

## ***Efficiency of control in regional self-government of the Slovak Republic***

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**Abstract:** *The importance of high quality public sector control is an obvious fact – without efficient and effective control system, the risk of wasting public funds is critical. The goal of this article was to evaluate efficiency of internal control systems on the level of regional self-administration in the Slovakia. The findings clearly document many problems related to the performance of regional control bodies and on this basis purposes and possible actions are proposed. From the point of view of "fiscal rules", the research, for example, pointed to an exceptionally poor situation in compliance with the rules and conditions of budgetary management in the Bystrica region in the period 2006-2009. The research also proves that one of the key problems of nonconceptual and non-transparent asset management of regions is confusing and disadvantageous asset sales. The quantitative analysis suggests that the efficiency (intensity) of the functioning of regional control systems does not have a direct impact on the monitored output indicators. The implemented DEA also indicates the low effectivity of the internal control systems of the regions. Our findings fully prove that there are no truly efficient systems of external and internal control at the level of self-governing regions in Slovakia. The factor of high autonomy of regions in the financial management and disposal of assets in connection with the identified high degree of failure of the regional control system generates a clear need to strengthen the system of internal control of regions, based on systemic and procedural changes.*

**Keywords:** Slovakia, self-governing region, control, efficiency, fiscal rules

**JEL:** H1, H7, H8

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### **Introduction**

Control is a professional, purposeful, organized activity, the main task of which is to identify differences and deviations between the required state and reality. The importance of control lies mainly in ensuring the existence of a

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balance between planning and actual quantities and values - hence control is a technique to ensure the timely implementation of the objectives of the organisation. Management an organisation may commit mistakes and in order to stop the recurrence of such mistakes the most effective weapon is control.

Decentralisation, respecting the subsidiarity principle, transfers relevant competencies to the lowest possible level, following theoretical arguments provided for example by the decentralized provision decentralization theorem (Oates, 1972), which is mainly based upon optimal public goods provision hypothesis (Tiebout, 1956). According to the decentralization theorem efficiency and welfare gains can be achieved by providing public goods on the local level. However, the decentralization does not deliver automatically. This fact is visible also on the case of Slovakia (country covered by this paper), which belongs to most decentralized countries world-wide (Klimovsky, 2015), but this fact does not visibly contribute to the quality of governance in the country, as measured by existing studies (like Thijs *et al.*, 2017). The existing research provides several explanations on why highly decentralized public administration system in Slovakia does not deliver promised. Between many arguments the issue of a limited quality of control and audit on the self-government level can be found (like Ochrana & Pucek, 2012) – however, any in depth research on this issue does not exist in the Slovak conditions, yet (and this kind of studies is really rare even world-wide), despite to its obvious importance.

The importance of high quality control and audit on local and regional self-government level in highly decentralized countries like Slovakia is related to the fact that with the respect to the principles provided by the European Charter of Local Self-Government the control of the state over Slovak self-governments is aimed solely at ensuring compliance with the law and with constitutional principles. Existing legal system protects municipalities from unnecessary administrative interventions by the state and its bodies. The constitution guarantees that duties and restrictions to self-governments can only be imposed by parliamentary legislation. Prosecutors and the ombudsman can request that local decisions and measures be revised, but they cannot issue orders revoking such decisions and measures. In such a situation, the quality of internal control and audit is critical factor determining the performance of self-governments in Slovakia and in all other similar countries.

The goal of this article is to evaluate efficiency and effectiveness of internal control systems on the level of regional self-administration in the Slovakia, with specific focus on financial performance of regional self-governments. The authors are not aware about the existence of similar already delivered research – not only in Slovakia, but also in the neighboring countries. All “new” EU member states are characterized by specific socio-political environment, which may cause that standard public sector mechanisms function differently compared to the situation in “old” member states (Bouckaert *et al.*, 2011). In such situation, any

kind of research, highlighting specificities of this region has the potential to contribute to theory and practice of public administration and public policy.

The structure of this article has standard character. The first parts of the text include short literature review and background information. Afterwards the methodology used is presented. The results of our analysis are presented in verbal form and via quantitative calculations. The final part summarizes and discusses findings and proposes possible policy recommendations.

### **1. Efficiency and effectiveness and control on regional self-government level**

The role of control is to monitor compliance with existing rules, to monitor performance and to support the enforcement rules by catalyzing changes of the behaviour of regulates (Allen & Tomassi, 2001). With the respect to this, the control and audit in the public sector is usually connected with three dimensions (Jones, 1997):

- Checking and validating the accuracy and integrity of the financial practices, records and reports of an organization.
- Ensuring that expenditures financed via public funds has been spent on those purposes, and only for those purposes, approved when voting funds.
- Ensuring that, in addition to the financial probity aspects, organization seeks value for money in the form of economy, efficiency and effectiveness (3E) in pursuing agreed policy objectives.

Efficiency was defined by Samuelson and Nordhaus (2009) as a condition where there is no wastage. The economic theory distinguishes for example between allocation and technical efficiency. Allocation efficiency (Stiglitz, 1989) represents an optimal allocation of scarce resources in the economy and mainly deals with whether the utilisation of resources will achieve the desired state. Technical efficiency (Kerstens, 1999) represents a production at the constraints of production possibilities, so scarce resources are utilised to the maximum extent possible. Allocation and technical efficiency in practice is often monitored via the so-called "3E", i.e. economy (minimisation of inputs), efficiency (maximisation of input-output relation) and effectiveness (success rate in achieving goals).

With respect to the above, the goals of control systems on the regional self-government level (further region) are multi-dimensional. First, such systems should support the conformity of all decisions and transactions realised by the region to the rules and to the systems (compliance control). They also should promote value for money - "3E" aspects of conducting affairs of the regional self-government (performance control). Regional control systems are expected that all actions of the region are legal and deliver value for money, but also should assure that legality and value for money are the main principles of their own activities and actions.

There is not much international research with focus on the control and audit on local or regional level, but some interesting paper exists (like Linnas,

2007; Schmidt, 2004; Haugh, 2007 or Hepwortha, 1976). In the Central and Eastern Europe region this issue is under-covered and mainly indirectly discussed by few articles - like Dobrolyubova (2017), Slobodyanik *et al.*, (2018), Slobodyanik & Chyzhevskaja (2019), Tikhomirov (2019) and Trincu-Drăgușin (2020).

In the Slovak conditions the issue of regional control systems is also very rarely covered. Few studies including this element were delivered by the Transparency International Slovakia (for example Pirošik, 2007) and by few other articles (like Sicakova Beblava *et al.*, 2016) and books and articles written by authors of this paper (like Nemeč *et al.*, 2010; Merickova *et al.*, 2008; Ochrana & Nemeč 2009; Sagat *et al.*, 2015 and Sagat *et al.*, 2019).

In this article we use as the main critical performance criterion so called “fiscal rules” (fiscal discipline), a terminus well introduced into the world of academics and practitioners (Hallerberg *et al.*, 2004). Fiscal rules deal for example with balanced budget requirements and debt limits, define budgeting procedures, budget structure or spending limits and revenue rules. Fiscal rules, as any other regulation, shall be systematically monitored and, in case of violation, have to be enforced.

## 2. Background

The establishment of regional self-administration in Slovakia is connected with the period of decentralisation reforms 2000-2005. Pushed by the Prime Minister Dzurinda in beginning of 2001, in very (too) short time basic legislation was approved by the Parliament. The important Law on Transfer of Competencies defined the set of competencies to be transferred to regional self-governments – a large set of these competencies was re-allocated from direct ministerial responsibility (hospitals, education, etc.). In following years fiscal decentralisation system was created, to establish financial basis for functioning of regions. However, as of today, regions do not have real own resources (Table 1) and their revenues are especially shared income tax and transfers (for more about the situation see for example CLDR report on local and regional democracy in Slovakia). The share of regional expenditures in the total amount of gross domestic product is relatively low, only around one percent.

Table 1. Revenue structure of VUC 2019

	Type of revenue	billion €	Per capita
1.	Tax revenues	0.890	151
a)	of which personal income tax	0.890	151
b)	of which motor vehicle tax	0	0
2.	Non - tax revenues	0.110	20
3.	Transfers from SR	0.663	98
4.	Financial operations	0.018	32
	Total revenue	1.6456	301

(Source: authors, based on data from [www.nrsr.sk](http://www.nrsr.sk))

### 3. The system of control on the regional level

The system of control (and audit) on the regional level consists from two segments – the system of external control and the system of internal control. The external control is delivered especially by three bodies – the Supreme Audit Office (NKU), the Public Procurement Office (UVO) and the Ministry of Finance (MoF).

In the conditions of Slovakia, the NKU has been an independent body for external control of the management of budget funds, state property, property rights and state receivables since 1993. In 2006, the law extended the NKU's competencies to include external control of local governments, including their assets. The MoF is the professional and legislative-legal guarantor of financial control.

The most important component of the Ministry of Finance of the Slovak Republic actually performing external control and audit in the entire public administration of the Slovak Republic since 2016 is the Government Audit Office. It decides in a separate proceeding on the violation of financial discipline in the management of funds from the state budget and EU funds. UVO is the third central control body with the real exercise of competences in relation to the regions through the control of public procurement processes for goods, works and services.

Internal control in regional self-government of the Slovak Republic mainly takes the form of financial control, which has been regulated by a special legal regulation since 2001 (Act of the National Council of the Slovak Republic No. 357/2015).

Pursuant to the cited Act, financial control is understood as a set of activities ensuring the verification of economy, efficiency, effectiveness and expediency of financial operations or their parts before their implementation, during them until their final settlement, accounting, achievement and maintenance of financial operations or their parts thereof.

Act of the National Council of the Slovak Republic no. 302/2001 addresses the position of the chief comptroller of a self-governing region. The chief comptroller of a self-governing region is its employee, who is elected and removed by the council according to defined conditions and rules.

His control activities include control of legality, effectiveness, economy and efficiency in the management and disposal of property and property rights of the region, control of the budget, revenues and expenditures of the region, control of compliance with generally binding legal regulations, internal regulations and ordinances, control of compliance with resolutions, control of the handling of complaints and petitions and control of the fulfilment of other tasks provided for by specific legislation (budgetary rules, public procurement, grants and EU projects).

### 4. Methodology

The source of information for this article are especially the existing public data about VUCs finance for the whole period of their existence (2002-2019), collected by authors from various public reports, especially final account of regional self-governments, yearly reports of regional self-governments, yearly

report on state budget, etc. Such set of data is fully complex/representative and unique.

We measure the performance of the control on the VUC level by three sets of indicators. The first set is connected with the fiscal rules defined by the law the Law 583/2004 on budgetary rules for territorial self-government and includes following indicators:

1. economic results for the financial year
2. the number and percentage of budget adjustments
3. state, structure and development of total debt
4. state of assets

This set of indicators monitors if regional public finance is healthy; this means that these indicators have “outcomes” character. We are aware that there is no explicit direct link between the quality of regional control and fiscal performance of a region; however the above mentioned law 583/2004 explicitly requires the involvement of regional control bodies in monitoring and enforcement of fiscal rules (the core rules are that the regional budget must be balanced or in surplus, only is capital part can be in deficit as long as such a deficit is covered by reserves, external sources or by a surplus of the current part of the budget; that loans, repayable financial assistance, as well as bills and bond transactions are allowed, but only for the capital part of the budget; that the total amount of the regional debt may not exceed 60% of the total current revenues of the previous year and the sum of debt repayments shall not exceed 25% of the total current revenues of the previous year). The main responsible persons for this monitoring the situation of municipal finance are the president of a region and the regional comptroller. If the debt exceeds 60 % of total current revenues the municipal comptroller must report this situation to the Ministry of Finance. The region must introduce a “recovery regime” if the amount of overdue payables exceeds 15% of current revenues, or if any accepted payable is not paid within 60 days of the due date.

The second set of indicators has also “outcomes” character and it focuses on how the performance of a region is evaluated by the bodies of external control. This set includes following indicators:

5. results of NKU control on the regional level
6. results of control by the MF SR on the regional level
7. results of control by the UVO on the regional level

We are aware that also this set of indicators is only indirectly connected with the performance of the regional control system; however, the main goal of internal control system is to prevent problems, this means that higher level of effectiveness of internal control should mean less control findings of external control bodies.

The third set of indicators deals with the efficiency of the “own” control process. We selected following set of input and output indicators to measure this dimension:

8. Number of employees of the regional control body - input indicator
9. Number of controls performed - output indicator.
10. Total number of control findings - output indicator.
11. Average number of control findings per control performed - output indicator.
12. Total number of control findings directly related to exhaustively determined main objectives and tasks of regions (KZ2) - output indicator.
13. Average number of control findings related to the main objectives and tasks of the regions (KZ2) per control performed - output indicator.

Data collected are processed by standard means of quantitative analysis – correlations and DEA analysis. Correlations and the DEA are used to respond to three core research questions defined for this article:

1. Is there any relation between the efficiency (intensity) of internal control and fiscal results (level of compliance to fiscal rules) of regions?
2. Is there any relation between the efficiency (intensity) of internal control and results of external control/audit?
3. Are regions similar, or significantly differ from the point of performance of their control bodies?

## **5. Results**

In the analytical part of this paper we first deliver short verbal comparison of the performance of regions and their control bodies from the point of above defined indicators. The second part delivers quantitative analysis with different dimensions.

### **5.1 Comparative analysis of regions for selected indicators**

This part delivers most critical (verbal) information about the situation of regions from the point of our selected indicators. It includes four subparts as follows:

- a) evaluation of inputs - employment (number of employees of the regional control body),
- b) evaluation of the fiscal situation of regions (economic results for the financial year, number and percentage of budget adjustments, state, structure and development of total debt and state of assets),
- c) results of external control and audit (results of NKU control on the regional level, results of control by the MF SR on the regional level and results of control by the UVO on the regional level),
- d) efficiency of the “own” control process (number of controls performed, total number of control findings, average number of control findings per control performed, total number of control findings directly related to exhaustively determined main objectives and tasks of regions (KZ2), average number of control

findings related to main objectives and tasks of regions per performed control (relative KZ2).

***Employment***

Table 2 shows the long-term under-staffing (75-83%) of the departments of the chief comptroller of the regions in comparison with the originally approved number of comptrollers (as of 2002). After 2015, the number of comptrollers increased slightly, but above all in administrative positions (regions Bratislava, Trnava and Nitra created, for example, the position of director / head / department of the chief comptroller). In the regions of Banska Bystrica and Zilina, standard line structures have not been operating since 2010 (existence of separate departments focused on budget and assets).

**Table 2. Status and development of the number of employees of the departments of the Chief Comptroller of Regions 2002-2019**

<b>Region</b>	<b>Approved number of comptrollers (2002)</b>	<b>Actual number of comptrollers (2005)</b>	<b>Actual number of comptrollers (2010)</b>	<b>Actual number of comptrollers (2015)</b>	<b>Actual number of comptrollers (2019)</b>
Bratislava	7	9	11	12	11
Trnava	12	9	10	9	10
Nitra	10	10	10	12	12
Trencin	12	10	9	9	8
Bystrica	18	13	11	11	12
Zilina	14	10	9	7	9
Presov	21	12	10	9	12
Kosice	8	7	7	10	11
Total	102	80	77	79	85

*(Source: Authors)*

***Fiscal situation of regions***

In the period 2002-2005 alone, all 8 regions managed a balanced or surplus manner in accordance with the statutory budget rules, which did not happen in the following period. In the period 2006-2010, fiscal and budgetary discipline was loosened, resulting in negative economic results that persist in several VUCs to this day. The worst results of budget management in the indicator of passive balances are achieved by the regions of Zilina (6 deficit results for the observed period) and Bystrica (6 deficit results for the observed period).

During the monitored period, the regions made an average of 5.71 budget changes per year. The regions of Nitra, Bystrica, Presov and Trnava have been above this value for a long time. The Trnava, Bystrica and Presov regions have

reached a situation where a change in the previously approved budget has been implemented at each regional council for the last two years (2018-2019).

Another important indicator of budget management is provisional budgets, as a combination and at the same time a consequence of failure of financial and budgetary management and planning in fulfilling the main goals and tasks of the regions. The highest numbers of provisional budgets were found in the regions of Bystrica (period 2014-2015) and Trenčín (period 2013-2014). Serious consequences were especially seen in the Bystrica region, where the provisional budgets were reflected in the subsequent absolute non-utilization of EU funds in the period 2014-2017 and the deepening of capital and public debt.

Only the regions of Nitra, Bratislava and Prešov did not even once reach the maximum values of debt service defined by their budget management above the law in the period under review. On the contrary, the worst values were proven and confirmed by research in the regions of Bystrica, Žilina and Trnava. In the Bystrica Region, as the only one in the Slovak Republic, the highest threshold of budgetary responsibility was exceeded in 2011 by a public debt of 63%, while the Chief Comptroller of the Region did not even fulfill the notification obligation towards the Ministry of Finance of the Slovak Republic. The long-term indebtedness of this region was dominated by long-term loans with deferred payments and an unfavourable interest rate, which practically still complicate the standard management of this region. These were combined with the unjustified recognition of long-term liabilities and associated with illegal financial performance, which subsequently necessitated new bridging loans at even more unfavourable interest rates. Insufficient budgetary responsibility and high debt rates in 2006-2014 led to above-average growth in long-term debt in the Bystrica (from 8 to 64%), Trnava (from 5 to 57%), Trenčín (from 11 to 54%) and Košice Regions (from 19 to 25%). The tightened budgetary and fiscal measures from the 2008-2009 financial crisis started to have a positive impact on the management of the VUC with a delay of approximately 5 years and manifested themselves in the period 2015-2017. In the last two years (2018-2019), the average level of regional debt has once again risen.

The position of initial assets of all regions in 2001 was 1.33 billion euros. Of the largest assets, Žilina (EUR 0.25 billion), Košice (EUR 0.19 billion) and Prešov (EUR 0.16 billion) have had the largest assets since the beginning. BBSK (EUR 0.09 billion) and TTSK (EUR 0.07 billion) had the smallest initial assets. The management and disposal of assets, like its initial volume, were significantly differentiated in individual regions. In most regions, the value of assets decreases. The largest absolute decrease in assets was found in the Bystrica region, which was largely due to illegal and non-transparent procedures after 2007. The total sale of assets in the amount of EUR 150.42 million was relatively differentiated in individual regions. The smallest sales in the entire examined horizon were found in the regions of Trnava (EUR 9.89 million euros) and Trenčín (EUR 13.17 million euros) by our research. The largest volume of assets sales was found in the regions of Bystrica (EUR 30.67 million - about a third of total assets!) and Bratislava (EUR 24.07 million).

Persistent, unresolved asset problems are its nonconceptual and inconsistent records, valuation, frequent and confusing revaluation and application of appropriate methodologies. In practice, even today, four regions (Nitra, Bystrica, Presov and Kosice) record their assets at residual prices, the others at acquisition prices.

***Results of control activities of external control bodies in VUC***

In the period under review, the MoF carried out 33 audits in regional self-government, in which it found 90 breaches of financial discipline. It carried out the most audits in the Žilina Region (8), which is related to the audit of the increased volume of funds used from EU funds. From the point of view of the number of sanctions, the worst situation was in the region of Bystrica, where the MoF imposed sanctions in the amount of EUR 94,980.

In the period under review, UVO carried out 73 administrative proceedings in relation to the regions, within which it issued 66 prohibition decisions against unauthorized illegal practices, in which it prohibited illegal procedures and methods and imposed fines in the total amount of EUR 1,327,230. The highest rate of breaches of legality was demonstrated in the regions of Bratislava (13 cases) and Bystrica (12 cases). In the Bratislava region, these were, for example, cases of illegal procurement of information systems with a total amount of a fine of EUR 256,850. In the Bystrica region, fines in the amount of EUR 408,640 were imposed, for example, for illegal practices in road reconstruction. The highest individual fine was imposed on the Trenčín Region in 2006 in the amount of EUR 494,611 for illegal practices in the construction of an administrative building.

In the period under review, the NKU performed a total of 320 controls in the regions, during which 2,689 findings were found. The average number of findings per performed NKU control in the whole examined time horizon represents the value of 8.35 findings/1 control. The highest share of findings per control was in the regions of Kosice (11.25) and Trnava (9.0) and the lowest in the regions of Bystrica (7.20) and Presov (6.25). In terms of significance, the SAO found 1,080 violations of the KZ2 type, which represents 40.16% of all audit findings. The number of KZ2 per NKU control reached an average value of 3.38 KZ2/1 control. Above-average values of the indicator were found mainly in the regions of Trnava (4.38) and Kosice (4.25).

***Efficiency of the control activities of the Chief Comptroller's Office of VUC in regional self-government of the Slovak Republic***

In the same period, the regional control bodies carried out a total of 8,099 controls, during which 53,076 control findings were discovered. The number of controls performed varies significantly between regions, e.g. the Zilina region performed only 23 controls in 2019, while the Trenčín region performed up to 78 controls. The average number of findings per control performed was 6.55. The

above-average relative number of findings was in the regions of Kosice (12.13) and Bystrica (10.04). The auditors also found 14,610 KZ2 type audit findings. The number of KZ2 per control performed reached an average value of 1.80 for the whole period and all regions. The lowest long-term values were found in the Trnava region (0.78).

### 5.2 Quantitative analysis

In this part we deliver two groups of correlations and one DEA analysis to evaluate the performance of regional control bodies by the quantitative analysis. The first group of correlations tries to respond to our first research question (Is there any relation between the efficiency of internal control and fiscal results of regions?). The following variables are in this category:

Variable	Type	Description
Budget	discreet	Three values: -1 = deficit budget, 0 = balanced budget, 1 = surplus budget
Number of budget changes	discreet	The number of times the already approved budget has changed
Public debt	continuous	The percentage of the debt of the examined region with respect to its assets
Assets	continuous	The amount of assets of the region in millions of euros
Total number of controls	discreet	Number of controls performed of the VUC of the given region per year
Total number of control findings	discreet	Number of findings during the controls performed of the VUC of the given region per year
Number of control findings KZ2	discreet	Number of findings of the KZ2 type during the controls performed of the VUC of the given region per year

Basic descriptive statistics of the above variables are as follows:

Variable	Average	STDEVP	min	max	median
Budget	0.44697	0.855591	-1	1	1
Number of budget changes	5.795455	3.884192	1	25	5
Public debt	28.31061	18.08571	0	64	31.5
Assets	291.8854	132.7374	69.29	688.42	256.755
Total number of controls	57.73485	32.72124	4	247	60
Total number of control findings	375.2348	345.2462	8	1832	251
Number of control findings KZ2	105.2727	86.0811	1	550	90.5

*(Source: Own determination)*

In this group of variables, we can observe moderately strong direct linear relationships between the variables total number of controls, number of findings and number of KZ2 findings, which are statistically significant at the significance level of 1%. However, these dependencies are based on the definition of these variables and are therefore expected.

The performed correlation analysis also shows a weak direct statistical dependence between assets and public debt in percent. Although this dependence is weak it is statistically significant with an error of less than 1%. This shows that regions with larger assets are more often willing to go into higher debt. Assets also affect the number of budget changes. This relationship is again weak, and it is an indirect linear dependence, which is again statistically significant at a significance level of less than 1%. It is therefore possible to observe from the data that the smaller the assets the region has, the more often it has to reach for changes in the budget, while the regions with higher assets manipulate the budget less often.

From the point of view of the defined research question, we have a statistically significant dependence between the variable indicating the number of control findings of the KZ2 type and the number of budget changes and the amount of public debt. These variables have a weak direct linear relationship with each other, i.e. in regions that have a larger number of control findings of the KZ2 type, there is also a larger number of budget changes.

Weak direct linear dependence significant at 10% is also between the variables total number of findings and the amount of public debt. This value therefore suggests that the number of K1-type findings is more frequent in those regions with higher indebtedness. The last statistically significant relationship between the variables in this group can be found between the amount of assets and the total number of controls. Thus, the dependence is a weak indirect linear dependence and thus indicates that regions with smaller assets carry out on average a higher number of controls, i.e. there is a slightly greater number of controls against regions with larger assets.

The results of this correlation analysis (Table 3) are relatively interesting - in no case do they show that higher efficiency (intensity) of control activities increases the fiscal discipline of the region. The results are rather the opposite; however, they are only weak dependencies.

**Table 3. First correlation analysis: results**

Variable	Budget	Number of budget changes	Public debt	Assets	Total number of controls	Total number of control findings
Budget	1					
Number of budget changes	-0.20045**	1				
Public debt	-0.20872**	-0.04202	1			
Assets	-0.13619	-0.2513***	0.37006***	1		

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Variable	Budget	Number of budget changes	Public debt	Assets	Total number of controls	Total number of control findings
Total number of controls	-0.05097	0.10716	0.04771	-0.16826*	1	
Total number of control findings	-0.03893	0.12127	0.15895 *	0.07147	0.48745 ***	1
Number of control findings KZ2	-0.05422	0.17261 **	0.083385	0.03175	0.65004 ***	0.86891 ***

Level of importance 1% \*\*\*, 5% \*\*, 10% \*

(Source: Own determination)

The second correlation tries to respond to our second research question (Is there any relation between the efficiency of internal control and results of external control/audit?). The variables in this category are as follows:

Variable	Type	Description
Actual number of comptrollers	discreet	Number of comptrollers in the region. The values of the missing years are estimated by linear interpolation.
Total number of controls	discreet	Number of controls performed of the VUC of the given region per year
Total number of control findings	discreet	Number of K1 type findings during the controls performed of the VUC of the given region per year
Total number of KZ2	discreet	Number of K2 type findings during the controls performed of the VUC of the given region per year
Number of external findings	discreet	Cumulated numbers of findings of external control subjects for the monitored period in the given region

Basic descriptive statistics of the above variables:

Variable	Average	STDEVP	min	max	median
Actual number of comptrollers	10.25757 576	2.148365	7	21	10
Total number of controls	57.73484 848	32.72124	4	247	60
Total number of control findings	375.2348 485	345.2462	8	1832	251
Total number of KZ2	105.2727 273	86.0811	1	550	90.5
Number of external findings	59.36364	11.60543	47	82	54

(Source: Own determination)

This group of variables is much more related than in previous groups. For some variables, however, this is due to their acquisition by calculation from other

variables. Interestingly, at the same time, the actual number of comptrollers has a weak direct linear relationship with the total number of controls, this dependence is statistically significant at a significance level of 1% (it could be assumed that this dependence should be stronger). The same applies in part to the fact that the number of comptrollers has a very weak dependence with the variable total number of KZ2, this dependence is significant at 5%. At the same time, the number of comptrollers has no effect on the total number of KZ1. These facts indicate a low efficiency of control at the regional level.

The variable indicating the total number of findings by external control and audit entities (MF SR, ÚVO, NKU) indicates very statistically significant dependencies (1%) with the variables “total number of findings” and “number of KZ2 findings”. These dependencies are weaker direct linear dependencies. This variable also shows a weak direct linear dependence significant at 5% with the variable total number of controls. The finding suggests that the intensity / effectiveness of control activities at the regional level does not have a direct impact on reducing the number of control findings by external control bodies.

**Table 4. Second correlation analysis: results**

	<b>Actual number of comptrollers</b>	<b>Total number of controls</b>	<b>Total number of KZ1</b>	<b>Total number of KZ2</b>
Actual number of comptrollers	1			
Total number of controls	0.27384 ***	1		
Total number of KZ1	0.04887	0.48746 ***	1	
Total number of KZ2	0.19629 **	0.65005 ***	0.86891 ***	1
Number of external findings	-0.08215	0.17210 **	0.34285 ***	0.30457 ***

Level of importance 1% \*\*\*, 5% \*\*, 10% \*

(Source: Own determination)

The performed calculations of the analysis of DEA data packages, which serve to answer the third research question (Are regions similar, or significantly different from the point of performance of their control bodies?) contained one input and 10 outputs. Some outputs had to be adjusted to be maximizing prior to performing the analysis. Overview of variables is as follows:

<b>Variable</b>	<b>Type</b>
budget	output
Total number of controls	output
Total number of KZ2	output

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Variable	Type
total number of other findings	output
Assets (million € )	output
Public debt (%)	outcome
Number of budget changes	outcome
NKU control results	outcome
Results of MS SR controls	outcome
UVO control results	outcome
Actual number of comptrollers	input

In order to avoid large fluctuations in efficiency due to the choice of the type of DEA model used, a total of three input DEA models, the output DEA and the FDH model were calculated. We then obtained the efficiencies of individual regions by averaging the values of individual efficiencies.

The results of each region in all years examined were entered into the model, except for those for which some data could not be traced. The average efficiencies of regions are shown in the Table 5.

**Table 5. DEA results**

Region	Average efficiency
Bystrica (BBSK)	0.911484673
Bratislava (BSK)	0.938809756
Kosice (KSK)	0.949209078
Nitra (NSK)	0.974271022
Presov (PSK)	0.831197406
Trencin (TNSK)	0.9832223
Trnava (TSK)	0.930958438
Zilina (ZSK)	0.896255483

(Source: Own determination)

The resulting efficiencies were tested to determine which differences in efficiency are statistically significant and which are not. We used two sample f-test and t-test. The results of the t-test are in the Table 6.

**Table 6. DEA: t-test results**

t-test		BBSK	BSK	KSK	NSK	PSK	TNSK	TSK	ZSK
	efficiency	0.91149	0.93881	0.94921	0.97427	0.83120	0.98322	0.93096	0.89626
BBSK	0.91149	I	I	I	D	D	D	I	I
BSK	0.93881	I	I	I	D	D	D	I	I

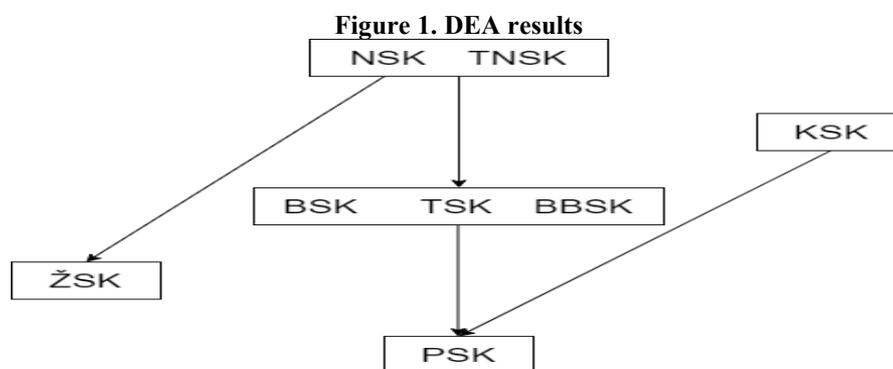
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t-test		BBSK	BSK	KSK	NSK	PSK	TNSK	TSK	ZSK
KSK	0.94921	I	I	I	I	D	I	I	I
NSK	0.97427	D	D	I	I	D	I	D	D
PSK	0.83120	D	D	D	D	I	D	D	I
TNSK	0.98322	D	D	I	I	D	I	D	D
TSK	0.93096	I	I	I	D	D	D	I	I
ZSK	0.89626	I	I	I	D	I	D	I	I

I=identical; D=different

(Source: Own determination)

By comparing the statistical significance of the difference in efficiency, our regions are divided into several groups. The regions in one frame are just as efficient. Connected regions (blocks) indicate a statistically significant difference (those that are less efficient) – Figure 1.



(Source: Authors)

## 6. Discussion and conclusions

The results of our qualitative and quantitative analysis of the obtained comprehensive data on the functioning of control at the level of self-governing regions did not provide positive findings. From the point of view of "fiscal rules", the research, for example, pointed to an exceptionally poor situation in compliance with the rules and conditions of budgetary management in the Bystrica region in the period 2006-2009. The massive credit burden in this period is still overcome by long-term restrictive consolidation, especially in the area of capital expenditures and investments. Although external and internal controls responded to deteriorating financial results with an increased number of controls and audit findings, they did not have any impact on the improvement. The research also proves that one of the key problems of nonconceptual and non-transparent asset management of regions

is confusing and disadvantageous asset sales. In the Bystrica region, the sale of assets was associated with numerous scandals and illegal practices, which culminated in criminal prosecution and a valid conviction of the director of the office for direct corruption in the sale of assets. Especially in the period 2007-2009, the region apparently sold the most lucrative assets (buildings after costly reconstruction in the historic city centres), often significantly artificially undervalued (valuation and expert opinions were performed by the office staff in order to reduce the final purchase price). Suspicions of non-transparent sales were also in the Bratislava region, where the main motive for the sale was an above-standard positional rent and a high price of real estate in the city of Bratislava. Most sales were made in the penultimate and final year of the political cycle. At the same time, all our research has shown that the sale of assets is a segment where control bodies at the regional level have fundamentally failed.

From the point of view of defined research questions, we found that according to the results of correlations, the efficiency (intensity) of the functioning of regional control systems does not have a direct impact on the monitored output indicators (research questions one and two). The implemented DEA also indicates the low effectivity of the internal control systems of the regions (research question three). From the point of view of comparing the performance of regional control systems using the DEA method, it can be stated that the differences between regions are significant. This statement is critical especially from the point of view of the fact that the performance of the best (Nitra and Trenčín) is not sufficient for control systems to efficiently influence the degree of fiscal discipline of the region and systematically reduce the number of negative findings of external control bodies. It could be figuratively said that Nitra and Trenčín are "one-eyed" among the "blind".

As we stated, the control of the state over Slovak (regional and local) self-governments is aimed solely at ensuring compliance with the law and with constitutional principles. The existing legal system protects municipalities from unnecessary administrative interventions by the state and its bodies. In such a situation high quality their own regional (and local) control systems are a necessary precondition of efficient performance of self-governments. However, our findings prove that there are no truly efficient systems of external and internal control at the level of self-governing regions in Slovakia. This fact has a significant impact on the quality of regional governance and finance.

Our findings that the quality of control activities at the level of self-governing regions in Slovakia is very low are extremely critical, especially if we realize the overlap of our findings to the level of local governments, where certainly (at least on average) the situation is not any better. While regional budgets represent a relatively small percentage of public expenditures, municipal budgets are already a significant amount in terms of public finances and the use of these funds (as well as at the regional level) is not efficiently controlled.

Limited existing literature provides selected arguments about purposes of such critical situation. We should mention especially very limited accountability

and responsibly on all public administration levels in Slovakia and in the Central and Eastern Europe as the region (see for example Vesely, 2013 or Thijs et al., 2017). The other critical factor is the existence of a phenomenon of systemic corruption (see for example Langr, 2018 or Sipikal *et al.*, 2017), which is to a large extent caused by a really high level of tolerance of corruption in Slovakia (Orviska & Hudson, 2003 or Hunady, 2017) and may be also by the limited rationality of “consumer’s behaviour” in Slovakia (Mikusova Merickova & Jakus Muthova, 2019).

To get better picture about the most critical factors determining a limited performance of regional control systems we also interviewed the former head of the regional control unit. His response was as follows:

*'I would consider the fact that in the cases of control findings no personal and causal responsibility is inferred, despite the fact that this is required by control legislation, as the main reasons for the low effectiveness of control at the regional level. The causal link and dependence of the internal control system on political cycles is also visible. A special factor is the low professional level of control management, planning and performance of control with insufficient reflection on the main objectives, tasks and functions of the regions, as well as the entire public sector of the Slovak Republic.'*

The factor of high autonomy of regions in the financial management and disposal of assets in connection with the identified high degree of failure of the regional control system generates a clear need to strengthen the system of internal control of regions, based on systemic and procedural changes. Systemic possibilities for a positive qualitative change in regional control should be part of the change in the social climate and the future fundamental reform of public administration and self-government. A critical problem of Slovakia is the high level of tolerance of corruption, which causes its penetration into all spheres of society. This problem can only be solved in the long run. From the point of view of the future public administration reform, it is necessary to mention that the current legislation does not sufficiently guarantee the independence of control bodies at the regional level, also by the fact that one body (the chief comptroller's department) is responsible for both internal control and independent audit. For example, the chief comptroller is an elected position and is in an employment relationship with the municipality. The salary of the chief comptroller is set centrally, but the council has the power to award them a monthly remuneration, which can reach up to 30% of the statutory salary. The council may, in stating the reasons, dismiss the chief comptroller, i.e. in a situation where the chairman of the self-governing region has the majority support in the council, his position in criticizing the decisions of the regional authorities is more than problematic.

Current practice (and the legal environment) also practically does not infer personal and causal responsibility for the errors and inefficiencies found. Such a situation creates an environment that is particularly conducive to corruption, in particular in that the risk of possible punishment for misconduct is very low.

From a procedural point of view, it is necessary for the Office of the Chief

Comptroller of the VUC to have developed long-term binding conceptual and strategic materials defining the strategy of control performance and to apply these materials to the performance of all types of controls. The performance of control should focus on the main objectives and tasks of VUC (budget, assets), performance control and risk control, less on compliance control.

#### Authors Contributions

The author/authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

#### Conflict of Interest Statement

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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