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STUDY OF THE EFFECTS OF BUSINESS INFORMATION SYSTEMS ON THE PREVENTION OF CORRUPTION IN THE PUBLIC ADMINISTRATION IN BULGARIAN CONDITIONS*

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Abstract. Modern business management entirely relies on the use of information technologies, covering all important aspects of business life. At the same time, introducing new ICT solutions in public administration remains in the shadow of business organizations – insufficiently studied from one side and from the other – with various and complex limitations such as financial, expert, lack of sufficient strategic planning, etc. In all cases, however, the use of information systems can improve the overall transparency of the administration, including by reducing the possibilities for subjective judgment on the part of the relevant employee. The main goal of this article is to study the effect that the use of business information systems will have in the fight against corruption in the public sector in the Bulgarian context. For this purpose, we conducted study, covering 73 public organizations (public enterprises and public administration) operating at the national and local level in Bulgaria. The survey was conducted in the period May-September 2024. The idea is to assess how employees in public organizations perceive the effects of using information systems in terms of the transparency of work processes, responsibilities, control over activities, the curbing of corruption and unfair practices, and the intention to use the system. Our findings based on the correlation analysis of the opinion of employees, indicate that the implementation and use of information systems in public organizations, on the one hand, increase the transparency of work processes, the distribution of responsibilities and the control of activities, and on the other hand limits the corruption and unfair practices. All this affects the intention of employees to use information systems in their work.

Keywords: business information systems; corruption; public sector; administration; transparency and accountability

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1. Introduction

Modern management is completely based on the use of information technologies – for better strategic and operational planning, for managing the stock availability in warehouses, contract management, logistics, Human Resource Management, specific project management, etc. There are numerous technological solutions when it

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comes to business organizations and the possibility of improving their overall performance through new technologies. At the same time, the introduction of new technical solutions in public administration remains in the shadow of business organizations, and in most cases, when implementing new technologies, their full capacity is not used in practice, and very often different systems are purchased, which, however, cannot work together. As a result, introducing various technical solutions may even hinder rather than improve the efficiency of the administration.

On the other hand, the development of new technologies and achievements related to effective solutions, proven in the practice of business organizations, undoubtedly have their application in the conditions of public administration. The desire of all citizens to receive improved public services can ultimately be satisfied precisely through new technologies, as long as they are introduced as part of an overall strategic policy of the administration.

In all cases, however, the use of information systems can improve the overall transparency of the administration, including by reducing the possibilities for subjective judgment on the part of the relevant employee. In this sense, the main goal of this article is to study the effect that the use of business information systems will have in the fight against corruption in the Bulgarian context.

2. Theoretical background

Corruption and, respectively, the fight against corruption, unfortunately, are not a new phenomenon in the practice of public administration. Corruption and all its manifestations corrode the rule of law, undermine the public's faith in the justice of all public entities and have an extremely harmful effect on the structure and moral of the entire society. Therefore, the fight against corruption is one of the major priorities for any public authority (Vyas-Doorgapersad, 2024). New technologies could contribute significantly to this fight, giving the needed tools for securing transparency and lack of subjectivity of critical procedures.

The scientific literature is not so rich in researchers exploring different possibilities for new technologies to strengthen the fight against corruption.

Bhattacharjee and Shrivastava (2018) find that ICT use impacts corruption by enhancing both the likelihood and speed of punishment for corrupt activities. Additionally, ICT-specific legislation moderates this effect, indicating that ICT investments alone may have a limited impact on reducing corruption unless reinforced by suitable ICT regulatory frameworks. In this regard, Lee, Choi, Kim and Jung (2018) define the factors affecting the decrease in corruption using ICT development and e-government service. They confirm that ICT and e-government development play a mediating role in reducing government corruption, suggesting that expanded ICT use and technological monitoring of government activities will be key factors in corruption prevention within government institutions. Ali and Gasmi (2017), after a comprehensive analysis, also conclude that ICT diffusion serves as an effective mechanism for controlling corruption. Additionally, as countries achieve greater economic development, their corruption levels tend to decline. The results indicate that higher per capita GDP, along with trade openness and strong institutional frameworks, correlates with reduced corruption levels.

Adam and Fazekas (2021) examine different digital public services, crowdsourcing platforms, whistleblowing mechanisms, transparency portals, distributed ledger technology, and artificial intelligence. Analyzing the shared features of these technologies, scholars observe that ICT can enhance anti-corruption efforts by strengthening public oversight in multiple dimensions: it enables corruption reporting, fosters transparency and accountability, and supports citizen engagement as well as interactions between governments and citizens. However, the authors warn that ICT also introduces potential avenues for corruption through mechanisms such as the dark web, cryptocurrencies, and the potential misuse of centralized databases (ibid). In this regard comes the research of

Schopf (2019), who argues that although ICTs generally help reduce corruption, ICT aid from leading providers in Korea was found to increase corruption levels in recipient countries. After profound research on the different factors for this situation, the scholar advises that e-government initiatives should be aligned with complementary anti-corruption administrative reform programs, including measures such as the anti-corruption integrity index, the ombudsman system, integrity pledge contract systems, whistleblower protection, results-oriented management, and budget transparency (ibid). This conclusion is complementary to the findings, made earlier by Sassi and Ali (2017), who empirically prove that African economies experience the anti-corruption benefits of ICT adoption only after achieving a certain threshold of rule of law. Ndoya, Okere, Belomo and Atangana (2023) scrutinize the relationship between ICT and the informal economy in Africa. Their findings indicate that ICT use reduces the prevalence of the informal economy. According to the authors, this relationship remains consistent across various robustness checks.

Additionally, mediation analysis reveals that the impact of ICTs on the informal economy is mediated by factors such as financial development, human capital, and corruption control (ibid). Wang, Luo and Jurkat (2022) explore data from 133 countries and conclude that ICT infrastructure enhances the positive effect of e-participation on corruption control. Their results highlight key relationships among e-participation, voice and accountability, ICT infrastructure, and corruption control.

Thommandru, Maratovich and Saparovna (2024) explore the possibility of strengthening the fight against corruption in Uzbekistan by using a good example of India, especially in the field of tech-driven strategies. Scholars admit that, although technology alone cannot resolve all corruption issues, the strategic integration of ICT into Uzbekistan's anti-corruption efforts—drawing on lessons from India's experience—can be a powerful instrument to enhance governance, reduce corruption and promote social justice for citizens. Khan, Ullah and Nobanee (2024) also confirm that technology has a spill-over effect on innovation, overall transparency, and institutional quality and could secure the sustainability of authorities.

Wu, Yan and Vyas (2020) scrutinize the attitude of civil servants in China and India in the fight against corruption. Based on the research, they conclude that civil servants in both countries generally hold positive views on the potential of transparency and technology to reduce corruption. At the same time, the authors discover that the effectiveness of these innovations depends on factors such as political commitment, levels of income inequality, and the readiness of infrastructure. According to their findings, Chinese respondents expressed greater optimism about the role of transparency, while Indian respondents were more favorable toward the impact of technology. This difference, argue scholars, may reflect the distinct drivers of corruption and the unique challenges faced by anti-corruption efforts in China and India (ibid).

Adam (2020) examines the development of e-government and its impact on the corruption level. The results indicate a strong relationship between e-government development and ICT development, institutional quality, and between ICT development and corruption. These relationships collectively affirm the impact of ICT development on reducing corruption. However, according to the author, the research found no significant direct effect of e-government on corruption reduction (ibid). The same opinion is reached by Sabani, Farah, and Dewi (2019), who studied the possibility of a corruption fight in Indonesia based on new technologies. They define several important barriers (such as budget limitation, available Infrastructure, Unprepared staff, Low awareness and participation, etc.) but also pay attention to the drivers of this effort (such as government support, motivation, policy enforcement, transparency and trust). The potential of e-government in fighting against corruption is also comprehensively studied by Silal, Jha and Saha (2023). Khan, Krishnan and Dhir (2021) argue that policymakers should prioritize building ICT-related knowledge, expertise, and infrastructure to enhance their capacity for designing effective e-government platforms and services. According to the authors, strategies should be developed to raise public awareness and improve technical skills, such as through targeted training programs. Addressing the digital divide is also crucial, ensuring broad access to the internet and other ICT resources. They

are convinced that without widespread citizen access to e-government, its potential impact on reducing corruption cannot be accurately evaluated (ibid).

Ibrahim, Norta and Normak (2024) reveal the potential of blockchain-based governance models that secure transparency and fight against corruption. Valle-Cruz, Sandoval-Almazan and Gil-Garcia (2016) explore the relationship between citizens and local authorities mediated by information technologies. Their study finds that technology-supported interactions between citizens and municipal governments significantly influence citizens' perceptions of transparency, efficiency, and corruption. Among the technologies examined, websites, social media, and mobile technologies were identified as having the greatest impact. At the same time, scholars reported that employment status emerged as the only demographic factor significantly affecting these perceptions (ibid). At the same time, Senator, Senyo and Addo (2021) explore the role of digital payment in reducing the corruption level. Using a fixed-effects analysis, their results indicate that digital transactions effectively reduce corruption. These findings are robust even when authors used instrumental variable analysis to address potential endogeneity issues, highlighting important implications for reducing corruption in developing countries (ibid).

Fan, Kuper, Choi and Choi (2021) reveal the impact that ICT have on the level of corruption pressure on the business. ICT development has the potential to significantly reduce the incidence of illicit payments made by firms to regulatory officials. Additionally, according to the scholars, the influence of ICT on perceived corruption pressure is shaped by elements of the institutional and competitive contexts: its effectiveness is enhanced in environments with strong institutional quality—characterized by robust checks and balances and secure private property rights—while it is diminished in competitive settings where firms face challenges such as the liability of foreignness and informal competition (ibid). This conclusion goes with the ideas of Jeong, Shenoy and Zimmermann (2023) who admit that corruption endures due to a disparity between formal (de jure) transparency laws and their actual (de facto) implementation.

Jiménez, Hanoteau and Barkemeyer (2022) explore the impact of e-procurement on the corruption. They conclude after a comprehensive data analysis that the adoption of an e-procurement system appears to reduce firm-level corruption, although this effect becomes evident only when the quality of national governance institutions is considered, which also strengthens the relationship. Additionally, they find that an e-procurement system effectively curtails firm corruption primarily when it receives support from supranational bodies (ibid).

Zhou et al. (2022) provide an interesting experiment on the impact of anti-corruption measures on the level of innovation in the environment. Their findings confirm that firm-level environmental innovation rises significantly in response to the anti-corruption campaign. Romero-Martínez and García-Muiña (2021) study the location choice of tourists in the hotel industry. Based on data from the Spanish hotel industry, their results confirm that corrupt or weak institutions significantly influence country selection. Conversely, a high level of digitalization reduces the likelihood of corrupt practices. Sahoo, Sethi, and Padilla (2023) focus on the ICT control of corruption in the field of green economies. Their findings indicate that green energy and innovation play a significant role in reducing carbon emissions. Additionally, according to their research, the interplay between corruption control, innovation, and ICT contributes to enhanced environmental quality over the long term.

Interesting aspects of the nexus between the fight against corruption and ICT development and digitalization, are also developed by Larsson and Teigland (2019), Angelova (2020), Adams et al. (2024), Park and Xiao (2021), Roomen and Jonge (2024), Susanto et al. (2024); Nazarova et al. (2020); Prodanchuk et al. (2023). In this regard, Bulgaria, as a regular member state of the EU, has big challenges in overcoming corruption practices. Studies of authors on the development of information and communication technologies in the Bulgarian state show a low level of implementation of modern technologies, especially in municipalities (Tsonkov, Petrov & Berberova-Valcheva, 2022).

Based on the profound research, Matheus, Janssen and Janowski (2021) conclude that government organizations should establish strong technological and institutional foundations to attain digital transparency. These foundations should then be utilized to structure and prepare the organization to operate transparently before developing and deploying digital solutions.

3. Research goal and methodology

The present study is based on the results of a survey conducted to investigate the opinion of employees in public organizations concerning the effects of the use of information systems in the project "Effective Models for the Implementation of Business Information Systems in the Public Sector". This project examines business information systems in public administration from different perspectives. In this article, we present the results related to the prevention of corruption through business information systems in Bulgarian public administration and enterprises with state and municipal participation (Methodological model is presented in Figure 1 below).

The survey includes 73 public organizations (public enterprises and public administration) operating at the national and local level in Bulgaria, conducted in the period May-September 2024. The study focuses on organizations that have recently implemented and are using an information system. The aim is to evaluate the effects of the use of the system and the factors influencing its implementation, by evaluating the opinion of the employees (users of the information system). The selection of public organizations is random, but the survey does not claim to be representative of the sample.

The questionnaire is designed to identify the factors influencing the implementation and use of information systems and the effects on employees in public organizations. The survey questions cover 5 main groups of questions that aim to identify:

- The structure and characteristics of the respondents - age, level of education, position held in the organization and others.
- Technological factors – factors related to the information system.
- Organizational factors – the conditions that the organization has regarding the implementation and use of the information system.
- Environmental factors – external factors affecting the functioning of the organization and the possibilities for implementing and using information systems.
- Human perceptions – factors that the information system has on the employee's perceptions of its use.

The present study focuses on employee perceptions of information system use. The aim is to assess how employees in public organizations perceive the effects of using information systems in terms of the transparency of work processes, responsibilities, control over activities, the curbing of corruption and unfair practices, and the intention to use the system. In this regard, the following two research hypotheses are defined:

H1: The use of information systems in public organizations increases the transparency of work processes and the responsibilities of employees, which affects the prevention of corruption and unfair practices.

H2: Increasing the transparency of work processes and the distribution of responsibilities affects the intention to use information systems by employees.

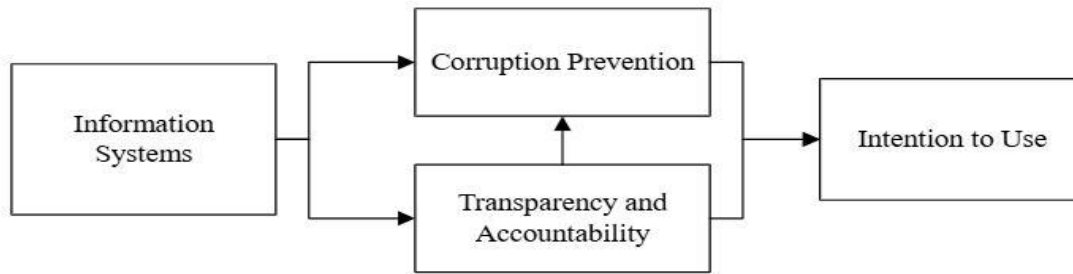


Figure 1. Methodological model of interaction.

The questions included in the present study refer to statements related to the effects of the use of an information system, for the surveyed employees to evaluate.

The possible values of each measure are located on a standardized Likert scale from 1 to 5 (from "strongly disagree" through to "strongly agree"). The aim is to evaluate the effects on employees of using an information system. First, to what extent has the information system contributed to increasing the transparency of work processes, the distribution of responsibilities, and the control of activities? Next, does the increase in transparency of work processes and employee responsibilities, as a result of the use of the information system, lead to the prevention of corruption and unfair practices in the public sector? Finally, do all these effects affect employees' intention to use information systems?

The model includes the opinion of employees regarding the statements:

- Has the information system increased transparency of work processes, distribution of responsibilities and control over activities? - the variable "Transparency and Accountability";
- Does the use of information systems in public organizations curb corruption and unfair practices? – the variable "Corruption Prevention";
- How do you rate your intention to use information systems in your work? – the variable "Intention to Use".

To determine the dependence between employee ratings, we use a statistical method of dependence analysis. Since employee ratings range from 1 to 5 (from "strongly disagree" to "strongly agree"), the data in the model is placed on an ordinal (ranking) scale. For the needs of the analysis is used non-parametric criteria for testing hypotheses - Spearman rank-order correlation. The Spearman rank-order correlation coefficient (Spearman's ρ) was used to prove the defined research hypotheses. In this study, rank (ordinal) data are used, and sometimes in the process of statistical analysis, it is necessary to transform primary interval or proportional data into rank data. In these cases, and when the assumption of a normal distribution of the Pearson coefficient is not fulfilled, it is appropriate to use the Spearman correlation coefficient. The Spearman rank-order correlation coefficient measures the strength of the increase or decrease in the relationship between two variables by not using the original data, but by ranking it and analyzing the ranked data. Spearman's ρ takes values from - 1.00 to + 1.00 and are interpreted similarly. A ρ of +1 indicates a perfect association of ranks, a ρ of zero indicates no association between ranks and a ρ of -1 indicates a perfect negative association of ranks. The closer ρ is to zero, the weaker the association between the ranks (Laerd Statistics, 2018).

The prerequisites for calculating Spearman's rank correlation coefficient are the same as for any nonparametric test:

- Random sampling. The selection of respondents must be random.
- The data for the variables must be independent. Each respondent completed only one survey and was not influenced by the opinions of other respondents.
- There is a monotonic relationship between the two variables. A monotonic relationship exists when the value of the variables increases together, or when the value of one variable increases, the value of the other variable decreases.

The statistical hypotheses that are tested are the following:

H_0 : There is no monotonic relationship between the two variables.

H_1 : There is a monotonic relationship between the two variables.

The processing of the received data is based on a set of statistical methods implemented through the software product IBM SPSS Statistics. The statistical methods of analysis were chosen according to two main aspects: the nature of the empirical data provided through the above-described methodology, the goals and objectives of the statistical analysis of the data. The methods for analyzing the variables are: descriptive analysis and statistical testing of hypotheses - research of dependencies by Spearman rank-order correlation.

4. Analysis of survey results

The research includes the answers of 73 respondents - employees in public organizations. The territorial level of public administration in Bulgaria includes two levels - national and local (municipal). Public organizations such as public enterprises and public administration are also divided into national (state) and local (municipal). The distribution of employees by territorial level is 39 working in organizations at the local level and 34 in organizations at the national level. The number of respondents working in public enterprises is 23 (31.5%), of which 12 are in national companies and 11 in municipal enterprises. The number of employees included in the survey working in the public administration is 50 (68.5%), of which 22 work in the state administration and 28 in the local administration (see Figure 2 below).

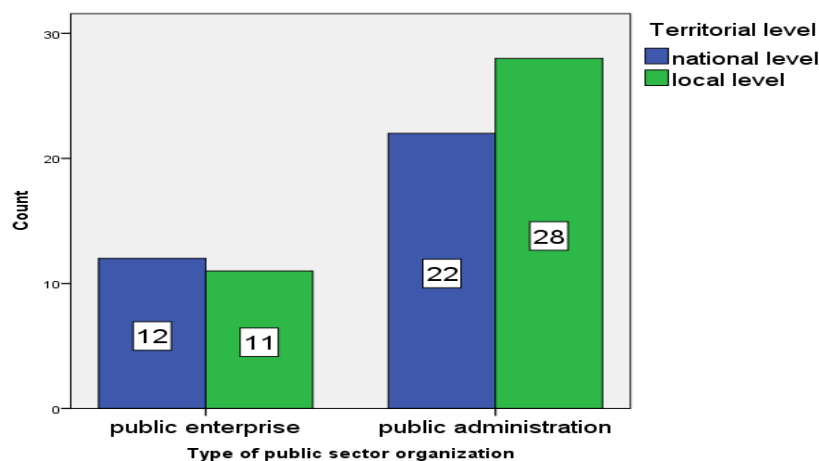


Figure 2. Distribution of respondents by type of organization and territorial level.

The territorial structure of the respondents is essential for the detection of imbalances in the manifestation of factors at different territorial levels. Territorial structure may influence the research model regarding employee perceptions of the effects of information system use and its benefits.

Figure 3 shows the distribution of respondents according to their assessment of the level of digitization in the organization they work for and the corresponding type of organization. The general opinion of the respondents (39 of the employees) is that the level of digitization of the organization in which they work is average. 20% of employees believe that the level of digitalization is high and very high, and 26% believe that the level of digitalization is low.

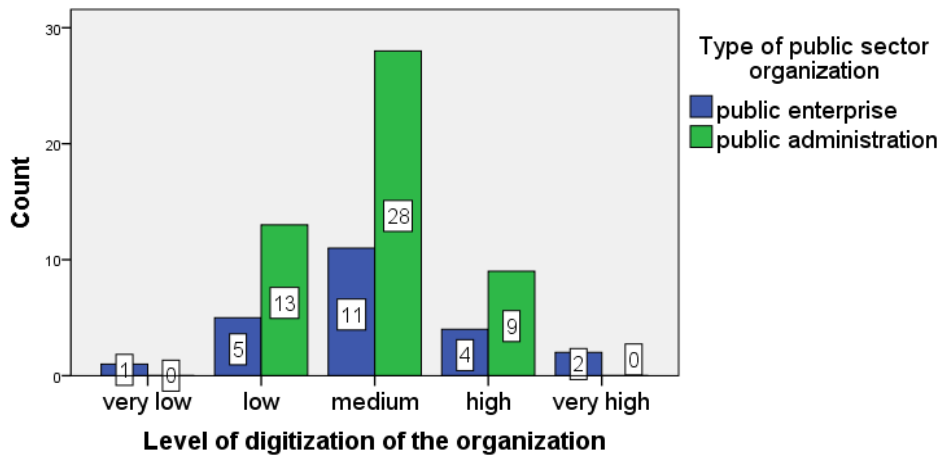


Figure 3. Distribution of respondents by type of organization and level of digitalization.

Comparing the respondents' assessments of the level of digitalization by type of public organization, it can be concluded that public enterprises have a greater level of digitalization compared to public administration. According to employee evaluations, 26% of the respondents believe that the level of digitalization of public enterprises is high and very high, while 18% of public administration employees believe that the level of digitalization is high.

The structure of the respondents by hierarchical level in the organization is important in the evaluations of the factors. Figure 4 presents the distribution of employees according to their position in the organization. The distribution of employees occupying and not occupying managerial positions in the organization is approximately equal, which gives representativeness of their opinion. About 50% of the surveyed employees hold management positions in public organizations. Their distribution is: about 15% operational management level, about 16.5% middle management level and about 19% senior management. The rest of the respondents (nearly 50%) are employees/experts in the organization.

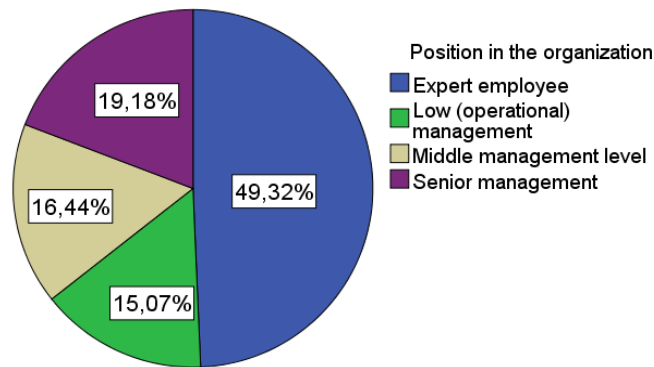


Figure 4. Position of the employees in the organizations

The participation of such a large proportion of employees in managerial positions is reflected in the estimates of the research model. Employees in management positions have a more objective assessment of the effects of the use of the information system, as regards the transparency of work processes, the distribution of responsibilities, the control of activities and management decisions. On the other hand, the large share of employees in non-managerial positions gives insight into the effects of using the information system in terms of control over their work and the perceived usefulness of using the system in daily work.

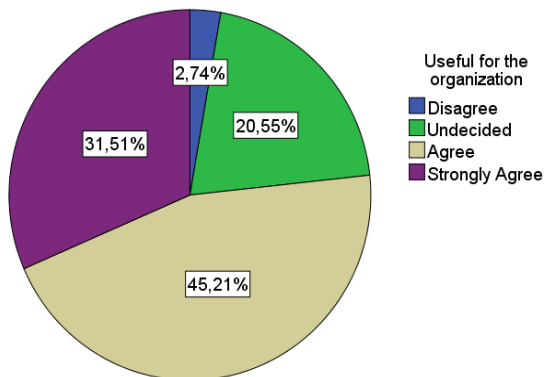


Figure 5. Evaluation of usefulness.

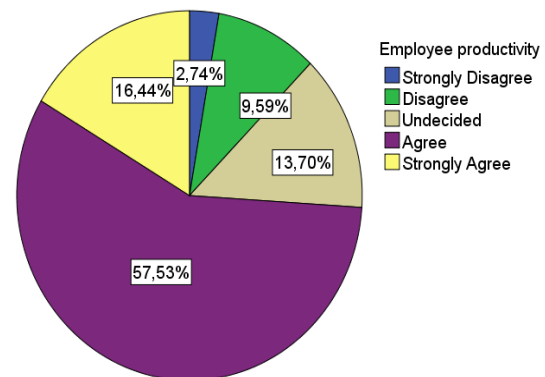


Figure 6. Evaluation of employee productivity.

The evaluation of the effects of the use of the information system depends on the opinion of the employees regarding the perceived usefulness for them and for the organization. Figure 5 presents the distribution of the ratings of the surveyed employees regarding the information system and its perceived usefulness to the organization. Nearly 77% of the employees surveyed believe that the information system is useful for the organization, about 20% cannot judge and only two indicated that the system is not useful.

The effectiveness of information systems depends on the perceived usefulness of employees and the effects it has on them. Figure 6 presents the distribution of employees' ratings of the survey question, "Did the information system make your work easier and increase your productivity?". The general opinion is that the use of the information system has made work easier and increased the productivity of employees (74% of respondents). About 12% of employees believe that the information system has not increased their productivity, and 13.7% cannot judge.

Summarizing the responses of the respondents, it can be said that the use of information systems in public organizations facilitates the work of employees and increases their productivity, which affects the utility of the organization.

To prove the research hypotheses, a relationship is sought between the variables in the model "Transparency and Accountability", "Corruption Prevention", "Intention to Use". This includes the respondents' assessments of the effects of the use of the information system in terms of increasing the transparency of work processes, the distribution of responsibilities and the control of activities; curbing corruption and unfair practices; employees' intention to use information systems in their work. The table presents the respondents' evaluations of the relevant statements.

The general opinion of the employees is that the information system increases the transparency of work processes, the distribution of responsibilities and the control of activities, with 85% of respondents indicating "Agree" and "Strongly Agree". 13.7% could not decide and one indicated "Disagree". No respondent indicated "Strongly Disagree". The average rating is 4.27, average rank 4 - "Agree" (Table 1).

Table 1. Evaluation of factors by employees.

Factors	Rating	Frequency	Percent %	Mean	Median	Mode
Transparency and Accountability	Strongly Disagree	0	0	4,27	4	5
	Disagree	1	1,4			
	Undecided	10	13,7			
	Agree	30	41,1			
	Strongly Agree	32	43,8			
Corruption Prevention	Strongly Disagree	0	0	4,05	4	4
	Disagree	4	5,5			
	Undecided	14	19,2			
	Agree	29	39,7			
	Strongly Agree	26	35,6			
Intention to Use	Strongly Disagree	1	1,4	4,18	4	5
	Disagree	3	4,1			
	Undecided	13	17,8			
	Agree	21	28,8			
	Strongly Agree	35	47,9			

Regarding "Corruption Prevention", about 75% of the respondents believed the use of information systems curbs corruption and unfair practices. 19.2% indicated "Undecided" and 5.5% indicated "Disagree". No respondents indicated "Strongly Disagree". The average rating is 4.05, with an average rank of 4 - "Agree".

The general opinion of the surveyed employees is that they would use an information system in their work, with nearly 77% indicating "Agree" and "Strongly Agree". Four of the employees have no intention of using an information system. The average score according to the "Intention to Use" criterion is 4.18, with an average rank of 4 - "Agree".

From the rank evaluations of employees, it can be concluded that information systems contribute to increasing transparency, accountability and control in public organizations and limit unfair practices. The intention to use information systems by employees in public organizations is high.

5. Testing the research hypotheses

In the dependence assessment model, the rank assessments of the employees on the variables "Transparency and Accountability", "Corruption Prevention", "Intention to Use" are included. The results of the implemented Spearman rank-order correlation in SPSS are (Table 2):

Table 2. Spearman rank-order correlation

Correlations			Corruption Prevention	Transparency and Accountability	Intention to Use
Spearman's rho	Corruption Prevention	Correlation Coefficient	1,000	,666**	,385**
		Sig. (1-tailed)	.	,000	,000
		N	73	73	73
	Transparency and Accountability	Correlation Coefficient	,666**	1,000	,314*
		Sig. (1-tailed)	,000	.	,015
		N	73	73	73
	Intention to Use	Correlation Coefficient	,385**	,314*	1,000
		Sig. (1-tailed)	,000	,015	.
		N	73	73	73

**. Correlation is significant at the 0.01 level (1-tailed).

*. Correlation is significant at the 0.05 level (1-tailed).

Concerning research hypothesis **H1**: The use of information systems in public organizations increases the transparency of work processes and the responsibilities of employees, which affects the limitation of corruption and unfair practices; the sought relationship is between the variables "Transparency and Accountability" and "Corruption Prevention". Spearman's rho value is 0.666 and is statistically significant (Sig. (1-tailed) = 0.001) at a one-sided critical region and error risk $\alpha = 0,01$. There is a monotonic relationship between the two variables. This gives reason to reject the null hypothesis in favor of the alternative, i.e. there is a dependence between the respondents' assessments of the two factors - "Transparency and Accountability" and "Corruption Prevention". The relationship can be rated as moderately strong to strong. The value of Spearman's rho is positive, which means that the information system, increasing the transparency of work processes and responsibilities, has a positive effect on preventing corruption and unfair practices in public organizations. Research hypothesis **H1** is confirmed.

To research hypothesis **H2**: Increasing the transparency of work processes and the distribution of responsibilities affects the intention to use information systems by employees, the sought relationship is between the variables "Transparency and Accountability" and "Intention to Use". Spearman's rho value is 0.314 and is statistically significant (Sig. (1-tailed) = 0.015) at a one-sided critical region and error risk $\alpha = 0,05$. There is a monotonic relationship between the two variables. This gives reason to reject the null hypothesis in favor of the alternative, i.e. there is a dependence between the respondents' assessments of the two factors. The relationship can be rated as moderately strong. The value of Spearman's rho is positive, which means that the increase in the transparency of work processes and the distribution of responsibilities as a result of the use of the information system affects the intention of employees to use information systems. Research hypothesis **H2** is confirmed.

According to the present correlation model, it is observed that the curbing of corruption and unfair practices is also dependent on the intention of employees to use information systems. Spearman's rho value is 0.385 and is statistically significant (Sig. (1-tailed) = 0.001) at a one-sided critical region and error risk $\alpha = 0,01$. There is a dependence between the respondents' assessments of the two factors "Corruption Prevention", and "Intention to Use".

From the correlation analysis made, based on the opinion of employees, it can be concluded that the implementation and use of information systems in public organizations, on the one hand, increase the transparency of work processes, the distribution of responsibilities and the control of activities, and on the other

hand prevent corruption and unfair practices. All this affects the intention of employees to use information systems in their work.

6. Comment on the results of open questions to identify missing influential factors

The answers to the open questions provide some interesting directions for searching for the influence of various factors. In essence, they do not differ from the established regularities by proving the two research hypotheses, but they specify some complementary understandings of the influence of information systems on the prevention of corruption and transparency in the public sector. The respondents' answers confirm the main conclusions made in the monograph "Information and communication technologies, as a strategy for the prevention of corruption" (Anguelov, K., 2008) related to the main functions that information and communication technologies have in terms of the sustainability of work processes, among which are retrospection of the actions taken, the possibility of publicity and public control, integration of information and the impossibility of individual employees to make decisions in an unregulated manner (anti-discretion).

From the respondents' answers, it can be concluded that implementing and using information and communication technologies in the public sector affects the transparency of work processes, control and limitation of corruption and unfair practices. However, the delayed implementation of information systems and the low level of digitalization of the public sector in Bulgaria are dictated by some significant factors.

First, according to the respondents, there is a lack of sufficient financial resources and technical conditions in public organizations.

Next, the respondents point to the low level of qualification of employees, low computer literacy and skills for working with information systems. This is the main reason for employees' resistance to using information systems. This negative factor can be greatly limited as a result of familiarizing employees with the effects of information systems even before their implementation, as well as conducting appropriate training.

The most significant factor indicated by the surveyed employees is the low desire by senior management to use information systems and political will. This may be due to the skills and competencies of senior management to work with such systems and outdated legislation. On the other hand, this is a significant obstacle to achieving digitalization and curbing corruption in the public sector.

Conclusions

The main purpose of this article was to investigate the effect that the use of business information systems will have in the fight against corruption in the Bulgarian context. The present study demonstrates the fundamental role of a group of factors influencing public sector employees' perceptions of their intention to use information systems. The two research hypotheses have been proven – there is a relationship between the employees' perceptions regarding corruption prevention and the increase in the transparency of work processes and the distribution of responsibilities, as a result of the use of information systems. Next, it can be concluded that information systems, increasing transparency, responsibilities and control affect employees' intention to use. Naturally, the employees' perceptions of the effects of the implementation of information systems in public organizations are influenced by other factors, which gives rise to the need for additional research on the issue.

According to the opinion of employees in public organizations, the main challenges to the effective digitalization of the public sector in Bulgaria are financial constraints, the skills of civil servants and the intention to use information systems, both by employees and management bodies. The implementation and use of information systems in public organizations would affect the improvement of the transparency of work processes, as well as

the control and limitation of corruption and unfair practices. All this affects employees' intention to use information systems.

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