

BUSINESS-GOVERNMENT RELATIONSHIP IN EUROPEAN POST-TRANSITION COUNTRIES: DO INNOVATORS GET THE WORSE END OF A STICK?

Valerija BOTRIĆ
Ljiljana BOŽIĆ

Abstract

Post-transition countries struggle in their attempt to catch-up the more advanced market economies with more or less success. Simultaneously, the business performance of the countries whose innovation indicators lag behind the desired levels seems relatively poor. Often emphasized problems in post-transition countries regard the relations of firms with government institutions. We analyze perceptions of innovative and non-innovative firms in dealing with government officials, aiming to explore if these two groups of firms share similar experiences with tax administration, business licensing and courts officials. The analysis is focused on 17 European post-transition countries that are either EU members or accession countries.

The results reveal that corrected for selection mechanism, innovative firms do not perceive courts as an obstacle to their business activities more than non-innovative firms, although they seem to participate more in court-related procedures. Furthermore, innovative firms in these countries are more likely to perceive licensing and tax administration as obstacles to their business. Thus, specific policy measures aimed at creating positive business environment should be designed in order to enhance innovation activities and support long-term growth prospects.

Keywords: innovation, business-government relationship, business obstacles, business performance, post-transition.

Valerija BOTRIĆ

Senior research associate, PhD, Department for Current Economic Trends, Short-term Forecasts and Fiscal Policy, The Institute of Economics, Zagreb, Croatia
Tel.: 0385-12-362.280
E-mail: vbotic@eizg.hr

Ljiljana BOŽIĆ

Research associate, PhD, Department for Industrial Economics, Innovation and Entrepreneurship, The Institute of Economics, Zagreb, Croatia
Tel.: 0385-12-362.252
E-mail: ljbozic@eizg.hr

1. Introduction

According to the Global Competitiveness Report 2015-2016 (Schwab, 2015), only few European post-transition countries have reached the stage of innovation-driven economies. Those are: the Czech Republic, Estonia, Slovakia and Slovenia. The remaining European post-transition countries are efficiency driven (Albania, Bosnia and Herzegovina, Bulgaria, FYR Macedonia, Montenegro and Serbia) or in transition from efficiency driven to innovation driven (Croatia, Hungary, Latvia, Lithuania, Poland, Romania and Turkey) (Schwab, 2015). The evidence shows that these economies vary in their innovative performance but they generally lag behind developed European countries. The latest edition of Innovation Union Scoreboard (European Commission, 2015) reveals that the best performing post-transition country is Slovenia with the innovation performance close to the European Union (EU) average. This score categorizes Slovenia in group of innovation followers. Other post-transition countries are modest (Romania, Bulgaria and Latvia) or moderate innovators (Lithuania, Poland, Croatia, Slovakia, Hungary, Estonia).

The transition process has entailed the evolution of different previously non-existent institutions governing everyday business activities. The institutional transformation created the opportunities for new entrepreneurs, but also implied regulating the newly established as well as existing markets in a novel way. Frequently drastic institutional changes created unfavorable environment for entrepreneurs and toughened the conditions for their survival (Ahlstrom and Bruton, 2010).

Transition in European economies additionally complicated the relationship with regulations related to European enlargement process and the questions of government officials' capacities to ease the transformation of societies in efficient way. These processes resulted in an enormous number of regulations but also in the instability of the regulatory framework (Manda, 2010). As a result, Rodriguez-Pose and di Cataldo (2015) recently argued that the state of institutional quality significantly varies across European regions contributing to uneven spread of innovation performance.

The main research question addressed in this paper is to determine how entrepreneurs in post transition economies perceive government activities. Special emphasis is put on the question whether innovative enterprises tend to perceive government more burdensome than other segments of the economy. To that end, we focus on three aspects of business-government relationship: tax administration, business licensing and courts. The main contribution of the present paper is to quantitatively analyze this issue for innovative and non-innovative firms. The identified differences can have important consequences for the future economic growth of the post-transition countries, due to the vital role of innovation in any economy.

We focus on post-transition European countries relying on the assumption that due to the EU accession process they either went or are going through a similar institutional change process. In particular: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, FYR Macedonia, Hungary, Kosovo, Latvia, Lithuania, Poland, Romania, Serbia, Slovak Republic, Slovenia, and Turkey. The paper

adopts the following structure: section 2 briefly summarizes the relevant literature, section 3 presents data sources, methodology and preliminary findings. Section 4 provides empirical results and discussion, and the last section brings conclusions.

2. Literature review

The business environment influences the choices of firms to engage in innovation activities. The resulting innovative performance observed at the country level depends on the interplay between firms and institutions. The regulatory environment has the potential to support, but it can also hamper business creation, performance and growth. The importance of institutional development has long been incorporated in the global economic growth literature. The argument states that economies with stronger legal environment are able to develop financial systems that ensure stable financing of its entrepreneurs (Levine, 1998). Financing of innovative projects could be perceived even riskier by financial institutions. In such circumstances, institutional development that ensures credit protection has the ability to spur long-run economic growth. This has been recently confirmed by Marresch, Ferrando and Moro (2015) who claim that a firm which operates in a country with weak creditor protection and a low-quality judicial enforcement system can face a competitive disadvantage with respect to a firm located in a country with strong creditor protection and a high-quality judicial enforcement system.

Researchers have documented that there are large differences in the quality of institutions among countries and composite indices have been developed to measure different aspects of institutional development (World Bank Governance Indicators – Kaufmann, Kraay and Mastruzzi (2009); Polity IV dataset – Jagers and Marshall (2000)). Although it could be argued that transition economies aspiring to join the EU had to adapt by acquiring the same institutional features prescribed by the *acqui*, studies have shown that adopting high quality laws cannot substitute for weak judiciary enforcement (Pistor, Raiser and Gelfer, 2000). EU regulations have, in some cases, encouraged innovation and entrepreneurship but there is also evidence of their less favorable effects (Pelkmans and Renda, 2014).

A cursory overview of the World Bank Doing Business 2016 indicators shows that bureaucratic and regulatory frameworks in European post-transition countries in many aspects create unfavorable environment for entrepreneurs. Although some economies have reached better ranking positions in some of the indicators, the overall ease of doing business ranking for most of these countries is not satisfactory as most of them are well away from the most efficient economies, with exceptions of FYR Macedonia, Estonia and Lithuania that are ranked among the top 20.

Government relationship with innovative enterprises is more frequently analyzed with respect to different support mechanisms and their effectiveness on the innovative firms (Afcha, 2012; Lach, 2002; Almus and Czarnitzki, 2003). It is generally believed that government activities are aimed at stimulating innovation activities. The policy instruments designed by government encourage innovation success (Aschhoff

and Sofka, 2009). Even some regulatory actions are thought to stimulate innovation activities, which is frequently emphasized in the literature on eco-innovation determinants (Horbach, Rammer and Rennings, 2012; Demirel and Kesidou, 2011; Kesidou and Demirel, 2012; Costantini and Mazzanti, 2012).

Unlike that stream of literature, in this paper we aim to explore how regulatory and institutional frameworks affect business activities of firms (especially innovating firms). The current state of business environment in these countries is such that we can hypothesize the potentially negative effects of government activities on business/innovation activities. We hope to contribute to the discussion why some transition economies lag in their innovative performance. The argument is related to the issue of competitiveness, where one of the basic requirements for competitiveness at the national level incorporates institutions, infrastructure, macroeconomic environment, health and primary education of the population (Schwab, 2014). Reforms that enable improvement of these features of an economy create initial positive preconditions for enterprises to compete on the international market. For countries where the business environment is weak, large reforms are often necessary (Klapper and Love, 2011).

When considering specific obstacles which the government activity might impose on entrepreneurs, corruption has occupied a large segment of the literature, in particular the literature on transition economies. When formal institutions do not function properly, business owners and managers tend to rely more on personal networks (Puffer and McCarthy, 2011). As transition countries mostly struggle with corruption and similar problems, one could expect that entry regulation might serve to resolve these issues. However, entry regulations, which in general increase costs and reduce creation of new firms, do not help to reduce illegal behavior in developing countries struggling with corruption (Klapper, Laeven and Rajan, 2006). The distinct effect on innovative enterprises has been explained by Shleifer and Vishny (1993) who argue that innovators are more likely to engage in acquiring novel equipment, opening new premises, importing or introducing new category of products to the market. Since these activities are also unprecedented to government officials, the space is opened for creative interpretations of specific laws and procedures. This has been documented by Ayyagari, Demiguc-Kunt and Maksimovic (2014) who have found that innovating firms pay more bribes than non-innovators in 57 analyzed countries. The additional burden put on innovative firms has been greater in countries with more bureaucratic regulation and weaker governance. However, authors argue that this does not imply that innovative firms receive better quality public services or engage more frequently in other illegal activities such as tax evasion.

Some studies have found that entrepreneurs are more likely to thrive in countries with low regulatory burdens (Klapper, Love and Randall, 2014). Yet, the relationship is not straightforward, since in addition to over-regulation, under-regulation of economic relationships can exist. Oxley and Yeung (2001) argue that the development of new sectors and entrance of new firms in a sector can be hampered due to a weak rule of law. This can be extended to innovation performance if creative and innovative

entrepreneurs get discouraged from starting a business. The regulatory environment can facilitate but also limit innovation within existing firms (Delmas, 2002). Furthermore, poor regulatory environment and weak rule of law, among other factors, can have negative influence on capacity to innovate (Chadee and Roxas, 2013).

Innovation activity is necessary, but costly to entrepreneurs. Thus, they demand specific protection from government to reward their innovation effort. OECD (2010) study emphasizes the necessity to promote intellectual property rights as an important policy measure to support innovation. In that context, the effectiveness and impartiality of local courts has been identified as an essential element for innovation (Baumol, 1990; Rose-Ackerman, 2001). Whether innovative firms perceive courts to be an important impediment for their business activity is precisely what we aim to explore in this paper. The perception of innovative enterprises is important since practice in transition economies has shown that it is not enough to introduce relevant regulations in the legal system, but that it is also important to ensure that they are implemented. Even if the transposition of the legal framework can be considered efficient by objective measures, the economic activities can still be hampered if entrepreneurs anticipate certain problems and delay or change their decisions on starting an innovative project. In this context, we should not only expect that corruption in the judiciary system can be considered an impediment to normal business activities, but we should question whether the judiciary system has enough capacity to apply institutional changes in practice.

The capacity argument can also be attributed to the newly established and existing licensing authorities that accompany changing institutional setting. Although it can hardly be argued that the licensing procedure can deter innovation activities, they can certainly influence the speed of innovation (Markman *et al.*, 2005). In the context of transition economies, perception of licensing authorities can also be relevant if we take into account that innovators are more likely to engage in novel projects and activities. In cases when licensing authorities do not have enough developed internal capacities to deal with these unusual requests, they might stop the innovation potential of an enterprise from unleashing.

The relative efficiency of the government can be assessed when contrasting the tax burden with the quality of public services provided. Previously, we have addressed the latter issue, although relative size of the government sector has been frequently assessed as extensive in transition economies. The flip side of the demand for the reduction in government size is the reduction in tax burden on the entrepreneurs (for more details on tax reforms in transition countries see Dabrowski and Tomczynska (2001); in Romania Lazăr (2005) and in Croatia Švaljek (2005) or Šimović, Blažić and Štambuk (2014)). Reduction in the tax administrative burden has been found to have a positive effect on new firm creation (Braunerhjelm, Eklund and Thulin, 2015). Existing literature frequently addresses the issue of actual tax burden size. Here we focus on perceptions, since negative perceptions can discourage entrepreneurs from engaging in innovation activities. If the general perception is that the tax burden is too high,

the entrepreneurs might decide not to engage in activities that are riskier and more costly than business as usual. Thus, perceptions can have important effects on future growth prospects.

Based on the presented evidence from the literature we cannot univocally claim that there is a simple causal relationship between the government activities and innovation performance in a country. Thus we proceed with investigating the recent evidence from post-transition economies in order to shed additional light on these issues.

3. Data, methodology and preliminary evidence

In the empirical analysis we use the European Bank for Reconstruction and Development (EBRD) and the World Bank's data from Business Environment and Enterprise Performance Survey (BEEPS V). These data are collected in 30 countries and refer to the time period from 2012 to 2013. The total sample consists of 15,883 firms from manufacturing and service sector (detailed information on BEEPS V is available on <http://ebrd-beeps.com/>). We restrain the analysis to 5,508 firms from the following European economies: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, FYR Macedonia, Hungary, Kosovo, Latvia, Lithuania, Poland, Romania, Serbia, Slovak Republic, Slovenia and Turkey. The reason why we focus on these particular countries is that they either already are EU members or are negotiating to become EU members. Although some other countries have expressed their intention to join the EU we argue that the beginning of formal negotiation process implies institutional changes that make this group of countries more homogenous.

In order to investigate the relationship between enterprises and government, we investigate three specific aspects:

- Do firms consider courts to be a major obstacle for their business activities?
- Do firms consider tax administration to be a major obstacle for their business activity?
- Do firms consider business licensing and procedures to be major obstacles for their business activities?

In all three cases, we consider binary dependent variable which takes value 1 if an entrepreneur perceives specific problem to be major obstacle or severe obstacle to their business activity (perceptions have been measured on a 5 points Likert scale starting with no obstacle to very severe obstacle). Further descriptions of the variables used in the paper can be found in the Appendix Table A1. We assume that prior experience could influence formation of specific perceptions. Thus, we analyze what influences the obstacles' perceptions, conditional on the fact that the entrepreneur had previous experience with the specific situation. In case of question related to courts, previous court encounters (either as a plaintiff or a defendant) are considered as previous experience, in case of tax administration, previous visits and/or audits by tax officials, and in case of business licensing whether the respondent has applied for a license.

Special emphasis in the analysis is on the innovative enterprises. Specifically, we want to explore whether the innovativeness of the enterprise implies different perceptions. All firms that have successfully developed new or significantly improved product, production/supply practice, organizational/management practices or structures, marketing methods and logistical or business process, and/or invested in (intra-mural or extra-mural) R&D and/or were giving employees time to develop or try out a new approach or new idea about products or services, business process, firm management or marketing during the three year period are considered to be innovative for the purpose of this analysis.

The sample reveals that the share of entrepreneurs who only had innovation input (R&D) but not innovation output in the analyzed period is relatively small (8.08%; 7.31% in the overall EBRD sample), while those who had reported innovation output comprise larger share of the sample (48.67%; 41.52% in overall EBRD sample). For the purpose of our analysis it is irrelevant whether innovative enterprise was or was not successful in realizing its innovative ideas, the important aspect is that there was an attempt and we want to explore the perceptions of innovative segments of economy of the relationship with the government sector.

Table 1: Sample characteristics, percentage for relevant subgroups

	Innovative (%)	Non-innovative (%)
Courts obstacle	10.13	6.71
Court system is fair	38.97	41.10
Court system is quick	18.01	24.96
Courts enforce their decisions	50.49	54.19
Informal payments to courts	3.28	4.05
Tax obstacle	22.14	14.80
Inf. payments tax administration	4.31	5.15
Licensing obstacle	7.12	4.38
Informal payments imports/customs	4.04	4.82

Notes: in case of courts N=4,241; in case of tax administration N=4,777; in case of business licensing N=4,728 due to specific item non-response

Source: Authors based on data collected through Business Environment and Enterprise Performance Survey (European Bank for Reconstruction and Development, undated)

The sample data in Table 1 shows that innovative firms more frequently perceive courts, tax administration and business licensing to be important obstacles for their business. Among these categories, tax administration seems to be the most important obstacle, with more than 22% of innovative firms considering that current tax administration is not suitable for their business needs.

It can also be noticed that innovative firms are less likely to perceive court system to be fair, quick and able to enforce its decisions than non-innovative firms. We can also notice that innovative firms are less likely to report informal payments to any segment of government activities analyzed in this paper. Generally, we can see that innovative firms are less satisfied with government-business relationship than

non-innovative firms. However, they seem also to be less inclined to informally settle their business needs.

This preliminary insight shows that it is important to distinguish between innovative and non-innovative firms when considering the obstacles government activities might pose for entrepreneurs in post-transition economies. As already mentioned, we analyze three specific segments of government-business relationship, where we analyze important predictors for firms to consider these segments important obstacle for their business activities.

When seeking for predictors, we investigate a large set of potential explanatory variables. In addition to whether an enterprise is innovative or not, we have included a list of independent variables frequently used in the literature on business obstacles. We briefly summarize the main reason for their inclusion.

Firm size is an important predictor in the analysis of business obstacles, since smaller firms are considered to be more vulnerable to adverse effects on the market (Fort *et al.*, 2013). To explore these effects, we include four dummy variables for the firm size, which were specified according to the BEEPS Survey into micro, small, medium and large. Arguments for including the age of a firm are related to establishing relationship with government officials. Young firms might be unaccustomed to specific procedures and thus perceiving government administration to be more burdensome than older well established firms.

In case of transition economies, it is always interesting to note differences in types of establishment. It could be assumed that state-owned enterprises have different perceptions on the relationship with the government than newly established private firms. Similarly, foreign ownership could be either beneficial or detrimental to developing successful relationships, depending on the weight government officials put on foreign investors. In order to investigate this issue, we add dummy variables that capture the type of enterprise.

Educational attainment of the labor force is included to control for the possibility that highly educated employees understand complex government procedures better and are able to grasp the changing business environment more quickly. To that end we include the share of employees with higher education in the estimates.

Economic activity of the firm is included since we can assume different involvement with specific segment of the government in the context of latest economic crisis. Some transition economies went through the phase of deindustrialization, some experienced booms in specific activities (automobile industry), some rapid decline in others (construction). The changes could affect the frequency of communication with specific segments of government (tax administration, courts, licensing authorities), which explains the introduction of dummy variables in our specification.

Finally, we also consider the location of an enterprise to capture the availability of government institutions. Enterprises located in small communities might not have the same availability to government services as those located in larger urban areas. This does not necessarily imply that their perceptions on the government would be

more negative. To explore the issue, we include dummy variables capturing the location of an enterprise.

As a rule, we have excluded each time from the analysis the respondents who have either not answered to key variables of interest or provided 'do not know' answers. This has been performed separately for each segment of the analysis. Thus, the number of observations in each segment is related to the exclusion of 'do not know' responses analyzed in that specific segment.

Most of our independent variables are binary, defining the whole dimension of the sample space. In order to avoid multicollinearity problems in estimation, we had to identify initial reference variables. In case of economic activity, manufacturing as a traditional segment of an economy was chosen. In case of size, medium enterprises served as the reference category. Since we focus the analysis on post-transition economies, enterprises that were established as state-owned were taken as reference due to the fact that all other types of enterprises evolved throughout the transition period. Finally, large town centers (with more than 250,000 inhabitants) were considered as reference as we argue that most government institutions are available to enterprises residing in urban areas, which might not be the case in smaller urban or even rural areas. Additionally, we had to define reference country variable. World Bank Rule of Law indicator (World Bank, undated) ranks Estonia the highest in 2013 in our sample. Consequently, we have initially excluded Estonia as a reference from estimation. The results are presented in the following section.

4. Results and discussion

We apply Heckman selection estimation procedure and estimate probability to consider specific variable important for business activity of an enterprise, conditional upon defined selection mechanism. We use general to specific approach starting with a larger number of potentially important predictors and reducing them to the list presented in Table 2.

The overall estimation results indicate that Heckman selection model was appropriate in case of courts and business licensing, but the selection mechanisms is not significant for the main equation in case of tax administration. Notwithstanding the non-significance of selection mechanism, we present both equations in case of tax administration, since they can still be interpreted as unrelated probit equations. The descriptive analysis has indicated that innovative firms are more likely to perceive courts to be important obstacle for business activity. Yet, the empirical estimates show that although innovative firms are more likely to participate in court activities, once we correct for the selection mechanisms, innovative firms' dummy variable becomes insignificant. This suggests that drawing conclusions on simple survey responses might lead to creating misdirected policy measures. The innovative firms are more likely to participate in court activities, probably due to the fact that they require also innovative legal solutions for their problems. In these cases, the capacity of legal officials in accommodating to these requirements is more likely to come in focus.

Table 2: Predictors of perceiving government activities to be major obstacle for business, estimation results

Independent variables	Dependent variable		
	Courts	Tax administration	Licensing
	Estimated coefficients (robust standard errors)		
Constant	-0.092 (0.175)	-1.622*** (0.134)	-2.135*** (0.218)
Innovative firm	-0.108 (0.077)	0.194*** (0.062)	0.206* (0.116)
Services	-0.161** (0.080)		0.191* (0.101)
Retail	-0.185** (0.084)		
Private	0.195* (0.101)		
Joint		-0.463* (0.275)	
Small	0.244*** (0.076)		
Large	-0.436*** (0.116)	-0.286*** (0.100)	
University share		-0.020** (0.008)	
Albania		0.501*** (0.152)	
B&H		0.364*** (0.136)	
Bulgaria			0.439** (0.195)
Croatia	-0.188* (0.112)	0.682*** (0.165)	
Czech Republic		0.556*** (0.154)	
FYRM	-0.283** (0.114)	0.256* (0.143)	0.407*** (0.156)
Hungary		0.534*** (0.146)	
Kosovo	0.788*** (0.209)	0.940*** (0.150)	
Lithuania		0.651*** (0.169)	
Poland		0.646*** (0.150)	
Serbia		0.583*** (0.141)	
Slovak Republic	0.490*** (0.147)	0.369** (0.172)	
Slovenia		0.604** (0.269)	
Romania		1.254*** (0.120)	0.591*** (0.134)
Selection dependent	Court participation	Tax visits	License application
Constant	-0.796*** (0.110)	-0.515*** (0.102)	-1.213*** (0.071)
Innovative firm	0.268*** (0.045)	0.087** (0.042)	0.299*** (0.048)
Services	0.197*** (0.045)	0.086* (0.048)	0.351*** (0.054)
Retail		0.135*** (0.051)	0.248*** (0.058)
Age of firm	0.005*** (0.002)		
Private	-0.177*** (0.067)	0.160*** (0.062)	
Micro	-0.227** (0.107)	-0.457*** (0.104)	-0.342*** (0.123)
Small	-0.289*** (0.050)	-0.205*** (0.047)	-0.202*** (0.051)
Large	0.294*** (0.073)	0.292*** (0.073)	0.400*** (0.072)
Small town	-0.117*** (0.043)	0.223*** (0.049)	0.087* (0.045)
Town		0.225*** (0.054)	
National orientation	0.197*** (0.065)	-0.138** (0.061)	
University share		-0.014*** (0.004)	
Albania	-0.621*** (0.113)	1.883*** (0.113)	
B&H	0.405*** (0.080)	1.025*** (0.089)	
Bulgaria		0.678*** (0.097)	
Croatia	0.744*** (0.081)		0.244*** (0.083)
Czech Republic	0.235** (0.097)	0.459*** (0.096)	-0.254** (0.110)
FYRM	0.606*** (0.080)	1.117*** (0.086)	0.352*** (0.081)

Independent variables	Dependent variable		
	Courts	Tax administration	Licensing
	Estimated coefficients (robust standard errors)		
Hungary	-0.461*** (0.107)	0.561*** (0.090)	-0.408*** (0.109)
Kosovo	-0.449*** (0.124)	1.700*** (0.139)	0.465*** (0.101)
Latvia			-0.258** (0.107)
Lithuania	0.244** (0.095)	0.242** (0.096)	
Montenegro		1.251*** (0.148)	0.510*** (0.131)
Poland	-0.181** (0.083)	0.186** (0.080)	-0.819*** (0.112)
Serbia	0.660*** (0.086)	0.639*** (0.091)	-0.298*** (0.106)
Slovak Republic		0.303*** (0.097)	-0.394*** (0.123)
Slovenia	0.731*** (0.090)	-0.624*** (0.101)	
Romania		0.619*** (0.076)	0.213*** (0.075)
Diagnostics			
N	4210	4777	4728
Wald chi2	84.22***	192.28***	38.83***
Log pseudoL	-2932.752	-4063.003	-2419.86
Prob (rho=0) chi2	31.76***	2.10	4.49**
Rho	-0.714 (0.078)	0.322 (0.206)	0.541 (0.202)

Notes: *** denotes significance at 1%, ** denotes significance at 5%, * denotes significance at 10%

Source: Authors' estimates

Positive predictors of perceiving courts as important obstacle to business activity are: small and private enterprise, located in Kosovo or Slovak Republic. On the other side, large firms in service and retail sector, located in Croatia or FYR Macedonia are less likely to perceive courts as major obstacle to their business activity. The results are not surprising, since we can assume that small firms have less capacity to deal with complex court procedures in comparison to larger firms. Similarly, firms in manufacturing are more likely to link negative connotation to court activities due to the restructuring process.

In selection equation, where court participation is dependent variable, we found that micro and small firms are less likely to participate in court activities. This result is according to the expectations, and corroborates the capacity for complex procedures argument. Also, firms located in small towns are less likely to participate, reflecting probably the availability of institutions at local level.

In case of licensing, we can notice in the selection equation that innovative firms are more likely to apply for permits and licenses, and they are also more likely to perceive licensing as important impediment to their business. This is in line with our initial expectations. In this case, the selection mechanisms did not account for negative perception of licensing by innovative firms leading to the conclusion that licensing procedures are in general more burdensome for innovative enterprises. The reason for this is probably related to the argument that innovative enterprises are more likely to engage in new activities, which are not familiar to licensing authorities. This finding would call for increased flexibility of licensing authorities in transition econo-

mies that are more supportive for innovation. In addition to innovative firms, those operating in service sector or located in Bulgaria, Romania and FYR Macedonia are more likely to perceive licensing to be a major obstacle for doing business.

Selection equation in case of licensing shows more diversity between analyzed countries, since relatively more country variables are significant. This probably refers to the organization of different licensing procedures across the analyzed countries, which in contrary influences the dynamics of encounters between firms and licensing agencies. Since we are not directly comparing the organization of analyzed aspects of government activities across the countries, but rather rely on perceptions of respondents, we will not draw any conclusions on the relative ease or difficulty in dealing with government in specific country. The country dummy variables should in all cases be considered only as a control variable, which captures all possible macroeconomic (social and cultural) conditions in analyzed countries, rather than assessment of specific government efficiency in one country relative to others in the sample.

The final segment of the analysis is related to tax administration. Generally, it is more likely that entrepreneurs will be dissatisfied with the height of the tax rates, since it directly influences their business results. This is especially evident if they cannot link the burden of taxes with the services provided. Although the question on the tax rates is also available in BEEPS, whether the tax rates are excessive or not is more an issue of overall fiscal policy than the quality of government services. So, the analysis in this paper concentrates on the question of tax administration, which has revealed probably the largest differences among the countries, reflected both in equation with tax visits as dependent variable, and equation with perceptions on tax administration as dependent variable. Regardless, we can notice that innovative enterprises are more likely to be visited or audited by tax administration, and that they are more likely to perceive tax administration as important obstacle to their business activity.

The analysis has also revealed that large and private firms, in retail and services, located in small and medium size areas are more likely to be visited by tax officials. Micro and small firms, oriented towards national market and with highly educated workers are less likely to be visited or audited for tax purposes. These findings might not be directly related to the specific strategy of tax officials, but rather to the structure of the sample.

Less negative perceptions of tax administration are formed by joint venture and large enterprises, as well as those with higher share of university educated employees. This is probably related to the enhanced capacity of these segments of the economy to deal with tax administration.

Finally, it is interesting to note that predictors of perceptions are not the same across the analyzed types of business-government relationship. There are some interesting similarities. When comparing selection equations, we can notice that innovative and large firms, as well as those in the service sector, are more active in all analyzed segments – they are more likely to participate in court activities, more likely

to be visited by tax authorities and more likely to apply for business license. On the other side, micro and small firms appear to be less active in these activities.

5. Conclusions

During the course of recent development, European transition economies have been assessed as lacking innovation performance and having inadequate government support for achieving much needed quantum leaps in entrepreneurial activity. In this paper we investigated the relationship between these two issues. Specifically, we explored whether innovative enterprises perceived different aspects of government activity to be important obstacles to their business more frequently than non-innovative enterprises. The underlying hypothesis was that if innovative enterprises associate the relationship with government officials with more negative connotations this could be either a deterring factor in innovation activity or a contributing factor towards creating alternative modes of doing business not recorded by official statistics data.

Within these circumstances, questions of administrative capacity to adopt efficient government procedures have been frequently addressed in evaluation reports on public policy. General awareness that adequate support by government institutions should enable the enterprises to successfully compete on the market is widely present. However, specific measures are neither uniform nor even clear to envisage in all circumstances.

The sample summary has indicated that innovative firms are more likely to perceive courts, business licensing and tax administration to be important obstacles for business activity. Yet, empirical estimates that corrected for possible selection mechanisms have shown that the results are not the same in all cases. Corrected for selection mechanism, innovative firms do not perceive courts as an obstacle, although they seem to participate more in court-related procedures.

Positive predictors of perceiving courts as a major obstacle to their business activity are reserved for small and private enterprises. On the other side, large firms in service and retail sector are less likely to perceive courts as a major obstacle to their business activity. This implies that court systems in post-transition countries are more suitable for large firms that have more financial and other resources to engage in complicated lawsuits. Considering the size and importance of SMEs sector, the improvements in this aspect of regulatory environment are necessary.

Innovative firms, being more dynamic and embarking on new projects, more often apply for permits and licenses. Unfortunately, in comparison to non-innovators, they perceive licensing as more important impediment to their business. Licensing appears to be a major obstacle for doing business to firms operating in service sector as well, and the relationship holds even after controlling for selection mechanism. Thus, specific arrangements related to simplifying licensing procedures should probably be suggested in analyzed countries.

Innovative firms are more likely to perceive tax administration as an obstacle for their business. Less negative perceptions of tax administration are formed by joint

venture and large enterprises, as well as those with higher share of university educated employees.

Our results have shown that innovative firms are more likely to perceive licensing (controlling for application for license) as an obstacle to their business as well as tax administration. Thus, it seems that government activities in post-transition economies are, contrary to declared support, not perceived by entrepreneurs as innovation-friendly. This could have potentially important consequences for long-term growth prospects of these economies and calls for specific policy attention. In these circumstances, when the system is unsupportive, direct measures for improving innovation performance can have limited scope mostly in the short run.

References:

1. Afcha, S., 'Analyzing the Interaction between R&D Subsidies and Firm's Innovation Strategy', 2012, *Journal of Technology, Management and Innovation*, vol. 7, no. 3, pp. 57-70.
2. Ahlstrom, D. and Bruton, G.D., 'Rapid Institutional Shifts and the Co-evolution of Entrepreneurial Firms in Transition Economies', 2010, *Entrepreneurship Theory and Practice*, vol. 34, no. 3, pp. 531-554.
3. Almus, M. and Czarnitzki, D., 'The Effects of Public R&D Subsidies on Firms' Innovation Activities', 2003, *Journal of Business and Economic Statistics*, vol. 21, no. 2, pp. 226-236.
4. Aschhoff, B. and Sofka, W., 'Innovation on Demand – Can Public Procurement Drive Market Success of Innovations', 2009, *Research Policy*, vol. 38, no. 8, pp. 1235-1247.
5. Ayyagari, M., Demirguc-Kunt, A. and Maksimovic, V., 'Bribe Payments and Innovation in Developing Countries: Are Innovative Firms Disproportionally Affected?', 2014, *Journal of Financial and Quantitative Analysis*, vol. 49, no. 1, pp. 51-75.
6. Baumol, W., 'Entrepreneurship: Productive, Unproductive, and Destructive', 1990, *Journal of Political Economy*, vol. 98, no. 5, pp. 893-921.
7. Braunerhjelm, P., Eklund, J.E. and Thulin, P., 'Taxes, Tax Administrative Burdens and New Firm Formation', Working Papers Series from Swedish Entrepreneurship Forum, 2015, [Online] available at http://economix.fr/pdf/workshops/2016_3rd_law_eco/JEklund.pdf, accessed on April 2, 2016.
8. Chadee, D. and Roxas, B., 'Institutional Environment, Innovation Capacity and Firm Performance in Russia', 2013, *Critical Perspectives on International Business*, vol. 9, no. 1/2, pp. 19-39.
9. Costantini, V. and Mazzanti, M., 'On the Green and Innovative Side of Trade Competitiveness? The Impact of Environmental Policies and Innovation on EU Exports', 2012, *Research Policy*, vol. 41, no. 1, pp. 132-153.
10. Dabrowski, M. and Tomczynska, M., 'Tax Reforms in Transition Economies – A Mixed Record and Complex Future Agenda', Center for Social and Economic Research, CASE Network Studies and Analyses no. 231, Warsaw, 2001.
11. Delmas, M.A., 'Innovating against European Rigidities Institutional Environment and Dynamic Capabilities', 2002, *Journal of High Technology Management Research*, vol. 13, no. 1, pp. 19-43.

12. Demirel, P. and Kesidou, E., 'Stimulating Different Types of Eco-innovation in the UK: Government Policies and Firm Motivations', 2011, *Ecological Economics*, vol. 70, no. 8, pp. 1546-1557.
13. European Bank for Reconstruction and Development, 'Business Environment and Enterprise Performance Survey', (undated), [Online] available at <http://ebrd-beeps.com/>, accessed on July 20, 2016.
14. European Commission, 'Innovation Union Scoreboard 2015', report prepared by Hollanders, H., Es-Sadki, N. and Kanerva, M., 2015, [Online] available at <http://webcache.googleusercontent.com/search?q=cache:oljsAeH2QMj:ec.europa.eu/DocsRoom/documents/9965/attachments/1/translations/en/renditions/pdf+&cd=3&hl=en&ct=clnk&gl=ro&client=firefox-b>, accessed on March, 22, 2016.
15. Fort, T.C., Haltiwanger, J., Jarmin, R.S. and Miranda, J., 'How Firms Respond to Business Cycles: The Role of Firm Age and Firm Size', NBER Working Papers 19134, 2013, [Online] available at <http://www.nber.org/papers/w19134.pdf>, accessed on March 21, 2016.
16. Horbach, J., Rammer, C. and Rennings, K., 'Determinants of Eco-innovations by Type of Environmental Impact – The Role of Regulatory Push/Pull, Technology Push and Market Pull', 2012, *Ecological Economics*, vol. 78, pp. 112-122.
17. Jagers, K. and Marshall, M.G., 'Polity IV Project', Center for International Development and Conflict Management, University of Maryland, 2000.
18. Kaufmann, D., Kraay, A. and Mastruzzi, M., 'Governance Matters VIII: Aggregate and Individual Governance Indicators 1996-2008', 2009, Policy Research WP Series no. 4978, World Bank, Washington, DC, [Online] available at <https://openknowledge.worldbank.org/bitstream/handle/10986/4170/WPS4978.pdf?sequence=1>, accessed on March 19, 2016.
19. Kesidou, E. and Demirel, P., 'On the Drivers of Eco-Innovations: Empirical Evidence from the UK', 2012, *Research Policy*, vol. 41, no. 5, pp. 862-870.
20. Klapper, L. and Love, I., 'The Impact of Business Environment Reforms on New Firm Registration', 2011, Policy Research Working Paper no. 5493, World Bank, Washington, DC.
21. Klapper, L., Laeven, L. and Rajan, R., 'Entry Regulation as a Barrier to Entrepreneurship', 2006, *Journal of Financial Economics*, vol. 82, no. 3, pp. 591-629.
22. Klapper, L., Love, I. and Randall, D., 'New Firm Registration and the Business Cycle', 2014, Policy Research Working Paper no. 6775, World Bank, Washington, DC.
23. Lach, S., 'Do R&D Subsidies Stimulate or Displace Private RD? Evidence from Israel', 2002, *The Journal of Industrial Economics*, vol. L, no. 4, pp. 369-390.
24. Lazăr, D.T., 'The Tax Reform of Romania since the Transition to Market Economy', 2005, *Transylvanian Review of Administrative Sciences*, vol. 15E, pp. 121-130.
25. Levine, R. 'The Legal Environment, Banks and Long-run Economic Growth', 1998, *Journal of Money, Credit and Banking*, vol. 30, no. 3, pp. 596-613.
26. Manda, C.C., 'Simplification of the National Legislation – A Prerequisite for the Improvement of the Legislative Regulatory Framework in Romania', 2010, *Transylvanian Review of Administrative Sciences*, vol. 29E, pp. 86-99.
27. Markman, G.D., Gianiodis, P.T., Phan, P.H. and Balkin, D.B., 'Innovation Speed: Transferring University Technology to Market', 2005, *Research Policy*, vol. 34, no. 7, pp. 1058-1075.

28. Marresch, D., Ferrando, A. and Moro, A., 'Creditor Protection, Judicial Enforcement and Credit Access', European Central Bank, Working Paper no. 1829, 2015, [Online] available at <https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1829.en.pdf?73b801d79490646e88a69b0cb5cfc2c4>, accessed on March 19, 2015.
29. OECD, 'The OECD Innovation Strategy: Innovation to Strengthen Growth and Address Global and Social Challenges', 2010, [Online] available at <https://www.oecd.org/sti/45326349.pdf>, accessed on March 18, 2016.
30. Oxley, J.E. and Yeung, B., 'E-Commerce Readiness: Institutional Environment and International Competitiveness', 2001, *Journal of International Business Studies*, vol. 32, no. 4, pp. 705-723.
31. Pelkmans, J. and Renda, A., 'Does EU Regulation Hinder or Stimulate Innovation?', CEPS Special Report no. 96, 2014, [Online] available at <https://www.ceps.eu/system/files/No%2096%20EU%20Legislation%20and%20Innovation.pdf>, accessed on February 12, 2016.
32. Pistor, K., Raiser, M. and Gelfer, S., 'Law and Finance in Transition Economies', 2000, *Economics of Transition*, vol. 8, no. 2, pp. 325-368.
33. Puffer, S. and McCarthy, D., 'Two Decades of Russian Business and Management Research: An Institutional Theory Perspective', 2011, *Academy of Management Perspectives*, vol. 25, no. 2, pp. 21-36.
34. Rodriguez-Pose, A. and di Cataldo, M., 'Quality of Government and Innovative Performance in the Regions of Europe', 2015, *Journal of Economic Geography*, vol. 15, no. 4, pp. 673-706.
35. Rose-Ackerman, S., 'Trust, Honesty, and Corruption: Reflection of the State-building Process', 2001, *European Journal of Sociology*, vol. 42, no. 3, pp. 526-570.
36. Schwab, K. (ed.), 'The Global Competitiveness Report 2014-2015', World Economic Forum, 2014, [Online] available at http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf, accessed on March 3, 2016.
37. Schwab, K. (ed.), 'The Global Competitiveness Report 2015-2016', World Economic Forum, 2015, [Online] available at http://www3.weforum.org/docs/gcr/2015-2016/Global_Competitiveness_Report_2015-2016.pdf, accessed on March 3, 2016.
38. Shleifer, A. and Vishny, R.W., 'Corruption', 1993, *Quarterly Journal of Economics*, vol. 108, no. 3, pp. 599-617.
39. Šimović, H., Blažić, H. and Štambuk, A., 'Perspectives of Tax Reforms in Croatia: Expert Opinion Survey', 2014, *Financial Theory and Practice*, vol. 38, no. 4, pp. 405-439.
40. Švaljek, S., 'The 2000 Tax Reform in Croatia: Causes and Consequences', 2005, *Ekonomski Pregled*, vol. 56, no. 12, pp. 1217-1236.
41. Torgler, B., 'Tax Morale in Transition Countries', 2003, *Post-Communist Economies*, vol. 15, no. 3, pp. 357-381.
42. World Bank, 'Doing Business 2016: Measuring Regulatory Quality and Efficiency', Washington, International Bank for Reconstruction and Development, 2016, [Online] available at <http://www.doingbusiness.org/~media/GIAWB/Doing%20Business/Documents/Annual-Reports/English/DB16-Full-Report.pdf>, accessed on April 15, 2016.
43. World Bank, 'Worldwide Governance Indicators', (undated), [Online] available at <http://data.worldbank.org/data-catalog/worldwide-governance-indicators>, accessed on February 25, 2016.

Appendix

Table A1: Definition of variables

Variable name	Definition
Court obstacle	=1, if firm perceives courts to be major or very severe obstacle to business
Tax obstacle	=1, if firm perceives tax administration to be major or very severe obstacle
License obstacle	=1, if firm perceives business licensing to be major or very severe obstacle
Court participant	=1, if it has been to court during last three years
Tax visit	=1, if it has been visited or inspected by tax officials during last year
License applicant	=1, if either submitted an application for an import license or an operating license during last two years
Innovative firm	= 1, if firm had innovation output or R&D (defined in paper)
Age of firm	= years since establishment (until the time of interview)
University share	= share of employees with university degree in total
Services	=1, if economic activity is within service sectors
Retail	=1, if economic activity is NACE 52
Private	=1, if firm was established from time of start-up as private
Joint	=1, if firm was established as a joint venture with foreign partners
Small town	=1, if located in area with less than 50.000 inhabitants
Town	=1, if located in area with more than 50.000 and less than 250.000 inhabitants
Micro	=1, if this is a micro firm (less than 5 employees)
Small	=1, if this is a small firm (more than 5, less than 19 employees)
Large	=1, if this is a large firm (more than 100 employees)
National orientation	=1, if share of sales to national market in total sales >50 percent
Country dummy	=1, if respondent is established in specific country
Court system is fair	=1, if respondent either agrees or strongly agrees with this statement
Court system is quick	=1, if respondent either agrees or strongly agrees with this statement
Courts enforce their decisions	=1, if respondent either agrees or strongly agrees with this statement
Informal payments to courts	=1, if respondent would either frequently, very frequently or always make informal payments or gifts to deal with courts
Inf. payments tax administration	=1, if respondent would either frequently, very frequently or always make informal payments or gifts to deal with taxes and tax collection
Informal payments imports/customs	=1, if respondent would either frequently, very frequently or always make informal payments or gifts to deal with customs/imports