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*Marjan Nikolov
Editor-in-Chief*

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MEASURING BUDGET TRANSPARENCY OF THE MACEDONIAN MUNICIPALITIES - TRANSPARENCY AND ACCOUNTABILITY AT LOCAL GOVERNMENT LEVEL

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Abstract

The transparency strengthens the credibility of the government policies and improves fiscal discipline while at the same time enables a platform for enhanced citizens' satisfaction of the public services; participation of the citizens in the process of preparation of the public policies and ultimately increases the willingness to pay (more) for the public services. An effective local governments' transparency is necessary for accountability. While these two are not an end in itself are however pertinent means to support an effective and inclusive decision-making within the budgeting process. The legal and budgetary mechanism that enable contribution from the local communities/citizens are particularly important for certain local government decisions in order to increase the accessibility to the general public i.e. the citizens at large.

This paper evaluates the budget transparency among the eighty one (81) local self-government units in Macedonia through an index measuring the degree and the method of disclosure of eight (8) budget process related documents. The objective of this paper is to analyze the transparency of the local self-government units' budget process and the availability of the "key" budget process documents; their accessibility and the methods of accessibility, in order to determine whether there has been an improvement or decline from 2014-2015 to 2017-2018.¹ The research establishes a scoring tool combining the number of budget related documents made accessible and the source of availability however not considering the content quality or the efficiency of effectiveness of the budget execution.

1) Monitoring period for the fiscal 2016-2017 information covers the availability of the budget documents which are considered for the period up until 14/2/2017. The Monitoring period for the fiscal 2017-2018 information covers the availability of the budget documents which are considered for the period up until 29/6/2018.

The scoring methodology used for determining the level of availability and transparency of the LSGU budget process in all municipalities in Macedonia covers scoring of the budget transparency both based on the level and manner (source) of availability of the basic process documents. For the purposes of this paper, local government budget transparency is measured by the number of available key budget documents disclosed and the medium/source where these are published, being scored on a scale from minimum 0 to maximum 16 index score points.

The availability of the eight documents does not indicate outright budget process transparency nor do we suggest that it means absolute accountability of the authorities however it demonstrates a step towards increased citizens informed and active civic participation.

INTRODUCTION

The transparency strengthens the credibility of the government policies and improves fiscal discipline while at the same time enabling a platform for citizens' satisfaction for the public services it provides, for participation of the citizens in the process of preparation of the public policies and ultimately an increased willingness to pay (more) for the public services. In essence, an effective local governments' transparency is necessary for accountability and these are not an end in itself, but means to support effective and inclusive decision-making in the budgeting both on a national and on a local level.

The bottom-up participatory structures for enhancement of the local government transparency and accountability need to be enwoven in both the legal, political and administrative tools for active involvement of the civic sector. The legal and budgetary mechanism that enable contribution from the local communities/citizens are especially important for certain local government decisions in order to increase the accessibility to the general public at large.

Furthermore, higher fiscal transparency enables informed public discussion and consensus on the government's priorities and policies while having a positive influence over the destructive effect of corruption and inadequate accountability at all governmental levels. Therefore, local governments' transparency and accountability should not be viewed independently, but as a crucial part of the overall good governance and public resource management.

Fiscal transparency² can serve as an early warning for potential fiscal risks through proper reaction when economic assumptions are changed. And more, fiscal transparency provides accountability toward citizens-taxpayers and can improve creditworthiness of the country toward international capital market.³

Studies published in the past predominantly focus on the national level budget process transparency, while to a smaller extend on the local level government transparency and accountability. Thus there is a gap in the research in this area, where our paper attempts to provide a contribution and comparison with formerly gathered information and data on the same subject. This paper examines the degree of transparency of the local level budget documents in the eighty one local government units in R. Macedonia including the City of Skopje as separate local government unit.

The objective of this paper is to determine the transparency of the local self-government units' budgets through measuring the availability of the key budget process documents and to determine whether there has been an improvement or decline between the periods 2014-2015, 2016-2017 and 2017-2018.⁴

2) Fiscal transparency – the comprehensiveness, clarity, reliability, timeliness, and relevance of public reporting on the past, present, and future state of public finances – is critical for effective fiscal management and accountability, Fiscal Transparency Code, International Monetary Fund

3) Budget process in Macedonia: Recent developments and challenges, Nikolov, Marjan, Center for Economic Analyses, 2009, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1443394

4) Monitoring period for the fiscal 2016-2017 information covers the availability of the budget documents which are considered for the period up until 14/2/2017. The Monitoring period for the fiscal 2017-2018 information covers the availability of the budget documents which are considered for the period up until 29/6/2018.

Budget transparency is defined as “a full disclosure of all relevant fiscal information in a timely and systematic manner.”⁵ (OECD, 2003). Therefore, a budget transparency implies that the information in regards to the budget are publicly accessible and are wholesome, relevant, correct, produced and issued timely and presented in understandable manner.

Considering that there are still no legally binding obligation for the LSGUs to publish all the key budget and budget execution documents on the official websites of the LSGUs,⁶ but merely within the Municipal Official Gazette (which is not electronically published among all LSGUs) there will not be an assessment of the compliance with the legal disclosure.

The paper is structured as follows: review of the literature and theories on budget transparency and local budget transparency, the methodology for indexing is elaborated, followed by the results of the budget transparency measuring and finally the conclusions and recommendations are drawn.

Literature review

The theoretical model presented in this work is related to the following literature. There are three types of theories that explain the financial accountability. In this study we call upon the two theories (Principal-Agent and Stewardship theory) which give a brief description. In the past, financial accountability researchers have relied on Agency and Stewardship theories explaining the phenomena that may hinder the exchange of financial information in the accountability and transparency processes. Macedonian public sector like other countries with lower level of economic development has accountability mechanism based on an Agency model.

Accountability mechanism following the assumptions of principal - agent theory focus on monitoring procedures in order to reduce information asymmetry. This can enhance the disclosure of information but may result in an information overload problem on the part of the accountors and the accountees (Greiling & Spraul, 2010).⁷ Agency theory describes the strategic interactions between two parties, called the principal and the agent (Halachmi, 2004).⁸ The agent acts on behalf of the principal; with the assumptions that the actors are utility maximizers driven by self-interest who act in situations of bounded rationality and normally differ in their aversion to risk. Principal-agent theory is concerned with the problem of the conflict of goals between the principal and the agent and the difficulty or the inability of the principal to verify what the agent is doing (Eisenhardt, 1989).⁹

The relationship between the actor (accountor) and the forum (accountee) is often interpreted as one between agent and principal (Bovens, 2007b),¹⁰ this is not only true for economics but also for political science (Greiling & Spraul, 2010).¹¹ The theory assumes that the principal's access to information is limited, and that the principal cannot perfectly and without costs monitor the agent's actions (Jacobides & Croson, 2001).¹²

5) OECD Best Practices for Budget Transparency, 2003

<https://www.oecd.org/gov/budgeting/Best%20Practices%20Budget%20Transparency%20-%20complete%20with%20cover%20page.pdf>

6) Since the end of 2017 with an addition of an article paragraph within the Law on accounting of the budgets and the budget users, the LSGUs are obliged to publish the final accounts of the budgets (budget execution reports) on their websites

7) Greiling, D., & Spraul K. (2010). Accountability and the challenges of information disclosure. *Public Administration Quarterly*, 338-377

8) Halachmi, A. (2004.) Performance measurement, accountability, and improved performance. *Public Performance and Management Review*, 25(4), 370-374.

9) Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *The Academy of Management Review*, 14(1), 57-74.

10) Bovens, M. (2007b). Analyzing and assessing accountability: A conceptual framework. *European Law Journal*, 13(4), 447-468

11) Greiling, D., & Spraul K. (2010). Accountability and the challenges of information disclosure. *Public Administration Quarterly*, 338-377

12) Jacobides, M., & Croson, D. C. (2001). Information policy and shaping the value of agency relationships. *Academy of Management Review*, 36(2), 202-223.

On the other hand, transparency is a multifaceted concept that is often conflated with accountability or even corruption, impartiality and rule of law. Hood's analysis illustrates the tendency for transparency to bleed conceptually into other equally compelling normative standards such as rule of law, accountability, public participation, and deliberative democracy. (Hood 2006, 14).¹³ Moreover, Bellver & Kaufman give a definition of transparency which includes not only making information available and accessible to stakeholders, but also laws and regulations are administered and implemented in an impartial and predictable manner.¹⁴ Principal-agent theory is concerned with the problem of the conflict of goals between the principal and the agent and the difficulty or the inability of the principal to verify what the agent is doing (Eisenhardt, 1989).¹⁵ The main tenets of agency theory focus on information asymmetry,¹⁶ pre-contractual opportunism¹⁷ and moral hazard or post-contractual¹⁸ (Van Slyke 2006).¹⁹

Stewardship theory serves as an alternative to the reasoning of principal-agent theory (Donaldson and Davis 1997, 27).²⁰ In other words, this theory has been developed as an explicit counterpart to principal-agent theory. Stewardship theory stems from organizational psychology and organizational sociology. (Donaldson & Davis 1991, 51).²¹ Instead of shirking away, managers or accountors aim to do a good job and to generate value - not only for themselves but for their organization as a whole. Stewardship behavior can be interpreted as rational behavior: The steward identifies cooperative behavior as being more useful than self-serving behavior. (Davis, Schoorman & Donaldson 1997, 24).²²

However, this theory fails to consider the lack of trust within government agencies, the risk-averse dispositions of public managers and the lack of incentives for public officers; the deeply politicized environment and scrutiny for oversight and accountability create pressures for not developing trusting relationships because of external perceptions of corruption (Van Slyke, 2006).²³ Cribb and Slyke state that steward theory has not been tested particularly in voluntary sector research and public sector.²⁴ Furthermore, it fails to provide any empirical evidence for accountability in the public sector (Greiling and Spraul 2010).²⁵

13) Hood, Christopher (2006) Transparency in historical perspective In: Hood, Christopher and Heald, David, (eds.) Transparency: the Key to Better Governance?. Proceedings of the British Academy (135). Oxford University Press, Oxford, UK, 3-23. ISBN 9780197263839

14) Bellver, Ana, and Daniel Kaufmann. 2005. Transparenting Transparency: Initial Empirics and Policy Applications. World Bank Policy Research Working Paper.

15) Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *The Academy of Management Review*, 14(1), 57-74.

16) The information asymmetry sometimes referred to as information failure, that present whenever one party to an economic transaction possesses greater material knowledge than the other party. In other words, one party has information to other group that does not possess.

17) Precontractual opportunism occurs which a party to a contract can exploit hidden information.

18) Moral hazard occurs when a party to the contract uses information and expertise and act in its own self-interest, to the exclusion of the agreed upon goals).

19) Van Slyke, D. M. (2006). Agents or Stewards: Using theory to understand the government-nonprofit social service contracting relationship. *Journal of Public Administration Research and Theory*, 17, 157-187.

20) Donaldson, L., & Davis, J. H. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. *Australian Journal of Management*, 16(1), 49-64.

21) Donaldson, L. and Davis, J.H. (1991) Stewardship Theory or Agency Theory: CEO Governance and Shareholder Returns. *Australian Journal of Management*, 16(1), 49-64.

22) Davis, J.H., Schoorman, F.D. and Donaldson, L. (1997). Toward a Stewardship Theory of Management. *The Academy of Management Review*, 22(1), 20-47.

23) Van Slyke, D. M. (2006). Agents or Stewards: Using theory to understand the government-nonprofit social service contracting relationship. *Journal of Public Administration Research and Theory*, 17, 157-187.

24) Ibid

25) Greiling, D., & Spraul K. (2010). Accountability and the challenges of information disclosure. *Public Administration Quarterly*, 338-377

As much of the policy literature today focuses on the role of transparency in reducing corruption, we find it compelling to explore what aspects more precisely might be necessary in order for transparency to enhance accountability and contribute to bringing about good government.

Transparency is sometimes more narrowly as “the release of information which is relevant for evaluating institutions” (Bauhr & Nasiritousi forthcoming).²⁶ Using a terminology derived from the principal agent framework, Lindstedt and Naurin make a distinction between agent controlled and non-agent controlled transparency. The release of government information by governments can be seen as a typical instance of agent controlled transparency, while the use of that information by external actors, such as the media, NGO or citizens is non-agent controlled.²⁷

Transparency and accountability, as two basic principles of good governance, are crucial in providing information and insight to the public on how public money is collected, allocated and spent. Additionally, transparency and accountability are necessary to show the determination and the intention of the public institutions, as well as to inform and share this information with the public (Trenovski Borche, 2014, 6). Trenovski states that no institutions in Macedonia has taken extra effort to introduce and inform the citizens about their budget in a visually simplified manner (preparation of Citizen’s budget).²⁸

Transparent budgets, in particular, encourage ease of access, present consolidated fiscal activity, contain auditing procedures, lack special accounts, and disseminate historical data (Poterba and Von Hagen, 1999). Budget transparency helps stakeholders assess an organization’s fiscal conditions, understand its costs, and the benefits of its services (Afonso, 2014; Dye et al., 2011). Governments that encourage budget transparency tend to be more democratic, have free and fair elections, and encourage partisan competition (Sayogo and Harrison, 2013; Wehner and de Renzio, 2013). Globally, transparency helps solve the collective action problems hampering development (Grigorescu, 2003).

Consequently, budgetary transparency has become a core theme of the debates on international development. It has been used in connection with international cooperation and conflict solution (Pallas & Urpelainen, 2011), the monitoring of international agreements (whether commercial or financial), monitoring the funds received as aid by developing countries or by countries undergoing financial crises (Chandy & Kharas, 2011), reducing corruption, and improving economic performance.

Przeworski (2010) writes that transparency enables citizens to know whether governments are defending public interests or not, so citizens can apply appropriate sanctions. Thus, politicians whose acts are favorable to citizens’ interest will be reelected, while those whose acts do not further these interests will lose elections. In other words, transparency makes it possible for governments to be held accountable for their acts, at least politically speaking. However, in a democratic environment, with strong, consolidated institutions, accountability should not only exist in the political sphere. This being the case, Schedler (1999) establishes three issues considered necessary for its effectiveness: information, justification and punishment. The first two (information and justification) refer to what the author calls “answerability”, namely, the duty of those who hold public office to inform, explain and answer for their acts; whereas the latter (punishment) concerns the capacity of enforcement, in other words, the capacity of agencies to impose sanctions and loss of power for those who violate their public duties.

One popular argument proposed by Fox (2007) holds that transparency leads to accountability when governments publish information and legislatures, supreme audit institutions (SAIs), and other formal oversight bodies use this information to hold government to account and apply sanctions, if necessary. Other authors,

26) Bauhr, Monika and Nagmeh Nasiritousi. Forthcoming. Resisting Transparency. *Global Environmental Politics*

27) Lindstedt, Catharina, and Daniel Naurin. 2010. Transparency is not enough: Making Transparency Effective in Reducing Corruption, *International Political Science Review*, 31: 301-322.

28) Trenovski, B. (2014). Improvement of the transparency and accountability through a performance based budget. Monitoring report on the transparency and accountability of the budget users, 6-7.
http://cea.org.mk/documents/cea_idscs_izvestaj%20od%20monitoring_eng.pdf

such as Yu and Robinson (2012), Peixoto (2013), and Khagram, de Renzio, and Fung (2013), have investigated other factors that play a role in connecting transparency and accountability, including the role of information intermediaries, international norms, and shifts in the political opportunity structure.

Research principle/methodology

The budget process documents are key documents since they outline the priorities of the local policies and the local programs. A transparent and open process leads to democratization and inclusiveness of the citizens in the policy creation and the public resource distribution.

Since the budgets are technical and not readily understandable for the wide public, an open process refers to information that are comprehensive but also simplified, understandable and provided in a timely manner, while easily accessible to the wide public. Subsequently, the budget transparency refers to the degree and simplicity with which the citizens can access the budget information, whether they provide overview on the planned/executed government's revenues, allocations, and expenditures, the availability of the documents, the easiness of their access and their timeliness.

The methodology used in the scoring of the level of availability and transparency of the LSGU budget process in the municipalities in Macedonia,²⁹ covers scoring of the budget transparency both based on the degree of availability and manner (source) of obtaining the key budget and budget process documents. For the purposes of this paper, local government budget transparency is measured by the number of key budget documents published and the medium/source where these are disclosed, as a level of transparency being scored on a scale from minimum 0 to maximum 16 index score points.³⁰

The key documents considered in the scoring through their availability are the following eight LSGU documents: (1) *Budget proposal*, (2) *Enacted budget*, (3) *In-Year quarterly budget execution reports*, (4) *Year-end budget execution report*, (5) *Annual report*, (6) *Citizens' budget*, (7) *Audit report* (by SAO)³¹ and (8) *Statute of the LSGU*.

These documents are considered as available and scored if the following criteria are met:

- *Budget proposal* - is considered as available if a document with this title³² has been published on the local unit's website separately, as part of the municipal Official Gazette or has been obtained through a request based on the Freedom of Information Act.³³ If not obtained in any of the methods used, the document is not considered as published or available. If the budget proposal is not published/available and the official response by the LSGU is that it is the same document as the Enacted budget³⁴ thus it is not available, this document is not considered as available.
- *Enacted budget* - is considered as available if a document with this title³⁵ (or Budget)³⁶ for the concerning fiscal year has been published within the local unit's website separately, as part of the municipal Official Gazette or has been obtained through a request based on the Freedom of Information Act. If the document is not obtained in any of these manners the document is not considered to be published/available.

29) Nomenclature of Territorial Units - NTES is based on the territorial organization of the local self-government in the Republic of Macedonia and it is harmonized with the classification of the European Union - Nomenclature of Territorial Units for Statistics – NUTS, established by Regulation (EC) No 1059/2003, there are 80 Municipalities, and one City, total of 81 LSGUs

30) From minimum 0 to maximum 14 if the State Audit Office has not conducted an audit in the last 5 years

31) SAO – State Audit Office of R. Macedonia

32) Предлог или Нацрт Буџет

33) Freedom of Information Act, official name Law on free access to public information, Official Gazette of RM (13/2006, 86/2008, 6/10, 42/14, 148/15, 55/16)

34) Усвоен Буџет

35) Усвоен Буџет

36) Буџет на општина

- *In-Year quarterly budget execution reports* - are considered as available if all quarterly documents with this title³⁷ (for the concerning period)³⁸ have been published on the local unit's website separately, as part of the municipal Official Gazette or has been procured through the usage of the Freedom of Information Act. If not, the document is not considered to be published. In the cases when only a "conclusion" for adoption (by the Municipal Council) has been published or provided the conclusion document, the budget documents are not considered as available.
- *Year-end budget execution report* - is considered as available if a document with this title (or title Final Account of the Budget)³⁹ has been published on the local unit's website separately, as part of the municipal Official Gazette or has been obtained through a request based on the Freedom of Information Act. Otherwise the document is not considered to be published/disclosed.
- *Annual report* - is considered as available if a document with this title⁴⁰ has been published on the local unit's website separately, as part of the municipal Official Gazette or has been procured through the Freedom of Information Act. Otherwise, the document is not considered to be published. If the annual report is not prepared/published/available and the reply by the LSGU is that it is the same as the Year-end budget execution report this is not considered as available document.
- *Citizens' budget* - is considered as available if any kind of simplified document presenting the budget revenues, expenditures or execution which is intended for the citizens and is following the principles of citizens' budget as considered by OBI,⁴¹ has been published on the local unit's website or has been procured through the Freedom of Information Act.
- *Audit report by SAO* - is considered as available if any audit report for the past five years have been conducted and published on the web site of the LSGU.⁴² The availability of the Audit report only on the website of SAO is not considered as available document, therefore only if any Audit report is published on the website or obtained through request of the LSGUs is scored. On the other hand, if the other budget documents are obtained through request of the LSGUs except the Audit report by SAO, it will be scored by -1.
- *Statute of the LSGU* - the Statute is the basic constitution document of the LSGUs and defines the openness, participation level and the related issues thus we consider that this is a crucial document for the transparency of the local government.

The easiness of the access of the citizens' considers the source of availability: if the document is accessible through a *specific designated area on the official website (2 points for each document)*, when disclosed within the municipal Official Gazette on the official web site (1 point for each document), when requested and received under the Freedom of Information Act (1 point for each document), in the cases when there is No information/no reply/does not exist/SAO has not produced an audit report within the last 5 years (0 points for

37) Кватрален извештај за извршување на буџет на општината

38) During the monitoring period for fiscal 2016-2017, the availability of the quarterly budget execution reports for the Q1, Q2, and Q3 for the fiscal 2016 are considered if separately published (not cumulative). During the monitoring period for fiscal 2017-2018, the availability of the quarterly budget execution reports for the Q1, Q2, Q3 and Q4 for the fiscal 2017 are considered if separately published (not cumulative).

39) Завршна сметка на буџетот на општината

40) Годишен извештај за работењето на општината

41) Guide to transparency in Government Budget Reports, Why are Budget Reports Important and What should they include, OBI, <http://www.internationalbudget.org/wp-content/uploads/Guide-to-Transparency-in-Government-Budget-Reports-Why-are-Budget-Reports-Important-and-What-Should-They-Include-English.pdf>

http://siteresources.worldbank.org/EXTSOCIALDEVELOPMENT/Resources/244362-1193949504055/4348035-1352736698664/Guidance_Note_Citizen_Budget.pdf

42) During the monitoring period for fiscal 2016-2017, the availability of the audit reports for any of the fiscal 2016 to 2012 are considered if these are conducted by SAO for the specific LSGU, during the monitoring period for fiscal 2017-2018 the availability of the audit reports for any of the fiscal 2017 to 2013 are considered if these are conducted by SAO for the specific LSGU.

each document specifically or -1 point⁴³ in the cases when SAO has produced an Audit report and the LSGU has not provided the document in any manner).

Through the usage of the index scoring method, there is possibility of maximum of 16 index points per LSGU in the case when all eight monitored documents are available through the “easiest and fastest” accessible manner - the official website of the LSGU on a specifically designated area for the local government budget process.

Furthermore, a comparison of whether there is an upgrading, downgrading or status quo has been completed through a comparison between the three periods: 2014-2015,⁴⁴ 2016-2017 and 2017-2018.⁴⁵ Depending on the period of publishing of the documents, there are three comparison indexes providing information and conclusion of whether there are any improvements of the availability of the documents among all eighty one.

Legally required budget disclosure for the local governments

The Constitution of Republic of Macedonia defines the level of self-governance as a right, and the unit for self-government defined is “the municipality” (Article 114).⁴⁶ According to the Law on Territorial Organization⁴⁷ there are 80 Municipalities (NTES⁴⁸ level 4) and the City of Skopje (NTES level 5, with covers 10 of these municipalities). The requirements for disclosure of the budget related documents regarding local government budget are specified in the budget legislation and the freedom of information legislation.

The Law on budgets,⁴⁹ considers budget transparency in the article 53⁵⁰ and 54 which respectively state, “*The budget execution report of the municipalities shall be done in accordance with the law*” and “*(2) The municipal budget and its final account shall be published in the Official Gazette of the municipality*”. The Law on local self-governance⁵¹ defines the obligations for informing the citizens through ways determined in the Statute “*The organs of the municipality, the council committees, and public agencies established by the municipality shall be obliged to inform the citizens about their work, as well as about the plans and programs which are of importance for the development of the municipality without any compensation, in a way determined by the statute. (2) The municipality shall be obliged to enable access to the basic information about the services that it provides to its citizens, in a way and under conditions determined by the statute of the municipality.*”⁵²

43) The last year index for 2017-2018 is subtracting (-1 point) for those municipalities that have undergone an audit and SAO has produced a report, yet did not publish nor provided the report based on a request based on the Freedom of Information Act. The indexes for former years have been altered in order to enable comparability

44) The City of Skopje is not monitored in the first round, thus there is no index comparison between the two points in time. The methodology for the 2014 – 2015 monitoring period includes additional manner of availability which is excluded in the 2016 – 2017 and 2017 – 2018 monitoring periods. In the 2014 – 2015 monitoring period was conducted direct interviews with municipal employees for obtaining public budget documents which is not a practice and part of the methodology in the other years.

45) Index score revised with altered methodology with -1 point for audit reports not published or not provided in any manner for those LSGUs that have undergone audit, in accordance the SAO programs for the past five years

46) <https://www.sobranie.mk/WBStorage/Files/UstavnaRmizmeni.pdf>

47) Law on Territorial Organization (Official Gazette of RM 55/2004, 12/05, 98/08, 149/14,

48) Nomenclature of Territorial Units - NTES is based on the territorial organization of the local self-government in the Republic of Macedonia and it is harmonized with the classification of the European Union - Nomenclature of Territorial Units for Statistics – NUTS, established by Regulation (EC) No 1059/2003

49) The Law on budgets (clean text), Official Gazette of RM (no. 64/05, 04/08, 103/08,156/09, 95/10, 180/11 171/12 192/15, and 167/16), available at http://www.finance.gov.mk/files/u249/Budget_law_cleared_version_20042010_0.pdf

50) Chapter VII, Budget transparency, Article 53

51) The Law on local self-governance (Official Gazette of RM (no.5/02)

52) The Law on local self-governance (Official Gazette of RM (no.5/02), Article 8

The transparency of the municipal council's work in the same law states“(2) the council sessions shall be public... (4) The presence of the public shall not be excluded at the debate on the municipal budget, annual balance sheet to the budget and the urban plans.”⁵³

While these legal acts deal only with the disclosure of the budget and the year-end report within the municipal Official Gazette there is no legal requirement for permanent availability of the key budget documents, neither for disclosure prior their approval, except for the presence on the council meetings. As of the end 2017,⁵⁴ with the alteration to the Law on accounting of the budgets and the budget users, an additional paragraph is inserted stating: *“the budget users are obliged to publish the final budget accounts on their web sites within 15 days from the day they submit the final accounts to the Register of annual accounts at the Central Registry”*

The Regulation does not require disclosure of existing documents such as the budget plan or audit report. The legislation does not define disclosure of in-year/quarterly budget execution reports, however some of the local governments disclose the in-year reports primarily through the municipal Gazette.

The status of budget transparency through main budget availability in the Macedonia LSGUs

This paper evaluates the budget transparency among the local self-government units in Macedonia through the level and manner of availability and disclosure of the budget documents. The disclosure requirements specified in the legislation are limited, i.e. a limited number of budget documents are obligatory to be published and there is no information of whether the noncompliance has lead/leads to any sanctions.

Analysis and comparison of the disclosure practice among the 81 LSGUs in Macedonia revealed that the LSGUs most often (and most likely) comply with the requirements stipulated in the budgetary laws as it can be seen that the most often available documents are the Enacted budget and the Year-end budget execution report. However, still a significant number of the LSGUs fail to comply with the requirements of the freedom of information legislation, both failing to respond to comply with the deadlines or providing the information/response at all. For the last 2017-2018 monitoring period 26 LSGUs (32%) out of the 81 requests, failed to respond within the legally set deadline, while additional 6 never replied to the requests (7,4%). In the 2016 - 2017 monitoring period, the number of LSGUs that never replied to the requests was almost tripled (17 out of 81 LSGUs) of the number for the 2017 - 2018 monitoring period.

After the expiration of the legal deadline of 30 days for submission of an answer regarding the submitted request for access to information of public character, an appeal was filed to the Commission for Protection of the Right to Free Access to Public Information (CPRAPI) for 7 LSGUs.⁵⁵ One of the LSGU after the filed appeal to CPRAPI has sent an answer regarding the submitted request and appeal.

In Macedonia, 34 out of 81 LSGU (42%) still have not published on the local unit's website contact information of the person in charge of public information in order to make the communication with the information requester easier. This case is more common in rural LSGUs.

Once again, there is no continuous practices of disclosure of the budget documents but rather “forced” transparency - if demanded. There is overall increase of the availability of the budget documents in the 2017-2018 index evident on an overall basis, however also there is an increased number of LSGUs that disclose the documents in a designated specific area and the overall availability of the documents.

53) The Law on local self-governance (Official Gazette of RM (no.5/02), Article 42

54) Law on accounting of the budgets and the budget users, Official Gazette of RM (61/02,98/02, 81/05, 24/11,145/15) with the Law for alteration and addition to the Law on accounting of the budgets and the budget users, (Official Gazette of RM (170/2017), adds to the article 29

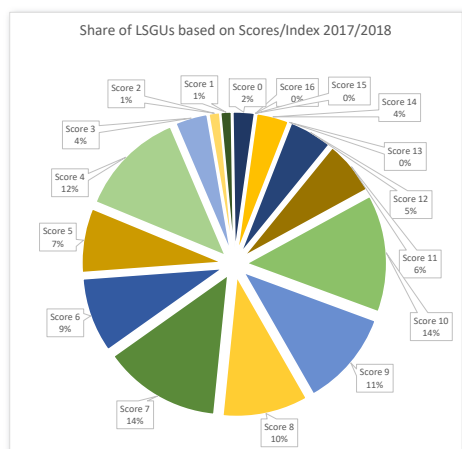
55) 7 appeals have been filed to the CPRAPI through the legal appeal procedure on 12.07.2018.

Figure 1 and Figure 2 indicate that still⁵⁶ not even one of the LSGUs produced and published all eight documents on the web site of the LSGU in a specifically designated area (thus there is no score of 16 points). For the first time 5 LSGUs (6%) have produced and published Citizens' budget.⁵⁷

Request for access to public information (RAPI) through the Public Information Act was sent to all 81 LSGUs for the budget documents that were not published on their web pages during the monitoring of the availability of budget documents on the official web pages of LSGUs.

The maximum number of documents produced and attainable by any single municipality is all eight (in two instances: Prilep and Strumica) regardless of the method for obtaining. The maximum number of seven documents available (in any of the manners used for obtaining documents) is attainable among eight LSGUs. The predominant share of municipalities have score of 10 index points and score of 7 index points (14% of the LSGUs in each group). In addition, if we take into consideration the LSGUs where the SAO has not conducted an audit report in the past 5 years (2013-2017), there are 7 LSGUs that have produced and made available (in any of the manners used for obtaining documents) 6 out of 7 budget documents.

Figure 1
Level of LSGU budget transparency, in % share



If we consider that the availability on the official websites as the easiest and fastest manner to be accessed, two municipalities can be separated as most transparent with availability of the seven (out of eight) budget documents available on the LSGUs' websites in a designated location specific to the budget process, these are the Municipalities of Bitola and Centar. On the other hand, there are still over ten municipalities that do not have functional web pages or those that do not use the official Macedonian language on their web pages.

The lowest scores of budget transparency⁵⁸ are measured among the municipalities of Saraj and Vrapciste with score of zero and no document available neither on the website, nor responded or provided the documents through RAPI. In regards to the municipalities Zelenikovo and Zhelino only one of the eight document is available/attainable.

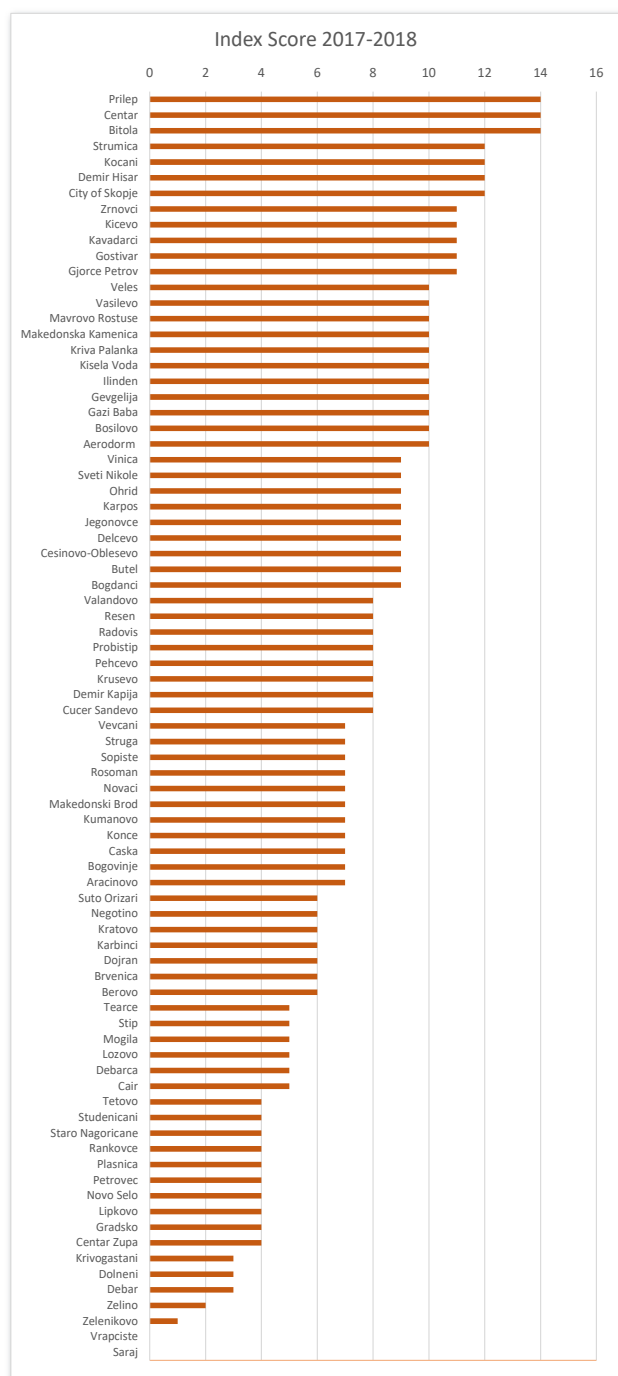
The most available documents, regardless of method of obtaining are the *Statute* (disclosed/obtained among 94% of LSGUs), *In-year reports* (disclosed/obtained among 93%), *Enacted Budget* (disclosed/obtained among 91%), and the *Year-end budget execution report* (disclosed/obtained among 90%). As for the remaining documents, only 6% provided Citizens' budget, 27% provided Audit Report, 35% provided Budget Proposal, and 68% provided Annual report. A significant part of the LSGUs still do not have the Gazette available on the website, which makes it rather impossible for the citizens to access the local budget documents.

56) Referring to the Index 2017-2018 monitoring period

57) Referring to the Index 2017-2018 monitoring period, LSGUs Prilep, Aerodrom, Strumica, Centar, Ilinden

58) Referring to the Index 2017-2018 monitoring period

Documents most often published and document not produced or published at all



Voluntary disclosure of budget documents (or proactive transparency) among the LSGUs in Macedonia still needs improvement. The budget document that is most easily accessed and available in a designated area on the website is the Enacted budget (available on the web of 50 LSGUs), followed by the Year-end budget execution report (available on the web of 48 LSGUs), the Statute of the LSGU (available on the web of 47 LSGUs).

In most of the cases the Budget proposal is not disclosed on the websites (7 LSGUs publish the document on the web), and is still a document that is often referred as “the same” as the Enacted budget. This is followed by the Audit reports (12 LSGUs published the reports on their website (if) conducted by the State Audit office); the Annual report (21 LSGUs) and the In-year reports (22 LSGUs).

The Annual reports are either not compiled or often associated with the Year-end budget execution report, thus the intent of being a “general purpose” report is associated with the detailed legal requirements. Moreover, most local governments do not use any alternative tools to communicate their results with substantial information which covers the degree of “achieved” objectives or the performance linked with the financial effects on the budget. This raises the questions if any and how the LSGUs provide accountability for their performance to their citizens.

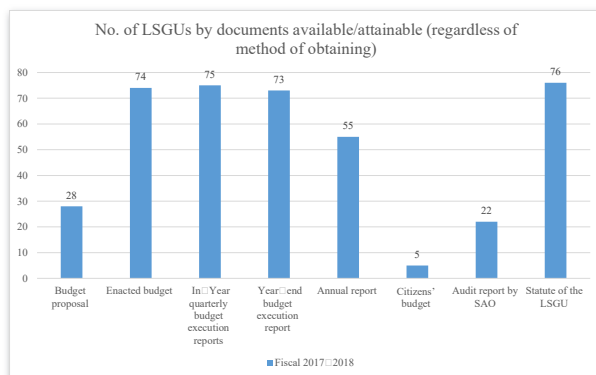
The inability of the LSGUs to provide the information grows if these and their accessibility (web site, official gazette, RAPI) is to be presented in a manner that the general public understands it

or is interested in it, which is the case of a preparation of a Citizen's Budget. For the first time five of the LSGUs prepared and published such a document.

Figure 2 Index of budget document availability by LSGU

As Rubin states (Rubin, 2000, 9) “Accountability does not happen by itself; budgets do not wade into crowds and draw around them circles of admiring readers. Budgets need to be interpreted and someone has to tell a good story to get the readers involved”⁵⁹

Figure 3
Number of LSGUs with available /attainable budget documents, by document 2017-2018



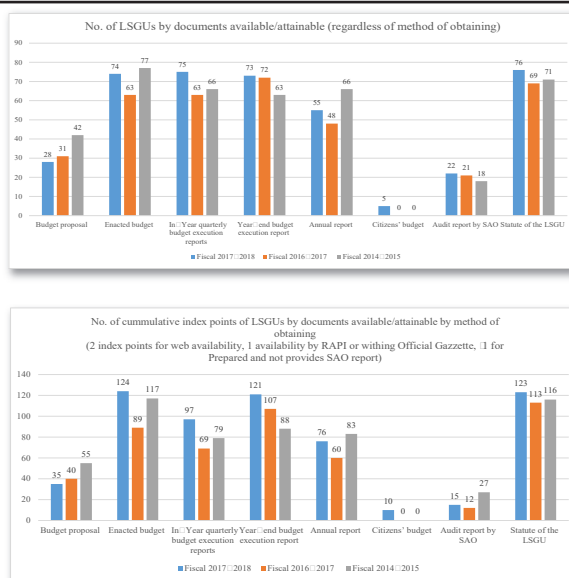
Budget transparency through document availability improved or declined?

The paper found that there is a considerable scope for improvement of the transparency of the local government budget process, while at the same time there are barriers that weaken the relationship and communication between local governments and the citizens. A very limited number of the local governments in Macedonia, timely and comprehensively publish and disclose the full array of budget related documents. The problem of limited transparency and accountability at a local level are interconnected to the absence or weak participatory decision-making in the budgeting process, weak mechanisms for monitoring and evaluation and low level of human capital. These are at the same time constraints of the local government affecting the quality of the services provided to the citizens.

Citizen participation as a concept that involves the civil society into government decision-making process is an essential component of a healthy democratic society. In Macedonia, not all municipalities organized budget forums where the society can express their needs and priorities of the community. Moreover, not all municipalities also respect the Public Information Act and their awareness of obligation of provision of the requested information is still at low level.

Most significant improvements in 2017-2018 compared with the previous period (2016-2017) are the availability of the In-Year quarterly execution reports and the Enacted Budget, while the availability of the Budget proposal availability has deteriorated. Considering the last legal changes, which oblige the LSGUs to publish the Year-end budget execution reports on the websites, the level of legal compliance can be evaluated as well. The monitoring indicated that for the fiscal 2017, only 49 LSGUs published the Year-end execution reports on a specific designated place on the web, and additional 8 LSGUs published the Year-end execution reports within the municipal Gazette, which is amounting to total of 70% of the LSGUs that comply with the legal obligations.

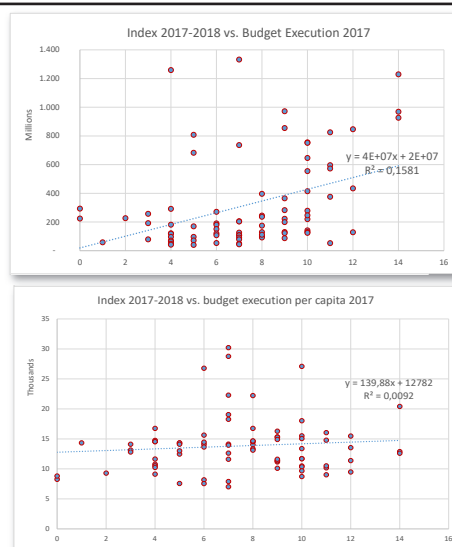
Figure 4
Number of LSGUs with available / attainable budget documents, by document, comparison 2014- 2015, 2016-2017 and 2017-2018



Factors correlated with budget transparency

In the attempt to consider if the index 2017- 2108 of the budget transparency are correlated with several factors. It can be concluded that the availability and manner of availability of the budget associated documents on a local level government are positively associated: to a limited degree with the size of the budget⁶⁰ (correlation 0.35), urban vs. rural municipalities (correlation 0.47, with the urban municipalities),⁶¹ and the size of the LSGU (population) (correlation 0.30). The larger the LSGU both by population, the budget size (in absolute value) and an urban LSGU, it is more likely to be more transparent in terms of disclosing budget related information and documents.

Figure 5
Correlation of the transparency index and selected variables⁶⁵



CORRELATION INDEX 2017-2018

CORRELATION	INDEX 2017-2018
BUDGET EXECUTION	0,35
BUDGET EXECUTION PER CAPITA	0,10
URBAN RURAL	0,47
POPULATION SIZE	0,30
HOUSEHOLD NUMBER	0,33

60) Executed budget, in absolute value in MKD for 2017

61) Coding urban with 1 and rural with 0; the average index of the urban municipalities is 8.75 while for the rural the average index is 5.84 out of 16.

62) In the scatter diagram, the LSGU City of Skopje is excluded in the visual representation as it is an outlier, the budget of the City is 3.6 times larger in value than the second largest LSGU by total budget executed

Conclusions & recommendations

The above analysis indicates still relatively low level of budget transparency among the Macedonian local self-government units. The most transparent in regards the overall average level of transparency (in accordance with the above described methodology) are the municipalities of Prilep, Bitola and Centar, with a score of 14 (out of maximum 16), followed by City of Skopje, Strumica, Kocani and Demir Hisar with scores of 12 points. The least transparent are Saraj and Vrapcishte with scores of 0.

Furthermore:

- As many as 2.5% of the municipalities did not publish/provide a single budget related document.
- The number of municipalities that publish the draft budget (budget proposal) for the following fiscal year on their website is small, only 9% of the municipalities published the Budget proposal for 2018, thereby depriving the possibility of interested citizens to participate in planning the budget of their municipality.
- 6% (5 municipalities) prepared and published Citizens' budget for 2018 for the first time, suggesting a positive trend however still overall lack of incentive for citizens' participation and monitoring of implementation.
- 27% of the LSGUs published their In-year quarterly budget execution reports on the web site which is a significant increase from previous years.

It is evident that due to the last legal changes obliging the municipalities to disclose the Year-end budget execution reports, the legal changes are driving the improvement in local budget transparency and accountability. However, there is still a space for significant improvement in the area. In these circumstances the improvements are to be expected if:

- The lack of administrative and financial capacity is adequately addressed
- Political awareness and willingness among the representatives (mayor and councils) is improved
- A demand driven trigger for increased budget transparency among the citizens and the media is achieved
- The legislation puts further pressure for increased budget transparency
- Increased awareness and capacities among the citizens of the benefits of budget transparency

All of these with the aim of improving the local budget transparency as a stepping stone towards increased accountability (towards the citizens), increased efficiency and interest for revenue collection and public expenditure, and decreased corruption for the improved wellbeing of the citizens of the municipalities.

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Annex

Measured Indexes and difference (+ Improvement, - Decline)

LSGU Name	Index Fiscal	Index Fiscal	Improvement +, Decline -	Index Fiscal	Improvement +, Decline -
	2014-2015	2016-2017	(I2014-2015 to I 2016-2017)	2017-2018	(I2016-2017 to I 2017-2018)
1 Centar	8	7	-1	14	7
2 Prilep	10	8	-2	14	6
3 Bitola	11	11	0	14	3
4 Strumica	12	5	-7	12	7
5 City of Skopje	N/A ⁶³	11	N/A	12	1
6 Kocani	9	11	2	12	1
7 Demir Hisar	4	12	8	12	0
8 Gostivar	6	6	0	11	5
9 Kavadarci	8	7	-1	11	4
10 Kicevo	4	7	3	11	4
11 Gjorce Petrov	9	10	1	11	1
12 Zrnovci	2	10	8	11	1
13 Makedonska Kamenica	9	6	-3	10	4
14 Mavrovo Rostuse	4	6	2	10	4
15 Gazi Baba	12	7	-5	10	3
16 Kisela Voda	6	7	1	10	3
17 Vasilevo	5	7	2	10	3
18 Veles	9	7	-2	10	3
19 Aerodorm	8	8	0	10	2
20 Bosilovo	8	9	1	10	1
21 Kriva Palanka	7	9	2	10	1
22 Ilinden	9	10	1	10	0
23 Gevgelija	8	11	3	10	-1
24 Delcevo	9	6	-3	9	3
25 Bogdanci	9	7	-2	9	2
26 Jegonovce	5	7	2	9	2
27 Sveti Nikole	9	7	-2	9	2
28 Butel	8	8	0	9	1
29 Cesinovo-Oblesevo	6	8	2	9	1
30 Karpos	10	8	-2	9	1
31 Vinica	12	9	-3	9	0
32 Ohrid	12	11	-1	9	-2
33 Demir Kapija	5	2	-3	8	6
34 Krusevo	9	4	-5	8	4
35 Cucer Sandevo	5	5	0	8	3
36 Pehcevo	6	5	-1	8	3
37 Probistip	10	6	-4	8	2
38 Radovis	6	7	1	8	1
39 Resen	8	8	0	8	0

63) Not applicable as not monitored at the period, thus there is no possibility for comparison as well

LSGU Name	Index Fiscal 2014-2015	Index Fiscal 2016-2017	Improvement +, Decline - (I2014-2015 to I 2016-2017)	Index Fiscal 2017-2018	Improvement +, Decline - (I2016-2017 to I 2017-2018)
40 Valandovo	2	8	6	8	0
41 Aracinovo	6	0	-6	7	7
42 Bogovinje	8	4	-4	7	3
43 Rosoman	3	4	1	7	3
44 Sopiste	5	4	-1	7	3
45 Struga	9	4	-5	7	3
46 Konce	6	6	0	7	1
47 Vevcani	6	6	0	7	1
48 Makedonski Brod	9	7	-2	7	0
49 Novaci	9	7	-2	7	0
50 Caska	11	8	-3	7	-1
51 Kumanovo	5	11	6	7	-4
52 Negotino	9	0	-9	6	6
53 Karbinci	5	2	-3	6	4
54 Berovo	6	5	-1	6	1
55 Brvenica	5	5	0	6	1
56 Suto Orizari	6	5	-1	6	1
57 Dojran	5	7	2	6	-1
58 Kratovo	5	8	3	6	-2
59 Cair	6	0	-6	5	5
60 Debarca	7	3	-4	5	2
61 Mogila	11	5	-6	5	0
62 Tearce	3	5	2	5	0
63 Lozovo	10	6	-4	5	-1
64 Stip	12	6	-6	5	-1
65 Novo Selo	5	0	-5	4	4
66 Gradsko	6	3	-3	4	1
67 Lipkovo	7	3	-4	4	1
68 Centar Zupa	5	4	-1	4	0
69 Plasnica	4	4	0	4	0
70 Petrovec	5	5	0	4	-1
71 Rankovce	7	5	-2	4	-1
72 Staro Nagoricane	3	5	2	4	-1
73 Studenicani	3	5	2	4	-1
74 Tetovo	11	5	-6	4	-1
75 Dolneni	6	2	-4	3	1
76 Krivogastani	7	4	-3	3	-1
77 Debar	6	9	3	3	-6
78 Zelino	9	8	-1	2	-6
79 Zelenikovo	5	2	-3	1	-1
80 Saraj	6	0	-6	0	0
81 Vrapciste	2	0	-2	0	0

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EFFECTS OF STATE-OWNED ENTERPRISE MODEL ON ORGANIZATIONAL PRODUCTIVENESS IN MACEDONIA

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Abstract

The qualitative analysis of the net operating margin indicator showed that state-owned joint stock companies and joint stock companies where the government is a shareholder as management models have higher profitability compared to public enterprises and limited liability companies in state ownership. The research rejects the hypothesis that the allocation of production inputs, such as labor and capital, affect the degree of production results i.e. this hypothesis is not applicable to state-owned enterprises in Macedonia, based on the available data for 2017. It seems that if the public service is not profitable but legally mandatory the government central or municipal establishes a public enterprise, while profitable enterprises were transformed to joint stock companies exempt from a more rigorous public law regime regarding employment and salaries. Quantitative analysis did not show statistically significant results.

Key words: State Owned Enterprises, Efficiency, Public Finances, Macedonia

Introduction

At a time when economic globalization, privatization and market competition are the basic paradigm, one should not neglect the fact that state-owned enterprises ("SOEs") continue to play a significant role in the global economy. In some countries, they account for as much as 20% of the total investment, 5% of the employment and 40% of the domestic output providing services in various economic sectors such as utilities, finance, natural resources, etc.⁶⁴ Globally, the profitability of state-owned enterprises has been rising. The proportion of SOEs among the Fortune Global 500 has grown from 9% in 2005 to 23% in 2014, driven particularly by the growth of Chinese SOEs.⁶⁵

64) *Factsheet - Corporate Governance of State-Owned Enterprises* (International Finance Corporation - World Bank Group, 2018)

65) *State-Owned Enterprises: Catalysts for public value creation?* (PricewaterhouseCoopers, 2015), p. 6

After the Second World War, there is a wave of nationalization of key industries in Western Europe to foster economic recovery after the war, while in Eastern Europe there are centrally planned economies until the 1990s. Following the collapse of the Berlin Wall and the spread of liberal economic values influenced by the Western countries, massive privatization takes place in these economies as a reverse process of nationalization. As one of the countries that were part of the socialist system of former Yugoslavia, after the independence Macedonia went through a long privatization process and the number of state-owned enterprises was constantly decreasing.

The subject of this paper is the potential connection between the management model, the number of users, the number of employees and the number of members in the management bodies (management board, supervisory board, director) of state enterprises in Macedonia and the degree of their efficiency expressed through the net operating margin.

This paper addresses the question do commonly accepted factors of productivity such as labor and capital affect state owned enterprise in Macedonia similarly, or differently based on the specific organizational model of SoE. A typically formulated hypothesis assuming the relationship between input and output factors of productivity is 'allocation of production inputs such as labor and capital affects the degree of production outputs',⁶⁶ or expressed differently efficient allocation of available resources provides (greater) productivity. This article tests the applicability of said hypothesis on SoEs in Macedonia.

Conclusions are based on a cross sectional study, and quantitative analysis of a stratified sample of 35 state owned enterprises in Macedonia.

Theoretical research framework

State-owned enterprises have different management models: in Macedonia in 2017 there were a total of 129 public enterprises,⁶⁷ 14 joint-stock companies in full state ownership, 5 joint-stock companies in which the state is a shareholder and 5 limited liability companies in state ownership. In 2016, 31 of the state enterprises in Macedonia had a total financial loss of over 35 million euros.⁶⁸ Having in mind that these losses are covered by the founders of the state enterprises (according to the Law on Public Enterprises⁶⁹ state enterprises may be established by the state of Republic of Macedonia, the municipalities and the City of Skopje) i.e. state funds are used to cover the losses, one could naturally question the level of efficiency and effectiveness of the state enterprises.

Whether they will contribute to economic and social development or will constitute an obstacle to it, could largely depend on establishing good practices. These good practices were determined in 2005 by the OECD in the Guidelines for Corporate Governance of State-Owned Companies, and were revised in 2015. They represent soft legal instruments that are not binding for the countries, but provide guidelines on corporate governance of SOEs and on reforming relevant legislation. According to the guidelines, state enterprises are defined as any company in which the state has some kind of ownership (including public enterprises, joint stock companies and limited liability companies).⁷⁰

66) OECD, Defining and Measuring Productivity, available at: <https://www.oecd.org/sdd/productivity-stats/40526851.pdf> [accessed 22.11.2018];

67) Годишен извештај од регистарот на вработените во јавниот сектор (Министерство за информатичко општество и администрација, 2017) p. 15

68) Како работеа државните фирми во 2016 година, available at <http://www.opendata.mk/Home/TekstualniDetails/40?Category=1> [accessed at 1.11.2018]

69) Official Gazette of Republic of Macedonia., 38/1996, 6/2002, 40/2003, 49/2006, 22/2007, 83/2009, 97/2010, 6/2012, 119/2013, 41/2014, 138/2014, 25/2015, 61/2015, 64/2018;

70) OECD Guidelines on Corporate Governance of State-Owned Enterprises, (OECD Publishing, 2015), p. 14

Comparing state-owned enterprises with private enterprises, it could be stated that they are "same, but different". Without operational efficiency and effectiveness there would be no justification for an enterprise to exist, whether it is privately owned or state-owned. However, what makes a state-owned enterprise different from a private one is that its contribution to society and the economy can not be measured solely by financial performance, but also by its other complex economic, fiscal, political and social implications. Compared to other administrative organizations, state enterprises are different because they operate in accordance to competitiveness principles, except when the competition obstructs the provision of the public service.⁷¹

The existence of state-owned enterprises is primarily necessary to provide public services to citizens (eg. national defense or public parks). Public services are a specific type of services because their consumption can not be limited to a certain number of consumers (eg. street lighting), they are not cost-effective and could not be undertaken by the private sector. Thus, these necessary public services must be provided by the state and when the citizens pay collectively (through taxes) instead of individually. Another motive for state ownership is the promotion of industrialization and the economic development of a country. This implies maintaining key industries that are of strategic interest to the economy, especially if that sector is a dominant employer, providing support for young industries when the costs of market entry are high, controlling over the restructuring of companies in downturn industries, etc. In addition, state enterprises could represent a substitute for regulation in case of natural monopolies or oligopolies (eg. electricity, gas, railways, etc.), but also when states want to limit foreign presence in some key industries.

On the other hand, the presence of state-owned enterprises can threaten the principles of the market economy. State-owned enterprises have access to resources and protection against various operational and financial risks that private companies lack. This could cause obstruction of healthy market competition and discourage the development of the private sector, especially the entry of foreign companies. Fiscal influences are an additional factor that needs to be analyzed when talking about state-owned enterprises - while healthy state-owned enterprises help the treasury, financial losses burden the state budget and may lead to increasing public debt. Due to this fact, the transparent and efficient management of state-owned enterprises and the absence of corruption are crucial.

The evaluation of the efficiency of state-owned enterprises can be made by comparing the financial indicators between state and private enterprises, between enterprises in different countries or comparing the enterprises before and after privatization.⁷² Previous research on the subject suggest that in most cases state enterprises have proved to be less profitable than private companies, with some exceptions depending on the specific sectors.⁷³ Additionally, financial performance tends to improve when compared before and after privatization of state-owned enterprises, although this is not always the case.⁷⁴ Other surveys that take social impacts into account in addition to the financial indicators, have found that when the effects of increased inequality are taken into consideration, the aggregate effects of privatization could turn out to be negative.⁷⁵ Regarding the management model, there are empirical studies that prove that public enterprises that are partially state owned versus those that are in dominant state ownership achieve a better balance between the social impact and the financial performance.⁷⁶

71) Art.2-a, Art. 37-e par.2, Art.37-n, Law on Public Enterprises *ibid*;

72) OECD Guidelines on Corporate Governance of State-Owned Enterprises, *Ibid.*, 31;

73) Anthony Boardman and Aidan Vining, "Ownership and Performance in Competitive Environments: A Comparison of the Performance of Private, Mixed, and State-Owned Enterprises", *Journal of Law and Economics*, vol. 32, Issue 1, (1989): 1-33

74) DeWenter, K. and P. Malatesta. (2001). "State-Owned and Privately-Owned Firms: An Empirical Analysis of Profitability, Leverage, and Labor Intensity." *American Economic Review*, 91 (1): 320-334.

75) J. Carrera, D. Checchi, M. Florio (2004), "Privatization Discontent and its Determinants: Evidence from Latin America", *POLITICHE PUBBLICHE, SVILUPPO E CRESCITA*

76) Aidan Vining, Anthony Boardman, Mark Moore, "The Theory and Evidence Pertaining to Local Government Mixed Enterprises". *Annals of Public and Cooperative Economies* 58 (1), (2014): 53-86

State Owned Enterprises in the Republic of Macedonia

The definition for state enterprises is provided in the Law on Public Enterprises according to which they are enterprises established by the Government of the Republic of Macedonia, the municipalities or the City of Skopje and have the goal of providing services of public interest on the territory of Macedonia. State-owned enterprises can have different management models. At the moment, SOEs in Macedonia have the following models: public enterprise ("PE"); a limited liability company ("LLC") and a joint stock company ("JSC"), whereby a distinction should be made between a state-owned joint stock company when the state is the sole shareholder and a joint-stock company where the state appears as one of the shareholders. According to the above, in the Law on Public Enterprises, the term "public enterprises" is used as a generic term covering not only PEs but also other management models (LLC, JSC) which are authorized with performing public interest activities. In this paper, the term "state-owned enterprises" is used as a generic term that covers all management models.

State-owned joint-stock companies and limited liability companies in which the state appoints managers and elects members of the supervisory board are companies that operate and are organized in accordance with the Law on Trade Companies, hence the employees have the status of employees in accordance with the Law for Labor Relations. What differentiates these companies from trade companies and joint stock companies in which the government is one of the shareholders is that the latter are private companies where the government appoints representatives on its behalf in the management bodies, but they are unambiguously part of the private sector. In these enterprises, the state has no dominant control, but has presence in the governing bodies, thus protecting the interests of the citizens.

Joint stock companies in state ownership are joint stock companies in which the sole shareholder on is the Government of the Republic of Macedonia and provide public services activity for which they have a public authorization obtained from the founder itself or from the competent ministry. They work for profit, but profits are issued as a dividend to the founder i.e. the Government.⁷⁷ Regarding public enterprises and limited liability companies, there is a dualism in the regulation, although both of them carry out business activity, they have different legal regime for election and dismissal of members of the management bodies and different legal treatment in relation of staff recruitment.⁷⁸ Their employees are not subject to the same employment rules as state employees, and the criteria for selection and dismissal of the members of the management boards and supervisory boards are decided by the companies themselves with a Statute approved by the founder. The existence of these companies remains controversial and there is no single view whether they are part of the public sector or not. Pursuant to the Law on Trade Companies⁷⁹ they are private companies where the government is the owner.

On the other hand, in accordance with the Law on Public Enterprises, companies that provide services of public interest (regardless of whether they are public enterprises that are transformed into JSC or LLC with public authorization) are subject to the same rules, working principles and responsibility as well as public enterprises. As a rule, public enterprises are organized in JSC if private individuals or legal entities invest in them. In the limited liability companies in state ownership, the role of the shareholders meeting is performed by the Government of the Republic of Macedonia, directly or through the Government bodies authorized to do so.⁸⁰ Public enterprises do not perform their business activity only for the profit, but they work on the principle of self-financing by achieving a financial balance i.e. balancing income and expenditure. Excess income, and not profits, benefits the public enterprise. The rules of bankruptcy do not apply to a public enter-

77) Анализа на именуваните и избраните лица (Центар за управување со промени, 2018) p. 23

78) Југослав Ѓорѓиевски, Правните критериуми за назначување на раководство на јавни претпријатија, регулаторни и самостојни тела, (Институт за демократија Социетас Цивилис, 2018), p. 19

79) Official Gazette of Republic of Macedonia, бр. 28/04, 84/05/, 25/07 87/08, 42/10, 48/10, 24/11 и 166/12;

80) Art. 8-a, Law On Public Enterprises *ibid*;

prise and the founder is obliged to cover losses from his operations.⁸¹ It should be noted that by amending the Public Debt Law in 2014, the debts of public enterprises for which the state has not issued a sovereign guarantee are excluded from the definition of public debt. This change in legislation represents an artificial reduction in the level of public debt, due to the fact that all debts and losses of the public enterprises are covered by the state, regardless of whether a guarantee has been issued for them. In this way, there is a lack of transparency in the management of state enterprises and the citizens remain uninformed about how state funds are spent.

Under Article 30 of the Law on Public Enterprises, the founder invests the surplus funds from the operations of the public enterprise in the public enterprise based on detailed financial plans. The public enterprise transfers the surplus funds from the operations of the public enterprise, which are not covered by investments in the public enterprise with the investment program prepared in accordance with the detailed financial plan, in the Budget of the Republic of Macedonia, the budget of the municipality or the City of Skopje. Regarding the excess revenues from the operations of the public enterprise that are paid in the Budget of the Republic of Macedonia, the founder may take a decision to cover the losses of another public enterprise, to be paid into a separate account with the purpose of financial support and development for performing activities of public interest to a legal entity established by the Republic of Macedonia or to cover the liabilities of the budget towards the budget funds. In addition, pursuant to Article 23-a, paragraph 3, if the operating report determines deficiencies and / or losses in the financial operations, the director is obliged to remove them in the next six months. If they are not removed within the given legal deadline, the director of the public enterprise shall be dismissed before the expiration of the mandate. From the foregoing it can be concluded that the legal framework provides certain mechanisms of transparency and accountability of public enterprises, but there remains the need for in-depth research related to the potential need for reforming public enterprises in Macedonia.

Methodology

Data on the number of households and service users are taken from the population statistics provided by the State Statistical Office.⁸² The number of employees in state-owned enterprises is taken from the Annual Register for Public Sector Employees for 2017.⁸³

Net operating margin is an efficiency indicator that is widely used in the financial field, and is calculated as a quotient of net operating profit and sales revenue. This indicator shows how much operating profit is generated by the enterprise for each unit of sales revenue after covering the operating costs. The data required for the calculation of the indicator was mostly provided by state-owned enterprises on the basis of submitted requests for information of public character and partly from the Central Registry.

The research is a cross sectional study and the data was obtained in 2018, representing the state of observed variables by the end of 2017. The research observed a stratified sample⁸⁴ of $n=32$ SoEs from a known population $N=174$, by the criteria: type of organization according to legal status (PE $n=22/N=129$, JSE where the Government is a single shareholder $n=6/N=35$, SoEs where the government owns a stock(s) $n=2/N=5$ and LLCs in Government property $n=2/N=5$), and number of employees. All organizations were

81) Borce Davitkovski, Ana Pavlovska-Daneva, Dragan Gocevski, Public Corporations (Faculty of Law Skopje: 2014), Reader p. 178

82) Макстар база, available at <http://makstat.stat.gov.mk/PXWeb/pjweb/mk/MakStat/?rxid=46ee0f64-2992-4b45-a2d9-cb4e5f7ec5ef>, [accessed at 08.11.2018]

83) Годишен извештај од регистарот на вработените во јавниот сектор (Министерство за информатичко општество и администрација, 2017), available at http://www.mio.gov.mk/sites/default/files/pbl_files/documents/reports/izvestajreg2017_v1.02.pdf, [accessed at 11.11.2018]

84) Janet Buttolph Johnson, H.T. Reynolds, Jason D. Mycoff, Political Science Research Methods 8th ed. University of Delaware, (Sage-Copress, Los Angeles, London, New Delhi, Singapore, Washington DC: 2016), 223;

placed in a list separated by Status, then by detecting the 'mode' by number of employees, the first in each group with identical number of employees was chosen. Accepting that PE had very few organizations with identical number of employees (only 6 groups), the 7 largest and national PEs were chosen deliberately to test effects of size of enterprise on productiveness indicators and the remaining were chosen by random. The other types of organizations were chosen by random.

Joint stock companies and limited liability companies are selected by sectors because they represent small populations. To test if there is a significant difference in the productivity indicators by type of organizations, a means comparison was used via independent sample t-tests (assuming unequal variances).⁸⁵ The relationship between the used variables was tested via a correlation coefficient analysis and multivariate linear regression test.⁸⁶ The analysis applied the following regression equation:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 E_3 + \beta_4 E_4 + \varepsilon$$

каде:

Y (Dependent variable) is an efficiency indicator i.e. net operating margin (Operating profit / Sale Revenue* 100);

X₁ (Independent variable) is the number of employees in state-owned enterprises;

X₂ (Independent variable) is the number of members in the governing bodies (management board, supervisory board and board of directors);

E₃ (explanatory variable in the hypothesis, treated as independent in the regression) is the number of users expressed by the number of people in the territory where the organization operates;

E₄ (explanatory variable in the hypothesis, treated as independent in the regression) is the number of users expressed through the number of households on the territory where the organization operates.

$$X_1, X_2, E_3, E_4 \rightarrow Y$$

Hypothesis diagram

To prevent heteroscedasticity a natural log was used for the values of all independent and explanatory variables. The Dependent variable is already represented as a percentage, thus using a log. was not necessary.

The assessment of the efficiency of state-owned enterprises is a complex task because it should take into account both the commercial and non-commercial benefits of their operations. The ideal state-owned company is distinguished with good financial performance, but it also fulfills its specific social goal (for example, cheap electricity for all citizens). If a state enterprise fulfills certain social goals, but is unprofitable it should be a subject to strategic reforms. By contrast, state-owned enterprises with financial losses that also fail to fulfill their social goal should be reformed or liquidated. For these reasons, an in-depth analysis of state-owned enterprises would mean assessing both financial indicators and social goals.

Measuring the social impact requires a holistic approach i.e. analysis of social, political, economic, fiscal and environmental impacts which surpasses the research question of this paper. This paper only analyzes the level of efficiency of the state-owned enterprises measured by the indicator net operating margin.⁸⁷

85) David S Moore, The Basic Practice of Statistics 2nd Ed., (W. H. Freeman and Company: 2000), 390, 401, 406; Maryann Barakso, Daniel M. Sabet, Brian Schaffner, Understanding Political Science Research Methods The Challenge of Inference, (Routledge Taylor and Francis, New York and London: 2014), 149;

86) Janet Buttolph Johnson et al. Ibid, 478, 492-496; Maryann Barakso, et. al. Ibid, 154;

87) State Owned Enterprises in the EU, (Institutional Paper 031, European Commission, 2016): p. 33

Analysis Results

Results from the means comparison tests reveal no statistically significant difference in Net Operating Margin values between SoEs measured by the legal regime they operate under. Meaning it makes no difference whether the organization is operated under public law as an PE, or under private law (Diagram 1. Appendix) as a JSC or LLC. There is a very visible difference in means, however due to the amount of variance within the mean it cannot be considered statistically significant, but rather coincidental.

There is one noticeable pattern, PE and LLCs observed in this study have a negative Net Operating Margin value, thus not considered profitable while JSC regardless of management shares being public or mixed, have positive Net Operating Margins (Graph 2. Appendix). Thus, the average values of the indicator operating net margin for the public enterprises and limited liability companies included in the sample are negative and amounts to -17.17% and -23.92% respectively. By contrast, state-owned enterprises that are established as joint-stock companies in which the state is one of the shareholders have a positive average value of the indicator of 5.56%, while state-owned joint stock companies in full state ownership have the highest average value of the operational net margin of 26.05%.

Regarding the correlation coefficient, assessing the relationship between observed variables: number of employees, size of management, size of consumer base. Regarding the correlation coefficient for assessing the relationship between the variables "number of employees", "the number of members of management bodies", "the number of beneficiaries" (households and population) and the "operating net profit margin" indicator, it can be noted that there is no significant correlation (Table 1).

Neither the number of employees, nor the size of the management and the number of users (household or population) is not a significant predictor of the profitability of state-owned enterprises (Table 2, Annex).

Larger municipalities are founders of enterprises with larger number of employees, but there is no significant connection with the profitability of the state owned enterprises. Most likely, due to the PE model, most of these enterprises have a minimum number of members of the management board and supervisory board and one director (as per the legally prescribed minimum), thus they tend to have smaller management compared to the number of residents and households.

If we were to interpret the results more broadly, though they show no statistically significant relationship between observed variables, i.e. the number of employees, size of management and size of consumer base, still the closest to significant relationship is the size of management ($p=.05$).⁸⁸ With negative correlation regression coefficients this variable indicates a tendency for organizations with larger managements to have lower profits or put in other words a percentage increase in management size may lead to poorer financial results (conclusions are applicable only to state owned enterprises based on the observed sample in Macedonia).⁸⁹

88) Although $p = .05$ is considered to be 95% probability meaning that the result is significant, in other tests the same variable showed a higher value of p , i.e. the result is not robust. Since it is at the very margin of significance we cannot confidently claim that there is a significant connection;

89) Another interpretation of the same conclusion would be that companies with lower (negative) financial results tend to have per-centual larger managements.

Conclusion

Based on the observed sample, the research concluded that the hypothesis allocation of production inputs such as labor and capital affect the degree of production outputs' is not applicable to state owned enterprises in the Republic of Macedonia, based on data representing state of affairs by the end of 2017.

This conclusion must accept all inherent weaknesses such as possible sampling error, and omitted variable bias,⁹⁰ however the research did not intend to seek out all predictors of profitability but to test whether or not, labor and capital expressed by employees, management, size of consumer base (as a source of potential revenue) were significant contributors to profitability. The research also sought to see significant differences in profitability between the various types of state-owned enterprises.

Because quantitative analysis did not return significant results, or at least not strong relationships we may only provide an interpretation based on qualitative observation and interpretation of conditions in the country. Because JSC observed in this research proved to be the only profitable ones, regardless of management structure, yet they were all national level companies we may assume that profitable business with a large enough consumer base were privatized or transformed in to a trade company to model private sector behavior even though they remained public owned and public managed which is a curiosity of itself. Why would the government transform a public enterprise in a joint stock company and not sell shares? We only wonder if there is something inherently wrong with public enterprise model or not, because the PE showed to be not profitable, but opposite, they created debt. Yet PEs must operate as they provide communal services, a public interest municipality and the central government are obligated to provide regardless of financial viability. Another curiosity are LLCs in public ownership, which are also not profitable, but are not PEs. This leads us to assume that there is no clear order as to why some enterprises were transformed or established as companies according to private legal regime, while others were public, except the aforementioned logic – that if a service is not profitable but legally mandatory the government central or municipal establishes a public enterprise, while profitable enterprises were transformed to joint stock companies exempt from a more rigorous public law regime regarding employment and salaries.

90) Future research may want to look into the following variables: salaries of employees and management, price of product/service, susceptibility to corruption, age of employees, education structure of employees, level of complexity of production process, PPP per capita;

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Appendix:**Table 1: Correlation Coefficient**

	<i>X1 Employees</i>	<i>X2 DecisionMakers</i>	<i>Households</i>	<i>Population</i>	<i>Y Net Profit Operating Margin</i>
X ₁ Employees	1				
X ₂ Decision Makers	0.26	1.00			
E ₁ Households	0.31	0.43	1.00		
E ₂ Population	0.58	0.31	0.73	1.00	
Y Net Profit Operating Margin	0.16	0.27	0.15	0.12	1

Table 2: Regression Analysis

<i>Regression Statistics</i>	
Multiple R	0.41
R Square	0.16
Adjusted R Square	0.04
Standard Error	33.91
Observations	32.00

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	4	6123.02	1530.76	1.33	0.28
Residual	27	31055.00	1150.19		
Total	31	37178.03			

	<i>Coefficient s</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower r 95.0 %</i>	<i>Upper 95.0%</i>
Intercept	69.97	59.18	1.18	0.25	51.44	191.3	51.44	191.39
X ₁ Employees	7.11	4.14	1.72	0.10	1.39	15.61	1.39	15.61
X ₂ Decision Makers	28.10	13.96	2.01	0.05	56.74	0.55	56.74	0.55
Households	0.27	3.46	0.08	0.94	6.84	7.38	6.84	7.38
Population	4.40	4.80	0.92	0.37	14.25	5.45	14.25	5.45

Graph 1.

PE public enterprise, SoE1 – JCE where Government is the only shareholder, SoE2, JCE where Government has a stock(s), SoE3 LLCs in Government ownership.

PE, SoE1 and SoE3 are Public Owned and Public Managed. SoE2 is mixed ownership and mix management, Public/Private.

PE are Governed under public law.

SoE1, SoE2 and SoE3 are governed under private (free competition) law.

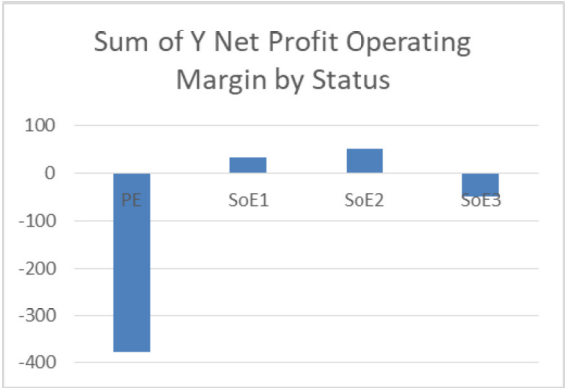


Table 3. t-Test: Two-Sample Assuming Unequal Variances

	PE	JSC and LLCs
Mean	17.17	3.76
Variance	566.80	2473.58
Observations	22.00	10.00
Hypothesized Mean Difference	0.00	
df	11.00	
t Stat	1.27	
P(T<=t) one tail	0.12	
t Critical one tail	1.80	
P(T<=t) two tail	0.23	
t Critical two tail	2.20	

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SOCIO-ECONOMIC DETERMINANTS OF SOCIAL SPENDING IN THE EU

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Abstract

The rise in social spending during the last century brought about a significant increase in the total government expenditures and according to many studies, also contributed to the rising public debt. The intent of social spending is reducing and alleviating inequality and poverty and enhancing social cohesion. Empirical evidence shows that countries that make greater efforts in social spending manage to reduce income inequality. However, it should not be on the account of endangering sustainability. In this paper we examine whether certain socio-economic variables influence the level of social expenditure in the EU countries in the last two decades. More specifically, we try to tackle the following questions: Do governments reduce social spending when debt rises, in order to avoid fiscal unsustainability? Do countries spend more on welfare in times of an economic downturn, i.e. is social expenditure counter-cyclical? Do countries with larger income inequality also have higher social expenditures aimed at reducing the larger gap?

Keywords: public debt, social expenditures, EU countries

JEL codes: H53, I38, H6.

1. Introduction:

There is a vast interest in academic and policy circles regarding the welfare state and in particular social expenditure as a measure of the welfare state effort. The decades after the Second World War marked the golden age of capitalism and the rise of the welfare state, resulting from industrialization, expansion of social rights, demographic changes etc. Social spending became an important component of the socioeconomic landscape in developed countries and have significantly influenced economic processes and outcomes since then.

The expanding role of the welfare state and the population ageing have led to a continuous rise in social expenditures. In today's developed economies more than half public spending is devoted to the welfare state. In the European Union, expenditure on social protection, education and health account for 66% of the general government expenditure on average. Europe's welfare states stand out as more generous compared to the welfare states in other developed countries, but are threatened to become unaffordable without any recasting. European countries have developed a more or less comprehensive welfare model, with a central role of the state in providing a range of social benefits (pensions, support for the poor, social housing, health-care being the largest). One of the most complex challenges currently facing European governments and societies is to reconcile these commitments to welfare provision, which are widely supported politically, with pressures that may make them unsustainable economically. They undeniably face a range of demographic, fiscal and other pressures, exacerbated by weak economic growth or recession during the recent economic crisis. (Begg et al., 2015) It is obvious that old-age related expenditures will continue to increase in the EU member countries, due to the 'greying population'. Critics of the welfare state regularly argue that population aging renders existing social welfare programs unsustainable. Hence adjustments will be needed to accommodate the predicted growth of spending on pensions and other old-age related expenditures. In Germany, for example, pension spending is projected to increase from 10 to 12.5 percent of gross domestic product (GDP) by 2050 unless the country makes adjustments to the system.

The rise in social spending during the last century brought about a significant increase in the total government expenditures and according to many studies, also contributed to the rising public debt. "Welfare spending became a promising target when seeking for the sources of poor growth and soaring debt as well as identifying the factors that hold back the recovery." (Czech and Tusinska, 2016) The intent of social spending is reducing and alleviating inequality and poverty and enhancing social cohesion. Empirical evidence shows that countries that make greater efforts in social spending manage to reduce income inequality (Sanchez and Perez-Corral, 2018). However, it should not be on the account of endangering sustainability (Schuknecht and Zemanek, 2018). The narrative of retrenchment is present in the debate around the welfare state nowadays, due to the economic crisis of 2008 and the European debt crisis. However, Tullock and Buchanan (1962) argue that social expenditures tend to have a high political, at least in the short-term, cost and it is hard to cut or even restructure social benefits. This might explain the reluctance to cutting social spending and the crowding-out of other public expenditure by social expenditure, such as for public investments, defense or economic affairs (Castles, 2007; Begg et al., 2015). This goes in line with some findings on the resilience of social expenditure to fiscal retrenchment measures (Castles, 2007; Lora and Olivera, 2007). This, however, does not mean that there haven't been cuts in social expenditure, especially in countries with less fiscal space.

In this paper we examine whether certain socio-economic variables influence the level of social expenditure in the EU countries in the last two decades. More specifically, we try to tackle the following questions: Do governments reduce social spending when debt rises, in order to avoid fiscal unsustainability? Do countries spend more on welfare in times of an economic downturn, i.e. is social expenditure counter-cyclical? Do countries with larger income inequality also have higher social expenditures aimed at reducing the larger gap? The rest of the paper is structured as follows. Section 2 explains the dynamics of social expenditure and public debt in the European Union. A brief overview of the empirical literature is provided in section 3. Section 4 explains the data and empirical model, followed by a discussion of the results in section 4. Finally, concluding remarks are given in section 5.

2. Social expenditure in the European Union

Social spending in the European Union has grown during the last few decades. Looking at the period from the turn of the century, however, they were pretty stable (even showing a small decline) in the pre-crisis period (see figure 1). Figure 1 also demonstrates that the dynamics of total government expenditure in the EU-28 is dominated by the movement of social expenditure (comprising in this case spending on social protection, health and education) and follows the same pattern. In a period of positive economic outcomes, when

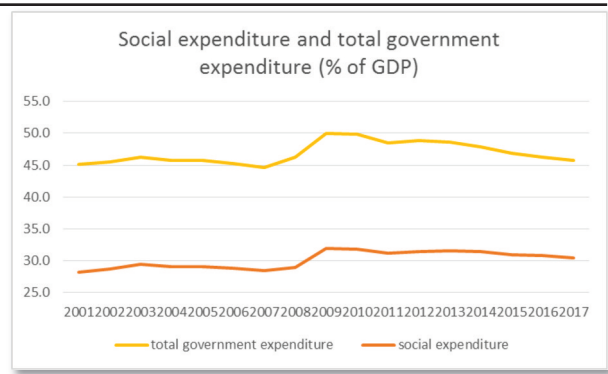
normally social protection expenditure for example drops as there are normally less people in need and when the denominator has a positive trend. Total government spending decreased in the same period by more than social expenditure, implying that the rising social expenditures had crowded out other public expenditures. In most countries social spending was falling or staying largely at the same level, except for most Mediterranean countries, where social spending grew at the rate between 1.1% and 2.8% yearly in the period 1995-2007. It is worth noting though, that social expenditures were usually growing where they were the lowest (Mediterranean and Anglo-Saxon countries), contributing to some extent of convergence in the level of social spending. Yet, social spending in these countries, although it reached an average level of most developed countries, has not reached the spending levels of most Nordic and Continental countries.

The Great Recession interrupted the favourable economic, social and fiscal trends. Real rates of economic growth declined though some countries were affected more than others. In response to the recession, most countries implemented expansionary policies. As is expected during a recession, social expenditures increased in the immediate aftermath as a natural consequence of governments spending more on unemployment benefits. As a share of GDP, social spending jumped in 2009 when GDP, the denominator of the ratio, fell sharply and social expenditures accounted for a larger proportion of national income. Figure 2 clearly shows the resulting drastic rise in social and total general government expenditure in the EU-28. Social protection expenditure rose by 3.5 p.p. in the period 2007-2009 and reached a peak in 2009, standing at 31.9 % of GDP. The dynamics of this growth was not that differentiated as in the case of public debt, but we can point to countries with relatively low rate of growth (Sweden, Germany, Poland, Austria) and relatively high rate of growth (Ireland, Finland, Belgium, Spain, Hungary, Slovakia). (Savage, 2019)

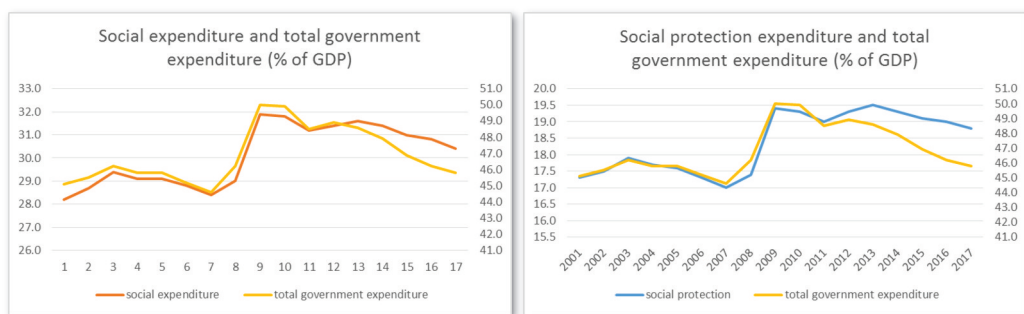
The following period was marked by cuts in government expenditures (part of the Fiscal compact) as a response to the rising public debts in EU countries. However, figure 2 and 3 show once more that social expenditure is far more resilient to reductions than government spending in other public policy areas, even in periods when austerity is the pervasive narrative. This however does not mean that there have not been any cutbacks in social benefits, as can be seen in the figures. A note should be taken that this is also a period of recovery from the crisis.

Eurostat (2019) confirm that expenditure on 'social protection', which reflects government's core function to redistribute income and wealth, financed by compulsory payments, was by far the most important COFOG⁹¹ division in 2017 in the EU, reaching an average ratio of 18,8% of GDP. They also argue that the rise in social protection expenditure by 0.9 p.p. of GDP from 2003 to 2017 was compensated partially by a decrease in all other government expenditure functions except health. Begg et al. (2015) find it striking that the shares of old-age outlays were so stable up to the crisis and how they appear to have been protected (and have indeed increased) since 2008. Healthcare, similarly, has been gently increasing its share, while spending on unemployment benefits jumped after 2007 due to the larger number of unemployed people.

Source: Eurostat.



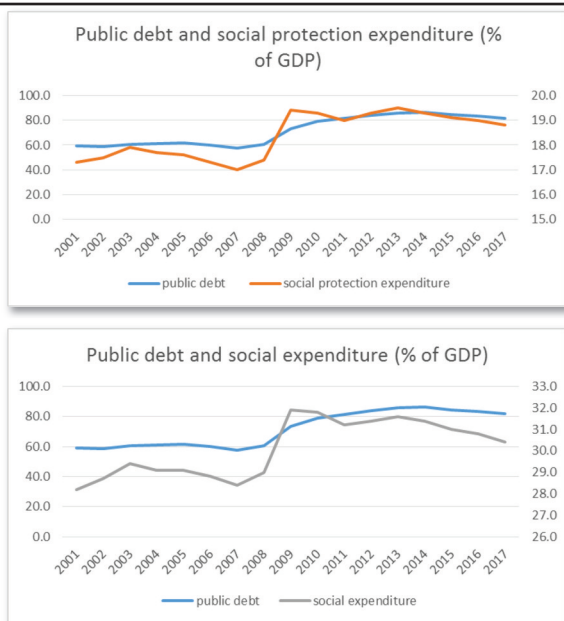
91) COFOG stands for Classification of expenditures by government function (developed by the Organisation for Economic Co-operation and Development and published by the United Nations Statistical Division).



Source: Eurostat.

Along with social spending, public debt of the countries was also falling in the pre-crisis period, but its trend changed direction with the onset of the economic and the debt crisis in the EU, which became quite severe in certain countries (PIIGS). The rate of growth of debt, however, was much higher than the rate of growth of social spending. Moreover, social expenditure shows a faster reduction than debt (see figure 4). The rate of growth of public debt was, however, very differentiated among countries. There were countries with relatively slow debt growth (like Sweden, Belgium, Austria, Germany, Italy, Poland and Hungary) and countries with a fast pace of debt growth (Ireland, Slovenia, the UK, Spain, Portugal, Czech Republic). Many countries have also reached or exceeded the barrier of 100% of GDP.

Figure 5.
Welfare expenditure and public debt

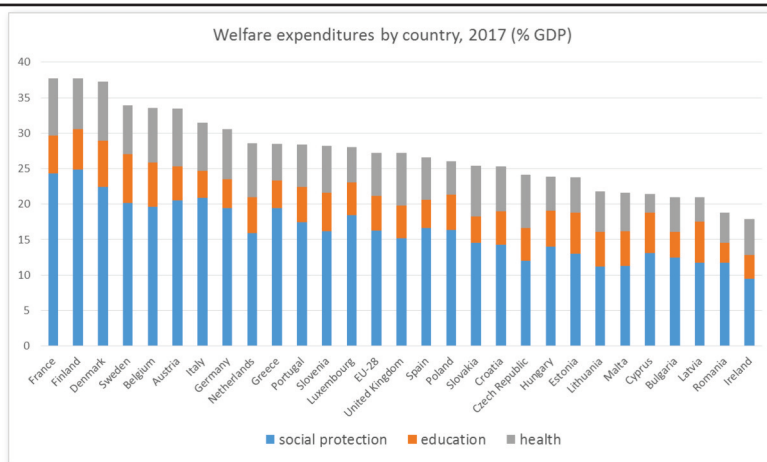


Source:
Eurostat and IMF WEO (April 2019) database.

However, the policy solutions differed among countries in terms of types of benefits, universality and generosity of allowances etc. For example, countries with Bismarckian welfare systems are generally less generous than the countries with a Beveridgean welfare system. Hence, we cannot argue the existence of a single European social model, but rather the EU contains a group of several different types of a welfare state (see Arts and Gelissen, 2012 for a short explanation of the welfare state models / regimes). Welfare spending per capita is lower in the lowest-income EU countries. Social protection expenditure as a proportion to

GDP also varies across EU Member States (see figure 6). It ranged from less than 10 % in Ireland (9.5 %) to nearly a quarter in Finland (24.9 %) in 2017. Six Member States – Finland, France, Denmark, Italy, Austria and Sweden - devoted at least 20 % of GDP to social protection, while Ireland, Lithuania, Malta, Latvia, Romania, Czech Republic and Bulgaria each spent less than 13 % of GDP on social protection. Welfare expenditure as measured in this paper (social protection, health and education) varied from above 35% of GDP in France, Finland and Denmark to less than 20% of GDP in Romania and Ireland.

Figure 6.
Welfare expenditure
by country in the EU



Source: Eurostat.

3. Literature review

Measuring the cross-national variation in welfare effort across countries has a long history, beginning with studies like Wilensky, 1975. The early studies emphasized the importance of wealth, economic growth, demographics and the age of the social security system.

Later on, in the 1970s and 1980s, political factors were found to be also of great importance (see for example Hicks and Swank, 1992; Schmidt, 1997; Castles, 2004). However, more recent studies, especially when analyzing changes in social expenditure, since 1980s, find a weaker impact of political parties (e.g. Kittel and Obinger, 2003) more recently, there are ambiguous results concerning the impact of political factors (for example, Schuknecht and Zemanek (2018) find the political ideology to be relevant). Another topic of study has been the influence of institutional and political variables in social expenditure, which is the focus of the paper by Baqir. His main conclusion is that democratization tends to be followed by important increases in social expenditure. Other authors who have explored how public expenditures may be affected by institutional and political variables have concluded that corruption reduces the share of education expenditures in total expenditures (Mauro, 1998) and that education and health expenditures grow faster in more democratic countries (Snyder and Yackovlev, 2000). Some researchers argue that for example left and right wing parties tend to move more toward the middle and respond to social requirements of the voters in a similar manner.

Many studies find that a crucial determinant is the socio-economic pressure. Obinger and Waschal (2012) conclude that in the aftermath of the golden age, main determinants found in research are population ageing, economic growth, GDP, unemployment, deindustrialization (Castles, 2004; Kittel and Obinger, 2003; Iversen and Cusack, 2000; Schuknecht and Zemanek, 2018). Molina-Morales et al. (2013) point that the three variables that most empirical studies use in explaining welfare spending are GDP, unemployment rate and the percentage of elderly people form the total population. Hicks and Swank, 1992; Swank, (2002) find a positive correlation between these three variables and social expenditure. Schuknecht and Zemanek (2018) investigate what caused the rise in social expenditure over the last few decades in OECD countries and find that the business cycle (automatic stabilizing effect of social spending), structural unemployment, population ageing are statistically significant. The demographic context has an impact on the social protection system's depend-

ency ratio, that is to say on the number of beneficiaries in the system compared to the number of people. The demographic context has an impact on the social protection system's dependency ratio, that is to say on the number of beneficiaries in the system compared to the number of people. Income inequality has also been examined as a determining factor of social spending (see Molina-Morales et al., 2013)

The relationship between public debt and social expenditures has attracted much attention in the past decades. Namely, the rising social expenditures triggered a wide debate about their impact on fiscal sustainability, creating a heavier fiscal burden. A few studies have been concerned with the possible impact of fiscal adjustment measures on social expenditure. In other words, whether countries react to rising debt levels by cutting social expenditure. For instance, Hicks and Kubisch (1984) and Hicks (1989) found that social expenditures tended to be well-protected in a small sample of highly indebted countries during periods of fiscal retrenchment in the 1970s and early 1980s, a finding that is confirmed by Baqir (2002) with a panel of over 100 countries for the period 1985-1998. Some recent studies have found that financing constraints, represented by net lending and public debt ratio (they show that they do have a marginal effect on social) influence social expenditure (Schuknecht and Zemanek (2018; Chang et al., 2016; Lora and Olivera, 2007; Fosu, 2007). Lora and Olivera (2007) using an unbalanced panel of around 50 countries for the period 1985-2003 find that higher debt ratios do reduce social expenditures, as popular opinion holds. Fosu (2007) and Chang (2016) reach similar conclusions. On the other hand, Schuknecht and Zemanek (2018) find a strong correlation between rising public debt ratios and the rise in social expenditure. Using an error correction model they find that in the long-term, an increase in GDP and in revenues increase social expenditure, implying a risk of unsustainability if those trends continue. Considering a government's policy reaction to excessive debts, Lora and Olivera (2007) argue that those higher debt ratios will reduce social expenditures. If the government succeeds, then in the longer run (at lower frequencies) an increase in debts will lead to a decrease in social expenditures (negative correlation). The above simple example shows that both a causality and co-moved correlation between government debts and social spending may differ at different levels of frequencies and change over time. (Chang et al., 2016)

Chang et al. (2016) argue that it is reasonable to speculate that higher government debts will be linked with higher social spending as fiscal deficits are typical for a recession, when also a greater demand for social expenditure exists. For instance, Dewan and Ettlinger (2009) argue that fiscal deficits are inevitable and appropriate during a recession, because a slow economy commonly creates greater demand for social expenditure such as social assistance and unemployed benefits. This also matches the observations of Adema, Fron, and Ladaïque (2011), who propose that many OECD countries initially increased social support to job losers or provided income support associated with shortened working hours in response to the financial crisis in 2008. Sanz and Velázquez (2007) discover that increasing government debts may be linked to an increase in social spending using the case of a panel of 26 OECD countries in the period 1970-1997. There are other alternative arguments, such as tax revenue suffers from an economic recession and most government spending is financed by debt being issued, while social welfare and health demand are the main driving force for the growth in government spending (Sanz and Velázquez 2007). This leads to the co-existence of high debt and high social expenditure

Schuknecht and Zemanek (2018) also explore the structure of their financing and find that the increase in social expenditure is financed largely through a reduction of other spending, confirming the 'social dominance' theory. They also find a strong correlation between rising public debt ratios and the rise in social expenditure. Using an error correction model they find that in the long-term, an increase in GDP and in revenues increase social expenditure, implying a risk of unsustainability if those trends continue. Lora and Olivera (2007) also find that some fiscal flow variables directly affect social expenditures. They estimate that a reduction in the overall or the primary fiscal deficit by \$1 is associated with an average decline in social expenditures of around 3 cents in the current year (or nearly 5.5 cents in the long run).

4. Methodology and data

In order to investigate the effect of public debt and other socio-economics variables on social expenditure in the European Union we estimate a panel regression. Due to data availability, the model is estimated for the period 2000-2017 meaning that it captures the link between social expenditure and the observed explanatory variables in the twenty-first century. The model also excludes Cyprus, due to missing data. Social expenditure in its broadest term (social protection, health and education) is used here as a proxy for the welfare state effort of the countries. We use a fixed effect panel regression model, as indicated by the Hausman test, in all our model specifications. We employ the OLS estimator, being aware of possible problems with endogeneity since social expenditure is regressed on public debt and other fiscal variables. However, Lora and Olivera (2016) find no significant differences in estimated coefficients with OLS and Arellano-Bond estimators.

described in the following general equation:

$$y_{i,t} = \beta_0 + \beta_i x_{i,t} + u_i + e_{i,t}$$

where $y_{i,t}$ is the dependent variable, β_0 captures the country effect, β_1 is a $k \times 1$ vector of parameters to be estimated on the explanatory variables, and $x_{i,t}$ is a vector of observations on the explanatory variables, u_i are the country fixed effects and $e_{i,t}$ is the idiosyncratic noise term. In the model, $i=1, \dots, N$, and it stands for the cross-sectional unit (number of countries), while $t=1, \dots, T$ and it stands for the time period. Specifically, we use the following model:

$$se_{i,t} = \beta_0 + \beta_1 se_{i,t-1} + \beta_2 d_{i,t-1} + \beta_3 Z_{i,t} + u_i + e_{i,t}$$

Where $se_{i,t}$ is the dependent variable - social expenditure in country i in period t ; $se_{i,t-1}$ is the lagged social expenditure; $d_{i,t-1}$ is lagged public debt of county i in period t ; $X_{i,t}$ is a vector of other relevant factors, u_i are the country fixed effects and $e_{i,t}$ is the error term.

Social expenditure and public debt are expressed as ratio to GDP. Social expenditure is represented by a wider scope than only on social protection and it includes general government expenditures on social protection, health and education, all of them important in providing welfare to the population. We use the lagged dependent variable to see if there is inertia in its dynamics. Public debt is represented by general government debt, as % of GDP. Public debt is expected to have a negative coefficient if the fiscal reaction function of social expenditure indicates a reaction of the authorities in terms of sustainability. We also use a set of other socio-economic and fiscal variables that are found to be relevant in the literature. We use tax revenues (as a percentage of GDP), to see if improvement in the revenues causes further increase in social spending (implying a revenue-expenditure nexus) or the additional revenues are used for other purposes. The GDP growth rate captures the economic condition of the economy. If the economy is improving, it could be expected that less people are unemployment and in need for social assistance and more people pay taxes and contributions that are used to finance social benefits. The unemployment rate is expected to be correlated with social spending and to have a positive coefficient. The same logic applies as in the case of low growth (except in opposite direction), since in bad times unemployment rises. We include the Gini coefficient that captures the distribution of income within a country in order to check whether countries with larger inequality tend to have higher social spending aimed to battle inequality or not. The old age dependency ratio (ratio of people at the age of 65 or older to people at working age) expresses the burden of the ageing population on the workforce.

Before proceeding with estimation of the model, the stationarity of the data series for the variables was checked. The results of the panel unit root test (Panel Levin, Lin and Chu) are presented in table 1. All series are stationary in levels, except for old-age dependency which is integrated of order 2 and total tax receipts which are difference stationary. Thus, these two variables were differenced before estimation of the model.

Table 1 Panel Levin, Lin and Chu unit root test

Variable	Probability for level	Probability for 1st difference	Probability for 2nd difference
SE - Social expenditure (% of GDP)	0.0000	/	/
PB - General government primary net lending/borrowing (% of GDP)	0.0000	/	/
DEBT - Government consolidated gross debt (% GDP)	0.0001	/	/
GDP – GDP growth (Percent change)	0.0000	/	/
UNEMP - Unemployment rate (Percent of total labor force)	0.0000	/	/
OAD - Old age dependency	0.9774	0.3496	0.0000
TAX (% of GDP)	0.2517	0.0000	/
GINI - Gini coefficient of equalized disposable income	0.0074	/	/

Note: Test specification: individual intercept.

Source: Authors' calculations.

The data on general government expenditures on social protection, education and health, data on population and Gini coefficient are extracted from the Eurostat database, while data on public debt, tax revenues, primary balance, GDP growth rate, unemployment rate are taken from the IMF (April 2019) World Economic Outlook database.

5. Discussion of empirical results

The results from the estimated fixed effects panel regressions are presented in table 2 and table 3. We estimated several equations. In the first equation all variables from the model are estimated (the non-stationary variables were previously differenced). Next, we excluded the non-stationary variables. However, this did not change the results for the other variables and for the model as a whole, as can be seen from Equation 3 where old-age dependency ratio is included again. Model 4 is a modified version of model 3 where primary general government balance is lagged for one period, same as the public debt, to account for the financial restraints of the government. We also estimated regressions for the change in social expenditure compared to the previous year as a dependent variable in models 5-8.

Table 2. Panel regression results - Dependent variable - social expenditure

Variable	Model 1		Model 2		Model 3		Model 4	
	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.
C	23.85072	0.0000	23.70637	0.0000	23.65211	0.0000	24.58857	0.0000
PB	-0.339707	0.0000	-0.339860	0.0000	-0.325288	0.0000		
PB (-1)							-0.281523	0.0000
DEBT(-1)	0.036283	0.0000	0.038533	0.0000	0.037322	0.0000	0.024866	0.0000
GDP	-0.186305	0.0000	-0.189432	0.0000	-0.190012	0.0000	-0.256332	0.0000
UNEMP	0.107784	0.0000	0.106465	0.0000	0.112666	0.0000	0.105570	0.0000
OAD1	19.62180	0.3947	/	/	15.95157	0.4935	35.98415	0.1415
TAX1	0.208479	0.0013	/	/			-0.128391	0.0602
GINI	0.035039	0.0561	0.035186	0.0579	0.039263	0.0340	0.039494	0.0428
Adj Rsquared	0.961		0.954		0.956868		0.952372	
DW	0.677		0.640		0.654055		0.701258	
Obs	432		432		432		432	

Table 3. Panel regression results – Dependent variable – change in social expenditure

Variable	Model 5		Model 6		Model 7		Model 8	
	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.
C	1.951352	0.0000	2.182895	0.0000	2.281773	0.0000	1.951352	0.0000
PB					-0.030695	0.0591		
PB (-1)	0.069715	0.0000					0.069715	0.0000
DEBT(-1)	-0.020083	0.0000	-0.019291	0.0000	-0.018678	0.0000	-0.020083	0.0000
GDP	-0.249945	0.0000	-0.245089	0.0000	-0.237031	0.0000	-0.249945	0.0000
UNEMP	-0.040315	0.0146	-0.066876	0.0000	-0.076547	0.0000	-0.040315	0.0146
OAD ¹	45.61055	0.0062	43.10158	0.0116	42.75077	0.0125	45.61055	0.0062
TAX ¹	-0.068095	0.1417	-0.102994	0.0282			-0.068095	0.1417
GINI	0.008601	0.5149	0.005139	0.7037	0.002007	0.8821	0.008601	0.5149
Adj Rsquared	0.589270		0.568565		0.567205		0.589270	
DW	1.767067		1.764985		1.737137		1.767067	
Obs	432		432		432		432	

Note:¹ Differenced data series due to presence of unit root.

Source: Authors' calculations.

The results from the first model in table 2 indicate that social expenditure reacts to changes in the general government primary balance in the expected way. When the primary balance improves, social expenditures fall. On the other hand, a rise in general government gross debt does not affect social expenditures much. The coefficient is actually opposite of what is expected considering the fiscal reaction function. This means that when debt grows, social expenditures also increase, although the reaction is very small. This is consistent with the argument that social expenditure is more resilient to spending cuts than other public expenditures. The influence of GDP growth is in line with the theory. When countries achieve better economic performances, social expenditure declines. This is confirmed in all the model specifications. The unemployment rate is significantly and positively linked to social expenditure. More unemployed persons normally require higher government spending. This especially refers to the part of expenditure on social protection. The old-age dependency ratio is found to be statistically insignificant in the equations. It does become significant when used in level and normally increases the social expenditure. The results for the tax revenues are inconclusive. When we apply the contemporary primary balance in the equation, tax revenues exhibit a positive influence on social expenditures. One way to interpret this result is that higher tax revenues improve the fiscal space for maneuver and governments have more funds. It could also reflect the notion that even in austerity periods when government took measures to increase revenues and reduce expenditures, social expenditures were more resilient to those cuts and perhaps even rose at some points. On the other hand, once we include the lagged primary balance, the coefficient of tax revenues changes its sign and now the result indicate that increasing revenues go along with falling expenditure. This could very well simply reflect their response to GDP, as they act counter-cyclically. In times of prosperity, tax revenues grow, while social expenditure falls (as indicated in the results) and vice versa. The response of the social expenditure on the Gini coefficient is only significant at the 0,1 confidence level and has a positive sign, indicating that higher inequality induces government action. However, the Scandinavian countries that have low Gini coefficients also have high social expenditures, while there are some Central European countries that do not spend as much in the social area, but still achieve low Gini coefficients, such as the Czech Republic, Slovenia and Slovakia. Yet, in general countries with higher inequality have lower welfare expenditures, so we take this result with caution.

Once we replace the dependent variable for its change (as in Schuknecht and Zemanek 2018), the regression loses some of the goodness of fit, but the Durbin-Watson is improved. The change in the response to the independent variables is that public debt has a negative coefficient, indicating that governments take account of the indebtedness, i.e. social expenditure grow by a smaller amount or fall when debt increases. The Gini coefficient becomes insignificant, as well as the tax revenues. The unemployment now has a negative sign

We additionally estimated the models for two sub-periods: pre-crisis period (2000-2007) and the period during and after the crisis (2008-2017). Generally the regressions are better in the second period in terms of goodness of fit and DW statistics. Also, one of the coefficients that are in our focus, the debt coefficient is more significant in the second period. It, however, still has a positive sign. Thus, the reduction of debt is more attributable to revenue improvements or cuts in other types of spending. Also, we can see that the change in social expenditures falls when debt rises. GDP remains significant and with a negative sign in all specifications and in both periods. The Gini coefficients is insignificant, so we cannot provide a robust conclusion about the reaction of social expenditures to inequality.

6. Conclusion

In order to investigate the effect of public debt and other socio-economics variables on social expenditure in the European Union we estimate a panel regression. Due to data availability, the model is estimated for the period 2000-2017 meaning that it captures the link between social expenditure and the observed explanatory variables in the twenty-first century. Social expenditure in its broadest term (social protection, health and education) is used here as a proxy for the welfare state effort of the countries. We use a fixed effect panel regression model, as indicated by the Hausman test, in all our model specifications. The results from the first model indicate that social expenditure reacts to changes in the general government primary balance in the expected way. When the primary balance improves, social expenditures fall. On the other hand, a rise in general government gross debt does not affect social expenditures much. The coefficient is actually opposite of what is expected considering the fiscal reaction function. This means that when debt grows, social expenditures also increase, although the reaction is very small. The influence of GDP growth is in line with the theory. When countries achieve better economic performances, social expenditure declines. This is confirmed in all the model specifications. The unemployment rate is significantly and positively linked to social expenditure. More unemployed persons normally require higher government spending. The old-age dependency ratio is found to be statistically insignificant in the equations. It does become significant when used in level and normally increases the social expenditure. The results for the tax revenues are inconclusive. When we apply the contemporary primary balance in the equation, tax revenues exhibit a positive influence on social expenditures. One way to interpret this result is that higher tax revenues improve the fiscal space for maneuver and governments have more funds. It could also reflect the notion that even in austerity periods when government took measures to increase revenues and reduce expenditures, social expenditures were more resilient to those cuts and perhaps even rose at some points. The response of the social expenditure on the Gini coefficient is only significant at the 0,1 confidence level and has a positive sign, indicating that higher inequality induces government action.

There are of course other factors that also influence the level of welfare expenditure. The literature highlights the importance of political and institutional factors. This may be included in a further analysis.

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ANNEX

Robustness check – Division into two sub-periods

Variable	Model 1				Model 2			
	2002-2007		2008-2017		2002-2007		2008-2017	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
SE					SE		SE	
C	24.53164	0.0000	27.76112	0.0000	24.82264	0.0000	27.61038	0.0000
SE(-1)								
PB	-0.269935	0.0000	-0.326260	0.0000				
PB((-1)					-0.134888	0.0119	-0.253857	0.0000
DEBT(-1)	0.022057	0.1344	0.035198	0.0000	0.015391	0.3341	0.017796	0.0047
GDP	-0.110568	0.0190	-0.156015	0.0000	-0.167452	0.0008	-0.222138	0.0000
UNEMP	0.123374	0.0048	0.134548	0.0000	0.137566	0.0042	0.125658	0.0002
OAD1	21.61963	0.3729	25.37174	0.3387	10.59107	0.6850	57.59305	0.0443
TAX1	0.174155	0.0685	0.131488	0.0552	-0.064396	0.5309	-0.151972	0.0511
GINI	0.011756	0.4363	-0.098250	0.1000	0.016422	0.3184	-0.048770	0.4520
Adj Rsquared	0.981002		0.967782		0.977775		0.962383	
DW	1.297069		0.993913		1.329144		0.977470	
Obs	162		270		189		270	

Variable	Model 3				Model 4			
	2002-2007		2008-2017		2002-2007		2008-2017	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
SE								
C	24.49279	0.0000	27.13944	0.0000	24.78075	0.0000	28.43189	0.0000
SE(-1)								
PB	-0.241732	0.0000	-0.323609	0.0000				
PB((-1)					-0.124696	0.0142	-0.238065	0.0000
DEBT(-1)	0.024280	0.1016	0.037749	0.0000	0.014683	0.3544	0.013732	0.0210
GDP	-0.130065	0.0052	-0.160836	0.0000	-0.164149	0.0009	-0.215994	0.0000
UNEMP	0.113352	0.0095	0.137285	0.0000	0.145276	0.0017	0.132689	0.0001
OAD1	15.08013	0.5332	26.47303	0.3208	12.51308	0.6286	56.51518	0.0497
TAX1								
GINI	0.015777	0.2959	-0.083357	0.1614	0.016047	0.3281	-0.069516	0.2804
Adj Rsquared	0.980652		0.967413		0.977879		0.961932	
DW	1.323848		0.986801		1.318582		0.973882	
	162		270		162		270	

Variable	Model 5				Model 6			
	Dependent variable - ΔSE							
	2002-2007		2008-2017		2002-2007		2008-2017	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
SE								
C	0.907966	0.3663	0.337522	0.8046	1.423275	0.1501	-0.447118	0.7510
SE(-1)								
PB								
PB(-1)	0.117577	0.0392	0.081452	0.0000	-0.001951	0.9094	-0.010223	0.0184
DEBT(-1)	0.000894	0.9580	-0.015893	0.0003	-0.247598	0.0000	-0.302518	0.0000
GDP	-0.260669	0.0000	-0.294961	0.0000	-0.043645	0.3785	-0.136622	0.0000
UNEMP	-0.017295	0.7319	-0.091386	0.0001	35.97299	0.2039	52.96297	0.0106
OAD1	35.42579	0.2051	52.05384	0.0089	-0.150292	0.1566	-0.129556	0.0155
TAX1	-0.080326	0.4642	-0.052745	0.3273	0.000916	0.9581	0.096306	0.0388
GINI	0.008025	0.6475	0.070905	0.1154				
Adj Rsquared	0.135212		0.740915		0.135212		0.719213	
DW	2.442059		1.930396		2.442059		1.828692	
Periods	162		270		162		270	

Variable	Model 7				Model 8			
	Dependent variable - ΔSE							
	2002-2007		2008-2017		2002-2007		2008-2017	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
SE								
C	1.659555	0.0785	0.137669	0.9223	0.907966	0.3663	0.622643	0.6404
PB	-0.211356	0.0001	-0.006220	0.7649				
PB((-1)					0.117577	0.0392	0.086933	0.0000
DEBT(-1)	0.000281	0.9862	-0.012339	0.0105	0.000894	0.9580	-0.017303	0.0000
GDP	-0.189312	0.0003	-0.297314	0.0000	-0.260669	0.0000	-0.292828	0.0000
UNEMP	-0.075974	0.1116	-0.140773	0.0000	-0.017295	0.7319	-0.088945	0.0001
OAD1	45.98967	0.0860	51.55607	0.0143	35.42579	0.2051	51.67974	0.0094
TAX1					-0.080326	0.4642		
GINI	-0.009572	0.5642	0.082017	0.0795	0.008025	0.6475	0.063705	0.1515
Adj Rsquared	0.358074		0.712276		0.135212		0.740955	
DW	2.497044		1.771855		2.442059		1.921028	
Periods	162		270		162		270	

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TURKEY'S FDI AND SOCIO-ECONOMIC DEVELOPMENT OF NORTH MACEDONIA

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Abstract

In North Macedonia, domestic savings and investment rates are low and insufficient for achieving more dynamic economic growth. On the other hand, borrowing by lenders (international and domestic) is not acceptable due to the limited budget opportunities for servicing the external debt in the medium term. At the same time, the dynamisation of the economic activity requires greater investments, which taking into account the aforementioned reasons, are expected to be realised by attracting FDIs as a long-term source and catalyst of the economic activity in the country. In the analysis made, it is determined that investments of Turkish origin have positive effects on the economy of the country. In this direction, our main goal, found the fact that a substantially increased economic cooperation over the last decade and particularly important economic and strategic partner who examine FDIs from the Republic of Turkey is to contribute in this direction, make proposals to ensure that reveal the effects and increase attendance.

Keywords: FDI, Economic Effects, Republic of North Macedonia, Republic of Turkey.

1. INTRODUCTION

In the long term, international capital movements increase their importance at the level of international economic relations. The reasons why investors want to realize economic activities in the host country are different. Foreign investors, according to the purpose of investing in a foreign country, can be categorized as investors who come for: natural resources, market opportunities, economic activities, strategic goals and capacity of the economy etc..

Foreign direct investments (FDI) are perceived as the main actors of the contemporary economic globalization. If we look at recent history, it can be concluded that the concept and practical achievements of FDI

began to emerge after the Second World War. After the 1960s, because of the increasing significance of the new FDI models, multinational companies and international cooperation, the international economy had undergone a transformation.

FDI has grown particularly with the establishment of the European Union. This growth continued to increase in the 80s with the start of new trade and oil markets; in the 90s with the collapse of the Soviet Union and the emergence of new markets in Eastern Europe, the growth of FDI has become particularly visible. Accelerated technological transfers and unavoidable ideological and political transformations have led to the approximation of national economies by strengthening the process of globalization and the destruction of closed-market models. Globalization caused movement of international capital from areas with relatively large volume of capital, but low earning, to regions characterized by low volume of capital but high earning.

In the legislation of the Republic of North Macedonia (hereinafter only "Macedonia"), FDIs are defined as the process of establishing long-term business relations in the country and / or as capital inflow in order to manage the company or the legal entity in which is invested. From this definition, FDI can be described as: 1) Establishing a new company; transfer of ownership to the investor by increasing the share capital; buying an existing company in the host country or establishing affiliates of an existing company; 2) Possession of more than 10% of the capital or decision-making power of an existing or new formed company; 3) At least five-year obligation for realization of the company's activities by the foreign investor; 4) Investing in order to achieve long-term economic relations with the host country in the form of lending to the basic activities (NBRNM: Law on Foreign Exchange Operations).

In Macedonia, savings and investment rates are low and insufficient to achieve more dynamic economic growth. On the other hand, due to limited budget funds in the medium term, borrowing from foreign and domestic lenders should not be allowed. Apart from the lack of sufficient level of savings, the need for new technologies and information, the need for new markets, is an incentive for the domestic economic units. At the same time, rising economic activities cause increased amounts of investment. As a result of the reasons we mentioned earlier, the country should realize FDI as a resource and catalyst in economic activities in the long term.

In order to attract the interest of foreign investors, Macedonia, as a small country characterized by a small market, needs to sign bilateral, regional and multilateral cooperation agreements not only with Western countries but also with other countries in the region. In this context, we want to emphasize the importance of the results of the more intense and deeper economic cooperation between Macedonia and the Republic of Turkey (hereinafter only "Turkey").

Like other Balkan countries, Macedonia has deep cultural and economic relations with Turkey. Strengthening these existing relations is essential. Some compare the relations between Macedonia and Turkey with the relations between the former colonial countries (United Kingdom, France, the Netherlands and Belgium) with their former colonies in Africa and in other parts of the World. Nowadays, to know the language of a country, similar educational systems, social traditions and various common values are elements that bring countries and nations closer in a particular way. Given the abovementioned elements, taking advantage of the shared experiences in all fields with Turkey, the doors for cooperation have always been and remain open.

Taking into account the geostrategic role of Turkey in the Balkans, it will be necessary to pay close attention to the socio-economic effects of the refugee crisis on the Balkans and Macedonia. For this reason, for the continuity of political stability, which is one of the prerequisites for socio-economic development, further development of friendly relations with Turkey is needed in every field.

There are several factors that justify Turkey's interest in Macedonia; they are: geographically (located on the road that opens toward Europe), historical (common historical heritage), people/human (the Turkish minority that lives in the country and Macedonian emigrants/expatriates in Turkey), economic (in recent years, increased interest in investing by Turkish businessmen).

2. Legal framework as the Basis for FDIs

The communication and cooperation between Macedonia and Turkey is intense and constructive on all levels. In addition to the good political relations, good economic relations are being built.

Because of the the good political relations, although the legal framework for economic relations between the two countries is well defined, however, the development of the results achieved in the economic sphere lag behind the results of the political field and requires a longer period of time for further development of the relations. In recent years, from an asymmetric point of view, in terms of concluded agreements and achieved results with other countries, more dynamic, but unbalanced economic relations have been observed with Turkey.

In 2008, a strategic cooperation agreement was signed to strengthen bilateral relations between the two countries. This type of agreement has only signed with the United States and Turkey, making this very significant. Macedonia and Turkey have signed 35 international agreements, 49 international documents, one consecutive document and 15 agreements are still in the process of signing.

Several important agreements on the legal framework for trade and economic cooperation between Macedonia and Turkey are:

Agreements	Date of signing	Date of confirmation (in Macedonia)
✓ Agreement on trade and economic cooperation	17.03.1994	03.04.1995
✓ Mutual cooperation between customs services	09.05.1997	01.10.1997
✓ Agreement for the avoidance of double taxation with respect to taxes on income and on capital	16.06.1995	01.01.1997
✓ Bilateral Agreements for the Mutual Protection and encouragement of foreign investment	14.07.1995	27.10.1997
✓ Free Trade Agreement	07.09.1999	01.09.2000
✓ Agreement on cooperation in the field of social policy and employment	05.09.2013	17.01.2014

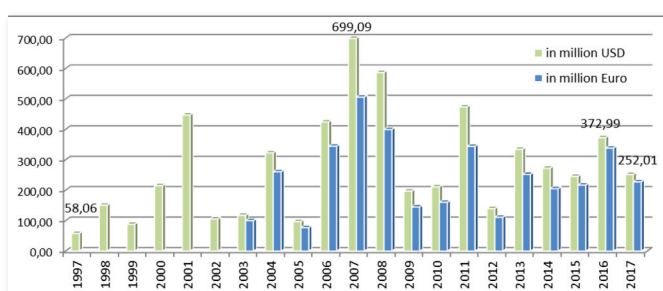
As can be seen, there are several agreements on FDI in the process: the Double taxation avoidance agreement and the Agreements for the Mutual Protection and encouragement of foreign investment. We can conclude that the legal infrastructure for economic development is favorable.

3. FDI in Figures

In order to boost the economy, the Government of the Macedonia is making great efforts to attract FDIs. Especially after 2007, several policies were created and implemented in this field. Although Macedonia is characterized by an advantageous geostrategic position, low taxes, good infrastructure, short periods for opening a new company, and a workforce with foreign languages skills, the level of FDI in the country is not at the desired level.

Figure 1.
FDI flows in Macedonia between 1997-2017 period (in mln USD and Euro)

Source: NBRM database.



It is noticed that the continuous participation of FDIs in the free industrial-technological zones is around 12%. The 3% share of FDIs in free industrial-technological zones in 2008 rose to 51% in 2009. The other years, however, this rate was between the range of 20-30%.

Table 1 identifies FDIs by country of origin, with Austria in first place, followed by the United Kingdom, Greece, the Netherlands, Slovenia and Germany. Turkey is seventh in the list, after occupying sixth place for two years from 2015.

Table 1. FDI in the Republic of North Macedonia, by country, 1997-2017 period (in million Euro)

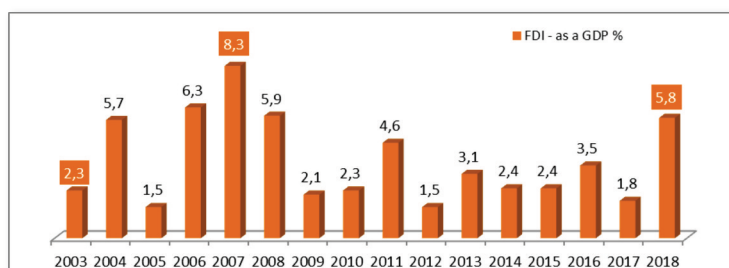
Rank	COUNTRY	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	AUSTRIA	17,6	30,1	39,5	33,0	36,8	37,7	42,8	62,3	57,7	219,4	238,3	334,6	362,6	341,5	365,0	396,8	484,3	516,3	524,9	567,5	636,7
2	UK	5,3	5,9	4,2	30,2	19,0	12,7	23,1	27,7	26,4	53,4	80,6	114,8	76,7	102,5	48,1	39,0	111,6	141,5	134,9	519,4	531,6
3	GREECE	9,7	12,8	20,5	105,3	174,2	213,0	223,0	264,1	279,2	320,4	387,1	450,7	380,3	431,2	442,9	436,2	433,5	429,2	477,3	463,4	473,9
4	NETHERLAND	1,4	4,6	10,2	14,7	15,6	61,1	69,7	103,2	213,3	212,0	431,3	435,6	523,6	550,4	740,4	783,0	815,1	869,7	960,0	423,3	375,3
5	SLOVENIA	16,4	21,2	43,7	56,2	58,8	66,4	84,7	101,8	106,8	126,7	165,8	262,8	391,2	366,6	380,3	348,8	396,7	387,6	375,0	374,5	323,9
6	GERMANY	9,3	14,1	15,9	50,2	54,6	52,5	57,3	70,6	64,1	85,9	66,2	62,0	71,3	86,3	83,5	111,3	154,5	190,7	248,2	273,0	
7	TURKEY	0,7	1,1	14,2	16,1	16,2	18,0	18,9	26,5	25,1	27,7	34,9	43,0	49,7	48,3	117,2	145,3	168,1	182,1	214,6	247,8	252,3
8	HUNGARY	0,0	0,0	0,0	0,0	300,6	300,1	313,4	354,4	350,0	350,4	421,3	410,6	388,7	346,9	346,6	346,4	324,6	227,3	226,5	209,5	213,5
9	SWITZERLAND	32,1	40,8	45,8	61,5	79,2	85,2	101,9	143,9	164,2	150,8	166,8	200,7	202,1	149,8	124,2	88,5	72,0	173,8	152,1	179,6	184,4
10	CYPRUS	1,2	77,1	92,8	117,9	138,7	141,6	141,1	150,5	160,8	182,2	20,5	34,9	47,9	46,2	48,8	57,7	68,7	51,1	54,4	162,9	164,2
	TOTAL	141,2	270,4	359,9	580,1	1.039,2	1.160,7	1.292,1	1.610,2	1.769,0	2.098,6	2.545,2	2.968,8	3.141,4	3.256,0	3.615,1	3.685,5	3.980,0	4.023,6	4.400,1	2.016,0	2.017,0

Source: NBRM database.

The following foreign companies can be listed as the largest foreign investors in Macedonia, from Austria: Mobilkom Austria, EVN, Vienna Insurance Group; from the UK: Johnson Matthey; from Greece: The National Bank of Greece, Hellenic Bottling Company S.A., Titan Group; from the Netherlands: Mittal Steel; from Germany: Deutsche Telekom, Kromberg & Schubert, Dräxlmaier Group; from Turkey: Cevahir Holding, Limak Holding, Acibadem Group, TAV; Van Hool (Belgium), Societe Generale (France), Johnson Controls (USA), KEMET Corporation (USA), Duferco (Switzerland), Lukoil (Russia), IBC (Israel), Gazit Globe (Israel)⁹² etc.

Figure 2.
FDI in the Macedonia
(as a GDP %)

Source: NBRM and Ministry
of Finance databases.

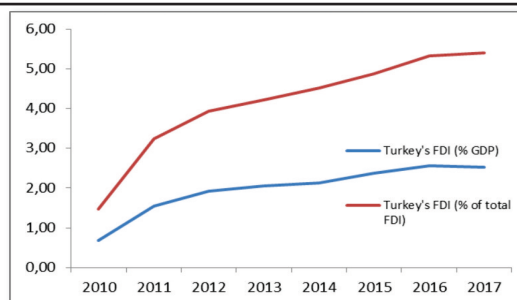


It can be also noticed that the level of FDI in Macedonia is insufficient by the low relative share of FDI in relation to GDP. In the period 2003-2017, FDI in GDP was 3.58% on average. The share of Turkish investments, however, in the total FDI of the country in the period 1997-2017 was on average 2.57%.

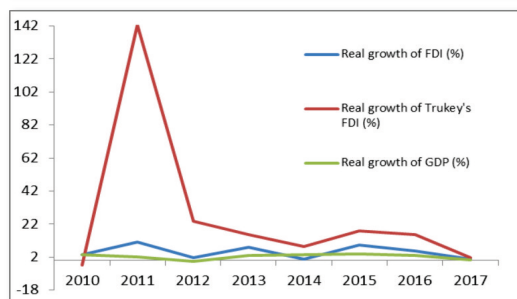
The charts below show that the share of FDI from Turkey in GDP and in the total FDI in Macedonia is growing. Also, in the period from 2010 to 2017, the growth of FDI from Turkey is higher than the real growth of the total FDI and GDP in Macedonia. There is also a great potential for cooperation between the two countries, which will affect the further growth of these variables,⁹³ but is yet to be utilized.

92) Invest Macedonia: FDI, <http://www.investinmacedonia.com/why-macedonia/growing-fdi>

93) For more information see: Aliyi, E.: Makedonya Cumhuriyeti İnşaat Sektöründe Türkiye Cumhuriyeti Menşeli Doğrudan Yabancı Yatırımlarının Önemi [Importance of the Turkish FDIs for the Macedonian Construction Sector], Hikmet -International peer-reviewed journal of scientific research, no.29, May 2017, pp.130.

Figure 3. FDI stock from Turkey (%)

Source: Processing by the author from the databases of NBRM, Ministry of Finance and Statistical Office.



If you look at the indicators shown by the countries that invest most in Macedonia, Turkey's investment per capita is constantly growing. In 2010 they were 23 euros, while in 2015 is 104 euros, showing a 4.5 times increase.

The National Bank of the Republic of North Macedonia (NBRMS) has data for the amount of the FDIs from Turkey, from 1997, as well as data on the trends of direct investments from 2003. The National Bank of the Macedonia still does not produce data separately for each country per activity, so there is no statistics on data on direct investments from Turkey into Macedonia by activity. Additionally, the submitted data for FDIs from Turkey into tMacedonia refer to the stated periods, expressed in millions of euros, by years.

Table 2.

FDIs from Turkey in Macedonia - stocks and flows, (provisional data, in million Euro)

	Stocks			Flows Value by year
	Value	Total	Share (%)	
1997	0,70	141,22	0,50	
1998	1,15	270,37	0,42	
1999	14,24	359,90	3,96	
2000	16,12	580,05	2,78	
2001	16,23	1.039,15	1,56	
2002	17,98	1.160,71	1,55	
2003	18,86	1.292,14	1,46	1,51
2004	26,49	1.610,22	1,65	3,95
2005	25,06	1.768,97	1,42	0,33
2006	27,72	2.098,57	1,32	3,90
2007	34,91	2.545,17	1,37	2,01
2008	42,98	2.968,75	1,45	1,50
2009	49,74	3.141,38	1,58	4,43
2010	48,29	3.255,97	1,48	15,53
2011	117,23	3.615,08	3,24	77,12
2012	145,32	3.685,54	3,94	23,53
2013	168,13	3.979,97	4,22	22,81
2014	182,1	4.023,6	4,52	17,05
2015	214,6	4.400,1	4,87	17,10
2016	247,8	4.657,3	5,32	24,61
2017	252,3	4.697,8	5,4	10,04
2018	/	/	/	36,20

Source: NBRM database.

In the period between 1997-2017, Turkey was seventh among the foreign investor countries in Macedonia, and the biggest investor from the countries outside the EU according to the total amount of direct investments of 252.3 million euro. In 2018, Turkish FDI flows in Macedonia amounted to 36,20 million euro and was the 3rd ranked among the foreign investor countries. The reason for analyzing the Turkish direct investments in particular is the increased economic cooperation between the two countries in the last ten years.

Although the political relations between the two countries are described as good-neighborly and romantic by the official authorities, the economic relations are not at the desired level. But in the last ten years, it can be said that there is a significant improvement in the economic relations.

According to the information obtained from the Trade Register and the annual accounts (closed database) of Macedonia from January 2019, there are:

- 1013 registered legal entities (the founder and the owner are a private individual or legal persons from Turkey),
- 48 registered branches (for companies coming from Turkey),
- 4190 employments (according to the final reports of 2017 - employees in legal entities with founders or owners from Turkey),
- Profit of 913.942.654 denars (or 14.860.856 euros) - (in the abovementioned Turkish companies at the end of 2017),
- 24.046.770.414 denars (or 391.004.396 euros) as total assets (in the abovementioned Turkish companies at the end of 2017).

In 2017, Turkey realized 455 million USD in trade exchange with Macedonia, making it the 8th country with the largest exchange with the Macedonia. According to the research and forecasts we can claim that the relations between the two countries are realized in two directions, and there is still a serious unused trade and investment potential. Turkish investments are usually around Skopje. Turkish investments are seen in all areas from banking to construction, from retailing to aviation management, from education to health sector and even to news agencies. Large Turkish companies in Macedonia have been organized around the Macedonian-Turkish Chamber of Commerce (MATTO). The following are significant Turkish investments, especially in the 2000s.

Table 3. List of main Turkish investor companies in Macedonia

	Company	Project	Starting date	Amount (mln euro)	Employment	Status
1	Haznedar Refrakter	Investment in Vardar Dolomit company	2003	5	250	Active
2	Ramstore Makedonya	Shopping mall construction	2005	50	575	Active
3	TAV	Construction of 'Aleksandar Veliki' and 'Sv. Kliment Ohridski' airports	2008	200	650	Active
4	Halk Bankası	Investment in banking sector (in Ziraat Bankası, formed in 1998 year)	2011	65	491	Active
5	Acıbadem	Investment in Sisitina hospital	2011	/	/	Active
6	Avrupa Göz Hastanesi	Hospital investment	2011	12	52	Active
7	Cevahir Holding	Skycity skyscraper and mall construction & Suncity residential construction	2012	450	450	In progress
8	Limak Holding	Residential and shopping mall construction	2012	250	25	In progress
9	Sütaş	Investment in Balkanska Mlekara company	2012	13	70	Active
10	Levidiagro	Rice processing factory	2015	4	100	Active
11	Çağatay Kablo	Free Zone Skopje 1 cables production factory	2017	4	100	Active
12	Murat Tic. Kablo	Free Zone Skopje 2 cables production factory	2017	6.6	60	In progress
		Total		1053	2823	

In addition, the general effects of the FDIs, the opportunities they offer and certain measures, will be discussed.

4. General Effects of Turkish FDIs in Macedonia

From a general point of view, Turkish direct investment has a positive impact on the economic growth, employment and export. In addition to the direct effects, there are certain indirect effects. FDI affects the following socio-economic areas: Local budgets (funds provided for basic projects, social programs, etc.), employment and human resources (new jobs, higher fee, education, other social benefits - free meals and accommodation, transport, etc.), state regulation and public finances (taxes, customs, relations with state institutions, political risk), infrastructure development, business activities in the region (the effect of expansion, services of foreign companies, development of small and medium enterprises), innovation (new technologies, products, organization, process and marketing), environment and social responsibility of business programs etc.

In addition to the above mentioned effects, the results of statistical models, surveys and interviews will be listed/summarized.

✓ Statistical models (Regression and VAR)

In order to determine the impact and effects of FDI on the key economic variables in the Macedonian economy, we created several simple models (regression and VAR) that should guide the relations between these key variables. In order to determine the impact of FDI and exports on gross domestic product (GDP) for a small and open economy such as Macedonia, we have made a simple regression analysis in which GDP is taken as a dependent variable, while the total amount of FDI and the export are taken as an independent variable. As a result of the regression analysis the impact of the FDI from different countries on GDP and total FDI, it confirmed the conclusions on the significant impact of FDIs from countries with the largest investments on GDP, exports and total FDI, as well as the significant impact of Turkish investments on economic activities in Macedonia. The VAR models that were designed to confirm previous claims on the impact of FDI on exports and other economic activities of Macedonia that is small and open country proved that the growth in FDI has significant effects on GDP and positive export growth, the impact of FDI on increasing economic activity and well-being in the national economy.

In this regard it can be concluded that if FDI in Turkey rise by 10%, in that case there will be a rise in GDP of 0.9%, indicating a significant correlation between these two variables.

✓ Survey

According to the results obtained from our survey conducted in the largest Turkish companies, investors in Macedonia, employment has a positive impact. Only in the companies⁹⁴ involved in the survey approximately 2500 employees are registered, but other employees in other Turkish companies, where this figure seems to be higher, should also be taken into account.

According to the same survey, it was determined that with these larger investments from Turkey, ethnic distribution of employees are mostly Macedonians, then Turks, Bosniaks and Albanians. Also, these companies mostly use the Macedonian language, then Turkish and English as a internal communication language.

✓ Case study

The case study computes the effects of a Turkish construction company⁹⁵ on local government, employment and the effect of spillovers.

94) Ramstore, Halkbank, TAV, Sutas, Cevahir Gurup, Limak, Sante plus vd.

95) Turmak AD – Skopje Branch

Buying construction land for construction: 2.5 million euro

Tax on the sale of land (3%): 75 thousand euros

Fee for landscaping (utilities): about 5 million euros (40% Municipality of Aerodrom and 60% City of Skopje)

Gross wages for employment (7 years): EUR 16.8 million (of which about 8 million euro are contributions and payroll taxes). An average of about 200-250 employments.

Spillover effect for local suppliers and subcontracting services: 60 million euros

*Profit tax (10%)

These are part of the larger positive effects on the economy. On the other hand, some studies indicate no negative effects such as the possibility for construction investors to spend the entire amount and profits in their own home country. The general conclusion is that the positive impact occurs in the case of reinvestment of profits in the country without having an outflow of profits.

✓ Interviews

In order to determine the impact of FDI on socio-economic development, a qualitative study was conducted (conducted interviews and surveys with the managers of the construction companies from the Turkey and the domestic companies).⁹⁶ The content of the interview and this analysis will help to determine the differences in the work and the way of functioning of local and foreign companies in order to determine the socio-economic effects of their activity for the Macedonian economy. The analysis includes questions on management, innovations, staff investments, employee training, corporate social responsibility, social benefits, etc., in order to consider, through a comparative approach, several aspects of the effects of FDI. In this direction, the following table presents a comparison of the socio-economic effects, on one side the local and on the other side the foreign construction companies.

Table 4. Socio-economic effects of FDIs from Turkey (case: construction companies)

Immediate effect of FDI	Description	Domestic companies (construction)	Turkish companies (construction)
<i>Local gov.budget revenue</i>	Provide funds for basic projects	partly	yes, through taxes
	Provide funds for social programs	partly	Yes
<i>Employment and human resources</i>	New jobs	yes	Yes
	Higher fee	yes	Partly
	Education	yes	Yes
	Specialization	partly	Yes
	Other social benefits	no	Yes
	Free meal	yes	Yes
	Free accomodation	no	Yes
	Free transport	partly	Yes
	Subvention for accomoditaion	no	Yes
	Other	no	Yes

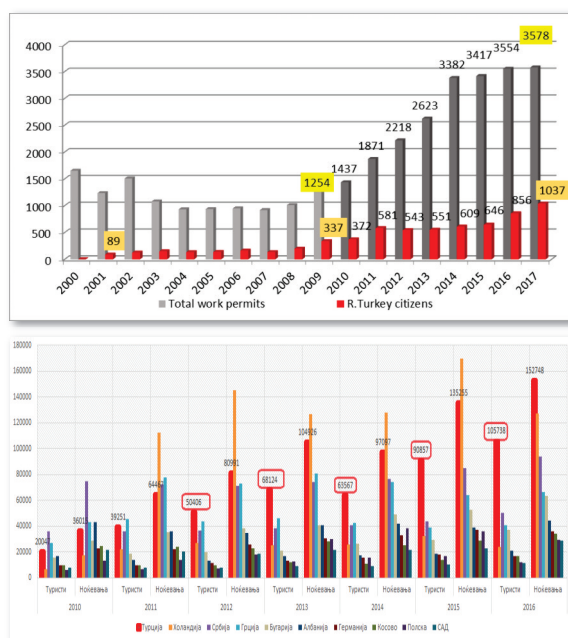
96) Domestic companies: Granit AD Skopje (in 2017 year, 76 mln euro realized revenue ve 2.080 employment), Beton AD Skopje (in 2017 year 35 mln euro realized revenue ve 1.095 employment), GIM; Companies from Turkey: Cevahir Gurup AD Branch Skopje (in 2017 year 15 mln euro realized revenue ve 203 employment), Limak Doo Skopje (in start year n/a), Pera Construction International Doo Skopje (in 2017 year 6,7 mln euro realized revenue ve 18 employment), Elif İnşaat Doel.

<i>State regulations</i>	Taxes	partly	Yes
	Customs	partly	Yes
	Relations w./ state institutions	yes, good	yes, good
	Political risk	yes	Partly
<i>Infrastructure development</i>		partly	partly □ possible
<i>Business activities in the region</i>	Spillover effect	yes	Yes
	Development of small and medium enterprises who service for foreign companies.	partly	Growth through local subcontractor
<i>Innovation</i>	New technologies	partly	yes * a new faster building construction methods, * construction a underbuilding concrete and iron pipes for seismic stability
	Products	yes	yes (for a first time in region construction a skyscraper 40 flats)
	Organization	yes	yes
	Process	yes	yes
	Marketing	partly	yes (using new marketing methods, new pricing policy the higher it is the more expensive)
<i>Environment responsibility</i>		yes	yes
<i>Social responsibility of companies</i>	Based on country origin and international experience	partly	yes

On the other hand, Turkish companies contribute to the development of other areas of social life, such as culture, sports, etc. Here are some examples: Limak - Macedonia is sponsoring the basketball federation, Cevahir Holding sponsors Basketball Club - MZT, Halk Bank is a sponsor of the Balkan Volleyball Federation and the Handball Federation of Macedonia, while D'S Damat is the general sponsor of the Macedonian football federation.

The graphs below show work permits and data on tourism respectively. It is noticeable that most of the work permits are issued to Turkish citizens, and after 2009 there is considerable growth from this aspect. Also, according to the number of tourists and night spent in the country, tourists from Turkey are in first place.

Figure 5.
Work permits for Turkish citizens and tourist
and nights spent figures



Source: MAKSTAT database.

✓ Cost - Benefit analyse

The countries that import capital are concerned about the effect of FDI on national welfare. There are a number of benefits, but also costs associated with the flow of FDI. Based on the analysis of the situation in Macedonia, the following SWOT analysis can be made for Turkish companies.

Strengths	Weaknesses
<ul style="list-style-type: none"> - Tax ambient - Achieved level of privatization and a solid level of economic reforms - Developed banking system - Convertibility of Turkish lira - A solid level of higher education staff - Educational staff that speaks Turkish - National treatment of foreign investors - Free trade at zero or relatively low customs rates - Existence of free economic zones - Shortly needed time for company registration - Possibility to use tax benefits - Favorable geographical position - Access to European markets, through bilateral, regional and multilateral agreements - Macroeconomic stability - High-skilled and relatively inexpensive workforce - Developed telecommunication infrastructure 	<ul style="list-style-type: none"> - Economic and political instability - Insufficiently developed infrastructure as a whole - Not yet recognizable locations for attracting FDI - It is located in an unstable security-political region - Limited natural resources - Distrust in judicial and legislative power - The size of the market - Relatively small purchasing power - Administrative barriers - Insufficiently developed sector technological base - Insufficient level of know-how (special managerial skills) - Long and slow procedures for the time needed for closing down companies - No out to sea/land covered country
<p>Opportunities</p> <ul style="list-style-type: none"> - Perspective EU and NATO membership - Commitment to the Government of the Republic of Macedonia for creating a favorable environment for attracting FDI - Further development of the financial market, and strengthening of the banking sector - Investments for construction of capital infrastructure objects - Education reforms in line with the needs of the development sectors - Greater utilization of human resources (reducing the outflow of labor abroad) - Inclusion in international transport and energy corridors <ul style="list-style-type: none"> - Better use of existing free trade zones and establishment of new ones 	<p>Threats</p> <ul style="list-style-type: none"> - Continued political crisis and stagnation of new investments on the market - An unresolved dispute with the name and uncertainty of the membership of the Republic of Macedonia in the EU and NATO - Unfavorable demographic trends and a high outflow of quality, highly educated workforce abroad - Serious competition from countries in the SEE region - Low level of reinvested capital and potential outflow of capital from FDI - Non-flexibility of the labor market (slow retraining and mismatch of educational programs with the needs and demands of foreign investors)

The analysis shows that Turkish companies, as well as other foreign companies, besides the advantages and opportunities of the Macedonian economy for investment, are faced with certain problems. By removing barriers to foreign companies and joining Macedonia in NATO and promising EU membership will provide significant growth in investments.

5. Importance of Non-economic Factors for FDI

Some of the main non-economic factors with a significant impact on economic growth and social development are: culture, religion, the role of the family, the class, tradition, the role of the individual, social and political dependence, the role of government, language as a resource of human capital, factors that belong to social pathology, etc. Some other variables are also used in contemporary economic empirical research, such as democracy, the rule of law, the state's share of spending in the economy, legal structures, colonial countries, the index of economic freedom, etc.

If we look back on our topic, apart from the political and economic relations between Macedonia and Turkey, there are deep historical ties, which give rise to common interests from the aspect of culture, history, education, science, defense, health, tourism and other areas.

FDI can also be used as a foreign policy tool to win an ally. From that aspect, in our case, we can point out the importance and impact of FDI on deepening the relations of Macedonia with *Turkey as a soft power country in the region*, and this will, in particular, contribute to the strengthening and deepening of the cultural relations and other non-economic areas that could contribute to the economic development of the host country.

The Turkish ethnic community in Macedonia and the emigrants/expatriates from Macedonia in Turkey, are strengthening the friendly relations between the two countries. Family and personal ties have greatly contributed to the improvement of economic relations between the two countries.

The cooperation is intensive in the following areas: culture, history, education, science, defense, health, tourism and others. Since 2005, Turkey, through the Turkish Cooperation and Coordination Agency (TIKA) in Macedonia, has implemented around 950 projects worth over 60 million Euros.

According to a survey conducted in the period from 15 November to 1 December 2013 by the Macedonian Center for International Cooperation and with the participation of the citizens of Macedonia, the results of the poll entitled "Global Leadership and Neighboring Countries" Turkey is preferred by most "friendly country" with a 16%. Also, on the poll "The Best Allies of Macedonia" with a rate of 16.6% of the votes, Turkey was again ranked first.

Turkish television series, films and channels have become more and more popular in Macedonia. This has an impact on the creation of curiosity, as well as the tourist potential for both countries. In recent years, a growing number of people from Macedonia are visiting Turkey, learning Turkish and striving for the Turkish lifestyle. This is especially important for their contribution to cultural diplomacy.

By 2015, within the framework of various military assistance programs, Turkey donated military equipment worth over US \$ 20 million to Macedonia. In March 2019, in the Government session of Macedonia, again, the military financial assistance from the Turkey was placed on the agenda.

Starting from July 1, 2014, Turkish lira (TRY-949) was introduced as a convertible currency on the NBRM exchange rate list. This situation allowed residents of both countries to make payments through Turkish lira.

6. Opportunities and Recommendations for a more Effective Partnership

In the next period in Macedonia, special treatment in stimulating should be made on metallurgy, construction, processing and certain services that are the main bearers of the country's economic growth and gross domestic product. Macedonian companies must maintain the quality and price of the products in order to replace the import and to perform in Turkey and other foreign markets which will contribute to the increase in exports. Here we can emphasize that the 21st century is a time of intellectual competitiveness. Therefore, as a dominant national interest, two demands are set before each country: the production of minds and the creation of conditions for those minds to retain and exploit their potential. In order to achieve this goal, besides other policies, the policies for attracting FDIs should be continued.

Turkey consistently manages to transform its cultural soft power in the Balkans into economic power. FDIs

from Turkey have a positive impact on the socio-economic development of Macedonia. Turkish businessmen are mostly interested in investments, but also for joint cooperation in the sectors of production of machines, textiles, furniture, steel structures, auto parts, technology, mining, construction, tourism, health, agriculture, and food industry. In the future, based on the Free Trade Agreement with tax exemptions and quotas for agricultural products and live animals, apart from increasing the volume of trade, it will affect new direct investments in these sectors in Macedonia.

Bilateral trade schemes between the economy of Macedonia and Turkey show that increasing the volume and quality of bilateral trade between the two countries requires two things: more inflows of foreign investments in sectors with higher added value and simultaneous economic transformation. It is also necessary a detailed consideration in the sector of exchangeable goods and to study its comparative advantages and competitiveness.

Apart from products in branches of traditional sectors, there is an intention of producing and exporting products with high added value. Especially products with halal standards can increase the trade potential, but also the production in Macedonia. It is possible to consider the possibility of increasing the capacities of Macedonian firms or joint production with Turkish companies and taking place on the market of products with halal standards in the countries of the Middle East and North Africa. The markets of the Middle East and North Africa are significant markets with over 400 million inhabitants.

Within the framework of the long-term strategy for economic growth and development, it would be very useful to identify the sectors that will be the main force of the Macedonian economy, and thus to develop a sectoral strategy for such sectors. According to the chambers of commerce, the following sectors are highlighted as the most important and should pay attention to: metal, metalworking, machinery and electrical industry, mining, tourism and construction. This will largely have a clear message to potential Turkish investors, but in order to have a positive impact, programs, plans and activities of the institutions of the system need to be realistic and achievable.

Turkish companies are also developing in the financial sector, manufacturing, construction etc.. In particular, the investment and trade should be increased in the medical sector; on the other hand, Turkish investors should consider investment opportunities in the agriculture, insurance and IT sectors, tourism (hotels, ecotourism, ski resorts, etc.) in other branches of the service sector. Turkish companies should analyze investments in already existing companies in the Macedonia, as well as joint investments. Turkish investments are not seen in strategically important sectors such as the oil industry, energy, telecommunications, for which in the future, the opportunities, that may arise from the new market conditions, should be closely monitored.

Obviously, the advantages of the free economic zones are not used enough by companies from the Turkey and have great potential for cooperation.

The establishment of financial and health free zones may attract the attention of Turkish businessmen. Special economic zones for only Turkish businessmen and industrialists can contribute to increasing investment and the volume of foreign trade. Of particular importance is the possibility of deepening the cooperation with the Macedonian Stock Exchange, which has recently experienced a growth of 120%.

Turkish construction companies need to focus on infrastructure projects, as capital infrastructure facilities that have recently been realized in the country have changed the structure of the construction business sector, from residential to infrastructure construction. In particular, hydro-construction in the future will have a great rise in the construction of hydroelectric power plants. Particular importance is given to the chance of increasing the cooperation in various areas of the economy with special attention to the construction sector and the establishment of joint ventures, encouraging bilateral or multilateral joint investments in their own or in third countries.

New projects have been announced by Turkish companies for Macedonia for the near future, with the assumption that they will reach nearly two billion euros in total investments, one billion US dollars of trade and thousands of jobs. Turkey, in order to protect its image that has been built over the last ten years, needs

to urge, or intervene through its official institutions on companies that are launching as big potentials, and have no feedback.

The intergovernmental Macedonian-Turkish Commission for Trade and Economic Cooperation which was passivated in 2008 should be activated. Also, the fairs in which Turkish products are promoted will be a positive contribution. Also, as its have been announced by the Macedonian government in March, in order to attract investments and strengthen bilateral relations, they will establish centers at the level of trade attache in Germany, the United States and Turkey.

Turkey should follow the EU's "Berlin Process" to the Balkan countries and to take care of the policies that are in its favor. The Berlin process was initiated in 2014 from Germany, and after Berlin this summit was held in Vienna, Paris and London. At the Western Balkans Summit in Trieste, held in July 2017, apart from the political integration of the region, the European Union aims to integrate the Western Balkan countries economically into a regional economic community in the fields of energy, transport and infrastructure. Also, standardization, homologation, trade union and digitization are the few global challenges that need to be taken into account. The Berlin process aims to create a framework for promoting relations between the countries of the region in order to achieve economic development and growth, ie to achieve accelerated reforming progress in the interest of faster integration into the EU.

In this way, Turkey to be successful need to revising its medium and long-term investment policies which can help to be one step ahead of other international actors in the region (EU, USA, Russia and China).

At the SEECP summit in Istanbul in June 2010, the Turkish Republic's desire to make the region "a center for infrastructure, transport energy projects and financial transactions" was expressed. The future strategic projects of the transport corridors (8 and 10), the Turkish Stream, the Silk Road, etc. will be very important in the next period for Macedonia. All this makes the Turkey an extremely important economic strategic partner for Macedonia. At the same time, the space occupied by Turkey is an important energy corridor and a terminal for Europe. Therefore, in all future plans and decisions, we should anticipate the strength and potentials of this geopolitical and geoeconomic space. Also, special attention should be paid to transport. China's 16 + 1 initiative (+ Greece) offers great perspectives for Macedonia. China's ambitious project The silk road (worth 124 billion dollars) is connecting the East with the West and offers free flow of goods and investments, as well as financial cooperation where Macedonia and Turkey benefit.

Of particular importance are the investments in the Balkan road and rail infrastructure with the ultimate goal of connecting all the major cities, economic centers and main seaports in the region and creating conditions for greater economic development.

With the development and investments in aviation, there will be an additional positive impact on the economic relations between Macedonia and Turkey.

Various programs are under consideration to support the development of economic cooperation. Of particular importance are the loans from Eximbank, the convertibility of Turkish liras, and others. In particular, the terms of the loans from Eximbank should be revised taking into account more favorable loans from other governments and financial institutions in order to become more competitive. Also, in the forthcoming period depending on the value of the Turkish lira, the flow / outflow transactions between the two countries may increase.

Turkey, in the Macedonian economy, plays the role of a regional power center, a tourist center, a source of investment and the successor to the country's important historical heritage.

The Macedonia, as a small, open economy, in order to maintain long-term growth should continue to support attracting FDIs, but the support and export orientation of domestic companies is certainly important as well. The human connection, cultural interactions and trade interaction relations between Macedonia and Turkey are very important to be kept.

7. Conclusion

The good political and legal framework for economic relations between the two countries is fairly well established, but improving the economic sphere is lagging behind the political sphere and is taking away a longer period of time.

Also, Turkish investments in Macedonia positively (directly and indirectly) affect the socio-economic development of the country.

It can be concluded that economic cooperation and relations between the two countries are going up and that there is great potential for cooperation that has not yet been used.

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ANTECEDENTS OF MANAGEMENT INNOVATION - A CASE OF COMPANIES FROM WESTERN BALKAN COUNTRIES

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Abstract

The focus of the study is to test the relationship between some key internal antecedents and management innovation, in companies from Western Balkan Countries. In this study management innovation is conceptualized as the introduction of new management and organizational practices that are new to the company. Using a large data sample, from Business Environment Enterprise Performance Surveys (BEEPS) and through binary logistic regression, a positive relationship was confirmed between three internal antecedents and management innovation. Findings indicate that giving time to employees to try a new approach or new ideas, providing training to employees and the size of the company, are positively related to management innovation. Surprisingly and conversely to results of some previous studies, the relationship between the level of education of the workforce and management innovation was not confirmed. Also, the expected inverse relationship between the inadequate level of education as an obstacle in company work and the level of adoption of management innovation was not confirmed. Findings from this research study can help management practitioners, scholars and policy-makers, to better understand key drivers of management innovation in transition economies from the Western Balkan Region.

Key words: management innovation, time to innovate, training, level of education, company size.

JEL Classification: O30, O32, M10, L20.

1. Introduction

The concept of innovation has always been associated with economic growth, prosperity and firm performance. Joseph Schumpeter in his book *Capitalism, Socialism and Democracy* originally published in 1942 has recognized the value of “creative destruction” as a revolutionary economic force and economic innovation as a key factor for economic growth. Recently Daron Acemoglu and James Robinson in their book: *Why Nations Fail: The Origins of Power, Prosperity, and Poverty* published in 2012 emphasized again the importance of “creative destruction” and inclusive institutions as key drivers for economic growth and national prosperity separating successful from failed nations. Organizational success highly depends on the organizational capacity to generate and adopt technological and non-technological innovations. Several scholars in the past have confirmed the positive impact of technological and non-technological innovation on firm performance (Exposito and Sanchis-Llopis, 2018; Camisón and Villar-López, 2010).

However, most of the studies in the past have been investigating the concept of innovation predominantly as a technology-based phenomenon (Godin, 2008) and were focused on the ways how organizations can develop technological innovation (Crossan and Apaydin, 2010). Aside from the studies mainly focused on technological innovation, this study is similar to previous studies (Damanpour et al., 2018, Khosravi et al., 2019, Mol and Birkinshaw, 2009) focusing on the adoption of managerial innovation, as a type of non-technological innovation. Following the approach of Mol and Birkinshaw (2009) this study defines management innovation as the introduction of management and organizational practices that are new to the firm and intend to enhance firm performance.

Cvetanovic et al., (2014) investigated the relation between innovation outputs and innovation inputs, and the relationship between the GII (Global Innovation Index) and GCI (Global Competitiveness Index) of Western Balkan Countries, and a group of six selected European Union (EU) countries. Cvetanovic et al. (2014) focused on innovation inputs and outputs on a country level, while this study contributes towards covering the geographical research gap, by investigation of the key internal antecedents of management innovation on a company level. The Western Balkan Countries have very similar political and economic conditions and it would be interesting to explore the relationship between some of the key internal antecedents of management innovation in companies from that specific region. The investigation within this region is even more important because the process of political and economic convergence between the countries from the Western Balkan region and EU is very important for the future process of EU enlargement.

Underpinning arguments supporting the need for this type of research covering the specific region of WB countries are derived from the inconsistent findings in previous studies related to the direction of the relationship between key drivers and management innovation. For instance, Ganter and Hecker (2013) in their research study of reassessment of Mol and Birkinshaw (2009) model on a large sample of German firms did not confirm the previously supported model on UK firms. This misfit in innovative firm behavior points to differences in the underlying institutional environment. Hence, when we test the research hypothesis it is very important to take into consideration the attributes which characterize companies and economies in developed countries from those in transition countries such as Western Balkan countries. The inconsistencies in the results can be noticed in several other studies. The study of Hansen (2010) has found a positive relationship between company size and management innovation, while the study of Vaccaro et al., (2012) showed that the relationship between these two variables is weak to nonexistent.

Therefore the research study addresses this research gap by exploring the relationship between several key internal antecedents and management innovation in companies from WB countries region. For the purpose of this study, five key research questions have been developed: 1) How the available time of employees to try new ideas or things is related to management innovation? 2) How providing training to employees impact management innovation? 3) How the levels of education of employees affect management innovation? 4) What is the relationship between inadequate education of employees and management innovation? 5) What is the relationship between company size and management innovation?

The remainder of the paper is structured as follows. First, in the section of theoretical development, the article focus is on the concept of management innovation and its antecedents. In the third section, the research methodology and the research process followed in the study are explained. In section 4, the findings from the research study are presented and discussed, followed by theoretical and practical implications. In section 6 future trends and improvements are discussed and proposed, while in section 7 a short remark regarding research limitations is given. At the very end of the paper summarization and conclusions are derived.

2. THEORETICAL DEVELOPMENT

Scholars from different fields of research have been studied innovation on various levels, using different terminology and research methods. The study of innovation was long time focused only on new product and production process development. This narrow notion of studying exclusively technological innovation is recently criticized by many researchers (Ganter and Hecker, 2013). Therefore there is a growing interest in studying and investigating the phenomenon of non-technological innovation (Damanpour, 2018; Khosravi, 2019). Studies of innovations in organizations include generation and adoption of technological and non-technological innovations (Damanpour et al., 2018). Similar to several studies in the past (Damanpour et al., 2018; Khosravi, 2018; Mol and Birkinshaw, 2009) this study focuses on the adoption of managerial innovation, or more precisely on the introduction of new management and organizational practices.

The fundamental difference between technological innovation and management innovation is comprehensively described and explained in the research study of Damanpour and Aravind (2012). The main difference between technology innovation and management innovation is related generally with the distinction between technology and social structure (Evan, 1966). Management innovation refers to the introduction of management practices, processes, and structures that are intended to further organizational goals (Birkinshaw et al., 2008). Technology innovations are primarily associated with the technical system of an organization, while management innovations are associated with the social structure of the social systems (Damanpour and Evan, 1984).

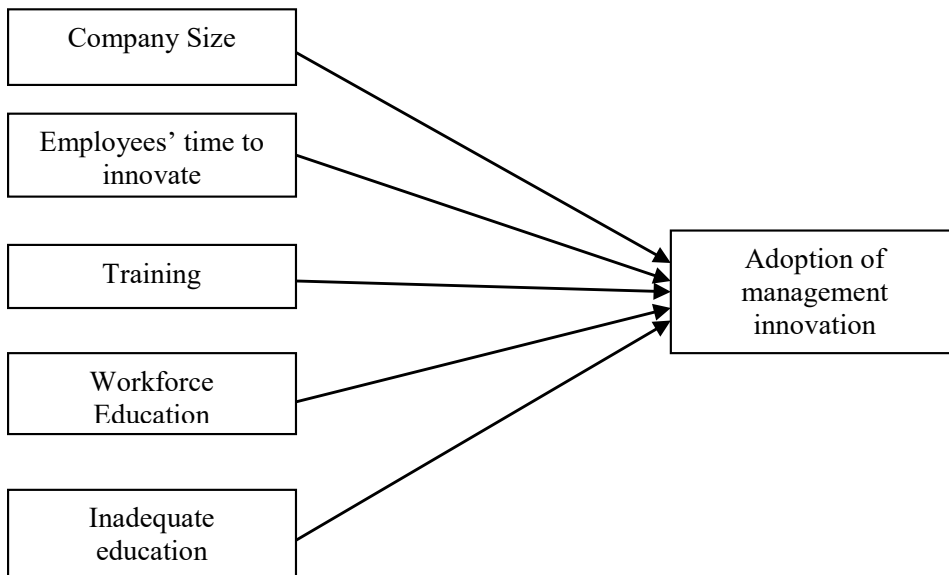
The model of Mol and Birkinshaw, (2009) included two main categories as antecedents of management innovation. The first category refers to the organizational context and its knowledge-based relations. They consider organizational size, level of education of the workforce and geographic scope as firm-level attributes, and they built their hypothesis on the assumption of the positive association between these attributes and management innovation. Ganter and Hecker (2013) reassess the model of Mol and Birkinshaw by additionally accounting for organizational innovation as a source of sustainable competitive advantage. They based their research study on a large sample of German firms drawn from the 2005 "Community Innovation Survey" and the empirical results from their study significantly contrast those by Mol and Birkinshaw. In the study of Ganter and Hecker (2013) competitive environment was identified as a significant predictor of adopting management innovation, while reference-group theory and knowledge search perspective were not confirmed as antecedents of management innovation.

Khosravi et al., (2019) in their recent systematic literature review and meta-analysis of management innovation identified a large number of drivers and outcomes of management innovation in a comprehensive framework. Four large groups of organizational, environmental, managerial and attributes of innovation were identified as drivers of management innovation. Within the group of organizational factors, eight subcategories were identified with several factors. The identified organizational subcategories are: 1) organizational structure and strategy 2) knowledge management 3) human resource management 4) dynamic capabilities 5) networks 6) organizational size 7) organizational culture/climate and 8) organizational resources. In the managerial factors as drivers of management innovation three subcategories were identified: 1) leadership behaviors 2) characteristics and attitudes and 3) stewardship. The category of environmental factors includes 1) market dynamics 2) political and legal environment and 3) people and communities. In the group of attributes of innovation three key drivers were identified: 1) relative advantages 2) cost and 3) impact on performance. Apart

from identified categories as explanatory variables or antecedents of management innovation, one group of mediator and moderator variables were also identified. At the end the framework gives three key categories of outcomes: 1) performance outcomes 2) innovation outcomes and capabilities outcomes.

This study is following the categorization established by Khosravi et al., (2019) and only several organizational factors were taken from their framework to be tested as antecedents of management innovation on a data sample for companies from Western Balkan Countries. In this study, the focus is more on the internal sources of management innovation closely related to the employee's capability for management innovation. Figure 1 presents the conceptual model giving the relationships and expected signs, between selected sources of management innovation as organizational factors and management innovation as a response variable.

Fig. 1 Conceptual model



Studies have presented inconsistent findings regarding the relationship between company size and management innovation. For instance, some studies have confirmed the positive relationship between company size and management innovation (Damanpour and Schneider, 2006; Mol and Birkinshaw, 2009; Azar and Ciabuschi, 2017) while other researchers indicated that the relationship between the two variables was weak to non-existent (Vaccaro et al., 2012; Černe et al., 2013). Having in mind the contradictory results from past studies it is valuable to test the relationship between company size and management innovation on a sample of companies from Western Balkan Countries. Large firms typically command a larger pool of knowledge, capabilities, and other resources successful introduction of new organizational practices require (Ganter and Hecker, 2013). Therefore a positive sign is expected between the two variables, although the inconsistency of previous results warns that this relationship might not hold.

H1. The larger the company size, the higher the level of adoption of management innovation.

Having time to experiment or to try new and various ways of doing things is a very important source of management innovation. Stuart and Rogers (2016) published their results from a global survey in Harvard Business Review in which they surveyed nearly 3,500 people from companies in the U.S., Canada, the UK,

Germany, and India. The results from their study showed that executive and management ranks clearly had the right tools at their disposal - encouragement, time, and resources while individual employees seldom felt that they have the right tools. This means that to have time to experiment and to be involved in creative activities, trying new things is considered a valuable source for innovative behavior. It is very interesting to investigate the situation in transition economies regarding this issue because the expected company awareness for giving employees more time for innovation would be usually much lower compared to highly developed countries. Hence, the second relationship tested in this research study is between the available time that employees have on disposal to try new things, to experiment and management innovation, expecting that employees which have more time to try new ways of working would generate more new management and organizational practices in their firm.

H2. The greater the time that employees have to try new things, the higher the adoption of management innovation.

Researchers from the past have examined the relationship between various HRM practices and organizational innovation. Findings from past research have found evidence for a positive relationship between the amount of training that the firm provides to its employees and organizational innovation (Mark and Akhtar, 2003; Jiménez-Jiménez and Raquel Sanz-Valle, 2008). Chang et al., (2011) focused on two specific HRM practices (selection and training) found that training core customer-contact employees for multiple skills enhanced both, incremental and radical innovation among hospitality firms. The framework of Khosravi et al., (2019) identified HRM practices as one of the several important antecedents of management innovation in their systematic review and meta-analysis study. Hence, the next hypothesized relationship is the positive relationship between this particular HRM practice and management innovation.

H3. The higher amount of employees training will be positively associated with higher adoption of management innovation.

Well educated employees are more likely to read widely, which increases the extent to which they are aware of issues beyond their immediate location of employment (Mol and Birkinshaw, 2009). Several studies in the past have confirmed a positive relationship between workforce level of education and management innovation. Mol and Birkinshaw, (2009) confirmed a positive relationship between the level of education of the workforce, measured as a percentage of employees with a degree and management innovation. Ganter and Hecker (2013) who attempted to extend and validate the model of Mol and Birkinshaw confirmed the importance of firm size and workforce education as an important antecedent of management innovation. The study of Damanpour and Schneider (2006) was focused on the level of education of managers and they came to the conclusion that highly educated managers have the ability to resolve unforeseen problems and provide better solutions with the adoption of management innovation.

But, the EBRD transition report for 2014 reported that measures of human capital (including the percentage of the population that has completed secondary or tertiary education, the average number of years of schooling and the average number of years of tertiary education) are not consistently found to be significant determinants of innovation. EBRD in the same report stressed out that weaker correlation may be due to the fact that enrolment ratio-type measures predominantly capture the quantity, rather than the quality of education. This means that if higher education is pursued by students in order to obtain a diploma, rather than skills, this could even waste resources that could have been used to support innovation. Hence, it would be of great importance to test the relationship between the level of education of workforce and management innovation for companies from WB Countries. Although the EBRD report indicates certain caution regarding the relation between quantity vs. quality of education in transition countries, a higher level of education should contribute the inner capability of the employees to try to implement new organizational and management practices in business organizations.

H4. The higher the company workforce education, the greater the adoption of management innovation.

Bartlett (2013) analyzed the results from BEEPS, 2010 (Business Environment and Enterprise Performance Survey) and noted that significant skill mismatches have been reported by employers in many countries and especially in transition countries in the Eastern European neighborhood region. According to Bartlett (2013), the greatest skill mismatches appear in Eastern Europe, while the least severe skill problems appear in the Western Balkan countries. Yet, even in the Western Balkans as a whole, almost one-fifth of firms report major or very severe problems with the education level of the workforce. These considerations support the following hypothesis stating that there is a negative association between inadequate education of the workforce and management innovation.

H5. Inadequate education or skills mismatch will be negatively associated with adoption of management innovation.

3. DATA AND METHODS

The research study use data from BEEPS (Business Environment Enterprise Performance Surveys) for the empirical investigation of the previously stated hypotheses. According to the website of EBRD (<https://ebrd-beeps.com/>) EBRD is implementing the Business Environment and Enterprise Performance Survey (BEEPS) in partnership with the World Bank. BEEPS is a firm-level survey based on face-to-face interviews with managers. The survey gathers information from firms in transition economies and for this study BEEPS survey data for 2012-2016 were used. Selected Western Balkan Countries were included in this research: Albania, Bosnia and Hercegovina, Kosovo, Macedonia, Montenegro, and Serbia. The final data sample used in this study provides a large number of independent observations including 1503 individual firms.

The definition of the variables, their coding, and expected signs are presented in table 1. The relationship between the list of explanatory variables and one response variable were tested through binary logistic regression. The binary logistic regression was selected as a method of analysis because in the conceptual model there are relationships between one nominal response variable and several nominal and one measurement variable as independent variables.

Table 1 Definition of the variables and expected signs

Variable name	Variable definition	Expected sign
Company size	Dummy variable =1 if the size of the company is large and has more than 100 employees.	+
Time to innovate	Dummy variable =1 if the establishment gave employees some time to develop or try out a new approach or new idea	+
Training	Dummy variable = 1 if the establishment over the last fiscal year had formal training programs for its permanent full-time employees	+
Workforce level of education	Percent of the establishment's full-time employees with a university degree at the end of fiscal year	+
Inadequate education	Dummy variable = 1 if the inadequately educated workforce is a very severe obstacle to current operations of this establishment	-
Management innovation	Dummy variable = 1 if there are new organizational and management practices or structures introduced over the last three years	+ -

1) Company size - this categorical variable in the BEEPS survey includes four categories: 1) micro with less than 5 employees 2) small between 5 and 19 3) medium between 20 and 99 and 4) large above 100 employees. The last group (large size of the company) was used in the regression analysis as a reference group or category, and the results of all other categories were compared with the reference group.

2) Time to innovate –this categorical variable in the BEEPS survey includes two categories meaning that either establishment provide its employees with enough time to try new things, to experiment, to develop new approach or idea or it does not give enough time. Hence, this categorical variable was dummy coded as 1 if the establishment gives enough time to its employees to try something new or 0 if that is not the case.

3) Training – this categorical variable in the BEEPs survey includes two categories, questioning whether the establishment provided its employees with training over the last fiscal year or not. Therefore this variable was dummy coded as 1 if the establishment provided training for its full-time employees in the last fiscal year and 0 if the establishment did not provide such training to its employees.

4) Workforce level of education - is numeric variable and the values for this variable used in the binary logistic regression were percentages of the establishment's full-time employees with university degree at the end of the fiscal year.

5) Inadequate education – this categorical variable in the BEEP's survey includes 7 categories as potential answers on which respondents included in the survey can choose their answer. The seven categories are: 1) No obstacle 2) Minor obstacle 3) Moderate obstacle 4) Major Obstacle 5) Very severe obstacle 6) Don't know and 7) Does not apply. In the data sample used for this study, the companies which answered 6 or 7 were not included in the analysis. For the rest of the 5 categories dummy coding was used where the last group (very severe obstacle) was used as a reference group or category, and the results of all other categories were compared with the reference group.

6) Management innovation – this categorical variable in the BEEP's survey includes two categories meaning that either the employees of the establishment have introduced new organizational and management practices or structures over the last three years, or that was not a case. Hence, this categorical variable was dummy coded as 1 if the employees of the establishment have introduced new management practices or structures and 0 if the employees did not introduce anything new in their working activities.

4. RESULTS AND DISCUSSION

To test the previously stated hypotheses, a data sample for companies from Western Balkan Countries (including Albania, Bosnia and Herzegovina, Kosovo, Macedonia, Montenegro, and Serbia) was derived and preprocessed from BEEPS survey data for 2012-2016. The final data sample included 1503 company data related to the variables of interest of this research study. This study employs binary logistic regression with five (four categorical and one numeric) independent variables and one dichotomous dependent variable. A binary logistic regression is appropriate statistical data analysis when the dependent variable consists two categorical, independent (unrelated) groups and when the model includes two or more independent variables, measured at the continuous or nominal level.

The results showed high statistical significance for the variables in equation ($p < 0.005$; $p = .000$). The R square of the model is 0.324 meaning that 32% from the variance of the dependent variable can be explained by the predictor variables. Hosmer and Lemeshow test which measures the goodness of fit for logistic regression models was non-statistically significant, with a p-value greater than 0.05 ($p = 0.249$) which indicates that the model was correctly specified. The results for the variables in the model are presented below in table 2 including model coefficients, p-values, and the odds ratios.

Table 2 Model coefficients, p-values and odds ratios

		B	Sig.	Exp(B)
Step 1	Not giving time	-1.925	.000	.146
	University degree	-.002	.443	.998
	No training	-.874	.000	.417
	Inadequate education		.036	
	No obstacle	-.435	.232	.647
	Minor obstacle	-.039	.921	.962
	Moderate obstacle	-.338	.397	.713
	Major	.213	.611	1.237
	Company size		.002	
	Micro	-.486	.253	.615
	Small	-.831	.000	.436
	Medium	-.729	.002	.482
	Constant	1.484	.000	4.409

Note. Variable(s) entered on step 1: time to innovate, university degree, training, inadequate education, company size.

The tested model supports Hypothesis 1 showing that there is statistical significance between the size of the company and management innovation. The p – values respectively for small and medium-sized companies ($p=0.000$ and $p=0.002$) were highly significant which means that there is enough strong relationship between the small and medium-sized companies and management innovation in comparison with the reference category. The reference category to which micro, small and medium-sized companies were compared is large companies. The predicted probability Exp (B) is for the membership function of having management innovation. The negative value of the B-coefficients means that the odds for having management innovation decrease for small and medium-sized companies, comparing to the reference category of large companies. Calculating the odds of the reference category ($1/0.436$; $1/0.482$) means that large companies are 2.29 times or 2.07 times more likely to introduce new management and organizational practices comparing to small and medium-sized companies respectively. The relationship between micro companies and management innovation was not significant, comparing to the reference category large companies. The results from the testing are in line with the previous research (Hansen 2010; Mol and Birkinshaw, 2008) who also confirmed that the odds for the adoption of management innovation are higher in larger companies than in smaller companies.

The tested model supports Hypothesis 2 confirming the positive influence of employee's available time to try new things on the level of adoption of management innovation. The p-value for companies which do not give time to employees to experiment and try new things is highly significant $p=0.000$, meaning that there is a significant relationship between the two variables. The negative value of the B-coefficient means that the odds to have management innovation decreases for companies that do not give employees time to try new things comparing to the companies which give enough time to their employees for experimentation. Calculating the odds ($1/0.146$) for the companies which give enough time to their employees to try new things indicate that, those companies are 6.8 times more likely to introduce new management and organizational practices, comparing to those companies that do not give enough time to their employees to try new things in their working. The results from the tested model indicate that, having time to try new things and to experiment plays a key role in the adoption of management innovation. The results are in line with the global survey of Stuart and Rogers (2016) that also showed that encouragement, time, and resources are key factors for management innovation.

The results from testing the model support Hypothesis 3 confirming that higher amount of employees training has a positive influence of higher adoption of management innovation. The p-value for companies which provide training to its employees is highly significant $p=0.000$, meaning that there is a significant relationship between the two variables. The negative value of the B-coefficient means that the odds to have management innovation decreases for companies that do not provide training to employees, comparing to the companies which provide training. Calculating the odds ($1/0.417$) for the companies which provide training on regular basis for own employees shows that those companies are 2.39 times more likely to introduce new management and organizational practices, comparing to the companies which do not provide such training to their employees. The results from testing the model are in line with previous research studies (Mark and Akhtar, 2003; Jiménez-Jiménez and Raquel Sanz-Valle, 2008) which confirmed the positive relationship between the amount of training and management innovation.

The results from testing the Hypothesis 4 were not significant, meaning that the relationship between the level of education of the workforce and management innovation was not confirmed with a p-value greater than the statistical error of alpha 0.05 ($p=0.443>0.05$). Also, the testing of Hypothesis 5 was not significant regarding the relationship between inadequate education and management innovation. The relationship of all four groups: 1) no obstacle, 2) minor obstacle, 3) moderate obstacle and 4) major obstacle were not significant with p values greater than 0.05, indicating that neither of the tested groups has greater or lower odds of adopting management innovation in comparison to the reference category which in this model are companies where inadequate education is a severe obstacle. The results from the model did not confirm the Hypotheses 4 and 5, although previous research has confirmed a positive relationship between the level of education of the workforce and management innovation, the data sample for Western Balkan Countries did not provide support for this hypothesis in binary logistic regression modeling.

5. THEORETICAL AND PRACTICAL IMPLICATIONS

The findings from this research study offer some theoretical implications. The theoretical contribution of this study is in exploring the antecedents of management innovation in a specific region in order to cover the geographical gap and to potentially reconsider generalization of the results from previous studies. The relationship between three antecedents: 1) time to innovate, 2) amount of training, 3) company size and management innovation was confirmed as highly significant. The study discovered that giving time to employees to try a new approach or new ideas significantly contributes in higher adoption of management innovation, in the companies from Western Balkan Countries. The results confirmed that companies which give more time to their employees to try a new way of doing things, new ideas and have time to experiment in their everyday work have higher probability to introduce some management innovation. The amount of training which companies provide to their employees has also proven to be significant antecedent of management innovation. This means that companies which provide more training to their employees have higher probability to adopt management innovation in their working. Also the companies with greater size have a higher probability to introduce management innovation than companies with smaller size.

Conversely to a number of previous studies, the level of education of the workforce was not confirmed as a significant antecedent of management innovation. The contrasting results of this study compared to others regarding the level of education suggest that differences in a country and regional level can exist and the results can be biased towards a certain country or region. Hence, it is important for researchers to be careful when models regarding management innovation are accepted without testing their validity in a specific region or country. What is more surprising is that the expected inverse relationship between the inadequate level of education and management innovation was not confirmed as well. Normally, we would expect that if companies grade inadequate level of education as a major obstacle in their working, would report a lower level of adoption of management innovation. But, this hypothesized inverse relationship between the inadequate level of education and management innovation was not confirmed as well. The study of Bartlett (2013), which raise

attention regarding significant skill mismatches could suggest that the quality of education is more important than the level of education. Hence, maybe the quality of education instead of the level of education should be measured and tested in relationship with management innovation, especially for transition economies. The results shed light on the need for more research exploring the relationship between the education and management innovation in the region of Western Balkan Countries.

Findings from this research study have also some practical implications and can help management practitioners, and policymakers, to better understand key drivers of management innovation in transition economies, especially in the Western Balkan Region. The results can influence business practice by increasing the manager's awareness to give more time to employees to innovate and to provide appropriate training because those two drivers are highly significant as drivers of management innovation. Policymakers can benefit from the results of this study by supporting further research in discovering the complexity of the relationship between the education and management innovation, in order to better understand the factors which undermine the significance of this relationship. The results from this study also indicate for policymakers in Western Balkan Countries to be more cautious in accepting results from studies conducting in other regions and countries because they might not be valid for transition countries. This means that policymakers need to support authentic research valid for their own country or region which will take into consideration the specific research context and attributes for that particular country or region.

6. FUTURE TRENDS AND IMPROVEMENTS

Future research should focus more on exploring the relationship between the level of education and management innovation in the region of Western Balkan Countries. The results from the study did not confirm that the level of education of the workforce is a significant antecedent of management innovation. In the future, more comprehensive studies should delve more deeply into the investigation of the complexity of the relationship between these two variables. Simple transfer of conclusions from studies done in other countries and regions cannot be accepted before their validity is tested on a specific research context. In the future, more studies are needed which involve the collection of new data from primary sources apart from BEEPS survey data. A different approach in research design and modeling can significantly contribute towards a better understanding of key antecedents of management innovation. In the end, studies can be done on a country level and regional level and comparison can be made in order to better understand the phenomenon of management innovation and its key antecedents for transition economies.

7. RESEARCH LIMITATIONS

The focus of this research study is to test the relationship between several organizational factors and the level of adoption of management innovation in companies from WB Countries region. Although the research study contributes to the existing body of knowledge, by covering a specific region of Western Balkan countries, yet it has inherent limitations that warrant caution in the interpretation of the results. First, the regression model for predicting management innovation as response variable does not have a very high explanatory value. Second, the research study includes only a limited set of predictor variables and only a single response variable. Thirdly, most of the measures used in the study rely heavily on the perception of respondents included in the survey. And at the end, the findings from this research study emerge from data collected for specific region, from several countries meaning that the results might be specific to the particular context.

CONCLUSION

The research paper accounts for the study of the adoption of management innovation in the region of WB Countries. The approach towards management innovation employed in this study treats management innovation as the introduction of new management and organizational practices that are new to the company. Using a large data sample from Business Environment Enterprise Performance Surveys (BEEPS, 2012-2016) and through binary logistic regression, a positive relationship was confirmed between three internal antecedents and management innovation. Findings indicate that giving time to employees to try a new approach or new ideas, providing training to employees and the size of the company are positively related to management innovation. Surprisingly and conversely to results of some previous studies the relationship between the level of education of workforce and management innovation was not confirmed.

Also, the expected inverse relationship between inadequate education of employees as an obstacle in company work and adoption of management innovation was not confirmed. Hence, the findings from this study show that providing training to employees and giving time to employees to experiment and try new things are strongly related to the adoption of management innovation. The findings from this study call for more research in the future regarding the relationship of level of education and management innovation, taking into consideration the companies from Western Balkan countries. However, the results from this paper can help management practitioners and policymakers to better understand the complexity of the relationship between organizational antecedents and management innovation in transition economies and to motivate future scholars to further contribute by investigating the antecedents of management innovation in transition economies.

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