HOW DOES OPENNESS DETERMINE THE ECONOMY OF LOCAL TERRITORIAL SELF-GOVERNMENT? EVIDENCE FROM SLOVAKIA

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Abstract

The presented study analyzes the impact of openness and economy on Slovak cities and municipalities in the period 2010–2022 using correlation analysis. The results indicate a weak to moderate correlation between openness and transparency in the selected sample of Slovak cities, city districts, and the largest municipality. Significant improvement in the economic domain was observed in 2018. Correlation analysis also reveals that aspects such as public procurement and real estate sales have minimal impact on economic efficiency. Conversely, transparency in municipal enterprises and investments is closely related to economic outcomes. The findings suggest the need for further research and a better understanding of the dynamics between openness and economic outcomes for effective management of public resources and strengthening democratic processes in Slovak cities and municipalities.

Keywords

local self-government, openness, economy, Slovakia

INTRODUCTION

In the realm of effective public governance and democratic development, few topics are as vital as transparency, public engagement, and the efficient management of local governments. These elements form the cornerstone of accountable and responsive governance, ensuring that public resources are utilized effectively and that decision-making processes are inclusive and representative of community needs. This study delves into the intricate relationship between the openness of territorial self-government and the economic performance of local governments in Slovakia spanning the years 2010 to 2022.

The significance of transparency and public participation in governance cannot be overstated. Transparent decision-making processes foster trust among citizens, encourage

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civic participation, and enhance the legitimacy of government actions. Moreover, when local governments operate efficiently, they can better allocate resources, deliver services, and spur economic growth within their jurisdictions. Understanding the interplay between openness and economy is therefore crucial for enhancing the overall effectiveness of public administration and promoting democratic principles at the grassroots level.

By conducting a comprehensive analysis that integrates various indicators of openness and economic efficiency, this study aims to shed light on the nuanced dynamics between these two dimensions. Through correlation analysis and data-driven insights, we seek to discern patterns, trends, and causal relationships that elucidate how openness influences economic outcomes at the local level. Moreover, by examining the implications of these findings, we endeavor to provide actionable recommendations for policymakers and practitioners seeking to bolster transparency, accountability, and economic prosperity in their communities.

Drawing upon a diverse array of data sourced from administrative records, economic reports, and other relevant sources, this study offers a multifaceted exploration of the relationship between the openness of territorial self-government and economy. By unpacking this relationship and elucidating its implications, we aspire to contribute to the ongoing discourse on effective public governance and democratic development, ultimately fostering stronger, more resilient communities in Slovakia and beyond.

Current state of knowledge

From an international perspective, over the past three decades, a plethora of empirical studies have delved into assessing the effectiveness, efficiency, and financial robustness of local governance across various dimensions and determinants. Broadly speaking, two predominant strands of empirical inquiry emerge. On one hand, scholars have focused on appraising specific local services (Kalb, 2014; Benito-López, del Rocio Moreno-Enguix and Solana-Ibañez, 2011; Bosch, Pedraja and Suárez-Pandiello, 2000) scrutinizing their efficacy and efficiency.

The scrutiny of financial stability and efficiency within local governance structures in Slovakia is reasonably well-documented, albeit lacking specific publications offering a contemporaneous and nuanced perspective on the financial landscape of Slovak territorial governance. Insights from authors provide a window into empirical studies encompassing selected clusters of municipalities or local administrations, or alternatively, researchers engage with aggregate data spanning the entire spectrum of local or regional administrations, often juxtaposed against neighboring jurisdictions. Initially, seminal works such as "Municipal finance in Poland, the Slovak Republic, the Czech Republic and Hungary" (Nam and Parsche, 2001) and "Local Government in Central and Eastern Europe" (Coulson and Campbell, 2006) directed attention towards the financial architecture of Slovak territorial governance. Noteworthy among domestic scholars scrutinizing the financial fabric of Slovak municipalities and towns are V. Nižňanský with seminal contributions including "Decentralization and Slovakia" (2013), "Merging and Cooperation of Municipalities" (2014), "Fair Distribution of Political Power" (2014), "The Third Stage of Public Administration Decentralization in Slovakia" co-authored with Cibáková and Hamalová (2014), and "State Reconstruction III: Strong Mettle, Strong Slovakia" (2018). Similarly, studies by Maruchnič and Čunderlík (2005), Čavojec and Sloboda

(2005), Švantnerová and Kožiak (2005) and Klimovský (2013) delve into the efficiency, economy, and financing paradigms of municipalities and towns within Slovak contexts. Further exploration of the financial dynamics of Slovak territorial governance is articulated in the work of Kološta, Flaška, and Bolcárová titled "Financial autonomy of municipalities in relation to economic performance in regions of the Slovak Republic" (2014). More contemporaneously, J. Knežová's article titled "Financial resources of municipalities in the Slovak Republic in a decade-long reflection of fiscal decentralization" from 2015 encapsulates select facets of the evolution of municipal and town financing in Slovakia.

In contrast, the discourse surrounding the openness and transparency of Slovak territorial governance is relatively subdued. Prolonged interest and scholarly endeavor in this domain are primarily attributed to the non-governmental organization Transparency International Slovakia. Under its auspices, authors contribute to a diverse range of works addressing various facets of transparency, including public procurement (Vlach and Sičáková-Beblavá, 2004), manuals on the transparency of local administrations (Pirošík, 2006), analyses of openness and participation, and their value addition at the local governance level (Pavel and Sičáková-Beblavá, 2009).

Partial insights into research on transparency and openness within territorial governance can be gleaned from empirical studies, such as those by Jaďuďová and Repa (2011) or comprehensive assessments of transparency in public administration in Slovakia (Foltíková and Dubcová, 2006), and evaluations of public procurement at the local governance level (Pavel and Sičáková-Beblavá, 2008).

However, within our contextual milieu, research exploring the nexus between openness and the fiscal health of territorial governance is conspicuously absent. Hence, there exists a lacuna for research into the mutual correlation between these dimensions concerning Slovak municipalities, city districts, and the most populous municipality. Consequently, the objective of the case study, employing correlation analysis, is to delineate and quantify the impact of openness as a determinant influencing the financial well-being of Slovak municipalities, city districts, and the most populous municipality during the period 2010–2022.

Studied issues and methods used

The aim of the research case study is to identify and quantify, through correlation analysis, the influence of openness as one of the determinants affecting the management of Slovak municipalities, city districts, and the most populous municipality during the years 2010–2022. Despite significant attention given to research on the efficiency, economy, and financial health of local territorial governance worldwide and also in Slovakia, the involvement of openness in governance as a determinant of economy, efficiency, or financial health remains absent from research. Within the scope of the study, we will initially quantify openness and the financial situation based on partial research indicators.

Primary data sources on economy were obtained through the Data Center (Ministerstvo financií Slovenskej republiky, 2024) and verified by pilot checks through identified Final Accounts and Budgets of specific local governments. Secondary verification and adjustments are carried out through monitoring indicators of the INEKO organization

and its database. Several missing primary data were supplemented through the study of economic and budgetary documents of the affected local governments. The overall primary data set on the economy consisted of 6,000 data points, while the secondary database comprised approximately 500 more. Extensive databases of Transparency Slovakia served as primary sources of openness data. Transparency Slovakia encompasses an extensive set of metadata, methodological procedures, and archives in the research of open governance and summarizes cross-sectional metadata (Transparency International Slovensko, 2024). In the assessment of the set of 100 selected Slovak local governments in the years 2010–2022, primary sources constituted 6,600 data points. Such volume of information can be considered sufficient for verifying research objectives and fulfilling the main goal of the study.

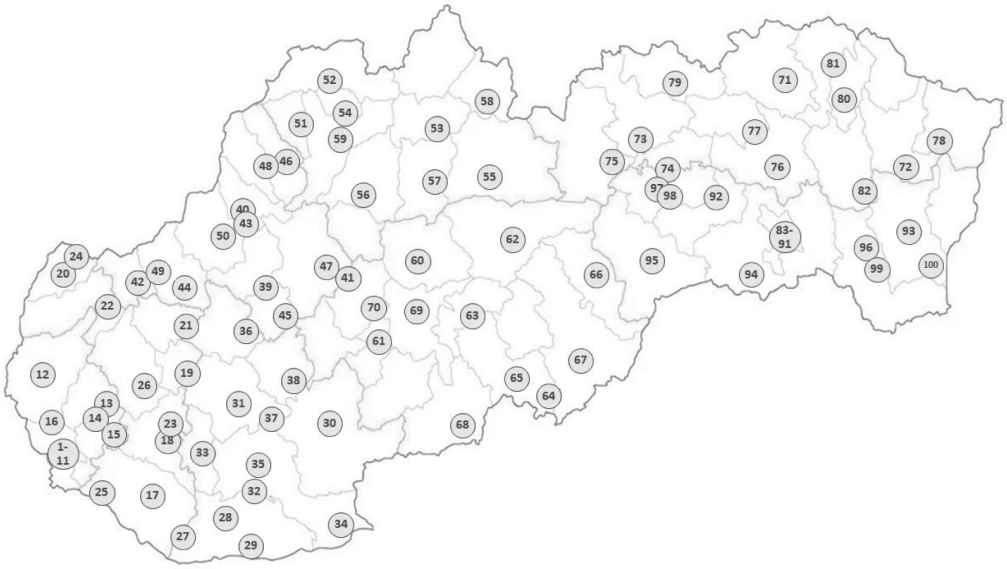
Overall, we included 100 units of local territorial governance in Slovakia in our research plan. The specific research set comprises a total of 79 municipalities, 18 city districts, two city councils, and the most populous municipality in Slovakia (Smižany). This constitutes a cross-sectional research sample targeting the most important centers of settlement in Slovakia, considering regional affiliation and population size.

Tab. 1 Population of the research sample

Population	Local Government Units
Up to 10,000	Banská Štiavnica, Fiľakovo, Krompachy, Modra, Sečovce, Smižany, Stará Turá, Štúrovo, Šurany, Tvrdošín, Veľké Kapušany, Veľký Meder, Vráble
10,000 to 15,000	Bytča, Detva, Holíč, Kolárovo, Kysucké Nové Mesto, Levoča, Moldava nad Bodvou, Myjava, Nová Dubnica, Revúca, Sabinov, Stropkov, Stupava, Svidník, Šamorín, Veľký Krtíš, Zlaté Moravce
15,000 to 20,000	Bánovce nad Bebravou, Dolný Kubín, Galanta, Handlová, Kežmarok, Malacky, Nové Mesto nad Váhom, Púchov, Rožňava, Senica, Sereď, Skalica, Snina, Stará Ľubovňa, Žiar nad Hronom
20,000 to 25,000	Brezno, Čadca, Dubnica nad Váhom, Dunajská Streda, Hlohovec, Partizánske, Pezinok, Rimavská Sobota, Senec, Šaľa, Vranov nad Topľou, Trebišov
25,000 to 53,000	Lučenec, Piešťany, Ružomberok, Topoľčany, Bardejov, Humenné, Levice, Liptovský Mikuláš, Komárno, Michalovce, Nové Zámky, Považská Bystrica, Spišská Nová Ves, Martin, Poprad, Prievidza, Zvolen
Regional cities	Banská Bystrica, Bratislava, Košice, Nitra, Prešov, Trenčín, Trnava, Žilina

Source: Own processing

Pic. 1 Geographic affiliation and distribution of the research sample



Legend: 1 Bratislava; 2 Bratislava – Devínska Nová Ves; 3 Bratislava-Dúbravka; 4 Bratislava – Karlova Ves; 5 Bratislava – Nové Mesto; 6 Bratislava-Petržalka; 7 Bratislava – Podunajské Biskupice; 8 Bratislava-Rača; 9 Bratislava-Ružinov; 10 Bratislava – Staré Mesto; 11 Bratislava-Vrakuňa; 12 Malacky; 13 Modra; 14 Pezinok; 15 Senec; 16 Stupava; 17 Dunajská Streda; 18 Galanta; 19 Hlohovec; 20 Holíč; 21 Piešťany; 22 Senica; 23 Sereď; 24 Skalica; 25 Šamorín; 26 Trnava; 27 Veľký Meder; 28 Kolárovo; 29 Komárno; 30 Levice; 31 Nitra; 32 Nové Zámky; 33 Šaľa; 34 Štúrovo; 35 Šurany; 36 Topoľčany; 37 Vráble; 38 Zlaté Moravce; 39 Bánovce nad Bebravou; 40 Dubnica nad Váhom; 41 Handlová; 42 Myjava; 43 Nová Dubnica; 44 Nové Mesto nad Váhom; 45 Partizánske; 46 Považská Bystrica; 47 Prievidza; 48 Púchov; 49 Stará Turá; 50 Trenčín; 51 Bytča; 52 Čadca; 53 Dolný Kubín; 54 Kysucké Nové Mesto; 55 Liptovský Mikuláš; 56 Martin; 57 Ružomberok; 58 Tvrdošín; 59 Žilina; 60 Banská Bystrica; 61 Banská Štiavnica; 62 Brezno; 63 Detva; 64 Fiľakovo; 65 Lučenec; 66 Revúca; 67 Rimavská Sobota; 68 Veľký Krtíš; 69 Zvolen; 70 Žiar nad Hronom; 71 Bardejov; 72 Humenné; 73 Kežmarok; 74 Levoča; 75 Poprad; 76 Prešov; 77 Sabinov; 78 Snina; 79 Stará Ľubovňa; 80 Stropkov; 81 Svidník; 82 Vranov nad Topľou; 83 Košice; 84 Košice – Dargovských hrdinov; 85 Košice-Juh; 86 Košice – Nad jazerom; 87 Košice-Sever; 88 Košice – Sídlisko KVP; 89 Košice – Sídlisko Ťahanovce; 90 Košice – Staré Mesto; 91. Košice-Západ; 92. Krompachy; 93 Michalovce; 94. Moldava nad Bodvou; 95 Rožňava; 96 Sečovce; 97 Smižany; 98 Spišská Nová Ves; 99 Trebišov; 100 Veľké Kapušany.
Source: Own processing

Research relies on data from databases, synergistically linking and integrating them into the study of causality among values for 100 Slovak territorial units since 2010. The research and analysis of both main areas – economy and openness – are conducted based on multi-component indicators. Regarding the study of openness, we started with 11 assessed areas, each assigned a certain number of points. The sum of these points provides information

on the total number of points and the percentile for each observed city in a specific year or period. Cities could obtain a maximum of 100% of points if all conditions in the partial areas of openness were fully met. The openness of Slovak cities, city districts, and the most populous municipality was verified in these eleven partial indicators:

Tab. 2 Partial Areas of Openness

I. Access to Information	II. Public participation in decision-making	III. Public procurement and provision of services	IV. Sale and rental of property	V. Budget	VI. Subsidies and grants
• Provision, publication and archive of council materials • Contacts for MPs • Electronic official board with archive • Information and reports of the chief controller • Publication of the amount of rewards, the work program of the mayor, the number of requests for information, information in a foreign language	• The public and access to the meetings of the Ministry of Health and the City Council • Publication of minutes from meetings of the Ministry of Education, Committees of the Ministry of Education and Culture (also retroactively) • Published archive of walking sessions of Committees of urban districts • Participatory budgeting • Tool/application for public submission of citizens' comments	• Links to EKS and ÚVO • Announcements, results, archive and VO schedule • Average number of applicants in competitions • The number of unfavorable decisions of the ÚVO	• Use of electronic auction (sale, rental) • Publication of information about the results of competitions • Archive of minutes and results of public business competitions • Availability of Property Management Policy	• Verbal description of items • Rules of budgetary measures • Publication and archive of budgets and ZÚ • Quality of publication of contracts, invoices and orders	• Participation of the public in the session during the allocation of subsidies • Existence of rules for resolving the conflict of interests of members of evaluation commissions • Publication of the decision on the allocation of subsidies/grants, specific criteria/rules for their allocation, list of applicants, evaluation tables, archive of decisions • Published information on allocated subsidies in the exclusive decision-making competence of the mayor
VII. Apartments and social facilities	**VIII. Personnel policy**	**IX. Ethics and conflict of interest**	**X. Territorial planning and construction office**	**XI. General enterprises and investments**	
• Public participation in the meeting of authorities/meetings of local government commissions deciding and discussing the allocation of an apartment • Electronic application for a rental apartment, a place in a social services facility • Number of drawn / allocated apartments • Minutes from committee meetings and basic statistics on apartments in the administration of the municipality • Publication of criteria/rules, list of applicants, list of allocated apartments + their continuous updating • Publication of rules for admitting children to nurseries and kindergartens • Publication of the list, information and rules for obtaining a place in a social service facility	• Number of selection procedures / number of filled positions of heads of departments and clerks • Publication of tender notices (location characteristics, date of publication) • Publication and archive of the minutes of the selection procedure (number, names of applicants, names of committee members, summary evaluation, order of applicants) • Professional biography of the mayor (education, previous jobs, membership in corporate bodies)	• Publication of the code of ethics of elected officials and employees • Publication of the minutes of the meetings of the Ministry of Health and Welfare commission for the protection of the public interest, property declarations of the mayor and members of the Ministry of Health and Welfare • The existence of a specific tool beyond the law for reporting unfair practices • Number of malpractice reports	• The possibility to submit an application in the construction procedure also in electronic form • Electronic register/electronic registration of applications • Publication of the spatial plan • Separate evaluation of public comments on the spatial plan	• Publication of annual reports of commercial companies • Linking the websites of organizations with the self-government website • The share of self-government in individual commercial companies • Publication of professional biographies of company managers (education, past jobs, membership in corporate bodies) • Members of the Council of Ministers as managers or members of the board of directors of municipal commercial companies • Sending minutes of low-value orders established by the school	

Source: Own processing based on Cíbik (2023)

The second research area monitored was economy. Based on selection, we identified a set of 10 partial areas. We proceeded with a similar working scheme as in determining the primary number of points for openness. Each of the analyzed partial economic areas had a predetermined number of points that the examined territorial units could achieve. The key to allocating points in these partial economic areas was the final values in ten areas compared to the average for the entire local territorial level. The higher positive values a specific territorial unit showed, the higher number of points it achieved. The maximum possible number of points that territorial units could obtain in partial economic areas was 10 points, totaling 100 points for all partial economic areas together. We analyzed the level of economic efficiency of places in the following secondary areas:

Tab. 3 Partial economic areas

Total debt	Bank loans and assistance + long-term liabilities - loans from ŠFRB / Current revenues from the previous year
Debt service	Expenditures on principal repayment + interest payments / Current revenues from the previous year
Current account balance	Current revenues - current expenditures / Current revenues
Past due liabilities to revenues	Liabilities past due / Current revenues from the previous year
Liabilities at least 60 days past due	Liabilities unpaid for 60 or more days past due / Current revenues from the previous year
Basic balance	Current revenues + capital revenues - current expenditures - capital expenditures / Population at the beginning of the year
Investment intensity	Capital expenditures - capital revenues / Current revenues
Net assets	Non-current assets + financial accounts - (bank loans and assistance + long-term liabilities - loans from ŠFRB) / Current revenues from the previous year
Immediate liquidity	Financial accounts / Short-term liabilities
Quick liquidity	Inancial accounts + short-term receivables / Short-term liabilities

Source: Own processing based on INEKO (2024)

In these areas, each city, city district, and municipality was assigned a point score based on real results in a specific partial area. The subsequent sum of points for individual areas was converted into a relative indicator capturing the percentage, representing the percentage share of points from the maximum possible number of points for that area.

For both monitored areas, the sum values are the total of partial point ratings, converted into a relative indicator. We further work with these data, and in the case of a maximum positive result, it represents 100%. It holds that the higher values/scores a specific city achieved, the higher its level of openness or economy.
The resulting data illustrate the average values of the examined local territorial units in a specific year. By substituting them into the formula to determine the correlation coefficient, we will find the resulting degree of dependence of economy on openness. The higher positive values we find, the stronger the direct dependence will be, and thus the more openness will affect the economy of regional cities. The partial research task is to monitor the degree of correlation of individual components of openness (11) and determine which ones exhibit the highest direct dependence on economy. At the same time, we have set the task to identify the developmental trend of both variables since 2010 for the entire research set.
Thanks to the establishment of an extensive database and datasets of primary data, we were able to move on to the next point of our research intention with a focus on Slovak cities, city districts, and the largest municipality. From the input data, we were able to identify average values and trends in all 21 partial areas as well as average values and trends of the two main research areas using standard statistical methods. The subsequent analytical work opened up possibilities for identifying long-term developmental trends, comparison between territorially large units of different populations, or evaluation of results by regional affiliation.
To fulfill the stated goal of our research, we had to proceed with the implementation of correlation analysis and monitoring/quantifying the relationship between the overall average values of analyzed cities in the areas of openness and economy. We will interpret the resulting correlation coefficient according to the obtained data, and it can take a value within <-1; 1>. Negative values of the correlation coefficient will indicate an indirect linear dependence of both variables, and positive values a direct linear dependence. The closer the correlation coefficient is to zero, the weaker the mutual dependence the variables will exhibit. Our evaluation of the correlation coefficient will be set as follows:

Tab. 4 Interpretations of the correlation coefficient according to Cohen (1998)

Value of the coefficient Interpretation	**Interpretation**
<from 1 to 0.9> and < from -1 to -0.9>	Very strong correlation
< from 0.9 to 0.7> and < from -0.9 to -0.7>	Strong correlation
< from 0.7 to 0.5> and < from -0.7 to -0.5>	Moderately strong correlation
< from 0.5 to 0.2> and < from -0.5 to -0.2>	Weak correlation
Less than 0.2 and -0.2	Very weak correlation

Source: Own processing

RESULTS

The objective of the presented study is to identify and quantify the impact of openness as one of the determinants affecting the economy of Slovak cities, city districts, and the most populous municipality during the years 2010–2022 based on correlation analysis. The results of the mathematical analysis of economy outcomes since 2010 are captured in the following table.

Tab. 5 Partial indicators of economy (%)

Year / Indicator	Total debt	Debt service	Current account balance	Past due liabilities to revenues	Liabilities at least 60 days past due	Basic balance	Investment intensity	Net assets	Immediate liquidity	Quick liquidity	**Average**
2010	77.1	89.0	39.5	0.0	77.9	27.5	62.3	63.9	57.4	58.9	**55.3**
2012	84.1	87.8	52.3	96.7	74.8	54.6	32.8	67.3	63.0	63.6	**67.7**
2014	86.3	90.1	53.6	98.0	80.9	47.5	43.7	63.4	67.2	66.8	**69.7**
2016	88.5	89.5	68.8	98.7	87.8	70.3	31.0	60.3	85.9	81.6	**76.2**
2018	88.1	90.4	64.0	99.2	92.1	49.4	55.8	54.2	82.8	75.4	**75.1**
2022	84.6	89.5	47.8	98.4	91.2	35.8	55.2	44.3	82.0	74.1	**70.0**
Average	**84.8**	**89.4**	**54.3**	**81.8**	**84.1**	**47.5**	**46.8**	**58.9**	**73.0**	**70.1**	**69.1**

Source: Own processing

At the beginning of observation, the indicator of total debt reached 77.1% of the possible point total. This indicator gradually increased, reaching 88.5% in 2016, then decreased to 84.6% in 2022. The average for the entire period is 84.8%. In 2010, the research sample achieved 89.0% of the maximum possible points designated for debt service. This indicator shows minor fluctuations, with a peak in 2018 (90.4%) and a trough in 2012 (87.8%). The average debt service for the period is 89.4%. The current account balance indicator reached its highest average values in 2016 and then declined to 47.8%, indicating a significant deterioration. Overdue liabilities to revenue show very high average achieved scores, meaning very high percentage values. Since 2014, they have never fallen below 98%, and the average for overdue liabilities to revenue for the period is 81.8%. Liabilities overdue by at least 60 days reached 77.9% of the maximum possible point total in 2010. This indicator consistently increased, reaching 92.1% in 2018. The basic balance indicator gradually increased, reaching 70.3% in 2016, then decreased to 35.8% in 2022. The average basic balance for the period is 47.5%. Lower values of the investment intensity indicator (e.g., 31.0% in 2016) suggest a lower ability of the research sample to invest compared

to maximum possibilities. Higher values (e.g., 62.3% in 2010) indicate higher investment activity. Since 2012, there has been a decrease in the point and percentage average obtained by the research sample in the area of net assets. By 2022, the average percentage of points obtained had decreased by more than 20%. In the immediate liquidity indicator, there has been an increase in the share of points obtained since 2010, stabilizing above 82% since 2016, and on average, the examined cities and municipality achieved 73% of the possible point total. A similar trend is shown in the emergency liquidity indicator, with its resulting average level since 2010 reaching 70.1%. The average values of achieved points in the monitored partial indicators of economic performance from 2010 to 2016 show a constant increase, indicating an increase in economic efficiency and financial stability. The positive trend reversed in the following years, when we recorded a drop in the overall average value of the possible point total of the examined cities and municipality by more than 6%. On average, the examined set of territorial units achieved the highest number of points in the area of debt service, total debt, and in the area of liabilities overdue by at least 60 days. The lowest average number of points were in the areas of basic balance and investment intensity.

Tab. 6 Partial indicators of openness (%)

Year / Indicator	Access to Information	Public Participation in Decision-Making	Public Procurement and Service Provision	Sale and Rental of Property	Budget	Subsidies and Grants	Housing and Social Facilities	Personnel Policy	Ethics and Conflict of Interest	Urban Planning and Building Authority	Municipal Enterprises and Investments	**Average**
2010	68.7	29.5	38.7	17.1	54.3	19.9	33.7	19.5	21.0	60.3	38.3	**39.9**
2012	75.8	38.0	50.0	18.5	81.6	34.8	45.2	11.0	25.2	75.0	46.3	**49.5**
2014	74.2	42.7	50.6	13.6	63.5	32.5	25.9	23.9	23.8	60.5	41.1	**47.4**
2016	74.2	54.7	45.6	13.7	69.7	33.1	26.9	30.0	24.3	63.2	49.4	**51.5**
2018	79.1	61.4	51.0	21.8	77.8	29.1	35.0	34.3	28.0	67.6	50.2	**57.3**
2022	78.8	63.8	65.4	37.6	75.9	40.2	42.5	42.7	41.2	79.7	49.2	**63.2**
Average	**75.1**	**48.3**	**50.2**	**20.4**	**70.5**	**31.6**	**34.9**	**26.9**	**27.3**	**67.7**	**45.8**	**51.5**

Source: Own processing

The indicator of access to information has been increasing from 2010 to 2018, indicating an improving trend in access to information. In 2022, the value slightly decreased but remains at a relatively high level. The average for the period is 75.1%. Similarly, in the case of the indicator of public participation in decision-making, we see an increasing trend from 2010 to 2018, with a significant increase in 2018. The value in 2022 is at its

highest level for the entire period. The average for the period is 48.3%. The partial area of openness titled public procurement and service provision shows relatively stable values for the examined sample, with only minor fluctuations. On average, territorial units achieved 50.2% of the possible point total. In the long term, the asset sales and leasing indicator shows a slight increase in values during 2010–2022, with an average value of 20.4% of the maximum number of points allocated to this area. The highest average values in the budget indicator were found in 2012. It is a relatively volatile variable with variable development. The average value of the subsidies and grants indicator during the years 2010–2022 was at the level of 31.6% of the total possible point total, and during these years, its average value ranged from 19.9% to 40.2%. A similar range is shown by the indicator of housing and social facilities, with an average value for the period of 34.9%. In the secondary area of openness, labeled as personnel policy, we observed relatively scattered partial values ranging from 11.0% to 42.7%. The highest value was reached in 2022. The average for the period is 26.9%. The ethics and conflict of interest indicator for the entire period shows a value of 27.3% of the total allocated points in this area. This indicator shows a constant increase in the average number of points since 2010, with the highest level of 42.7% of the total points found in 2022. The last partial evaluated indicator of openness was municipal enterprises and investments. This indicator ranges from 38.3% to 50.2%, with the highest value achieved in 2018. The average for the period is 45.8% of points. By generalizing the partial findings, we can illustrate the overall trend of openness, which has shown an increasing tendency since 2010. The examined sample of territorial units gradually achieved higher and higher point totals (from 39.9%) up to 2022, when we found the highest average point total. From 2010 to 2022, municipalities had a strong performance (achieving the highest average point total) in the evaluation of access to information and budget. In both indicators, the examined set achieved an average of more than 70% of the possible point total. The lowest values were observed in the area of Sale and Rental of Property, where the examined territorial units achieved an average of only 20.4% of the allocated points.

DISCUSSION

After obtaining the necessary comparative data, we were able to determine and quantify the degree of mutual correlation between the average openness and economy of the selected sample of local territorial units in Slovakia. Average economy values from 2010 to 2022 were used to establish the correlation coefficient for each partial area/indicator of openness as well as to determine the final degree of dependence between the resulting average values of openness and economy. These data are captured in the following table:

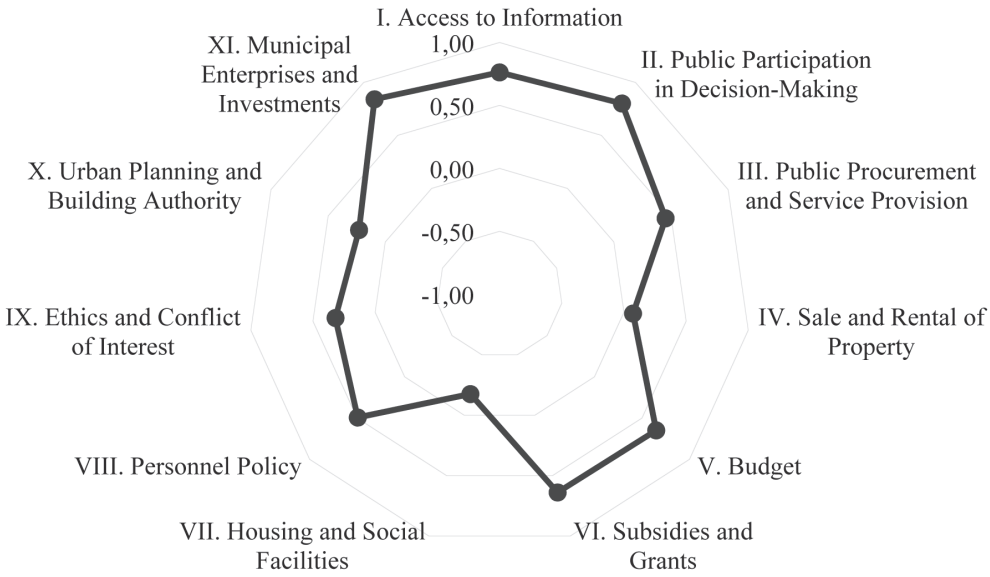
Tab. 7 Correlation coefficient between average economy and openness

Indicator	Access to Information	Public Participation in Decision-Making	Public Procurement and Service Provision	Sale and Rental of Property	Budget	Subsidies and Grants	Housing and Social Facilities	Personnel Policy	Ethics and Conflict of Interest	Urban Planning and Building Authority	Municipal Enterprises and Investments	**Average**
Correlation	0.76	0.80	0.45	0.07	0.65	0.64	-0.17	0.49	0.32	0.23	0.84	**0.46**
Interpretation	Strong	Strong	Weak	Very Weak	Moderate	Moderate	Very Weak	Weak	Weak	Weak	Strong	**Weak**

Source: Own processing

The analysis of the correlation between economy and openness, as well as between their individual partial indicators, offers intriguing insights into the interconnection of these two aspects. Access to information and public participation in decision-making processes exhibit a strong positive correlation with economy. This implies that countries or regions with higher levels of access to information and public participation tend to have higher economic performance. Conversely, property sales and leasing show a very weak positive correlation with economy, suggesting that these factors are only minimally associated with economy. Public procurement and service provision demonstrate a weak correlation, indicating that transparency in these areas may not be directly linked to economy. Budget and subsidies and grants display a moderate positive correlation with economic performance, suggesting that better financial management and transparency in allocating financial resources can support economy. Lastly, municipal enterprises and investments demonstrate a strong positive correlation with economy. This indicates that transparency in the activities of municipal enterprises and investments is closely linked to economic performance. The results of this analysis indicate that certain aspects of openness are closely related to economy, while others may have only minimal impact. For a better understanding of this dynamic, further study of the relationship between economy and openness is crucial, as well as identifying the most effective ways to support economy in various areas.

Graph 1 Correlation coefficient of openness indicators with economy



Source: Own processing

Access to information and public participation in decision-making have a positive correlation with economic outcomes, indicating that local governments with greater transparency and public involvement in decision-making processes are likely to be more effective economically. Public procurement and service provision show weaker ties to economic outcomes, suggesting that transparency and public participation in these activities may not have a significant impact on the economy of local governments. Property sales and leasing are only slightly associated with economic outcomes, suggesting that this aspect likely does not have a substantial influence on the overall economic efficiency of local governments. Budgeting and grant provision have a moderately to strongly positive correlation with economic outcomes. This relationship suggests that transparency and participation in budget planning and monitoring can significantly affect the economy of local governments. Housing and social facilities exhibit only a weak connection with economic outcomes, indicating that transparency and participation in housing and social service provision likely do not have a significant impact on the overall economic efficiency of local governments. Personnel policy and ethics and interests have only a slight connection with economic outcomes, indicating that transparency and principles in these areas likely do not have a significant impact on the economic efficiency of local governments. Urban planning and the building office have a strong positive correlation with economic outcomes. This relationship suggests that transparency and participation in urban development planning and construction may be crucial for the overall economic efficiency of local governments. Municipal enterprises and investments show only a weak connection with

economic outcomes, indicating that transparency and participation in municipal enterprises and investments likely do not have a significant impact on the economic efficiency of local governments.

Analysis of the correlations between indicators of local government openness and economic indicators of local governments reveals interesting relationships. We found that the highest correlations with economy are associated with the indicators of Municipal Enterprises and Investments and Public Participation in Decision-Making. These high correlations (0.84 and 0.80) suggest that transparency and participation in municipal enterprises and investments, as well as public involvement in decision-making processes, may have a positive impact on the economic efficiency of local governments.

On the other hand, the lowest correlation rates were observed for Housing and Social Facilities and Sale and Rental of Property, which exhibit very low correlations (-0.17 and 0.07) with economic outcomes. This means that transparency and participation in the provision of housing and social facilities, as well as in property sales and rentals, do not have a significant impact on the overall economy of local governments.

The average mutual correlation coefficient between openness and economy is 0.46, indicating a weak to moderately strong correlation between these areas. This is a positive correlation coefficient, indicating a positive/direct relationship between these variables. This result suggests that there is a direct connection between the level of openness of local government and economic outcomes, but it is not straightforward, and it does not imply a simple premise that an open and transparent local government performs better economically.

CONCLUSION

The study's conclusions reveal a complex relationship between the openness of local government and the economy of municipalities in Slovakia. These findings have profound implications for the effective management of public resources and the strengthening of democratic processes in towns and communities. Starting with the fact that the highest levels of correlation coefficients of economy are associated with transparency and participation in municipal enterprises and investments, as well as with public participation in decision-making processes. This suggests that local governments actively ensuring transparency and involving citizens in decision-making processes tend to achieve better economic results. This identified positive correlation indicates that citizen participation in decision-making and transparency in financial management can support better outcomes in public finances and economic development.

Conversely, the lowest correlations were found in the provision of housing and social facilities, as well as in the sale and rental of property. This suggests that openness in these areas does not have a significant impact on the overall economy of local governments. These data indicate the need to focus on other aspects of local government management that may have a greater impact on economic outcomes. The average mutual value of correlation coefficients between openness and economy is 0.46, indicating a weak to moderately strong correlation between these areas. This result underscores the existence of a relationship between the level of openness of local government and economic performance, although

it is not straightforward and simple. It shows that open and transparent management can create an environment that supports economic stability and growth in local governments, but on the other hand, it is not a rule.
The reasons are inputs from other variables that affect economy such as the level of management, expertise, and skills of local government representatives, as well as other objective factors such as economic opportunities, potential, and barriers that Slovak municipalities face. As a result of these findings, it is important to further study the relationship between the openness of local government and economy to better understand this dynamics and identify the most effective ways to support economic efficiency in various areas of local government.
This may include strengthening transparency mechanisms, increasing citizen engagement in decision-making processes, and improving the management of public finances. Such steps could lead to the creation of a sustainable and prosperous local environment for residents and businesses.

Acknowledgements

The article was created as part of the project solution VEGA 1/0312/22.

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