v. Federal Republic of Germany, C-318/94

Judgment of the Court of Justice of the EU in the case Commission of the European Communities v French Republic, C-340/02

Judgment of the Court of Justice of the EU in SECAP SpA (C-147/06) v. Comune di Torino, C-148/06

Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC.

TKÁČ, J., GRIGA, M., 2016. *Zákon o verejnom obstarávaní – Veľký komentár*. Bratislava: Wolters Kluwer s. r. o., pp. 1260, ISBN 978-80-8168-454-8.

Interpretive opinion of the Office no. 3/2016 on the authority of the office to review the contractual conditions of a draft contract or framework agreement, which is to be the result of a public procurement (available at the web address: https://www.uvo.gov.sk/fileadmin/dokumenty/vykladove_stanoviska_2015/3_2016.pdf
The call for tenders published in the Public Procurement Bulletin no. 152/2019 under the sign 20410 – WYS (available at the web address: https://www.uvo.gov.sk/vestnik-a-registre/vestnik/oznamenie/detail/414876?cHash=522d3c7846fb434f8d074499f56f81f5

Zákon č. 311/2001 Z. z. Zákonník práce v znení neskorších predpisov.

Zákon č. 343/2015 Z. z. o verejnom obstarávaní a o zmene a doplnení niektorých zákonov v znení neskorších predpisov.

ŽOFČINOVÁ, V., 2021. *Labor relations in public administration* (delegated and subsidiary scope of the Labor Code). Prague: Leges, pp. 142. ISBN 978-80-7502-577-7.

Contact address

Mgr. Michal Roháč
Representation of the Košice Self-governing Region at the European Union
Košice Self-governing Region
Rue d'Arlon 63
1040 Brusel
Belgium
E-mail: rohac.michael@gmail.com

JUDr. Róbert Gyuri, PhD.
ID ORCID: 0000-0002-9362-7501
Pavol Jozef Šafárik University
Faculty of Public Administration
Department of Public Law Disciplines
Popradská 66
041 32 Košice
E-mail: robert.gyuri@upjs.sk

Engaging New Audiences: Innovative Tools for Museum and Gallery Development in Slovakia

Iveta Korobaničová, Romana Rončáková

https://doi.org/10.33542/VSS2024-2-5

Abstract

The concept of audience development has taken a main role in current situation among cultural institutions. After the coronavirus disease, COVID-19, a lot of cultural institutions have a problem with financing of their activities and re-engaging with their audience. The aim of this paper is to analyse the state of audience development tools among the cultural institutions and galleries in Slovak Republic. This article relies on quantitative research to examine the complex of tools used by these institutions to achieve their goals and reach their target audiences. The research question focuses on identifying the types of tools used by these organisations to engage both potential and current audience. The research primarily highlights the significant role of social media and other digital tools in reaching younger audience.

Keywords*: audience, development, process, social media, digital tools*

Introduction

Audience development has been important issue in a research and studies in all cultural institutions (Kawashima, 2000; Waltl, 2006; Arts Council England, 2015). Based on the Kawashima (2000) the sustainability of the cultural institutions in the cultural market is dependent on the establishment of a new management processes and audience development strategies to foster citizen participation. Audience development is crucial for all institutions aiming to enhance attendance, expand their digital user experience database and disseminate the value of culture between potential audiences. Some of them engage their audiences with providing the grants for the institutions to fund outreach programs and so on (Wiggins, 2004). In Germany, publicly funded high-arts institutions often use this concept as a tool to increase visitor attendance (Mandel, 2018).

Broadly defined, audience development refers to the process of building and expanding audiences for a specific product, service, or organization. This process involves the understanding of the audiences. It is not possible without the identification of their needs and based on the results of the analysis developed the strategies to engage it more effectively (Ayla, Cuenca-Amigo, & Cuenca, 2019; Aizpuru, Cuenca-Amigo, & Cuenca, 2024). The success of this process is dependent on careful planning and implementation (Savage, 2015).

This paper is divided into a few parts. The first part contains a theoretical background of this approach. The second part deals with the research objective and methods. In the third part and the final part of this paper present findings of the quantitative research with some recommendations.

1. Theoretical background of audience development concept

Cultural institutions should achieve increasing numbers of audience and engagement of audience by strategic activities adjusted to audience´s needs. This process included "marketing, commissioning, programming, education, customer care, and distribution" to reach new audiences (Arts Council England, 2015).

According to Waltl (2006), audience development requires a coordinated approach, that involves all activities of cultural institutions to achieve the cultural institution´s goals with higher quality. Also, this long-term process is focused on the identification of audiences´ needs (both potential and current). This process helps to cultural institutions understand their audiences and build relationships with them. In this approach, the audience is at the centre of the institutions´ activities. Key elements of audience development include engaging people, address their needs and interests, and create environments and experiences that appeal to them. (Vargová & Hladký, 2014)

The term "audience development" extends beyond the strategy or concept. Anderson (2005) emphasizes that visitor´s experience with the cultural offering is the most important concept. This is achievable only when the roles of curator, educator and marketer are integrated. Furthermore, through innovation, cultural institutions can attract new audiences and enhance the quality of life (Cerquetti, 2014).

The European Commission underscores the growing importance of audiences, noting that museums are becoming more community-focused, prioritizing *"audience development as a strategic and interactive process of making the arts widely accessible through cultural organizations."* This concept integrates cultural, economic, and social dimensions related to target groups, aiming to develop or increase audiences, deepen relationships with existing audiences, and diversify audience demographics. Cultural institutions may focus on one or all of these dimensions (European Commission, 2012, p. 3). Similarly, a study by the European Cultural Commission describes *"audience development as a multifaceted concept connected to democratization, access, participation, co-creation, organizational innovation, leadership, and policymaking"* (Hadley, 2017, p. 275).

Effective audience development depends on factors such as place / city and must be tailored to meet unique requirements of their audiences (also potential) and cultural institutions. However, understanding common themes can help to these cultural institutions to make long-term commitments to increase engagement and growing their audiences (Deakin, 2022).

Cultural institutions try to reach and engage local audiences through the various art activities designed for new audiences and offering a broader portfolio of art activities for existing audiences. These activities also take place in their strategy with aim to achieve higher participation among current audiences and cultural organisations. (Connolly & Hinand Cady, 2001; Deakin, 2022). The primary goal is to reshape the composition of the existing audience structure, encourage the trust and loyalty among current and potential audiences (Hayes, 2003).

Audience development can also be seen as *"a strategy pursued by an arts or cultural organization to increase its audience quantitatively, strengthen relationships with existing audiences, and expand audience demographics"* (Alnasser & Yi, 2023, p. 2). Khan (2010) controversially suggests that this approach stems from a mercantilist perspective, linking strategies to cultural marketing. Audience development strategies often include tailoring cultural content for different age audience. A lot of institutions prepare and attract new personalised offerings and experiences for their visitors. (Tešin et al., 2021). Romanello (2013, p. 62) highlights that the term broadly implies *"a democratizing intent and a strong participatory spirit".* With its emphasis on participatory experiences, audience development has become increasingly significant. The term *"participatory culture"* emerged in 1992 when Henry Jenkins described fandom as a form of social exchange (Jenkins, Ito, & Boyd, 2016).

In museum and gallery practices, participation serves as an umbrella term, encompassing activities related to social activism, audience development, and empowerment. This aligns with Hooper-Greenhill's (1997) critique of audience development strategies that aim to cater to minority audiences. For theatres, it is an economically viable way to use existing resources and build stronger relationships with key stakeholders (Hazelwood, Lawson, & Aitken, 2009).

Audience development focuses on sustaining a core audience, expanding reach, attracting diverse groups, and building community connections. The primary goals according to Reussner (2003) are broadening the audience base and encouraging repeat visits. To achieve these goals, cultural institutions have to analyse current and potential audiences, their preferences, and competitors' strategies. These analyses help institutions identify target segments, develop specific engagement strategies, and establish unique identities (Reussner, 2003). Not merely about increasing the size of a museum's visitorship, "audience development" is a deliberate strategy aimed at cultivating new audiences, usually with a focus on those previously under-represented at the museum (Black, 2005, p. 47). Success often involves breaking down barriers and offering visitors meaningful activities (Waltl, 2006).

2. Objectives and methods

Hooper-Greenhill (1994, in Anderson) observed that museums and galleries have historically lagged behind audience studies in mass communication and cultural studies, both in developing concepts and adopting methods. However, the current situation changes the view of the importance of digital technologies into this sector too.

This article will specifically present only finding related to audience development tools using for the achieving their goals and specific audience. For this research, following research question was posed: *"What tools should museums and galleries in Slovakia use for audience development?".* To address the research question, we had used the quantitative research. A questionnaire survey was conducted among museums and galleries in Slovakia. Using the Register of Museums and Galleries from the Ministry of Culture of the Slovak Republic, a database of contacts for these cultural institutions was compiled (available at the end of January 31, 2023). All these cultural institutions were contacted via e-mail with the requirements to be included into this survey. From 153 cultural institutions, only 26 cultural institutions answered to our questionnaire. The questionnaire was prepared based on the previous research and studies (Sanivar & Akmehmet, 2011; Alnasser & Yi, 2023; Mandel, 2018). The first section of the questionnaire was focused on gathering general information about the cultural institutions, while the second section addressed topics related to digitalisations, audience development tools and associated strategies.

3. Results of the questionnaire

The process of collecting questionnaires began at the end of February and concluded in April 2024. This survey included cultural institutions from various regions, with the highest representation from the Prešov region (26,9%) and Banská Bystrica region (23,1%). 50% of the respondents reported that their founding entity is a Higher Territorial Unit. Around 15,4% of the institutions involved in the survey indicated that their founders are cities or municipalities, while one institution was founded by Slovak Post (3,8%). The remaining 30,6% respondents are under the jurisdiction of Slovak ministries, such as the Ministry of Culture, the Ministry of Education, Research, Development and Youth of the Slovak Republic, the Ministry of Defence of the Slovak Republic or the Ministry of Transport and Construction of Slovak Republic. **(Figure 1)**

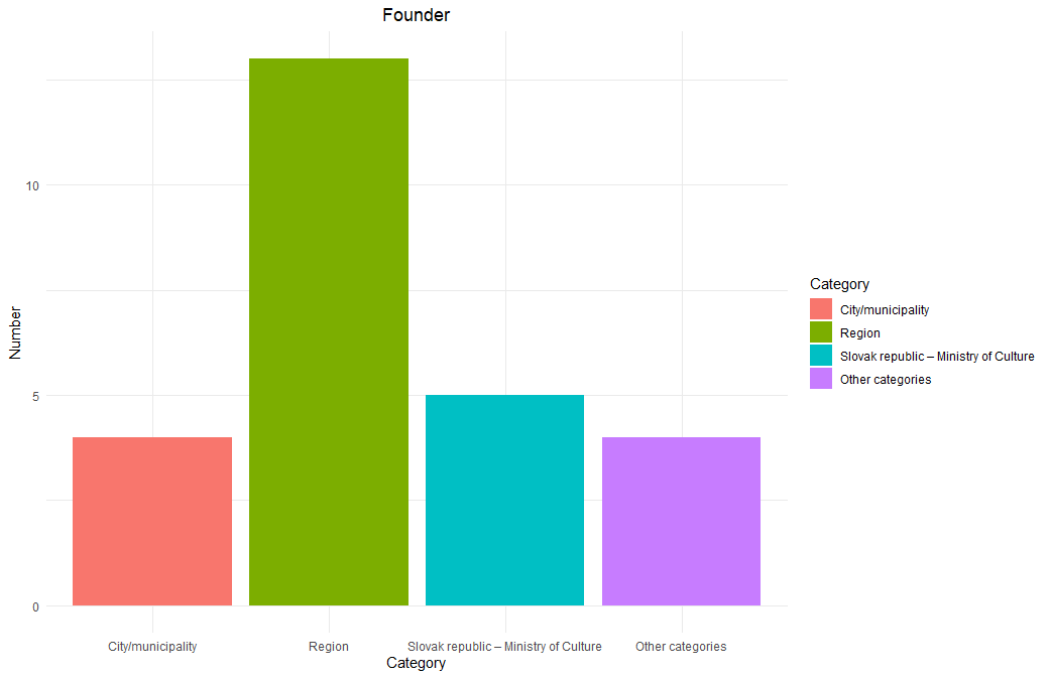

Figure 1: Funders of museum and galleries in our survey (in Slovakia)
Source: based on research survey

The majority (88,5%) of surveyed cultural institutions operate in their own premises, while 11,5% use rented facilities. In terms of workforce, almost half (46,2%) of these institutions employ between 10 to 30 staff members. Other reported employing 5 to 10 employees (19,2%), 15,4% employing more than 30 employees, 16% employing 3 to 5 employees, and only 3.8% employing fewer than 3 employees.

One survey question investigated the percentage contribution of different income sources to museums and galleries budgets. **Figure 2** illustrates that the largest income share, averaging 79,59%, comes from founder funds. Admission fees contribute an average of 10,88%, donations and foundations support 4,29%, business activities 2,67%, and European funding 2,58%. (Remark: Due to insufficient data, the chart reflects responses from only 24 out of 26 participants.)

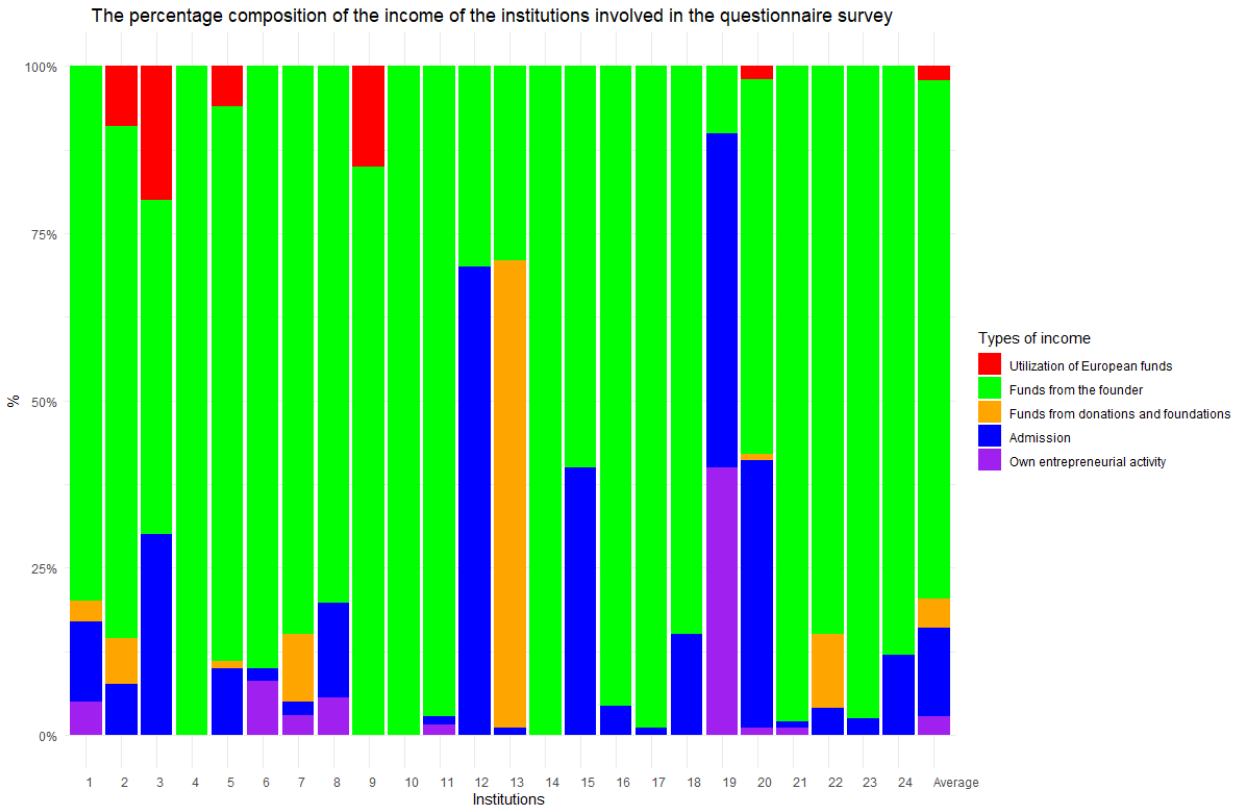

Figure 2: The percentage composition of the income of the survey´s institutions
Source: based on the research

Regarding audience development, the survey revealed that 92,3% of museums and galleries in Slovakia have never participated in European, inter-regional or national Audience Development programme.

In the following part of the questionnaire, we asked cultural institutions to what extent they agree with the stated objectives/functions of audience development through digitalisation. Respondents agreed most strongly (100%) with the statements that "Digitalization enables better and more up-to-date audience information" and that "Digitalization enables audience expansion" (92,31%). However, only 50% agreed that digitalization contributes to sustainable funding for cultural programs and services. (**Figure 3**)

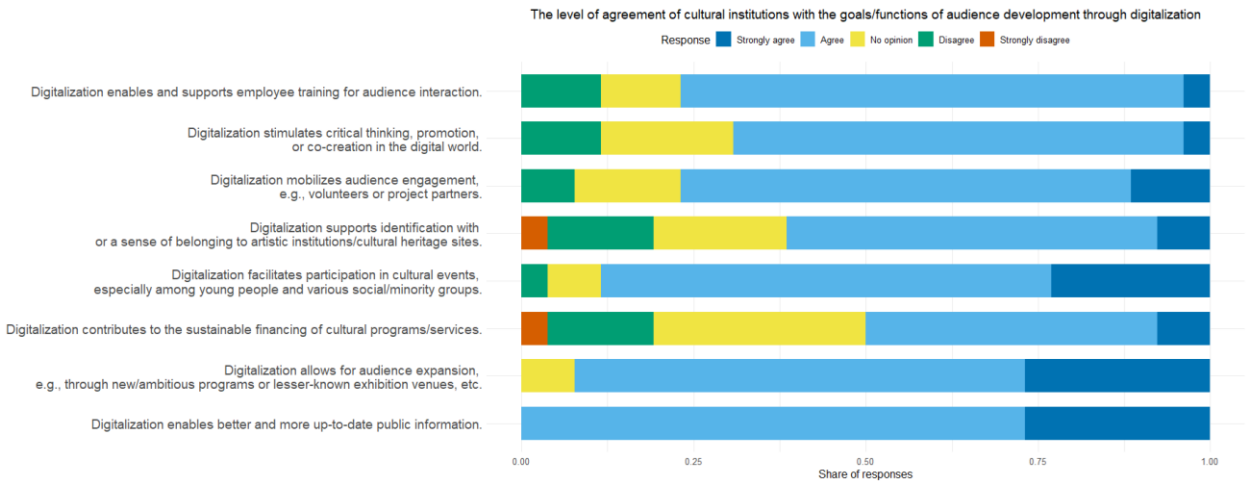

Figure 3: The level of agreement of respondents with the goals of audience development through digitalization
Source: based on the research

Respondents identified several tools for achieving audience development objectives (**Figure 4**):

- enhanced audience information: social media and networks (23,6%) and institutional website, applications (22,47%);
- audience expansion: social networks (22,22%) and institutional website, applications (18,06%) were highlighted.
- Sustainable funding: digital content creation and shared platforms (both 16,67%) were the top choices.
- For activating participation in cultural events, especially among young people and minorities: social networks (25,33%), institutional website, applications (17,33%), and digital content creation (16%).
- For promoting a sense of belonging to art institutions/cultural monuments: social networks (19,72%) and institutional website, applications (16,9%).
- For mobilizing audience involvement (e.g. volunteers or project partners): social networks (22,54%) and institutional website, applications (16,9%).
- For stimulating critical thinking, promotion, or co-creation in the digital world: digital content creation and institutional websites/apps (both 18,52%).
- For training staff to interact with audiences: a combination of digital and analogue methods, including workshops, training programs, and marketing campaigns via email or newsletters, as well as shared platforms (21,57%).

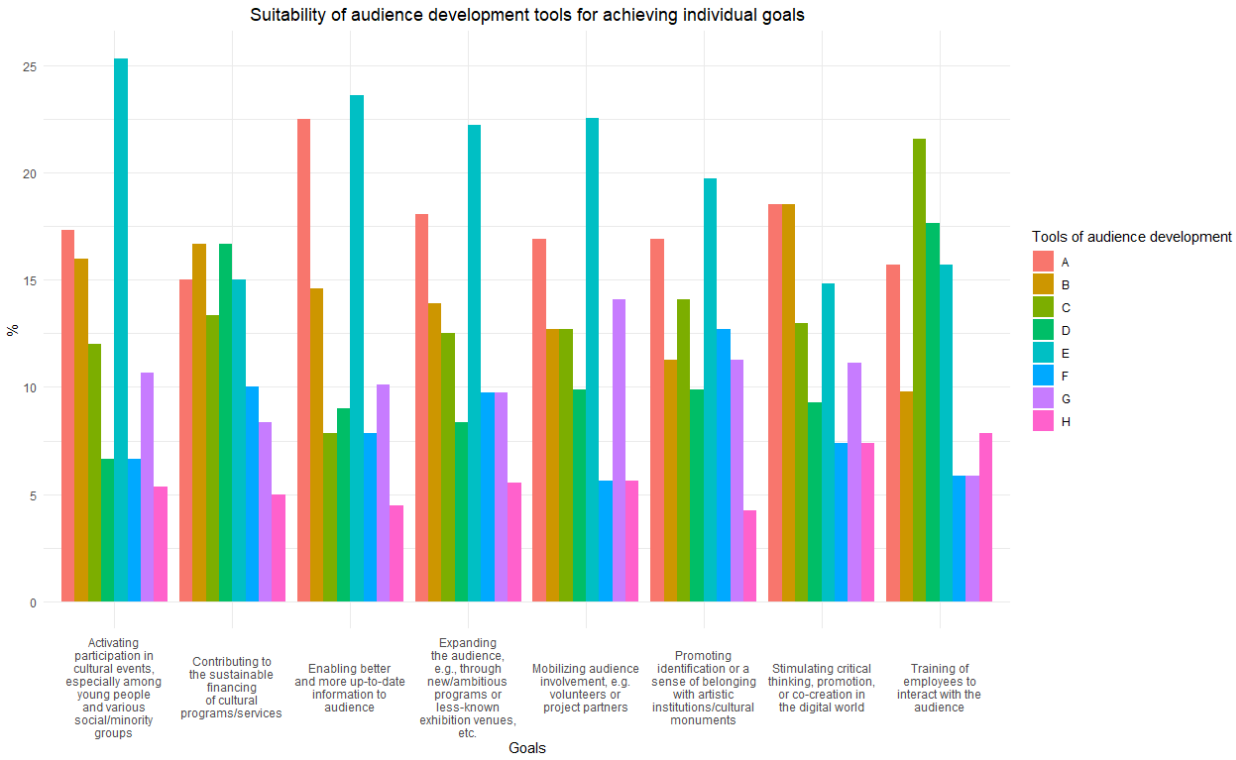

Figure 4: Suitability of audience development tools for achieving goals:[2]
Source: based on the research

In addressing audience types, respondents recommended (**Figure 5**):

- young audience: digital content (28,71%), social networks / media (27,96%), and shared platforms (25%);
- older population: institutional websites / apps and audience research (both 22,67%);
- families with children: digital content (26,76%) and a mix of digital / analogue practices (26,9%);
- migrants and minorities: publicly subsidized cultural portals and institutional websites / apps;
- people with disabilities: digital / analogue practices (20,29%) and audience research (18,87%);

[2] A. Web site / application of institution / organisation with detailed information, interactive tools etc.

B. Customize digital content to attract (potential) audiences / users, such as digitised parts of exhibitions / collections available on the website, DVDs, YouTube etc.

C. Mix of digital / analogue exercises, e.g. workshops, educational programmes, marketing campaigns via mailings, newsletters, etc.

D. Shared platforms (with institutional collaboration) or portals of affiliates of professional organizations.

E. social media, e.g. Facebook, Instagram.

F. Official or publicly subsidiaries (cultural) portals at local, national or European level.

G. Tools and activities of local initiatives, friends, supporters, etc.

H. Audience research, e.g. Online, via mails, surveys.

- audiences with low cultural participation: local initiatives, supporters and digital content creation.

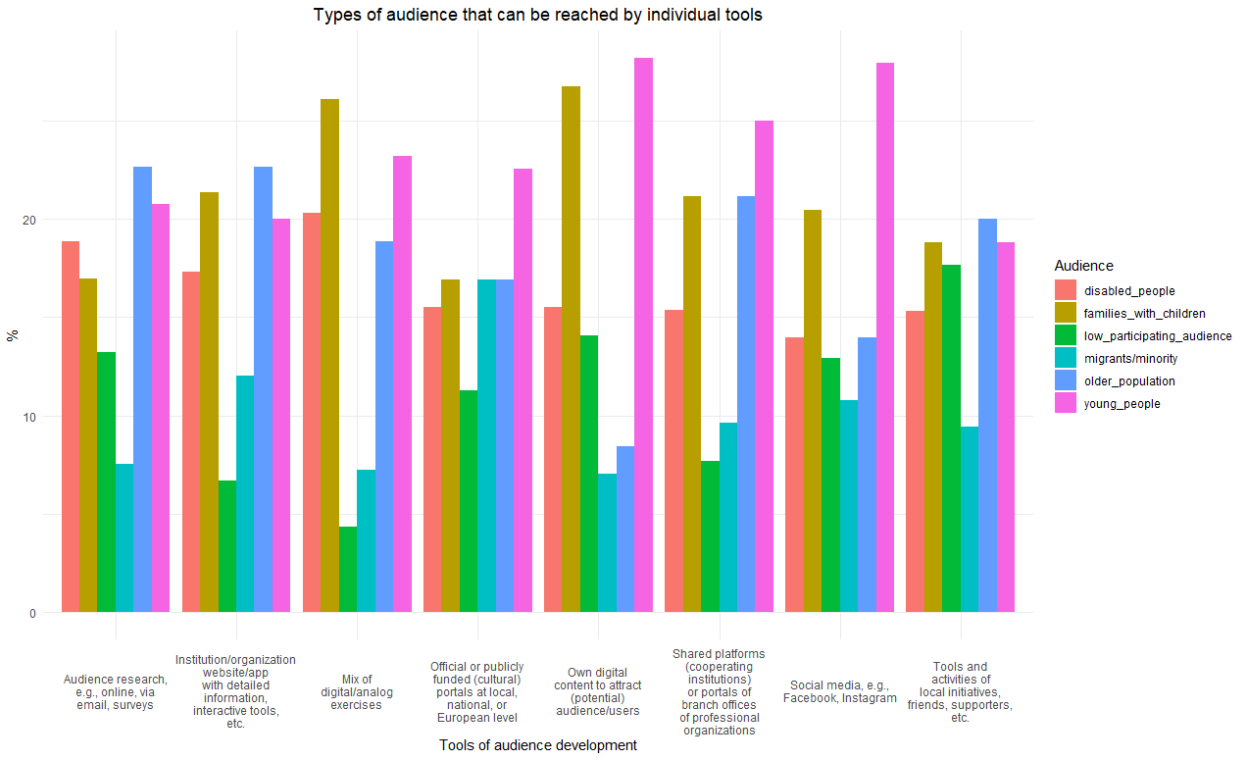

Figure 5: Types of audiences reached by selected tools

Source: based on the research

Conclusion and discussion

This paper analysed audience development strategies and tools in Slovak cultural institutions, identifying key tools for specific audience types. The research question was: "*What tools should museums and galleries in Slovakia use for audience development?".*

Current development in cultural institutions after coronavirus disease (COVID-19) prompt us to reflect on how these institutions relate to the past in a digital culture. Digital innovation has influenced into the strategies of all institutions. The similar situation is expected in the cultural institutions.

This article focused on identifying specific audience development tools that museums and galleries in Slovakia should utilize. Audience development tools vary widely, encompassing both traditional and modern approaches. It is also depended on the goals of audience development in the selected institutions. However, our research has certain limitations. The most significant limitation is the composition of the respondents included in this survey. As a result, the findings cannot be generalized to all museum and galleries in Slovakia. However, it should be noted as recommendations for their audience development strategies.

The questionnaire survey, which targeted museum and galleries in Slovakia, included questions about the tools these institutions considered most effective for achieving various audience development objectives.

The responses indicated that to provide more up-to-date audience information, institutions should leverage social media / networks and web site /app of the institution. For audience expansion, respondents identified social networks and institutional websites or apps as the most effective tools. If the cultural institution would like to find new sustainable funds for their programs, they will be more successfully through digital content shared by platforms with institutional cooperation or professional organization portals. Respondents also highlighted primarily social media and organisation website or application for the promoting identification or a sense of belonging with cultural monuments, also for recruiting volunteers or project partners and for the participation with audience. However, to train staff for audience interaction, cultural institutions should employ a mix of digital and analogue methods, including workshops, training programs, and marketing campaigns via email or newsletters. According to (Waltl, 2006; Vargová & Hladký, 2014), audience development requires coordination of all areas of cultural institutions, its tools to achieve the institutional goals.

Based on these findings, museums and galleries in Slovakia would emphasize the inclusion of social networks, institutional websites or apps, and digital content creation in their audience development tools. Social networks and websites are essential tools in today's digital age, and cultural institutions must not only adopt them but also use them actively and strategically. According to Brancato (2022), podcasting is one of the useful and trendy tools for the cultural institutions. Podcasting are very simple and cost-effective marketing tools for the interaction between the audience and availability of cultural institutions. Additionally, the ResSolution survey (2024) indicates that the audio format of podcasts is listened to at least once a week by more than a third of the Slovak online population. Several Slovak museums and galleries have already begun with their own podcasts, including the Slovak National Gallery, the Slovak National Museum, and others. In the context of leveraging social networks for more effective promotion, these institutions could also adopt another trend in museum marketing highlighted by Brancato (2022): user-generated content (UGC). UGC refers to authentic, brand specific content, such as images, videos, reviews, and testimonials. It will be created by users and shared on social media or other channels. This modern form of word-of-mouth marketing fosters connections and builds trust between audiences and cultural institutions.

However, for each cultural institution is crucial to conduct its own audience research to understand its specific audience demographics, challenges, and needs. This approach enables the development of customized tools and strategies that maximize effectiveness in

engaging diverse audience groups as was mentioned in theoretical background (Reussner, 2003; Black, 2005; Waltl, 2006).

Through this article, we suggest that museum and galleries in Slovakia should redefine their traditional tools for the audience development and moving beyond its traditional role. Organisations should encourage to consider the varied forms of participation and engagement.

Acknowledgements

This paper was supported by the Ministry of Education, Research, Development and Youth of the Slovak Republic Grant VEGA No. 1/0681/22.

References

ANDERSON, S. 2019. Visitor and audience research in museums, pp. 80-96 in: *The Routledge Handbook of Museums, Media and Communication*. British Library Cataloguing-in-Publication Data. 2019. ISBN 9781138676305.

ALNASSER, N. S., & YI, L. J., 2023. Strategies applied by different arts and cultural organizations for their audience development: A comparative review. *Heliyon*, *9*(5).

AIZPURU, I., CUENCA, M. & CUENCA, J., 2024. Examining the State of the Art of Audience Development in Museums and Heritage Organisations: A Systematic Literature Review. DOI: 10.4324/9781003142102-28.

ARTS COUNCIL ENGLAND, 2015. “Information for Funded Individuals and Organisations.” Accessed November 13, 2015. www.artscouncil.org.uk/funding/information-fundedorganisations

AYALA, I., CUENCA-AMIGO, M. & CUENCA, J., 2019. Examining the state of the art of audience development in museums and heritage organisations: a Systematic Literature review. *Museum Management and Curatorship*, 35 (3), pp. 306–327. DOI: 10.1080/09647775.2019.1698312.

BAKER, T., 2000. *Stop reinventing the wheel*. London: Association of British Orchestras.

BLACK, G., 2012. Transforming Museums in the Twenty-first Century. New York: Routledge.
CONNOLLY, P. & HINAND CADY, M. 2001. Increasing Cultural Participation: An Audience Development Planning Handbook for Presenters, Producers, and Their Collaborators, Illinois: The unit for contemporary literature Illinois State University.

HOOPER-GREENHILL, E. (Ed.)., 1997. *Cultural diversity: Developing museum audiences in Britain*. London; Washington, DC: Leicester University Press.

HAYES, D. S. A., 2002. Rethinking the missionary position’ – the quest for sustainable audience development strategies. *Managing Leisure,* 1. vyd.7, pp. 1-17.

HAZELWOOD, L., LAWSON, R. & AITKEN, R., 2009. An essential guide to audience development. New Zealand. *Marketing Intelligence and Planning*, Vol. 27, No. 6. DOI 10.1108/02634500910988681.

KAWASHIMA, N., 2000. Beyond the Division of Attenders vs. Non-Attenders: A Study into Audience Development in Policy and Practice. Coventry: Centre for Cultural Policy Studies, University of Warwick. Audience development and social inclusion in Britain. Tensions, contradictions and paradoxes in policy and their implications for cultural management**.** *International Journal of Cultural Policy, Vol. 12, No. 1, 2006* ISSN 1028-6632 print/ISSN 1477-2833 online /06/010055-18 © 2006 Taylor & Francis. DOI: 10.1080/10286630600613309.

MAITLAND, H,. 2000. *A guide to audience development*. London: Arts Council of England.

PITTS, S. & GROSS, J., 2017. Audience exchange": cultivating peer-to-peer dialogue at unfamiliar arts events. *Arts and the Market* Vol. 7 No. 1, pp. 65-79. Emerald Publishing Limited 2056-4945. DOI: 10.1108/AAM-04-2016-0002.

REGINA MANDEL, B., 2018. Can Audience Development Promote Social Diversity in German Public Arts Institutions? *The Journal of Arts Management, Law, and Society*. 49:2, pp. 121-135, DOI: 10.1080/10632921.2018.1517064.

REUSSNER, E., 2003. Strategic Management for Visitor-oriented Museums A change of focus: *International Journal of Cultural Policy*, vol. 9, no. 1, pp. 95–108.

SAVAGE, J., 2015. Precursors to Audience Development in the Management of Performing Arts Organisations: An Evaluation of the Singaore Symphony Orchestra. *Graduate Journal of Cultural and Creative Industries*, ISSN 2424-7928. Avalaible on: https://gjcci.weebly.com/uploads/5/4/0/1/54017633/precursors_to_audience_development_in_the_management_of_performing_arts_organisations-_an_evaluation_of_the_singapore_symphony_orchestra.pdf

SIGURJONSSON, N., 2010. Orchestra Audience Development and the Aesthetics of "Customer Comfort" *Bifr¨ost University, Borgarnes, Iceland. The Journal of Arts Management, Law and Society.* 40: 266–278, 2010 Copyright C Taylor & Francis Group, LLC ISSN: 1063-2921 print / 1930-7799 online DOI: 10.1080/10632921.2010.502011.

TEŠIN, A. et al., 2021. From children to seniors: is culture accessible to everyone? *International Journal of Culture, Tourism and Hospitality Research.* Vol. 15 (2), pp. 183-201. Emerald Publishing Limited, ISSN 1750-6182. DOI: 10.1108/IJCTHR-08-2019-0142.

WIGGINS, J., 2004. Motivation, Ability and Opportunity to Participate: A Reconceptualization of the RAND Model of Audience Development. *Marketing Management*, Volume 7, Number 1.

Contact address

Iveta Korobaničová, Assistant of Professor
ID ORCID: 0009-0006-6370-4381
Technical University of Košice
Faculty of Economics
Department of Regional Science and Management
B. Nemcovej 32, 040 01 Košice
Email: iveta.korobanicova@tuke.sk

Romana Rončáková, PHD student
Technical University of Košice
Faculty of Economics
Department of Regional Science and Management
B. Nemcovej 32, 040 01 Košice
Email: romana.roncakova@tuke.sk

The Current State of Effectiveness of the Security System of the Slovak Republic

Katarína Miňová

https://doi.org/10.33542/VSS2024-2-6

Abstract

The objective of this article is to analyze the current state of the Slovak Republic's security system, with a particular focus on its effectiveness and the role of the Security Council of the Slovak Republic within the crisis management framework. The paper examines the legislative and organizational aspects of the security system, emphasizing its capacity to respond to contemporary challenges such as hybrid and cyber threats. Using a SWOT analysis, the study identifies strengths, weaknesses, opportunities, and threats, while comparing Slovak practices with those of other Visegrad Group countries, particularly the Czech Republic and Poland. Examples from crisis management during the COVID-19 pandemic and other emergencies illustrate the practical implications of the system's operations. Based on these findings, the article proposes recommendations for enhancing the system's coordination, digitalization, and resilience, offering a framework for more efficient crisis response at national, regional, and local levels.

Keywords: *Security system of the Slovak Republic, Security Council of the Slovak Republic, crisis management, digitalization, cyber-security, threats, opportunities, strengths, weaknesses, SWOT analysis*

Introduction

The security system of the Slovak Republic (SR) is a complex set of institutions, legal instruments, procedures and measures that ensure the protection of the state, its citizens and strategic interests against internal and external threats. Examining this system is essential for identifying its strengths and weaknesses, which allows for the formulation of recommendations for its streamlining and adaptation to the changing security challenges that the Slovak Republic faces today and needs to be able to respond to effectively.

The security system is the key element on which the basic ability of the state to provide its essential functions and services depends. The examination of the security system of the Slovak Republic is therefore crucial not only for security policy experts, but also for policy makers, academics and the general public. The results of such research can contribute significantly to building a resilient and effective system capable of meeting current and future challenges.

The aim of examining the security system of the Slovak Republic for the purposes of this paper is to assess whether the current legislation and structures meet the needs of security in the current geopolitical and technological environment. Verifying how effectively a security system can respond to different types of threats, including hybrid attacks, cyber threats, natural disasters and pandemic crises. Analysis of good practice examples of countries with similar security challenges as the Visegrad Four (V4) countries. And on the basis of the above - a proposal for specific measures to optimise processes, increase the reliability of the system and strengthen its coordination.

1. Historical context

The development of the security system of the Slovak Republic is closely linked to the historical, political and security challenges faced by the new state after its establishment in 1993. Since then, the security system has undergone several stages of transformation, adapting to internal needs and international commitments.

After the division of the Czech and Slovak Federative Republic, the security system of the Slovak Republic was formed on the basis of institutions taken over from the federal structure, with an emphasis on the creation of independent security and defence mechanisms.

However, the security system as a complex mechanism is first mentioned in the Security Strategy of 2001, which stresses the need to build it, in the context of the accession to NATO and the EU, so that the state has a governing body that will ensure a unified system of management in crisis situations (Ušiak, 2021). In the conclusion of the strategy from 2001, the Government of the Slovak Republic undertook to build the Security System of the Slovak Republic, which will represent a complex, integrated, functionally and structurally purposefully arranged system, in which the competences, i.e. rights and duties, responsibilities and the mutual mechanism of relations between its elements will be specifically defined, so that this security system is capable of fulfilling its mission to plan, manage, coordinate tasks, measures and activities of its elements to guarantee the security of the state in peacetime, in crisis situations and in war, with effective use of the internal resources and means of the state and international support (Security Strategy of the Slovak Republic, 2001)

According to the Security Strategy of the Slovak Republic of 2001, the security system should be able to analyse the security environment, its global, regional and sub-regional aspects, classify security risks and threats to the Slovak Republic and the tendencies of their development, determine procedures and measures for the prevention and elimination of security risks and threats and the resolution of crisis situations in accordance with available resources and capacities, ensure effective management and coordination of forces and means in the prevention and elimination of individual types of security risks, threats and crisis situations, with a precise definition of competences and interrelationships between the National

Council of the Slovak Republic, Government of the Slovak Republic, the President of the Slovak Republic and other public authorities, legal entities and natural persons, to achieve the required degree of interoperability with the security systems of the Member States of the North Atlantic Alliance and its neighbours, enabling effective international cooperation of the entire system and its individual elements, to operate as an integral part of the mechanism of state management in accordance with the constitutional legal order of the Slovak Republic, to ensure the required level of sensitivity and flexibility, to have the necessary scientific and theoretical background and qualified personnel, to ensure its continuous readiness and operational capability. (Security Strategy of the Slovak Republic, 2001)

A significant event was the adoption of Act No. 110/2004 Coll. on the Activity of the Security Council of the Slovak Republic at the Time of Peace, which established the legal basis for its activities as a coordinating body of the Government (Act No. 110/2004 Coll.).

Slovakia's accession to NATO and the EU in 2004 brought significant changes in security policy. The Security Council of the Slovak Republic assumed the role of coordinator in the implementation of international commitments in the field of defence, security and crisis management. This integration required the alignment of national security measures with NATO and EU standards, thus increasing the strategic importance of the Council (Statute of the Security Council of the Slovak Republic, 2024).

The 2005 Security Strategy of the Slovak Republic mentions the security system as a decisive means of security policy, a multifaceted complex consisting of foreign policy, economic, defence, internal security, social, rescue and ecological instruments and their interrelations. The basic prerequisite for the management, construction and development of the security system of the Slovak Republic are effectively functioning legislative, executive and judicial bodies. They are responsible for the readiness and actionability of crisis management tools and the timely adoption and implementation of measures aimed at guaranteeing the security of citizens and the state. However, despite this, the 2005 Security Strategy, reflecting NATO and EU membership, still states in its Article 38 that the Security System of the Slovak Republic *will be* capable, i.e. it could not yet be considered ready. Thus, in the future, according to this strategy, it should be able to provide a unified management system in all crisis situations; identify the emerging crisis situation and provide early warning; analyse the impact of the crisis situation on the security interests of the Slovak Republic and propose the manner of participation of the Slovak Republic in its resolution; prevent the emergence of crisis situations and, if they arise, eliminate them at their outset; respond to the most likely threats, adapt to changes in the security situation, including responding to unexpected threats; ensure the rapid elimination of the consequences of the crisis situation and the restoration of the original situation; and guarantee the continuity of its functioning. (Security Strategy of the Slovak Republic, 2005)

After 2010, the Slovak security system faced new challenges such as hybrid threats, cyber-attacks and migration crises. Although these phenomena were already present in the international, broader regional and Slovak security environment a few years after the adoption of the 2005[3] Security Strategy, the Slovak Republic did not respond strategically and conceptually to them until 2021, when the government adopted a new Security Strategy for the Slovak Republic. In its Article 45, the Security Strategy for the Slovak Republic sets as its main priorities for the security system to ensure an effective and efficient management system in all crisis situations; to identify emerging crisis situations and provide early warning; to analyse the impact of a crisis situation on the security interests of the Slovak Republic and to propose solutions; to prevent the emergence of crisis situations and to increase the resilience of the state and society, and to suppress such situations in their initial stages if they arise; respond to confirmed threats and adapt to changes in the security situation, including reacting to unexpected threats; ensure the rapid removal of the consequences of a crisis situation and the restoration of the original state; guarantee the continuity of its functioning; improve the sharing of information between the individual elements of the security system; systematically practise and evaluate its functionality. (Security Strategy of the Slovak Republic, 2021)

Another milestone in the historical development was the adoption of the new Concept of the Security System of the Slovak Republic (2023), which reflects these challenges and redefines the role of the Security Council of the Slovak Republic. The government took this step in relation to the prioritisation of the reform of the Slovak security system in its 2020 Programme Statement, which spoke of modernising and improving the security system to respond to current security challenges, including hybrid threats and the need for strong coordination between the components of the security system (New Concept of the Security System of the Slovak Republic, 2023, Programme Statement of the Government of the Slovak Republic, 2021).

The new Concept replaced the 2002 concept materials. It is based on making the security system more efficient without setting up new institutions. The focus of increasing the resilience of the state will lie in the coordination of individual entities by the Security Council of the Slovak Republic. The Security Council of the Slovak Republic is presented in the concept as the main coordinating body responsible for effective response to crisis situations and for strengthening the resilience of the state to security threats. Historically, the Security Council of the Slovak Republic has played a key role in coordinating crisis responses, especially in the case of major crises such as floods, pandemic situations or NATO military exercises. In the new concept, its role is strengthened by introducing systematic planning of crisis responses,

[3] For example, the terrorist attacks on the US in September 2001 or the cyber attacks on Estonia in 2007.

the inclusion of an executive vice-chairman and an emphasis on a unified methodology for all components of the security system (Act No. 110/2004 Coll., New Concept of the Security System of the Slovak Republic, 2023). The concept also envisages the strengthening of the individual executive components in terms of personnel, expertise and material. The composition of the Central Crisis Management Staff should be modified - its management structures will include an executive vice-chairman in the person of the minister of the ministry responsible for the implementation of tasks according to the specific type of threat. The security system should thus be gradually transformed from the current one to ensure uniformity of decision-making and separation of decision-making, advisory and executive functions and powers of the crisis management bodies. The concept contains two models of the security system, which differ in the extent of the transformation and changes needed to the current security system. The first model proposes strengthening the role of the Security Council of the Slovak Republic in the decision-making process in dealing with a crisis situation. However, its disadvantage is the need to amend the Constitution of the Slovak Republic and the Constitutional Law on State Security during War, State of War, State of Emergency and State of Emergency with regard to the status of the Government of the Slovak Republic and the Security Council of the Slovak Republic. The second model states that the main decision-making body of the security system in any situation, including crisis situations, should be the government alone. At the same time, it proposes the integration of the Central Crisis Management Staff into the Security Council of the Slovak Republic (New Concept of the Security System of the Slovak Republic, 2023). The new government elected in 2023 emphasises stability, peace and security for citizens. The programme declaration focuses on protection from external threats and strengthening national self-confidence and sovereignty, with less emphasis on specific modernisation elements of the security system. It emphasises Slovakia's internal security and sovereignty. Although it supports the security system, the text does not explicitly mention the centralisation of crisis management or improved coordination between the components. In the area of hybrid and cyber threats, the current government focuses more on sovereignty and the protection of national interests, with less emphasis on cyber and hybrid security compared to the previous government. For the current government, the focus on internal stability is rather important and it does not specify any specific planned changes in the functioning of the security system among its priorities, while its areas of interest are more focused on social stability and internal security (Programme Statement of the Government of the Slovak Republic, 2023). It is questionable to what extent the proposals of the new Concept of the Security System, which could potentially aim at strengthening the competences of municipalities as important actors of the security system in the field of crisis management and also at improving the conditions for their mutual cooperation in managing crises and emergencies such as the pandemic crisis, will be implemented during the mandate

of the current government (the electoral period 2023 - 2027), e.g. following the example of some other European countries. The current government can probably be expected to focus on maintaining Slovakia's sovereignty and internal security, but so far without a detailed plan for the modernisation and centralisation of the security system, with the exception of the draft of a new comprehensive framework of processes and procedures for crisis management in the Slovak Republic from the Ministry of the Interior in the spring of this year. (Proposal for a new comprehensive framework of processes and procedures for crisis management in the Slovak Republic, 2024; The Ministry of Interior of the Slovak Republic, 2024)

2. Theoretical and legal definition

At present, the Security System is defined without changes by the original legislation in force - the Constitution of the Slovak Republic, which in its Article 1 and Article 102 sets out the basic principles of protection of the sovereignty and security of the state. It is also defined by the Constitutional Act on State Security in Wartime, During Hostilities, Martial Law and State of Emergency No. 227/2002 Coll. as amended, which regulates the way of managing the state during a state of threat and war, when specific defence and protection mechanisms are activated. In times of war, the Government of the Slovak Republic assumes full responsibility for the management of the State and the Security Council of the Slovak Republic acquires exceptional coordinating powers. Furthermore, it is also Act No. 387/2002 Coll. on the Control of State in Crisis Situations Except for Wartime and During a State Hostilities, which lays down the basic principles of the functioning of the security system and its structure. It defines the roles of the government, ministries, local authorities and other entities in dealing with crisis situations (Act No. 387/2002 Coll.). Furthermore, it is Act No. 110/2004 Coll. on the Activity of the Security Council of the Slovak Republic at the Time of Peace, which defines the role of the Security Council of the Slovak Republic as the coordinating body of the Government for security policy and crisis management, and the Statute of the Security Council of the Slovak Republic, which specifies the organisational structure and mechanisms of the Security Council of the Slovak Republic (Act No. 110/2004 Coll., Statute of the Security Council of the Slovak Republic, 2004).

The Security System of the Slovak Republic in these legal sources is a complex set of legal, organisational and functional measures that ensures the protection of the state, its citizens and its interests against internal and external threats. It ensures the sovereignty of the State, the protection of territorial integrity, political stability and the security of the population. It integrates defence, security, economic, information and environmental measures into a unified system of response to crises and threats. It includes activities such as crisis management during peacetime and emergencies, defence mechanisms activated in times of

state threat and war, coordination between the executive bodies of the state, municipalities and security forces.

3. The structure of the security system of the Slovak Republic

The top level is represented by **the executive bodies of the state**. *The President of the Slovak Republic* is the supreme representative of the State and Commander in Chief of the armed forces of the Slovak Republic (Constitution of the Slovak Republic, Article 102). He has the power to declare a state of war on the proposal of the Government. In times of war or state threat, he coordinates the cooperation of the armed forces with the Security Council of the Slovak Republic and the Government of the Slovak Republic. *The Government of the Slovak Republic* is responsible for the overall management of the security system of the Slovak Republic (Act No. 387/2002 Coll.). In peacetime, it organises the preparation of the state for crisis situations, including the development of strategic plans. In times of war or threat to the state, it has the authority to manage all components of the security system, including the armed forces and civil protection. (Šimák, 2016)

The Security Council of the Slovak Republic plays an important role in the security system of the Slovak Republic, which is an advisory, initiative and coordinating body of the Government of the Slovak Republic, coordinates strategic security planning and crisis management, monitors threats and proposes measures to deal with them (Act No. 110/2004 Coll., Statute of the Security Council of the Slovak Republic). Its key competences include the preparation of security policy and strategic documents; supervision of the fulfilment of Slovakia's international obligations within NATO and the EU; coordination of the activities of security system entities and their preparation for crisis management (Act No.110/2004 Coll.), activation of crisis plans in emergency situations and in a state of war. The Statute provides that the Security Council of the Slovak Republic has nine members, including the chairman (Prime Minister) and vice-chairmen. The Chairman of the Security Council of the Slovak Republic is the Prime Minister of the Slovak Republic, and the members are representatives of relevant ministries and state administration bodies. The committees for specific areas, such as defence planning or civil protection, provide expert preparation of proposals (Šimák, 2016).

At the same time, **ministries and other central government bodies, such as** the *Ministry of Defence of the Slovak Republic*, which manages the Armed Forces of the Slovak Republic and is responsible for their readiness for the defence of the state (Act No.321/2002 Coll. on the Armed Forces of the Slovak Republic), and also coordinates military operations in times of war and crisis deployment of forces in peacekeeping operations, also play an important role in the security system of the Slovak Republic. Furthermore, the *Ministry of the Interior of the Slovak Republic*, which manages crisis management in the civilian sector, including the police, fire brigades and integrated rescue system components (Act No. 387/2002

Coll.), and is responsible for the organisation of civil protection of the population and the protection of public order. Furthermore, the *Ministry of Foreign and European Affairs of the Slovak Republic*, which coordinates the international security policy of the Slovak Republic and is responsible for the fulfilment of the international obligations of the Slovak Republic within NATO, the EU and the UN. The *Ministry of Finance of the Slovak Republic* ensures the financing of the security system, establishes budgetary frameworks for crisis management and defence planning. (Šimák, 2016)

Regional and local crisis management units, such as *regional crisis management staffs* established at the level of municipalities, are also an important part of the security system, coordinating crisis management between municipalities and central authorities. They prepare response plans for crisis situations such as floods or pandemic threats. Furthermore, *municipal and city crisis management staffs* are also responsible for the initial response to local threats, including natural disasters and accidents. They work with police, firefighters and medical facilities to ensure the protection of the population (Šimák, 2016).

The Security System of the Slovak Republic is also composed of **supporting components** of the security system, such as *the Armed Forces of the Slovak Republic*, which represent the basic component of the defence of the state, deployed for the defence of the territory or in the framework of international operations. They provide logistical and personnel support during crises, such as floods or pandemic measures. Then there is *the Integrated Rescue System (IRS)*, which includes the police, firefighters, emergency medical services and other bodies. It ensures a coordinated response to emergencies such as traffic accidents, fires or evacuations of the population. Last but not least, the Security System of the Slovak Republic also includes the *intelligence services*, *the Slovak Information Service (SIS)* and *military intelligence*, which ensure the collection and evaluation of information on security risks. They support strategic planning and operational responses to threats. (Šimák, 2016)

4. Efficiency analysis of the security system of the Slovak Republic

For the purposes of this paper, the analysis is conducted through the so-called SWOT analytical technique, used to strategically assess the internal and external factors that affect the performance of an organisation, system or project. It specifies four main categories of assessment: Strengths, Weaknesses, Opportunities and Threats. It is a versatile and practical tool that not only assesses the current state, but also provides a framework for strategic decision-making and planning. It allows comparisons to be made between different actors or systems, which is useful, for example, when assessing good practice in an international setting. The analysis of the effectiveness of the Security System of the Slovak Republic is based on the currently valid legislation, concrete examples of crisis management in the Slovak Republic and these values are compared with examples of good practice from abroad (Czech Republic

and Poland) and also the proposals for a new concept of the Slovak security system and the current proposal of the Ministry of Interior of the Slovak Republic regarding the creation of a new comprehensive framework of processes and procedures for crisis management in the Slovak Republic.

4.1 Strengths

The Security System of the Slovak Republic is characterised by a number of *strengths* that confirm its robustness. Its main strengths include *a comprehensive legislative framework*, which is firmly anchored in laws such as Act No. 387/2002 Coll. on Control of State in Crisis Situations Except for Wartime and During a State Hostilities. This framework enabled effective management during the COVID-19 pandemic, for example through the introduction of the COVID automat. (Ministry of Health of the Slovak Republic, 2021) In this area, the Slovak system can be compared with the Czech Republic, which has a similarly effective Crisis Management Act No. 240/2000 Coll. However, according to the new Security System Concept, it would be advisable to unify this robust legislative framework so that the various laws dealing with the security system are consolidated. This challenge is partly answered by the proposal for a new comprehensive framework of processes and procedures for crisis management in the Slovak Republic, which was presented by the Minister of the Interior in early 2024. As stated in the material discussed and approved by the Government, the subject of this forthcoming project is the proposal of a new comprehensive framework of processes and procedures for crisis management, its implementation into practice and the creation of a new entity subordinate to the Minister of the Interior (the Office for Crisis Management), which will be responsible for the entire life cycle of crisis management in Slovakia, i.e. not only crisis management, but also prevention, preparation and subsequent recovery. This entity will have its own resources (people, assets), supra-ministerial competences and will be the sole representative in this area both inside and outside the state (similar to the Police Corps or the Armed Forces of the Slovak Republic) (Proposal for a new comprehensive framework of processes and procedures for crisis management in the Slovak Republic, 2024; (The Ministry of Interior of the Slovak Republic, 2024).

The involvement of regional and local governments is another **strong element**. Based on the principle of subsidiarity, municipalities have an indispensable role to play in dealing with crisis situations. In practice, municipalities and cities have demonstrated their ability to respond to crisis situations by setting up collection and vaccination points during a pandemic. (Košice Self-Governing Region, 2022 and 2022; Government Resolution No. 110/2021). A proposal from the current Ministry of the Interior to create an Office for Crisis Management centralizes crisis management into a new entity subordinate to the Minister of the Interior. This step eliminates inconsistency and duplication of competences. On the other hand, the currently

planned project of the Office for Crisis Management, which will be centrally responsible for crisis management, raises a slight concern about the extent to which crisis management is moving towards centralisation, which ultimately may not be worthwhile in terms of capacity, personnel or organisation in the 21st century, when the trend in modern democratic states is to decentralise rather than to centralise, when it comes to managing crises in the state.

The strengths also include *Slovakia's involvement in international cooperation in the field of security* and the fulfilment of the obligations and rights arising therefrom. Slovakia's foreign policy orientation plays a special role in this area, as its membership in organisations such as the North Atlantic Treaty Organisation and the European Union gives it access to best practices, civil protection mechanisms and other resources. For example, Slovakia had the opportunity to use EU mechanisms to provide medical supplies during the pandemic.

4.2 Weaknesses

With regard to **the weaknesses** of the Security System of the Slovak Republic, it is possible to note in particular *the fragmentation of competences* between the central level of state management and local state or local government bodies. This weakness is one of the most pronounced. Departmental thinking, which causes fragmentation of competences between central authorities, regional and local entities, weakens the effectiveness of the security system as a whole. This weakness was evident during the pandemic when there was confusion between central measures and their implementation at the local level. (Prokopčáková, 2024) For comparison, the Czech Crisis Management Act No. 240/2000 Coll. precisely defines the competences of the different levels of governance (state, regional and local). In contrast to Slovakia, the Czech Republic has a stronger involvement of regional authorities, which function as an intermediate step between the government and municipalities, which improves information transfer and uniformity of measures. Regional authorities thus have a significant role to play in the crisis management coordination, thus eliminating confusion between central and local actors. To this end, the Czech government has established an integrated information system for crisis management, which allows for efficient information sharing between central and regional authorities. Regional health stations were key in epidemiological monitoring and setting up measures. Their direct connection to the central government allowed for rapid implementation of regulations. During the pandemic, the Czech regions proved to be flexible units that could adapt measures to local needs in accordance with centrally established rules. (Act No. 240/2000 Coll., on Crisis Management; Ministry of Health of the Czech Republic, 2022; Crisis Portal, 2022)

In this context, the New Security System Concept recommends the establishment of a digital platform for coordination. The proposal of the current Minister of the Interior (2024) partly answers this call because the proposal presented for the creation of the Office of Crisis

Management centralizes crisis management in a new entity that reports directly to the Minister of the Interior. This step eliminates inconsistencies and duplication of competences. And since Slovakia has lacked a sufficiently interconnected system between the headquarters and the regional units, this step may be helpful. On the other hand, this proposal represents a clear move towards strong centralisation of crisis management. In countries such as the Czech Republic and Poland, where the security system works efficiently, this is due to decentralisation. Regional authorities in the Czech Republic and voivodeships in Poland serve as active mediation units, bridging potential disputes or ambiguities between headquarters and local governments. In contrast, the Slovak security system is more linear, with a greater number of direct links, which repeatedly overloads the central authorities, and this move emphasises precisely this linearity by reinforcing the concentration of competences, information and capacities exclusively at the central level.

At the same time, *the weak digitalisation of the security system* represents another **weakness** of the Security System of the Slovak Republic. The absence of modern tools for sharing information between the system components slows down the security system's response during crises. In Poland, it was the National Digital Platform that enabled rapid communication with citizens and effective coordination. The Czech Republic introduced an online portal for crisis management that integrated regional and central data. This portal served as a central point for sharing information between the government, regional authorities and the public. It allowed monitoring the current epidemiological situation, the measures taken and provided guidance for citizens and businesses. The integration of data from different levels of government ensured consistency of information and coordination of actions across the country what minimised confusion and improved the effectiveness of the pandemic response. (Crisis portal, 2022)

The introduction of a modern digital platform as proposed in the New Security System Concept would address this weakness. The current (2024) Minister of the Interior's proposal for a new comprehensive framework of processes and procedures for crisis management partially addresses the lack of digitalisation and the absence of modern information sharing tools, as it includes a plan for mapping and updating assets for crisis prevention, prevention and management and the development of information systems (Proposal for a new comprehensive framework of processes and procedures for crisis management in the Slovak Republic, 2024; The Ministry of Interior of the Slovak Republic, 2024).

Another **weakness** of the Slovak security system is *the investment debt in technology and infrastructure, as well as financial constraints, which are mainly manifested at the local level*. Even the 2021 Security Strategy of the Slovak Republic emphasised funding as a key factor for the sustainability and effectiveness of the security system and identifies it as an essential prerequisite for ensuring the Slovak Republic's ability to face security challenges,

such as military threats, hybrid attacks, cyber security or crisis management, while pointing to the need for long-term, stable and predictable financing of the security system to cover the costs of building and modernising critical infrastructure, technological development in areas such as cyber security and digitalisation, and prevention and preparation for managing emergencies (Security Strategy of the Slovak Republic, 2021). Increasing spending in the security area is necessary both in the context of military security and defence, where Slovakia needs to fulfil, among other things, its commitments to the North Atlantic Alliance (2% of GDP to the country's defence capability), but also in the context of non-military security, where the financing of non-military components of civil protection of crisis management is crucial. In addition, the Security Strategy of the Slovak Republic identifies the need for better funding at local and regional levels, particularly in the area of crisis management. It proposes the creation of crisis funds to support local governments in dealing with emergencies such as floods, forest fires and pandemics. The consequences of insufficient funding in this area could be seen, for example, during the 2024 floods, when some municipalities did not have sufficient resources on their own to provide for evacuation and recovery. Slovakia also needs to invest more in advanced technologies to improve response to hybrid and cyber threats and to support research and development in the field of security. At the same time, Slovakia should reduce the burden on the public budget, in particular by strengthening its participation in international programmes from the EU and NATO, such as the European Defence Fund (EDF) to support technological and defence innovation and the RescEU to finance civil protection measures (Security Strategy of the Slovak Republic, 2021).

The Ministry of Interior's ambitious plan to first map the actual situation and assets in the field of crisis management as part of the project to create an Office for Crisis Management (OCM) is therefore a much-needed step, but what is questionable is the subsequent ability to secure funding for the elimination of the investment debt and, of course, the funding of the created entity and its further development.

4.3 Opportunities

Among the **opportunities**, and in relation to the above, we could also mention *the digitalization of the security system*, which offers the opportunity for better monitoring and prediction of threats, the ability to respond also to cyber security threats and the opportunity to shorten response times through digitalisation. The Security Strategy of the Slovak Republic 2021 addresses digitalization of the security system as a key tool for increasing the efficiency, flexibility and resilience of the Slovak security system. The document identifies digitalization as one of the strategic objectives for coping with modern threats, including cyber-attacks, hybrid threats and the need for rapid coordination between the components of the security system. The draft New Security System Concept also recommends investing in cyber security

and digital solutions. The Programme Declaration of the Government of the Slovak Republic for 2023 - 2027 emphasises the digitalization of public administration as one of the main priorities (New Concept of the Security System of the Slovak Republic, 2023). The Government is committed to developing an efficient public administration. (Programme Statement of the Government of the Slovak Republic, 2023) And although the currently proposed comprehensive framework of processes and procedures for crisis management of the Slovak Republic from the Ministry of the Interior does not yet respond to this need, the government also plans to strengthen the material and technical support and staffing of all components of the Ministry of the Interior, which will encourage the effective digitalization of public space. (Office of the Government of the Slovak Republic, 2024) Currently, there are many calls, funded by the Programme Slovakia or the EU Recovery and Resilience Plan, which are focused on partial objectives, such as supporting regional public administration in the field of cyber and information security. While such challenges will not ensure a comprehensive digitalization of the security system, in the long term they will help to improve the quality of services provided by public administrations and ensure compliance with legislative requirements in the field of cyber and information security. (Ministry of Investments, Regional Development and Informatization of the Slovak Republic, 2024) In the long term, it is essential to follow the example of the Czech Republic and Poland, where digital platforms have enabled better coordination and rapid information exchange in crisis management.

Another **opportunity** for the development of the Slovak security system is *the development of international cooperation*, which, thanks to cooperative security mechanisms and the sharing of experience, procedures and security capabilities, helps Slovakia to gain greater resilience to threats. The Security Strategy of the Slovak Republic 2021 underlines the need to align Slovak crisis mechanisms with international standards to ensure a high level of preparedness. In this context, it mentions, for example, the strengthening of cooperation with NATO in the framework of *the Civil Emergency Planning Committee* and the use of EU civil protection mechanisms, mandatory participation in joint NATO-EU exercises simulating various crisis scenarios (e.g. natural disasters, pandemic threats, cyber-attacks). The Security Strategy of the Slovak Republic also stresses the importance of joint operations to increase interoperability between Slovak forces and international partners. The international cooperation in protecting critical infrastructure from cyber and hybrid threats is also a key priority. It is important for Slovakia to participate in projects such as the *NATO Cooperative Cyber Defence Centre of Excellence* with the possibility to use the expertise of EU member states. The Security Strategy of the Slovak Republic also emphasises the importance of bilateral cooperation with neighbouring states in dealing with cross-border crises, as well as the need for a coordinated approach to securing supplies of strategic materials (e.g. medical supplies, food) through international partners. In the area of international cooperation in crisis

management, the Programme Declaration of the Government of the Slovak Republic for 2023 - 2027 focuses on strengthening partnerships with international organisations such as NATO and the European Union. Slovakia plans to continue its active participation in European Union initiatives such as RescEU, which provides resources and capacities to manage major crises (natural disasters, pandemics). In the NATO area, the importance of exercises and joint operations that improve interoperability and preparedness for both military and civilian crisis situations is highlighted. The need to deepen cooperation with neighbouring countries, in particular within the Visegrad Four (V4), is highlighted. This cooperation should include coordination in crisis planning, sharing of best practices and the creation of joint response units. The Government of the Slovak Republic aims to make active use of regional security mechanisms to support Slovakia in major crisis situations. The Programme Declaration emphasises international training programmes and exchange of experience, especially in the areas of hybrid threats, cyber security and crisis management. (The Programme Declaration of the Government of the Slovak Republic, 2023) Both documents agree on the need for cross-border cooperation and building interoperability, with the Security Strategy of the Slovak Republic placing more emphasis on digitalization and hybrid threats, while the Programme Declaration reflects regional cooperation and exchange of experience within the V4. At the same time, the project currently under preparation for a central Crisis Management Office at the Ministry of the Interior sees international cooperation not only as an opportunity but also as an obligation to fulfil the commitments associated with this cooperation. It emphasises the need to describe the current state of play, to propose a new model for the future functioning of crisis management that will meet current national as well as supranational requirements (NATO Resilience Committee, etc.) in this area, to prepare changes in the relevant legislation, to create a new entity and to put it into operation (with particular emphasis on the organisational structure, but also on staffing, financial resources and budget, priorities, objectives, programme management). According to the Ministry of the Interior of the Slovak Republic, the creation and implementation of such a comprehensive framework for risk management, damage and consequence reduction is also one of the priorities of the Government of the Slovak Republic and a requirement of our partners and allies in supranational organisations (NATO, EU). (Proposal for a new comprehensive framework of processes and procedures for crisis management in the Slovak Republic, 2024; The Ministry of Interior of the Slovak Republic, 2024)

The unification of crisis planning methodologies can also be **an opportunity** for the security system, ensuring better coordination of responses at all levels and speeding up the ability to respond to incoming threats, thanks to clear rules for all actors. **L. Šimák** (2016) highlights the importance of a systematic approach to the identification and analysis of risks that may threaten public administration and society as a whole. He proposes the

implementation of comprehensive strategies to manage crisis situations, emphasizing the need for coordination between different levels of public administration and other stakeholders, the creation of a unified crisis planning methodology to ensure effective cooperation and communication between the different components of the system. This approach should include a clear definition of competences and responsibilities, the identification of roles for each entity involved in crisis management, standardised procedures and processes to help establish a set of uniform guidelines and protocols for dealing with crisis situations, and the implementation of regular training and exercises to ensure the preparedness of human resources through continuous education and practical drills. According to Šimák, the implementation of these measures would contribute to increasing the resilience of the public administration to crisis phenomena and ensure effective management of emergencies in the conditions of the Slovak Republic (Šimák, 2016).

The recommendation of a unified methodology of crisis planning was also brought by the draft of the new concept of the security system of the Slovak Republic from 2023. The proposal of the Ministry of the Interior of February 2024 to establish the Office for Crisis Management (OCM) directly responds to the need for the introduction of a unified crisis planning methodology. The aim of the forthcoming project is to precisely improve coordination between all levels of management. The establishment of the Office for Crisis Management is intended to ensure a unified approach to crisis planning and management within the Slovak Republic. The Office will be responsible for the entire crisis management cycle, including prevention, preparation, crisis management and recovery. This will remove the current legislative, personnel and material and technical shortcomings that have made it difficult to manage crisis situations effectively. (Proposal for a new comprehensive framework of processes and procedures for crisis management in the Slovak Republic, 2024; The Ministry of Interior of the Slovak Republic, 2024)

At this point, however, it should be pointed out again that while Slovakia is moving towards centralisation of crisis management through the OCM, the Czech Republic and Poland favour decentralised models. In the Czech Republic, crisis management is organised at regional level, with regional authorities playing a key role in the coordination and implementation of measures. This approach allows for a more flexible response to local specificities and needs (Act No. 240/2000 Coll., on Crisis Management). The Polish voivodeships (regional authorities) also have considerable autonomy in managing crisis situations, which allows for the adaptation of measures to local conditions and more effective cooperation with local authorities. (Urbanek, 2014) Slovakia has chosen a centralised model of crisis management due to the experience of recent years, which revealed legislative, personnel, material and technical shortcomings in dealing with emergencies. The

centralisation is intended to ensure the uniform procedures and coordination at the national level, thus avoiding a confusion and duplication of competences.

4.4 Threats

Threats could include *the asymmetric security threats* such as *hybrid and cyber threats*, as well as *low public awareness and financial constraints*, as it was mentioned above.

A low public awareness is particularly problematic in the context of declining public trust in public institutions and the subsequent measures they take. This was evident during the COVID-19 pandemic, when a lack of public information caused confusion and reduced confidence in the measures taken. In general, if the state is not transparent enough and does not inform the public sufficiently about security actions that affect the public, the public loses trust and may start to disrespect the regulations. In the Czech Republic, it was the awareness campaigns that helped to systematically build public trust in the state. (Ministry of the Interior of the Czech Republic, 2024) Also, the draft of the New Concept of the Security System of the Slovak Republic recommends to strengthen awareness campaigns that would not cause panic and would not cause unnecessary fear, but would bring the public closer to the issue of security threats and the possibilities that the state has to eliminate them in order to protect the public from their unwanted effects. This is especially true if the threats in question are new, unusual, atypical or asymmetric in nature. Such threats require a particularly sensitive form of communication to the public. The Slovak Republic launched the portal hybridnehrozby.sk and implemented at the level of the Ministry of the Interior of the Slovak Republic in cooperation with the Police Force of the Slovak Republic an awareness campaign "Hoaxy sa na mňa nelepia“ *(Hoaxes don't stick to me),* the continuation of which after the change of government cannot be documented. Officially, this campaign has not been terminated, but it is not active and the social networks that were used for this purpose are still active but do not declare a link to the Ministry of the Interior of the Slovak Republic. The web portal hybridnehrozby.sk is still active with the operator of the Centre for Countering Hybrid Threats of the Ministry of the Interior and the Ministry of the Interior of the Slovak Republic, the Ministry of Foreign and European Affairs of the Slovak Republic, the Office of the Government of the Slovak Republic, the Ministry of Defence of the Slovak Republic, the Academy of the Police Corps as partners of the project. It is also a project implemented from the Effective Public Administration Operational Programme from the European Social Fund of the EU. General information such as Basic Conceptual and Strategic Documents on Hybrid Threats and information on foreign events, and articles and analyses as early as 2023 are available on the website (Centre for Countering Hybrid Threats of the Ministry of Interior of the Slovak Republic, 2024).

We consider *hybrid and cyber threats* as another **threat** in the SWOT analysis of the security system of the Slovak Republic. The Security Strategy of the Slovak Republic of 2021

identifies hybrid and cyber threats as significant risks to national security. The document emphasises the need to strengthen the resilience of the state and society to these threats, including disinformation, and to ensure a functional cyber, information and communication security system. The 2023 draft of the new concept of the security system of the Slovak Republic identifies hybrid and cyber threats as significant risks to national security. The document emphasises the need to improve the efficiency of the state security system without creating new institutions, with the focus of increasing resilience being on the coordination of individual entities through the activities of the Security Council of the Slovak Republic. Particular emphasis is placed on streamlining the work of the committees of the Security Council of the Slovak Republic and strengthening the competences of the Director of the Security Council Office (New Concept of the Security System of the Slovak Republic, 2023).

In accordance with the Action Plan for Coordinated Countering of Hybrid Threats 2022 - 2024, the process of establishing *the Committee on Hybrid Threats*, which was established as a permanent working body of the Security Council of the Slovak Republic, was ongoing. Its task is to coordinate the planning of measures to maintain security and build the Slovak Republic's resilience to hybrid threats. This committee was established by the amendment to Act No. 110/2004 Coll. on the Activity of the Security Council of the Slovak Republic at the Time of Peace, which entered into force in May 2023. The cooperation of this specialised committee with other committees of the Security Council of the Slovak Republic is intended to contribute to linking the sharing of information on specific security threats with the threats already defined in *the National Security Threat Risk Management Strategy of the Slovak Republic* (hereinafter also as “Strategy”), which identifies hybrid threats as a serious risk to the stability and security of Slovakia, citing the need for a multidisciplinary and multi-agency approach. This includes cooperation between the public and private sectors, including the active involvement of private companies, academic community and the civil sector; the sharing of information and experience between government departments and international partners and the establishment of an integrated information system to monitor threats and coordinate responses. The cyber threats are described as a growing risk that requires specific strategies and actions. According to the Strategy, the key actor in this area is the National Security Office (NSO). The Strategy highlights the need to establish digital platforms for information sharing and coordination of responses to cyber security incidents. Public-private partnerships and the modernisation of technological infrastructure are seen as key elements to increase resilience to cyber-attacks. The Strategy also stresses the importance of education and awareness-raising on hybrid and cyber threats among the public and professionals. In general, the document identifies the need to expand and strengthen national capabilities, in particular by creating a unified framework for risk assessment, strengthening technical infrastructure and investment in cyber security, and ensuring coordination between crisis management

components at both national and regional levels. (National Security Threat Risk Management Strategy of the Slovak Republic, 2023) Given the need to respond to hybrid threats, the Centre for Countering Hybrid Threats was established at the level of the Ministry of the Interior, which is an organisational component of the Ministry of the Interior within the Institute of Administrative and Security Analysis. Its main objective is to increase Slovakia's preparedness and resilience to various forms of hybrid threats, such as disinformation, cyber-attacks or corruption. It monitors and assesses potential threats in the media and digital environment, assesses existing legal and organizational frameworks to identify vulnerabilities and suggest improvements, develops recommendations to strengthen the state's resilience to hybrid threats, organizes training and simulation sessions for public administration employees and other relevant entities to enhance their preparedness. It also cooperates with international partners, including the European Centre of Excellence for Countering Hybrid Threats (hereinafter also as “the Centre”), where Slovakia is one of 31 member countries. In September 2023, the Centre launched the website www.hybridnehrozby.sk, which provides comprehensive information on hybrid threat issues for the general and professional public, and an awareness campaign, Hoaxy sa na mňa nelepia (Hoaxes Don't Stick to Me), was also launched. The Centre is still active and continues its activities, focusing on identifying, analysing and addressing hybrid threats to strengthen the security and resilience of the Slovak Republic (Centre for Countering Hybrid Threats of the Ministry of Interior of the Slovak Republic, 2024).

The Programme Declaration of the Government of the Slovak Republic of 2023 focuses on improving the security environment, but specific measures regarding hybrid and cyber threats are not explicitly mentioned in the available parts of the document. Similarly, the 2024 draft of a new comprehensive framework of processes and procedures for crisis management by the Ministry of the Interior proposes the establishment of an Office for Crisis Management (OCM) to centralise crisis management in Slovakia, but it primarily focuses on improving coordination in crisis situations and does not include specific measures on hybrid and cyber threats (the Programme Declaration of the Government of the Slovak Republic, 2023; Office of the Government of the Slovak Republic, 2024).

Also, the aforementioned *Committee on Hybrid Threats* was established as a permanent working body of the Security Council of the Slovak Republic. However, according to the information available as of August 2023, it appears that the Committee has not yet met, as there is no mention of the Committee's work plan in the 2024 Work Plan of the Security Council of the Slovak Republic. (Security Council of the Slovak Republic, 2024)

From this point of view, it can be stated that the biggest threat to the security system of the Slovak Republic is the fact that the Slovak Republic does not have a strategic approach to

the issue of hybrid threats at the top level of state management, either within the Security Council of the Slovak Republic or at the government level.

In the event that a security threat of hybrid or cyber origin needs to be eliminated, the Slovak Republic addresses these threats on the basis of ad hoc proposals from individual ministries, as we have seen in the case of the cyber threat through e-mail threats of bomb attacks on schools. In recent months, the security system of the Slovak Republic has faced a series of bomb threats sent via e-mail to hundreds of schools across the country. These incidents prompted an immediate and coordinated response by the relevant authorities to ensure the safety of pupils and staff. Following the receipt of the threatening e-mails, the schools concerned were evacuated and the premises were searched by police forces to verify the presence of explosives. For example, in May 2024, approximately 1,544 such threats were registered, none of which were confirmed after thorough searches. (Pravda, 2024) 2,050 police officers were allocated to provide security, with each school having a police officer assigned to it who could be contacted at any time. The police opened a prosecution for the particularly serious crime of terrorist attack. If proven guilty, the perpetrator faces a maximum sentence of 25 years imprisonment or an exceptional sentence of life imprisonment. (Pravda, 2024) As similar threats have been reported in other countries, the Slovak authorities have worked with international partners to identify perpetrators and coordinate security measures. (Körtvélyesiová, ,2024) The Ministry of Education, Research, Development and Youth of the Slovak Republic has provided schools with guidelines on how to deal with bomb threats, including evacuation plans and communication with parents. (Ministry of Education, Research, Development and Youth of the Slovak Republic, 2024) As threats were sent electronically, measures to monitor and prevent cyber-attacks were strengthened, including cooperation with the National Security Bureau and other relevant institutions. (Hospodárske noviny, 2024)

The Security System of the Slovak Republic responded to the bomb threats in a prompt and coordinated manner, taking measures to protect the population and minimise disruption to the educational process. At the same time, it focused on identifying the perpetrators and strengthening preventive measures to avoid similar incidents in the future.

Subsequently, the Minister of the Interior presented the concept of strengthening school security through the installation of CCTV cameras. An analysis of public facilities where increased surveillance and protection is needed showed the greatest need for them at schools. A pilot project is expected to be implemented at three selected schools in the coming months. The main objective of installing CCTV systems is to increase control over access to school buildings and to monitor the movement of people around the schools. These systems will not only reduce the risk of unauthorised access, but will also provide an important tool for rapid response in the event of a security incident. This security system is intended to help prevent hybrid threats in the school environment, such as the bomb threats just mentioned. (The

Ministry of Interior of the Slovak Republic, 2024) On the other hand, the Minister of Interior has not yet offered an expert argument when asked how CCTV systems will help stop the sending of bomb threat emails.

As similar attacks were happening in the Czech Republic at the same time, we provide a comparison of the responses:

Response in the Slovak Republic:

- Evacuation of schools - following the receipt of threatening emails, several schools were evacuated to ensure the safety of pupils and staff. The Slovak police subsequently carried out searches of the premises.
- Disruption of classes - in some cases classes were cancelled, disrupting the educational process and causing complications for parents and students
- Ensuring information - setting up a sub-page on the Ministry of Education, Research, Development and Youth's website where schools had all relevant information in one place, with the abovementioned ministry advising schools to shorten classes.

Response in the Czech Republic:

- Minimising disruption to teaching – the Czech police took measures to interfere as little as possible with the teaching regime. The aim was to maintain the continuity of education and minimise panic among students and parents.
- Focus on investigation – the Czech police forces concentrated on identifying the origin of the threats and worked with international partners to identify the perpetrators.
- Ensuring awareness – the Czech police communicated extensively with school representatives and took appropriate action, while trying to interfere as little as possible with the normal running of schools. The aim was to ensure continuity of education and avoid unnecessary panic.

From a brief comparison, we can identify at least the following shortcomings. Many evacuations and disruptions in Slovakia have led to considerable disruption of the educational process, especially in comparison with the Czech Republic, where the priority has been to maintain the continuity of classes. The repeated evacuations in Slovakia may have increased the level of fear and panic among those affected, for which the above-mentioned camera system is supposed to be **an improvised solution**, but it does not represent a comprehensive solution and raises many questions and uncertainty on the part of those affected. In the Czech Republic, on the other hand, the emphasis has been on investigating the origin and source of the bomb threats on the one hand, and on keeping the peace and minimising interference in the normal running of schools on the other.

Summary of the analysis of the security system of the Slovak Republic

In terms of strengths, we can state that the Security System of the Slovak Republic has a comprehensive legislative framework that enables crisis management at various levels. We can also consider the links with supranational structures such as NATO and the EU and, last but not least, the fact that the Security System of the Slovak Republic also applies the principle of subsidiarity, i.e. it involves local state and municipal authorities in crisis management.

In terms of weaknesses, we can speak in particular about the fragmentation of competences between the central, regional and local levels of the Slovak security system management. Weaknesses also include the lack of digitisation of the security system and the absence of modern information sharing tools. Also problematic is the insufficient allocation of funding for crisis management at the level of municipalities, which reduces their ability to respond immediately to or prevent these incoming threats.

In terms of opportunities, if the lack of digitalisation is a weakness of the Slovak security system, then greater digitalisation and the creation of digital platforms to support crisis management is, on the contrary, an opportunity. A deepening and strengthening of the strengths in international cooperation, critical infrastructure protection and crisis management is also a great opportunity for Slovakia. We see the same opportunity after the implementation of the unified crisis planning methodology. A unified legislative framework would bring room for improvement in all areas of security system management.

The biggest current threats to the security system are, firstly, the low public awareness of security issues, secondly, without a doubt, the increasing rise of hybrid and cyber threats that threaten the infrastructure and stability of the security environment in Slovakia, and last but not least, problematic funding, as the lack of resources for prevention and response weakens the overall capacity of the security system as a whole. The currently planned steps presented by the Ministry of the Interior of the Slovak Republic also objectively show the risk of inefficient centralisation of crisis management.

5. Recommendations for practice

In order to improve the efficiency of the Slovak security system, it is necessary to introduce several concrete measures. In the area of legislation, it is crucial to unify the existing legal norms related to crisis management and security policy into one comprehensive framework. This consolidation would eliminate duplication and ensure a consistent approach to security threat management. It is also important to implement a single crisis planning methodology that would serve as a standard for all levels of government, thereby improving the coordination and effectiveness of responses.

A digitalization is another area that requires significant investment. The creation of modern digital platforms for sharing information between the different components of the

security system would allow for fast and efficient communication during crisis situations. At the same time, there is a need to strengthen capacities in the field of cyber security and protection against hybrid threats, which requires not only technological investment but also systematic training of personnel.

A funding plays a crucial role in the security system. The introduction of crisis funds, which would provide local and regional governments with resources to deal with unexpected events, would significantly improve their ability to respond to crisis situations. At the same time, there is a need to increase the budget for crisis prevention and preparedness, especially at local government level, which often faces the direct consequences of emergencies.

At international level, Slovakia should deepen cooperation with NATO and EU allies, especially in the area of hybrid and cyber threats. Regional partnerships within the Visegrad Four can also bring synergies in crisis management. A key step is the exchange of best practices and participation in joint exercises that enhance interoperability and preparedness.

Finally, it is essential to strengthen education and awareness-raising. Regular training of public servants and informing the public about their roles during crisis situations will increase the preparedness of society as a whole. At the same time, it is necessary to promote public debate on security issues and to raise awareness of current threats and how Slovakia can respond effectively to them. This comprehensive approach will ensure a more resilient security system and its ability to face current and future challenges.

Conclusion

The assessment of the effectiveness of the Slovak security system shows that despite a robust legislative framework and membership in international organisations such as NATO and the EU, the system faces a number of challenges that limit its ability to respond effectively to current threats. Fragmentation of competences between different levels of government and shortcomings in the digitalization of crisis management are the main weaknesses undermining coordination and the speed of responses to crisis situations. At the same time, hybrid and cyber threats are on the rise, increasing pressure to improve system resilience and integrate modern technologies.

On the other hand, the implementation of a common methodology for crisis planning, the strengthening of digitalization and the use of best practices from international practice provide significant opportunities for development. Examples from the Czech Republic and Poland show that a decentralised approach, reinforced by an efficient digital infrastructure, can lead to more flexible and faster crisis management.

In order to ensure a more efficient functioning of the Slovak security system, it is essential to implement the recommendations of the New Security System Concept, in particular in the areas of digitalization, hybrid threats and strengthening cooperation between

all levels of government. By focusing on these aspects, Slovakia can increase its preparedness and resilience to modern threats and improve the protection of citizens and critical infrastructure.

References

Bezpečnostná stratégia SR. 2001 [online]. Národná rada SR. [cit. 2024-11-10]. Available at: https://www.nrsr.sk/web/Dynamic/Download.aspx?DocID=458853 *(Security Strategy of the Slovak Republic, 2001)*

Bezpečnostná stratégia SR. 2005 [online]. Ministerstvo obrany SR. [cit. 2024-11-10]. Available at: https://www.mosr.sk/data/files/4264_bezpecnostna-strategia-sr-2005.pdf *(Security Strategy of the Slovak Republic, 2005)*

Bezpečnostná stratégia SR. 2021. [online]. Ministerstvo obrany SR. [cit. 2024-11-10]. Available at: https://www.mosr.sk/data/files/4263_210128-bezpecnostna-strategia-sr-2021.pdf *(Security Strategy of the Slovak Republic, 2021)*

Bombové hrozby na školách boli pravdepodobne kybernetický útok, potvrdila polícia. 2024. [online] TASR. Hospodárske noviny. [cit. 2024-10-9]. Available at: https://hnonline.sk/slovensko/96148222-bombove-hrozby-na-skolach-boli-pravdepodobne-kyberneticky-utok-potvrdila-policia *(Hospodárske noviny, 2024)*

BREZINA, D., 2022. *Rozhodovacie procesy na nižších úrovniach krízového riadenia*. Liptovský Mikuláš: Akadémia ozbrojených síl generála M. R. Štefánika, ISBN 978-80-8040-616-5

BUZALKA, J., 2012. *Krízový manažment vo verejnej správe*. Bratislava: Akadémia PZ. ISBN 978-80-8054-527-7.

Centrum boja proti hybridným hrozbám MV SR. 2024 [online]. Centrum boja proti hybridným hrozbám. [cit. 2024-10-9]. Available at: https://www.hybridnehrozby.sk/ *(Centre for Countering Hybrid Threats of the Ministry of Interior of the Slovak Republic, 2024)*

COVID AUTOMAT. 2021. [online] Ministerstvo zdravotníctva SR [cit. 2024-10-10]. Available at: https://www.minv.sk/swift_data/source/images/020221%20COVID%20automat%20Signalizacny%20system%201v4.pdf *(Ministry of Health of the Slovak republic, 2024)*

Dezinformační kampane. 2024 [online]. Ministerstvo vnitra ČR. [cit. 2024-10-9]. Available at: https://www.mvcr.cz/clanek/dezinformacni-kampane.aspx?utm_source=chatgpt.com *(Ministry of Interior of the Czech Republic, 2022)*

HOFREITER, L., BREZINA D., 2023 *Bezpečnosť, bezpečnostná politika a bezpečnostný systém*. Liptovský Mikuláš: Akadémia ozbrojených síl generála M. R. Štefánika. 2023. ISBN 978-80-8040-657-8.

Informace o speciálních stránkách HZS CR ke koronaviru. 2022. [online]. Krizový portál. [cit. 2024-10-9]. Available at: https://www.krizport.cz/aktualni-situace/aktuality/all-informace-o-specialnich-strankach-hzs-cr-ke-koronaviru *(Crisis portal, 2022)*

KÖRTVÉLYESIOVÁ, D., 2024. *Slovenská vláda reaguje na bombové hrozby: Prezradili detaily útokov a jasné odporúčania pre školy.* [online] Tlačová správa Úradu vlády SR. [cit. 2024-10-9]. Available at: https://www.startitup.sk/slovenska-vlada-reaguje-na-bombove-hrozby-prezradili-detaily-utokov-a-jasne-odporucania-pre-skoly-navod

Košický samosprávny kraj pomáha zabezpečiť priestory a zdravotníkov na celoplošné testovanie. 2020*.* [online]. Košický samosprávny kraj. [cit. 2024-10-9]. Available at: https://web.vucke.sk/sk/novinky/kosicky-samospravny-kraj-pomaha-zabezpecit-priestory-zdravotnikov-celoplosne-testovanie.html *(Košice Self-Governing Region, 2022 and 2022)*

LUŽÁK, J., KLAČKO, L., 2019. *Audit bezpečnostného systému SR* [online]. Globsec. [cit. 2024-10-9]. Available at: https://www.globsec.org/sites/default/files/2019-09/Audit-Bezpecnostneho-Systemu-SR-v-kontexte-HH.pdf

MIHALKOVÁ, H., LAUKOVÁ, L., 2024. *Každá škola dostala svojho policajta. Vinníkovi za teroristické bombové vyhrážky hrozí aj doživotie*. [online]. Denník Pravda [cit. 2024-10-9]. Available at: https://spravy.pravda.sk/domace/clanok/709303-kazdy-skola-dostala-svojho-policajta-vinnikovi-za-teroristicke-bombove-vyhrazky-hrozi-aj-dozivotie/

Ministerstvo školstva odporučilo školám postihnutým bombovou hrozbou skrátiť vyučovanie. 2024. [online]. Ministerstvo školstva, vedy, výskumu, vývoja a mládeže SR. [cit. 2024-10-9]. Available at: https://www.minedu.sk/ministerstvo-skolstva-odporucilo-skolam-postihnutym-bombovou-hrozbou-skratit-vyucovanie/ *(Ministry of Education, Research, Development and Youth of the Slovak Republic, 2024)*

Na Slovensku vzniklo pre verejnosť 88 očkovacích centier, z toho 14 veľkokapacitných. 2021. [online]. Ministerstvo zdravotníctva SR. [cit. 2024-10-10]. Available at: https://www.health.gov.sk/Clanok?covid-19-14-03-2021-ockovacie-centra *(Ministry of Health of the Slovak republic, 2024)*

Národná stratégia riadenia rizík bezpečnostných hrozieb Slovenskej republiky. 2023. [online]. Úrad vlády SR. [cit. 2024-10-9]. Available at: https://rokovania.gov.sk/RVL/Material/26865/1 *(National Security Threat Risk Management Strategy of the Slovak Republic, 2023)*

Návrh nového komplexného rámca procesov a postupov pre krízové riadenie Slovenskej republiky. 2024. [online]. Úrad vlády SR. [cit. 2024-10-9]. Available at: https://rokovania.gov.sk/RVL/Material/29227/1 *(Proposal for a new comprehensive framework of processes and procedures for crisis management in the Slovak Republic, 2024)*

Nová koncepcia bezpečnostného systému SR. 2005. [online]. Úrad vlády SR. [cit. 2024-11-10]. Available at: https://rokovania.gov.sk/RVL/Material/28141/1 *(New Concept of the Security System of the Slovak Republic, 2023)*

Nová výzva podporí subjekty verejnej správy v oblasti kybernetickej a informačnej bezpečnosti. 2024 [online] Ministerstvo investícií, regionálneho rozvoja a informatizácie Slovenskej republiky [cit. 2024-10-9]. Available at: https://mirri.gov.sk/aktuality/digitalna-agenda/nova-vyzva-podpori-subjekty-verejnej-spravy-v-oblasti-kybernetickej-a-informacnej-bezpecnosti/ *(Ministry of Investments, Regional Development and Informatization of the Slovak Republic, 2024)*

Pandemický plan ČR. 2022.[online]. Ministerstvo zdravotnictví ČR [cit. 2024-10-9]. Available at: https://mzd.gov.cz/category/ochrana-verejneho-zdravi/pandemicky-plan-cr/ *(Ministry of Health of the Czech Republic, 2022)*

Plán práce Bezpečnostnej rady Slovenskej republiky na rok 2024. 2024. [online]. Úrad vlády SR. Kancelária Bezpečnostnej rady SR. [cit. 2024-10-9]. Available at: https://www.vlada.gov.sk/site/assets/files/1765/pla_n_pra_ce_br_sr_na_rok_2024.pdf *(Security Council of the Slovak Republic, 2024)*

Programové vyhlásenie Vlády Slovenskej republiky na obdobie rokov 2021-2024. 2021. [online]. Národná rada SR. [cit. 2024-10-9]. Available at: https://www.nrsr.sk/web/Dynamic/DocumentPreview.aspx?DocID=494677 *(Programme Statement of the Government of the Slovak Republic, 2021)*

Programové vyhlásenie Vlády SR na obdobie rokov 2023-2027. 2024. [online]. Národná rada SR. [cit. 2024-10-9]. Available at: nrsr.sk/web/Dynamic/DocumentPreview.aspx?DocID=535376 *(Programme Statement of the Government of the Slovak Republic, 2024)*

PROKOPČÁKOVÁ, D., 2024. *Populizmus, ignorácia odborníkov a slabý boj s dezinformáciami. Ako sme (ne)zvládli pandémiu.* [online]. [cit. 2024-10-9]. Available at: *https://primar.sme.sk/c/23396074/pandemia-slovensko-hodnotenie-odbornici.html*

ŠIMÁK, L., 2016. *Krízový manažment vo verejnej správe.* Druhé prepracované vydanie. Žilina: EDIS - vydavateľské centrum ŽU. ISBN 978-80-554-1165-1.

Štatút Bezpečnostnej rady Slovenskej republiky. 2024. [online] Úrad vlády SR. [cit. 2024-10-9]. Available at: https://www.vlada.gov.sk/site/assets/files/1765/s_tatu_t_u_lohy_kbr.pdf *(Statute of the Security Council of the Slovak Republic, 2024)*

URBANEK, A., 2014. Vybrané prvky systému národnej bezpečnosti Poľskej republiky. *Krízový manažment.* 1, pp. 73-80. [online]. [cit. 2024-10-9]. Available at: https://krm.uniza.sk/pdfs/krm/2014/01/13.pdf

UŠIAK, J., 2020. *Bezpečnostná politika Slovenskej republiky a vybrané bezpečnostné dokumenty*. Banská Bystrica: Belianum. ISBN 978-80-557-1795-1. 266s.

Ústava Slovenskej republiky č. 460/1992 Zb. (*Constitution of the Slovak Republic No. 460/1992 Coll.)*

Ústavný zákon č. 227/2002 Zb. o bezpečnosti štátu v čase vojny, vojnového stavu, výnimočného stavu a núdzového stavu (*Constitutional Act on State Security in Wartime, During Hostilities, Martial Law and State of Emergency No. 227/2002 Coll.*)

Uznesenie č. 110/2021 Z. z., Uznesenie vlády Slovenskej republiky č. 166 k návrhu aktualizácie mapy okresov podľa aktuálnej rizikovosti s ohľadom na šírenie ochorenia COVID-19. 2021. [online]. Zbierka zákonov SR. [cit. 2024-10-9]. Available at: https://www.epi.sk/zz/2021-110/znenie-20210329

V očkovacom centre Košického samosprávneho kraja sa bude očkovať aj vakcínou od Moderny. 2022. [online]. Košický samosprávny kraj. [cit. 2024-10-9]. Available at: https://web.vucke.sk/sk/novinky/v-ockovacom-centre-kosickeho-samospravneho-kraja-bude-ockovat-aj-vakcinou-od-moderny.html *(Košice Self-Governing Region, 2022 and 2022)*

Vláda po dvoch desaťročiach prijala zásadné koncepčné zmeny v nastavení bezpečnostného systému štátu. 2023 [online] Ministerstvo vnútra SR. [cit. 2024-10-9]. Available at: https://www.minv.sk/?tlacove-spravy&sprava=vlada-po-dvoch-desatrociach-prijala-zasadne-koncepcne-zmeny-v-nastaveni-bezpecnostneho-systemu-statu *(Ministry of Interior of the Slovak republic, 2024)*

Vláda schválila koncepciu posilnenia bezpečnosti škôl prostredníctvom inštalácie kamerových systémov. 2024. [online] Ministerstvo vnútra SR. [cit. 2024-10-9]. Available at: https://www.minv.sk/?tlacove-spravy&sprava=vlada-schvalila-koncepciu-posilnenia-bezpecnosti-skol-prostrednictvom-instalacie-kamerovych-systemov *(Ministry of Interior of the Slovak republic, 2024)*

Všetko o téme hybridných hrozieb nájdete na novej webovej stránke hybridnehrozby.sk. 2024. [online] Ministerstvo vnútra SR. [cit. 2024-10-9]. Dostupné z: https://www.minv.sk/?tlacove-spravy&sprava=vsetko-o-teme-hybridnych-hrozieb-najdete-na-novej-webovej-stranke-hybridnehrozby-sk *(Ministry of Interior of the Slovak republic, 2024)*

Zákon č. 110/2004 Z. z. o fungovaní Bezpečnostnej rady Slovenskej republiky v čase mieru, Bezpečnostná stratégia Slovenskej republiky (*Act No. 110/2004 Coll. on the Activity of the Security Council of the Slovak Republic at the Time of Peace)*

Zákon č. 240/2000 Sb. o krizovém řízení a o změně některých zákonů *(Act No. 240/2000 Coll. on Crisis Management and amending certain acts)*

Zákon č. 321/2002 Z. z. o ozbrojených silách Slovenskej republiky (*Act No. 321/2002 Coll. on the Armed Forces of the Slovak Republic and on Change and Amendment of Some Acts)*

Zákon č. 369/1990 Zb. o obecnom zriadení (*Act No. 369/1990 Coll. on Municipal Establishment)*

Zákon č. 387/2002 Z. z. o riadení štátu v krízových situáciách mimo času vojny a vojnového stavu *(Act No. 387/2002) Coll. on the Control of State in Crisis Situations Except for Wartime and During a State Hostilities)*

Zákon č. 42/1994 Z. z. o civilnej ochrane obyvateľstva (*Act No. 42/1994 Coll. on Civil Protection of Population and on amending and supplementing certain laws)*

Zákon č. 575/2001 Z. z. o organizácii činnosti vlády a organizácii ústrednej štátnej správy (*Act No. 575/2001 Coll. Code of Acts on Organization of Activities of the Government and Central Government as Amended).*

ŽÍDEK, R., CIBÁKOVÁ, S., 2009. *Bezpečnosť štátu.* Liptovský Mikuláš: Akadémia ozbrojených síl generálana M.R. Štefánika. ISBN 978-80-8040-375-1.

Contact address

Mgr. Katarína Miňová, PhD.
ID ORCID: 0000-0002-5135-7427
Pavol Jozef Šafárik University in Košice
Faculty of Public Administration
Popradská 66, 040 22 Košice
Email: katarina.minova@upjs.sk

REVIEW

Hope for a Fractal Society/ Social and Political Plan for Future (?)

Jaroslav Vencálek

The book Hope for a Fractal Society can be described as a vision for a better transformation of society. It provides an innovative and sober approach to understanding contemporary social phenomena by offering a fresh perspective on the current state and direction of society.

One of the most interesting aspects of the book is the use of the fractal concept. Through fractals, the author encourages readers to consider new ways and processes that create the structure needed to understand social phenomena. The fractals described in the book offer a fascinating view of the complexity and recurrence of patterns in society. The author uses this concept to express hope and optimism, showing that complex phenomena can have order and system. As a result, the author provides a more grounded perspective on the future and the potential for positive societal transformation.

In six chapters, the author explores various proposals and practical changes that could help societies grow and prosper. Overall, Hope for a Fractal Society is an inspiring and thought-provoking work that combines theoretical concepts with practical suggestions for improving societal functioning.

In the introductory chapter, the author examines the past of regions that once operated in unity and cooperation, warning of the risks if regions fail to learn from history and lose their values and solidarity. Ignoring local traditions can lead to isolation and dependence on superficial trends, which limits the regions' ability to collaborate and embrace diversity. The author emphasizes the need to support diversity and inter-regional cooperation to ensure sustainable development in a changing world. The second chapter explores how the perception of regional truth is changing at the beginning of the third millennium. It focuses on internal and external knowledge, the space-time continuum, and its impact on regional truth amidst societal differences. The author warns that while truth may provide certainty, it is not always fully known or universal. What is true for one region may not apply to another. The chapter emphasizes the need to consider the context and specifics of individual regions when evaluating truth. The third chapter addresses social reality and the development of administrative systems. It examines how social reality is perceived and introduces the new concept of complementarity. The author highlights that political and social systems should complement and analyze each other to find meaning in values and ideals. The chapter also calls for a focus on finding balance and strengthening democratic changes to support

sustainable development. In the fourth chapter, the author uses the example of the Pezinok and Brezovice Carpathians region to explain this topic. It illustrates how the complementary perception of social reality functions and how this reality is linked to specific places. The fifth chapter summarizes and deepens the topics covered so far, inviting readers to think more deeply about global development. It explores synergistic effects of spatial relationships, turning points between rises and falls, identity as a phenomenon of the human internal environment, and the concept of genius loci. It also focuses on finding measures of complexity and new aspects of complexity, showing the interconnection of these concepts in social reality. In conclusion, the author shares his thoughts and invites readers to focus on finding new forms of harmonious coexistence through this publication. He emphasizes the importance of knowledge and hope in creating a harmonious space where individual societies can live in harmony and support each other.

Through this publication, the author delves into many current topics, such as ecology, economy, social relationships, and more, all connected by the central idea of a fractal society. The book stands out for its attractiveness, especially through the use of metaphors to explain fractal concepts, which can often be complex for readers. Although fractals originate from mathematics and natural sciences, the author uses them to create an innovative perspective on modern society. The publication is particularly interesting due to its interdisciplinarity and is intended for a broad audience – from laypeople to experts interested in the future of society. The book also addresses the challenges we currently face and provides new insights for those seeking better solutions for the future. Therefore, I highly recommend this publication to anyone who wants to deeply consider how to shape society for a better future.

Information about the publication:

Prof. PeadDr. Jaroslav Vencálek, Csc.
Hope for a Fractal Society/ Social and Political Plan for Future (?)
Publisher: Tlačiareň J+K, Nemšová
Year of Publication: 2024
Number of Pages: 138
ISBN: 978-80-8978-70-5

Reviewer:

Mgr. Michaela Krajčírová - Internal Doctoral Student
Pavol Jozef Šafárik University in Košice
Faculty of Public Administration
Popradská 66, 040 11 Košice
Email: michaela.krajcirova@student.upjs.sk

Funding for the development of regions and cities from European Union funds in Slovakia

Eva Výrostová, Zuzana Hrabovská, Milan Douša

Author´s team, led by E. Výrostová, examines in the monograph the possibilities of financing the development of regions and cities from the EU budget, as well as other European sources, particularly repayable resources from the European Investment Bank, the European Investment Fund and Next Generation EU. The main focus is on EU cohesion policy funds, an evaluation of their implementation during the 2014–2020 programming period and the setup of these funds in the new 2021–2027 programming period.

The publication presents the results of the VEGA 1/0837/21 project: „Spatial and Temporal Aspects of EU Cohesion Policy: Lessons Learned and Future Perspectives“.

The authors focused in the monograph on addressing primarily the following research questions: Does the EU cohesion policy fulfill its primary goal of reducing regional disparities in the conditions of Slovakia? Does the spatial allocation of EU funds in the Slovak Republic correspond to the main goal of cohesion policy, i.e., reducing regional disparities? What impact do changes in the allocation of funds have on the cohesion policy in relation to addressing the consequences of the COVID-19 pandemic and other crises on achieving the fundamental goal of cohesion policy? Do the EU cohesion policy funds contribute to increasing the competitiveness of regions in the Slovak Republic and to the sustainable development of cities in the Slovak Republic?

In the first chapter are analyzed various European funding sources for development projects in municipalities, cities, and regions in Slovakia, comparing the implementation of EU funds during the 2014–2020 and 2021–2027 programming periods. The analysis shows that EU funds are a significant source of public investment in Slovakia, making it one of the largest recipients of EU funds. However, during the 2014–2020 period, there was no noticeable reduction in disparities between less developed and more developed regions. The authors also examine the impact of changes in the allocation of cohesion funds due to the COVID-19 and energy crises, concluding that these changes did not contribute to achieving the policy's primary goal.

The second chapter evaluates changes in regional competitiveness in Slovakia during the 2014–2020 period using the economic polygon method, examining the relationship between the absorption of EU cohesion policy funds and changes in regional competitiveness. During the observed period, the expected increase in competitiveness due to the significant absorption of EU funds in Slovak regions was not recorded.

The third chapter focuses on the urban dimension of cohesion policy, including its financing. It highlights the issues faced by urban areas, such as unemployment, segregation, poverty, demographic changes, migrant inclusion, traffic congestion, environmental pollution, and the impact of climate change. It describes how EU cohesion policy, through the European Regional Development Fund, supports integrated strategies for the sustainable development of cities.

The fourth chapter analyses the use of cohesion policy funds by cities in Slovakia, maps trends and challenges faced by cities, and identifies opportunities for financing sustainable urban projects during the 2021–2027 period.

A significant contribution of the monograph, particularly from the perspective of the societal impact of the conducted research, can be seen in the summarized results of the analyses and the proposed recommendations for the next programming period. These proposals focus on the process of absorbing funds from the EU structural funds, the identification of strategic areas for financing with regard to long-term sustainability, and the implementation of integrated territorial development tools.

The authors have addressed the issue of the specifics of financing regional and urban development from EU funds in the context of the Slovak Republic with professional precision. The monograph provides important theoretical insights into EU cohesion policy and offers specific recommendations for improving its implementation. The publication has practical significance for policymakers as well as for local governments, particularly due to its proposals for more effective fund absorption, supporting the long-term sustainability of regional development in Slovakia, and integrated urban development.

Information about the publication:

Ing. Eva Výrostová, PhD., Ing. Zuzana Hrabovská, PhD., PhDr. Milan Douša, PhD.
Funding for the development of regions and cities from European Union funds in Slovakia
Publisher: Praha: Leges
Year of publication: 2023
Number of pages: 178
ISBN: 978-80-7502-721-4

Reviewer:

Ing. Katarína Petrovčiková, PhD.
ID ORCID: 0000-0002-727
University of Economics in Bratislava
Faculty of Business Economics with seat in Košice
Tajovského 13, 041 30 Košice
Email: katarina.petrovcikova@euba.sk

Register of Authors

INSTRUCTIONS FOR AUTHORS

Public Administration and Society is a scientific reviewed Journal of the Faculty of Public Administration University of Pavol Jozef Šafárik in Kosice publishing the original scholarly and science works, contributions to discussion and reviews having the content orientation on the theory and practice of Public Administration. The mission of the Journal is to publish significant results of the scholarly researches regarding the area of public policy and administration, social sciences, public legal disciplines, economics and management of the public administration.

Only the original contributions are accepted which have not been so far published or accepted for publishing by other journals, respectively by any other publications.
The author is responsible for the technical accuracy, grammatical correctness and compliance with the instructions of the text.
Based on the review, made by two reviewers, and considering the scientific contribution, quality and significance of an article, the Editorial Board will decide about acceptance/non-acceptance of the article.

STYLE SHEET

Size	A4
Margins	left, right, top, bottom – 2.5 cm
Font	Arial (normal, 11 points)
Spacing	1.5
Article sizes	**Scientific articles:** 10 – 20 pages **Contributions to the discussions:** 8 – 13 pages **Reviews:** 2 pages

STRUCTURE

Title

- 15 points, bold

Author`s First name and Surname

- 14 points, bold
- without academic or educational degrees

Abstract

- 11 points
- in English, framed
- 10 lines max.

KeyWords

- 5 words max.
- in English
- lower – case letters

Tables, diagrams and figures

- with clear identification according to the article template provided in the original format (e.g. *.xls, *.jpg, etc.)

References

- the correctness and completeness of the bibliographical data is within an author's responsibility while ISO 690:2012 must be followed
- the list must be in alphabetical order and without a numbering

Quotations

- the method of the first datum and date

Contact Address

- the author's name and surname including his/her degrees; ID ORCID, the name and address of his/her institution and e-mail

Language

- Slovak, Czech, (British) **English**

Footnotes

- they are allowed only for more detailed specification of a term used in the text. It is not allowed to include any mathematical expressions and references to the literature into the footnotes.

The articles must comply with the Publishing Ethics and Instructions for Authors (including the template). Any failure to comply with the instructions provided in the Style Sheet may result in rejecting the article. Articles are to be submitted electronically by **31st March / 30th September.**
The article and signed Authorship and Copyright Transfer Statement is to be sent to e-mail address: fvs-vss@upjs.sk