Firm performance and obstacles to doing business in the Western Balkans

Evidence from the BEEPS

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Abstract

Western Balkans countries – Albania, Bosnia and Herzegovina, FYR Macedonia, Kosovo, Montenegro and Serbia – all aspire to membership of the European Union but have living standards that are well below the EU average. Weak institutions and an unfavourable business environment undermine the region's economic performance and are at the heart of this prosperity gap.

We use the responses in the latest round of the Business Environment and Enterprise Performance Survey (BEEPS) of approximately 1,800 Western Balkans business owners and senior managers to examine the linkages between firm performance and perceived obstacles to doing business. We address three questions. First, what do businesses see as the main problems that hinder their activities? Second, what is the quantitative impact of selected constraints on firm performance? And third, to what extent are key obstacles associated with different firms' characteristics?

We find that businesses in this region are concerned principally about unfair competition from the informal sector. Other obstacles also impose a major burden on enterprises and adversely affect their performance. However, the effect varies by firm characteristic, such as the sector in which they operate, market orientation, manager experience, type of ownership and innovation track-record. One important finding is that export-oriented firms are disproportionately affected by problems associated with customs and trade regulations.

This paper therefore highlights the need for tackling more rigorously all sorts of informality. This is important not only in the context of unfair competition, but also for the sustainability of public finances. As the role of export-oriented industries in driving growth is particularly important, this paper also highlights the region's urgent need to tackle "soft" impediments to trade in addition to the major investment required in power and transport infrastructure.

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1. Introduction

Why do countries in the Western Balkans lag so far behind EU standards of living, and what can be done to narrow the gap in the coming years? Most observers of this region would agree that weak institutions, including a problematic business environment, are at the heart of the problem, as they deter investment and hold back potential productivity gains. This paper uses survey evidence of enterprise owners and managers on the ground to assess the extent to which different obstacles to doing business are preventing the private sector from achieving its full potential.

The paper focuses mainly on the six non-EU members of the Western Balkans (WB-6): Albania (ALB), Bosnia and Herzegovina (BIH), FYR Macedonia (MKD), Kosovo (KOS), Montenegro (MNE) and Serbia (SRB). For these countries, a natural reference point is what we term in this paper the "EU-11", namely, the group of 11 former socialist countries in central and eastern Europe that joined the European Union in 2004 or since then.[1] At present, GDP per capita (adjusted for purchasing power standards) in the Western Balkans is, on average, just half the level in the EU-11 countries.[2] Estimates of aggregate labour productivity (provided below) show a similar gap. Low productivity in the Western Balkans region reflects many years of under-investment, failure to integrate into European and global value chains, and an inadequate institutional setup.

In this paper, we address the following questions. First, what do businesses themselves see as the main problems that hinder their activities? Second, what is the quantitative impact of selected obstacles on firm performance? And third, to what extent are key obstacles associated with different firm characteristics such as foreign ownership and export orientation? The latter question is particularly important because future growth and convergence in Western Balkans countries will need to be driven by boosting exports and attracting more foreign direct investment (FDI) into tradeable sectors. We analyse these questions using the fifth round of the EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS V), described in more detail below.

We find the following results. First, the main perceived obstacle to doing business in the region is competition from the informal sector. Other significant obstacles include political instability, access to finance, tax rates, corruption and getting electricity. Second, some business environment problems impose major costs on enterprises. On average, firms in the WB-6 claim they lose more than 13 per cent of their annual sales because of four business environment obstacles listed in BEEPS, namely: crime, electricity issues, poor transport infrastructure and corruption. This is not only firms' loss in sales, but also public loss in taxes and employment opportunities, and is a significantly higher burden than in the EU-11. Also, managers in the Western Balkans spend almost one day a week, on average, dealing with government regulations, which is a major burden on their time and distracts from more productive activities.

Third, the costs of different obstacles vary according to firm characteristics. Manufacturing firms tend to find that obstacles related to access to finance, competition from the informal sector, tax rates and tax administration have a more severe impact on their performance than firms in services. Export-oriented companies in the Western Balkans tend to find customs and trade regulations problematic, foreign owned companies perceive courts as a more costly business obstacle compared to domestically owned companies, while innovative companies

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[1] The EU-11 consists of: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia.
[2] See Sanfey et al. (2016).

tend to find corruption, inadequately educated workforce and practices of informal sector as most harmful.

These results have important policy implications, by pointing to the problems that most affect the very firms that are expected to drive growth in the future. The prominence of unfair competition from the informal sector and a burdensome tax administration calls for an enhanced and sustained approach to reducing informality by registering firms and simplifying tax compliance. In this regard, the recent efforts of the Albanian government to tackle the problem are yielding some initial results and may serve as an example for others. The state of the roads and the problems with getting reliable electricity, as well as their implied economic costs for businesses, both highlight the need for major investment in these areas. Given the fiscal constraints in all countries and the high level of public debt in some, private and foreign sources of investment will likely play an increasing role in these areas, building on successful examples of concessions and public-private partnerships in EU countries and elsewhere. However, this must be accompanied by addressing the soft barriers to trade and other problems with moving goods across borders that have bedevilled this region since the early 1990s.

2. Background literature: a brief overview

The importance of high-quality institutions and a favourable business environment for productivity and growth has long been recognised in the economics literature. Recent years have seen the publication of a number of authoritative studies and popular books on why countries diverge so much in economic performance.

Acemoglu, Johnson and Robinson (2005) provide a theoretical framework on how differences in economic institutions are the fundamental cause of differences in economic development. As the authors put it, economic institutions are important because they influence the structure of economic incentives in society. For instance, aspects of an unfavourable business environment such as poor property rights and a biased judiciary remove the incentives for firms to invest or adopt more efficient technologies.

The EBRD's *Transition Report 2013 - Stuck in Transition?* pointed to the importance of improving institutions and producing an enabling business environment in the EBRD's region in order to generate better long-run growth. The rapid growth rates in many central and eastern European countries after the initial recession were driven by a first set of reforms, such as price liberalisation, which, by reallocating resources in a more efficient way, produced major productivity gains. By the end of the first decade of the 21st century, these gains were largely exhausted. Without improvements in institutions and the business environment, the report argued, countries would remain "stuck" in transition and little or no further convergence would take place in future. In this regard, the process of EU approximation is especially important for the Western Balkans region, compared with other emerging markets, as it helps to anchor the institutional development of the countries on their path towards EU membership.

There is an extensive literature on the use of enterprise surveys to assess the quality of the business environment, and its impact on economic performance. Dethier et al. (2010) is a useful reference which reviews many papers and summarises the main conclusions from the literature. Several important findings emerge from this overview.

First, subjective responses can yield important and relevant information about the quality of the business environment. Increasingly, questions of this nature in enterprise and household surveys are exploited by economists, as seen for example in the fast-growing literature on the determinants of life satisfaction. Evidence cited by Dethier et al. (2010) points to a clear correlation between subjective assessments of the difficulty of obstacles with objective indicators. For example, Pierre and Scarpetta (2004) found that countries with more restrictive labour regulations also tended to have high shares of firms reporting labour regulations as a problem. EBRD (2010, Chapter 5) also showed a strong correlation between perceptions of business constraints and various external variables. In our analysis below, we link subjective answers and objective data to assess the quantitative impact of obstacles to doing business on firm performance in Western Balkans countries.

Second, the weight of evidence is that negative perceptions of business climate features are correlated with weaker economic performance at the firm level. In particular, aspects such as poor infrastructure, limited access to finance, weak regulation and excessive crime and corruption all appear to have a damaging impact on the financial well-being of enterprises. However, the impact of business climate perceptions on firms' performance can differ according to the type of enterprise being surveyed. Aterido et al. (2011) use a large dataset covering 85 countries and find that the impact of selected obstacles differs according to the size of firms. For example, business regulations have a stronger impact on small firms while lack of finance and poor infrastructure hold back medium and large firms. In line with much

of the literature, we also investigate whether specific obstacles to doing business are associated with different firm characteristics in the Western Balkans.

Third, empirical results are sensitive to the treatment of a range of methodological issues, including self-selection, endogeneity and multicollinearity. The issue of self-selection arises because enterprise surveys are based on existing firms, not on those that have exited the market or never entered the market in the first place. For that reason, a finding that respondents are relatively unconcerned about the quality of roads, say, does not necessarily mean that the roads are in good shape. Instead, it could be that existing firms are concentrated in businesses that do not need good roads and have managed to adapt to the conditions, while many other firms have been deterred from entering by this problem.[3] Endogeneity is also a pervasive problem. For example, having better access to finance may help firm performance, but good firm performance in turn increases the likelihood of being able to access finance. And multicollinearity is an issue when one includes a range of perceived business obstacles on the right-hand side of a regression equation, because the answers are likely to be highly correlated in many cases, complicating statistical inference. For instance, Commander and Svejnar (2011) find that the impact of business constraints on performance is limited once one controls for endogeneity, errors in variables, missing variables and country dummies.

Carlin et al. (2010) and Carlin and Schaffer (2012) have argued convincingly that even the most careful treatment of model specification issues cannot overcome these inherent limitations of the data. They suggest a different approach, one that treats responses to questions about the impact of low-quality public inputs as valuations by the firm of these inputs. In other words, instead of treating the answers to questions about the severity of business environment obstacles as an explanatory variable, one can regard them as the "revealed cost" to the firm, allowing the researcher to investigate how these costs differ by size of firm, sector, exporters versus domestic suppliers, and other variables. Our econometric approach in section 4 follows Carlin and Schaffer (2012) and we draw the appropriate conclusions from our estimations.

Lastly, the literature on firm performance and business obstacles in the Western Balkans is limited. Previous rounds of the BEEPS have provided the statistical basis for various regional studies and reports; see, for example, Broadman et al. (2004). More recently, the region's progress in transition in the past 15 years and the competitiveness challenges ahead have been thoroughly examined by, respectively, the IMF (2015) and the OECD (2016). However, to the best of our knowledge, there has been no attempt yet to use BEEPS V to examine systematically the linkages among firm performance and business environment obstacles in this region.

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[3] Hausmann et al. (2008) refer to this as the "camels and hippos" problem, namely, that in a desert one may come across camels, which are relatively unconcerned about the shortage of water, but not hippos, which rely on a plentiful supply of water – see also Dethier et al. (2010).

3. Firm performance and obstacles to doing business: a first look at the data

The fifth wave of the EBRD/World Bank Business Environment and Enterprise Performance Survey (BEEPS V) was carried out in 2012-14. This wave is the focus of our paper not only because it is the most recent, but also because, unlike the first three waves, it covers all countries in the Western Balkans and the samples are properly randomised. We considered using the fourth wave as well but that round was implemented in 2007, before the global crisis took hold, and the results may therefore have less relevance for today's environment.

The BEEPS is implemented in the form of face-to-face interviews with enterprise owners and firm managers in almost all EBRD countries of operations. The survey is a rich source of information on the characteristics and performance of the firms in the EBRD region as well as the business environment they are operating in.[4] In BEEPS V, there are around 360 observations for each of the Western Balkans countries except for Kosovo (200 observations) and Montenegro (150 observations). To make the results representative of the countries and not only of the survey sample, we use strata weights from the survey design throughout the analysis. Whenever the number of observations is too low for a country-level analysis, countries are grouped into a region and additional GDP weights are included in the weighting scheme to ensure that the relative country sizes are accounted for.

3.1 Labour productivity by country and sector

An important indicator of firm performance is productivity. The BEEPS data allow one to calculate a rough measure of labour productivity, defined as total sales divided by full-time employment. The data highlight the labour productivity gap between Western Balkans countries and the EU-11. Chart 1 shows that, on average, aggregated firm level labour productivity in this sample of WB-6 companies is about 60 per cent that of the EU-11. Chart 2 demonstrates that this gap is driven by the manufacturing sector; the productivity of this sector in the WB-6 is around 55 per cent that of the EU-11. In the WB-6 region, manufacturing is most productive in Serbia and Bosnia and Herzegovina, with both countries having a strong industrial basis. Services (wholesale, retail, transport, accommodation and food services) are more productive than manufacturing in all WB-6 countries, except in Albania, but still on average only 70 per cent of EU-11 levels.

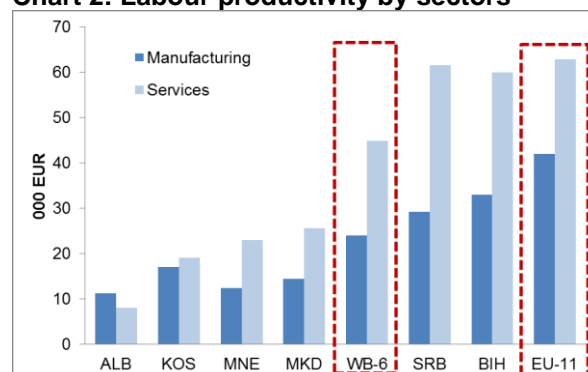**Chart 1: Labour productivity, overall**

Chart 2: Labour productivity by sectors
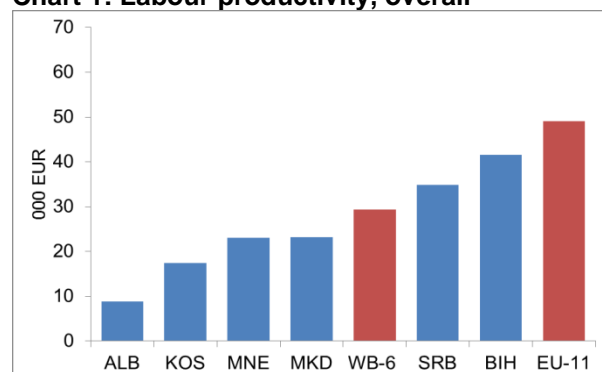
Source: EBRD BEEPS V, 2013.
Note: Average labour productivities for EU-11 and WB-6 are calculated as weighted averages of the median values for each country, with GDP being the weight. Outlier analysis has been performed.

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[4] See more about the BEEPS at: http://ebrd-beeps.com/.

Nevertheless, there are product groups where the WB-6 has productivity levels comparable to the EU-11. Chart 3 shows the differences in productivity levels between the two regions for eight manufacturing groups. Western Balkans countries have lower labour productivity in all product groups but one: wood, paper and paper production. However, the productivity gap is particularly small in two other sectors, namely: (i) food processing and (ii) plastics, rubber and non-metallic products. These two product groups are also where the region has the highest labour productivity in manufacturing. The productivity gap is of a medium size in the following sectors: furniture; machinery, equipment and electronics; and textiles, garments, tanning and leather. Large differences between the WB-6 and the EU-11 emerge in other sectors, including: publishing, printing and recorded media; and basic metals and fabricated metal products.

While the BEEPS data suggest the WB-6 region is doing well compared with its wealthier central and eastern European neighbours in sectors such as wood processing, food processing and plastics, rubber and non-metallic mineral products, it is not necessarily the case that these sectors will drive future exports and growth. It is more likely that growth will come from those sectors in which a country has a trade specialisation, and hence a high revealed comparative advantage (RCA) vis à vis the rest of the world. The RCA index, first proposed by Balassa (1965), has been extensively used in the literature as a useful guide to a country's export concentration. A country has an RCA in a sector (and an RCA value above one) if the percentage of the country's exports coming from that sector is greater than the percentage of global exports coming from that sector. In the econometric analysis below (section 4), we highlight the importance of distinguishing between export- and locally-oriented firms, because the two groups differ markedly in their assessment of the severity of different business environment obstacles.

Chart 3. Labour productivities across manufacturing sectors: WB-6 vs EU-11
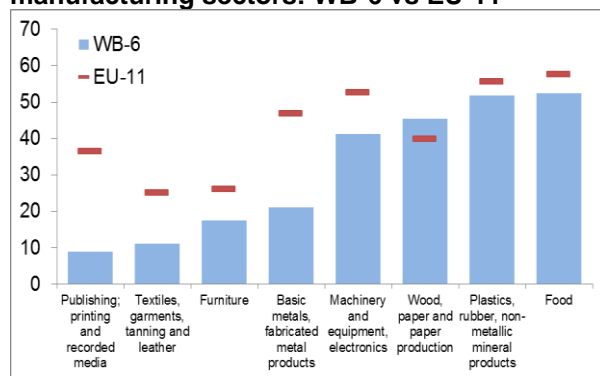
Source: EBRD BEEPS V, 2013.

Chart 4: Revealed comparative advantages (RCA) across manufacturing sectors in WB-6
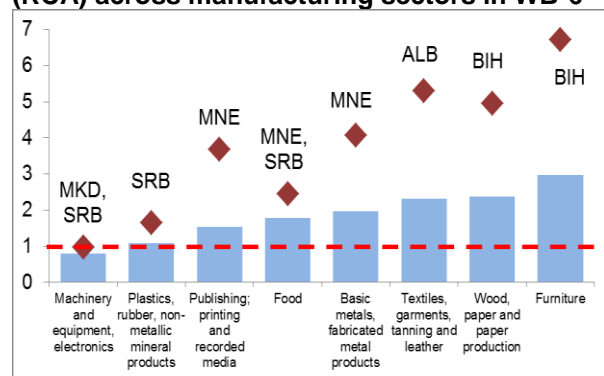
Source: UNCTAD Trade matrix by products, 2016.
Note: Kosovo is not included. Countries that have the highest RCA in a certain industry group are marked.

Chart 4 shows the RCA for the eight manufacturing groups (bars) and top performers among the Western Balkans countries (diamonds). Furniture and wood processing come top on the list, closely followed by textiles, metals and food processing. Looking at the top performers in each industry group reveals important differences within the region. For example, Bosnia and Herzegovina has a strong comparative advantage in furniture and wood, paper and paper production, while Montenegro has an export concentration in basic metals and fabricated metal products, Albania in textiles, garments, tanning and leather, Serbia in food, plastics, rubber and non-metallic mineral products, as well as in machinery and equipment electronics, and FYR Macedonia in machinery and equipment electronics.

3.2 Obstacles to doing business

We now turn to the responses of firm owners and managers in the BEEPS when they are asked to assess how serious different potential obstacles are to their day-to-day operations. While these data are subjective and therefore prone to the biases and imprecisions associated with these types of questions, the answers provide a revealing snapshot of the things that bother businesses and prevent them from growing and thriving. As discussed below, the responses can also show which problems apply most to which sectors in different countries.

The BEEPS approaches this issue in two ways. First, towards the end of the interview respondents are shown a card with a list of 15 potential obstacles and are asked:

Can you tell me which of the elements of the business environment included in the list, if any, currently represents the biggest obstacle faced by this establishment?

Table 1 shows the 15 obstacles and the percentage response for each one, by country. The last column of the table shows cross-country averages. Practices of competitors in the informal sector, political instability, access to finance, tax rates and corruption typically emerge as the biggest obstacles to doing business in the Western Balkans.

Competition from the informal sector is especially damaging in FYR Macedonia (chosen by 26 per cent of respondents as the top obstacle), closely followed by Kosovo (23.3 per cent) and Albania (16.8 per cent). It should be noted that, since the survey was carried out, the Albanian government has launched a major campaign to tackle informality in the economy, which is already yielding some positive results.[5] Studies have shown that the firms affected the most by competitors from the informal sector are those that resemble them the most, namely, small firms serving markets with low entry costs.[6]

Political instability is highly problematic for businesses in Bosnia and Herzegovina (30.2 per cent) and Serbia (26.7 per cent), but much less so elsewhere in the region. In the case of Bosnia and Herzegovina, the complex political setup is believed by many to have led to dysfunctional institutions that hinder the dynamism of the private sector. In Serbia, the perceived political instability is less easy to explain but may reflect elections held shortly before the survey was carried out which resulted in a change of government and some uncertainty about the future direction of the country.

Access to finance is on average, the next biggest obstacle in the region at 12.7 per cent. Many surveyed firms described themselves as credit-constrained, meaning that they need a loan but were either rejected when they applied or felt discouraged from applying. According to the surveyed firms, the main driver behind this was the discouragingly high level of interest rates. However, interest rates have fallen across the region since the survey was carried out and it may therefore be the case that access to finance is now less of a problem than it was before.

Tax rates come next, at 11.9 per cent on average. Although most countries in the Western Balkans have made significant progress in reforming their tax systems and have relatively favourable tax rates, the period in which the survey was conducted coincided with increases of several tax rates across the region as a result of the need for post-crisis fiscal consolidation. Montenegrin firms reported tax rates as a major problem, perhaps as a result of the VAT increase from 17 to 19 per cent as well as the introduction of the crisis wage tax on above-average earnings.

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[5] See Sanfey et al. (2016) for a discussion.
[6] See Gonzalez and Lamanna (2007).

Systemic corruption is another persistent problem in the region. The 2016 European Commission reports on the state of progress of EU approximation in the WB-6 countries assessed the countries' fight against corruption at "some level of preparation" in all countries except Kosovo, which was assessed to be at an "early stage/has some level of preparation" in the fight against corruption.

Table 1: Biggest obstacle to doing business, percentage vote by country

	ALB	BIH	MKD	KOS	MNE	SRB	Average
Competition from informal sector	16.8	4.1	26.0	23.3	12.5	9.8	15.4
Political instability	4.8	30.2	8.8	3.6	4.8	26.7	13.2
Access to finance	12.9	14.9	18.6	14.6	6.3	9.0	12.7
Tax rates	9.8	7.9	7.6	5.0	26.4	15.0	11.9
Corruption	6.3	7.8	1.4	9.8	0.9	10.9	6.2
Electricity	13.6	1.5	5.7	7.0	1.8	0.2	5.0
Customs and trade regulations	1.0	7.6	1.8	8.4	6.3	3.1	4.7
Tax administration	11.6	1.2	2.4	3.9	1.8	4.9	4.3
Inadequately educated workforce	1.9	2.0	5.9	6.3	1.9	5.7	3.9
Courts	0.2	3.3	4.5	1.3	0.2	4.2	2.3
Access to land	5.9	0.8	1.1	1.8	0.9	0.9	1.9
Labour regulations	0.1	6.5	0.6	0.4	3.0	0.1	1.8
Crime, theft and disorder	1.5	1.9	1.0	2.2	1.8	1.2	1.6
Transport	2.7	2.8	1.0	0.9	0.7	0.4	1.4
Business licensing and permits	1.3	3.7	0.4	1.3	0.3	1.2	1.3
Don't know	*6.5*	*2.0*	*0.5*	*1.8*	*15.9*	*4.1*	*5.1*
Refused	*0.0*	*1.4*	*9.9*	*8.0*	*9.1*	*1.1*	*4.9*
Does not apply	*3.3*	*0.5*	*3.0*	*0.5*	*5.6*	*1.7*	*2.4*

Source: BEEPS V.

Note: All companies; no differentiation between the industries; individual observations weighted (strata weights). The categories sum up to 100.

While asking people about the most serious constraint they face gives us useful information, one would like to know more about the extent to which different obstacles are perceived as problematic. Throughout the survey, therefore, interviewees are also asked to rate the severity of each of the 15 obstacles listed in Table 1 (as well as a 16th obstacle – telecommunications) on the following scale: no obstacle (scored as 0); minor obstacle (1); moderate obstacle (2); major obstacle (3); very severe obstacle (4).

Table 2 shows the percentage of companies that say a specific area is either a major or very severe obstacle to doing business. The overall ranking is similar to that of Table 1, though with some minor differences.[7] Practices of competitors in the informal sector are still the largest obstacle on average, followed by political instability. However, corruption emerges as the third most serious obstacle on average, and access to electricity is also seen as especially problematic (in fourth place), pushing down tax rates and access to finance. Challenges in the power sector are numerous across the region, but especially in Kosovo, where there are frequent power outages as the country's power generation plants are among the most out-dated in Europe.

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[7] Excluding telecommunications, the rank correlation coefficient between the two rankings ranges from 0.56 in Montenegro to 0.92 in Albania.

Table 2: Obstacles to doing business, by percentage who see major or very severe problem

	ALB	BIH	MKD	KOS	MNE	SRB	Average
Competition from informal sector	19.9	16.0	34.6	58.9	11.2	12.6	25.5
Political instability	11.1	34.3	21.7	45.7	0.4	31.5	24.1
Corruption	17.0	26.4	13.3	51.0	3.2	24.5	22.6
Electricity	21.6	10.2	28.9	49.5	6.0	6.6	20.4
Tax rates	12.8	20.3	16.0	30.2	8.7	25.5	18.9
Access to finance	6.5	14.1	19.3	44.9	7.6	15.7	18.0
Tax administration	13.1	13.1	10.3	28.2	2.7	17.4	14.1
Crime, theft, disorder	3.8	7.2	9.1	46.6	4.1	7.4	13.0
Inadequately educated workforce	6.4	7.4	14.0	25.9	0.3	11.3	10.9
Customs and Trade regulations	2.0	5.7	6.6	34.2	3.0	4.9	9.4
Access to land	12.9	4.6	9.8	17.7	0.3	3.6	8.1
Telecommunications	3.1	4.9	16.3	13.0	4.0	3.9	7.5
Courts	1.5	8.2	6.7	13.0	1.1	13.9	7.4
Transport	4.1	3.7	5.4	22.7	2.0	4.6	7.1
Labour Regulations	1.8	11.1	4.0	4.9	0.4	6.9	4.9
Business licensing and permits	3.5	8.4	5.1	4.6	0.3	3.7	4.3

Source: BEEPS V.

How do perceived obstacles differ according to the sector in which a business operates? To answer this question we disaggregate once again the manufacturing sector into eight groups and present the share of major or very severe obstacle broken down by sector.[8] Table 3 presents the results and contains a number of interesting findings, especially in light of our earlier analysis of revealed comparative advantage. Industries are ordered in line with the RCA, from the lowest on the left to the highest on the right. For example, 65 per cent of firms in the manufacturing furniture industry – the sector with the highest RCA in the region – report that access to finance is a major or very severe problem, while problems with tax administration stands out as a serious issue for companies in wood and paper production, the sector with the second highest RCA. Tax rates and tax administration seem to be the main concern for the textiles and metals sectors, and courts for the food processing sector – all sectors that also have a relatively high RCA. Sectors with a lower RCA, such as machinery and equipment, as well as plastics and rubber (mainly concentrated in Bosnia and Herzegovina and Serbia) find political instability to be their main concern.

Table 3: Major and very severe obstacle by manufacturing industries

	Machinery, equipment	Plastics, rubber	Publishing, printing	Food	Basic metals	Textiles	Wood, paper	Furniture
Political instability	68.4	54.4	39.0	25.8	18.9	12.2	1.4	35.1
Tax rates	28.1	16.4	22.0	37.1	30.4	41.7	1.2	32.4
Access to finance	16.8	36.5	44.5	8.9	21.0	3.4	2.4	65.5
Tax administration	27.6	11.1	1.0	20.8	28.4	48.4	25.1	32.9
Corruption	28.1	11.5	37.6	13.5	20.4	2.3	2.7	33.3
Courts	36.1	0.6	1.3	40.2	19.3	1.2	0.0	0.5
Electricity	0.7	5.2	24.0	27.0	15.8	5.5	2.1	1.6
Informal sector	1.6	13.0	28.7	16.4	1.3	2.7	4.6	3.8

Source: BEEPS V.

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[8] One should be careful with results for publishing and printing; machinery, equipment and electronics as well as furniture, as the number of observations in each of these manufacturing groups is less than 50.

3.3 Linking business obstacles with firms' costs

The analysis so far has pointed to a number of obstacles that stand out in the minds of business owners and managers as being a major constraint to doing business. But what are the actual costs of these obstacles, and can their impact be quantified? To tackle this issue we adopt the approach of Bah and Fang (2015), using information from other parts of the BEEPS. Specifically, in line with Bah and Fang's analysis of a group of African economies, we examine the questions that ask firms about their loss in sales due to various obstacles to doing business. The answers are likely to have a high degree of subjectivity and measurement error and should be treated cautiously, but the comparison between the WB-6 and EU-11 regions is still instructive.

We focus on four issues where the impact can be quantified: crime, electricity issues, poor transport infrastructure and corruption. The effect of crime is measured by the sum of: per cent of annual revenue lost as a result of theft, robbery, vandalism or arson on firms' premises; per cent of annual revenue paid for security; and per cent of annual revenue lost when shipping to domestic markets because of theft. The impact of electricity issues is measured by the per cent of annual revenue lost due to power outages. Costs of poor transport infrastructure are captured by the per cent of total products value lost when shipping to domestic markets because of breakage or spoilage. Lastly, corruption costs are measured by per cent of annual revenue paid as informal payment to 'get things done'.

Chart 5 shows the results for the WB-6 region and for the EU-11. On average, firms in the WB-6 lose 13.2 per cent of their annual sales due to these four business environment obstacles, compared with an average loss of 9.8 per cent in the EU-11. Out of the 13.2 per cent figure, 5.9 per cent is due to crime, 5.8 per cent due to electricity issues, 0.7 per cent due to poor transport infrastructure and 0.7 per cent due to direct corruption. Considering that these four dimensions represent only one quarter of the obstacles used in the questionnaire, the level of the invisible tax on output/productivity due to inadequate business environment is doubtless even higher. This is indeed something that should be taken into account when assessing the international competitiveness of the tax environment in the Western Balkans.

Chart 5: Costs of business environment obstacles
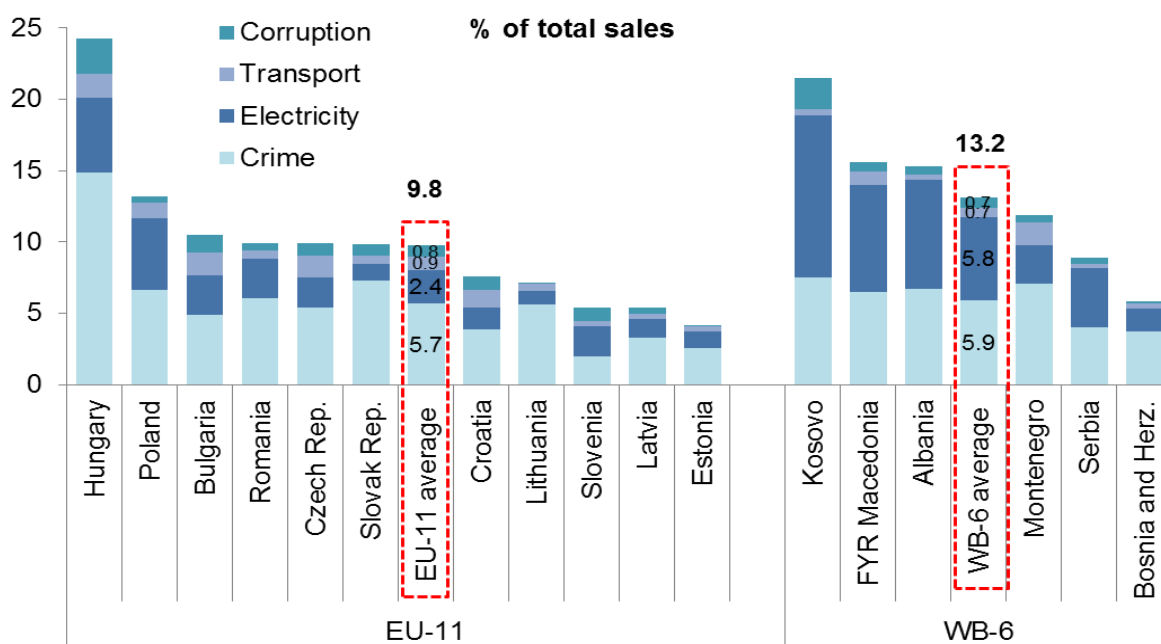
Source: BEEPS V.

If we add to these costs the amount of red tape, proxied here as the percentage of senior management time spent on dealing with requirements imposed by government regulations, the situation is even more dramatic (see Chart 6 below). This figure shows that, on average, managers in the Western Balkans spend almost one day in a week dealing with government regulations. While this figure is little different from that in the EU-11, the variation across countries is much smaller in the Western Balkans.

Chart 6: Red tape

Per cent of management's time spent on dealing with requirements imposed by government regulations

	EU-11												WB-6					
Country	Poland	Croatia	Romania	Bulgaria	Czech Rep.	EU-11 avg	Hungary	Slovenia	Slovak Rep.	Estonia	Lithuania	Latvia	Kosovo	Bosnia and Herz.	Serbia	WB-6 avg	Montenegro	FYR Macedonia	Albania
Value	23.0	22.7	17.7	17.6	14.5	13.5	12.7	11.0	8.6	7.4	6.3	6.2	18.4	15.6	13.3	13.2	11.6	10.7	9.4

Source: BEEPS V.

4. Obstacles, costs and firm characteristics: an econometric analysis

4.1. Theoretical approach and empirical strategy

The descriptive analysis so far in this paper has already revealed a number of interesting and policy-relevant findings about the types of obstacles that bother firms in the Western Balkans, and their costliness in terms of lost productivity and sales. But in order to get further insight into the link between perceived obstacles and type of firm, we turn to an econometric analysis of the data. This analysis enables us to discover what type of firms are most sensitive to a specific obstacle and to pinpoint the obstacles that are most relevant to a firm with specific characteristics, such as large versus small firms, exporters versus domestically-oriented firms, foreign-owned versus local firms, innovators versus non-innovators, and so on.

Our analysis broadly follows the approach outlined in Carlin et al. (2010) and Carlin and Schaffer (2012). That is, we assume that firms in the same country operate within the same business environment which is taken as a public, rather than private, input in production. As Carlin and Schaffer (2012) explain, the key point here is that indicators on the quality of the business environment are not objective estimates of the quality (or quantity) of the specific public good used by the firm, but rather as valuations, which necessarily depend on the characteristics of the firm making the valuation. These judgements about specific aspects of the business environment can then be viewed as the revealed costs (RCs) of the deficiency in the particular public good in question, or the loss in profits caused by the public good being an obstacle relative to when it is no obstacle.[9]

The first step of the analysis is to look at how these revealed costs differ according to the characteristics of firms in the Western Balkans. For example, competition from the informal sector in Albania is likely to be much more of a problem for small businesses in the food industry, where informal sales channels thrive, than for large companies in the metals industry, where the scope for informal activities is much more limited. As another example, we would expect firms operating on the international market to be more concerned about customs and trade regulations than those that sell to the local market only. We are interested not only in typical firm characteristics but also in whether the individual characteristics of owners and senior managers, such as experience and gender, affect the perceived costliness of a particular public input. Experience could indicate better access to information on utilising the public input, but also simply the know-how acquired through longer exposure to the business environment.

Second, we compare the differences between the WB-6 and the EU-11 regions by interacting firm characteristics variables with a regional dummy. In this way we estimate the aggregate influence of firm characteristics on costs of doing business in the Western Balkans and test for the difference between the two regions at the same time. Estimating a difference-in-difference model instead of looking at the subsamples across the two regions is the biggest methodological difference compared with work done by Carlin and Schaffer.

To address the two questions, we estimate the following equation for each of the 16 obstacles *k*, using data for firm *i* in country *j*:

$$RC_{ijk} = \alpha_{jk} + \beta_{1k} * X_{ij} + \beta_{2k} * REG * X_{ij} + u_{ij},$$

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[9] Carlin et al. (2010) omit access to finance and tax rates from their analysis on the basis that they do not have the "public good" aspect that is evident in other business environment obstacles. However, for completeness we include both obstacles in our analysis.

where RC is revealed cost of the deficiency in the particular business environment obstacle k (as explained above), X is a vector of variables indicating the following firm characteristics: (i) size of the company (in log number of full-time workers); (ii) growth performance of the company (whether the company was expanding or contracting in the last three years in terms of the number of workers); (iii) foreign ownership (if the company has more than 10 per cent foreign ownership); (iv) if the company is part of the bigger firm or not; (v) type of establishment (privatisation of the previously state-owned company or private from the beginning); (vi) age of the company (in log years); (vii) experience of the top manager (in log years); (viii) gender of the manager; (ix) product orientation (local, national, international); (x) innovation track-record of the company (whether company innovated and/or invested into research and development); and (xi) industry of the company (manufacturing, retail, other services). REG is a dummy variable taking value 0 for companies in the Western Balkans region and 1 for those in the EU-11. We control for country effects (C). Although the dependent variable is ordinal rather than cardinal, we use OLS for simplicity of interpretation; the results using ordinal dependent variable models yield broadly similar conclusions. The vector of coefficients β1 gives an aggregate effect of a specific firm characteristic on parts of business environment in the Western Balkans, (β1+β2) gives the same effect on EU-11 companies, and β2 gives, and at the same time tests, the difference between the two.

Lastly, we rank business obstacles by country according to the total revealed cost. That is, we look at how the response of an average firm in the Western Balkans (as defined by the firm characteristics we use throughout the analysis) changes with the change of the institutional framework specific to each country. We do this by comparing the same hypothetical company across countries and comparing the conditional country means (that is, conditional on firm characteristics) given by the estimate of the intercept α for every country. This will provide us with the mean value of obstacles to doing business in each country, or the cost of public input, for a firm with the same set of characteristics.

4.2 Results

Table 4 below summarises the most important results; the complete results of estimations are given in Table 1 in the annex. The table shows only statistically significant coefficients on the effects of firm characteristics on the perception of obstacles to doing business in the Western Balkans (β1). The colours then indicate whether the same variable has a significantly different effect in the EU-11: green indicates that β2, the difference between the effects in EU-11 and the WB-6, is significant and positive, red means that β2 is significant and negative. No colour indicates that the interaction term is not statistically significant. For example, the more experience the top manager in the company has, the more costly corruption is, and this effect is significantly stronger in the WB-6 than it is in the EU-11.

Table 4: Econometric results

obstacles / firm characteristics	1) Practices of competitors in informal sector	2) Political instability	3) Corruption	4) Electricity	5) Tax rates	6) Access to finance	7) Tax administration	8) Crime, theft, disorder	9) Inadequately educated workforce	10) Customs and trade regulations	11) Access to land	12) Telecommunications	13) Courts	14) Transport	15) Labour regulations	16) Business licensing and permits
Number of workers, log	-0.135***		-0.0665*						0.103**						0.0887**	
Expansion in the last 3 years versus the same number of employees										-0.142*					-0.0974*	
Contraction in the last 3 years versus the same number of employees										0.129*			0.200**			
Foreign owned versus domestically owned			-0.405**				-0.315**	-0.361***					0.249**	-0.226*		
Part of a larger firm versus stand-alone firm		0.262*						0.198***								
Privatised firm versus private firm from the beginning									0.330**	-0.440**					-0.256***	
Firm age						0.192**					-0.163**	0.099***	0.156**			
Manager experience	0.189***	0.324***	0.337***													
Gender of the manager: male versus female									0.208*	-0.198**		0.0853***	-0.149**		-0.190*	
Main market: domestic versus local					-0.261***				-0.0914*	0.380***						
Main market: international versus local	-0.553**							-0.382***		0.542***	-0.214***					
Innovation	0.348***		0.334***						0.328***			0.101***	0.226**		0.189**	
Services versus manufacturing	-0.184**				-0.198**	-0.244**	-0.128**					0.272**				
Retail versus manufacturing				-0.324***	-0.240*			0.421**								

$^{*}\ p < 0.10,\ ^{**}\ p < 0.05,\ ^{***}\ p < 0.01$

significant difference, and larger effect in EU-11 compared with WB-6

significant difference and larger effect in WB-6 compared with EU-11

Source: BEEPS V.

The problem of **practices of the informal sector** constitutes one of the largest obstacles for doing business in the Western Balkans. Size, manager experience, market orientation, innovation activities and industry are the main firm characteristics associated with higher costs of practices of the informal sector**.** The larger the company, in terms of full-time employed workers, the less likely it is to find practices of competitors in the informal sector as an obstacle for doing business. In other words, smaller companies find unfair informal competition more costly for doing business. Also, companies in the services sector find competition from the informal sector significantly less costly than companies in manufacturing, as well as those with an international (as opposed to local) market orientation. Furthermore, perceived costs of the informal sector are higher for companies that have been engaged in innovation activities and for those with more experienced managers. Significant differences for companies in the WB-6 compared with those in the EU-11 exist regarding the size, industry and management experience. For example, an increase in management experience corresponds to significantly higher costs of informality in the Western Balkans than in the EU-11.

Political instability seems to be more costly for the firms with more experienced managers and those firms that are part of a larger group. Being part of a larger group often implies broader geographical presence and higher transaction costs, both of which are sensitive to political instability. More experienced managers may be more aware of the costs of political instability, helping also to explain the significantly higher costs of this factor in the Western Balkans than in the EU-11.

Corruption appears to be a bigger problem for smaller and more innovative firms, as well as those with more experienced managers. This is in line with the results of the EBRD *Transition Report 2014*, which showed that differences in the perception of the business environment by firms that innovate and those that do not are particularly large when firms are

asked to assess the importance of corruption, workforce skills and customs and trade regulations. That report also showed that firms innovate more in countries that have better economic institutions, including an environment of low corruption. It is also the case that greater management experience corresponds to significantly higher costs of corruption in the Western Balkans than in the EU-11.

The results show that inadequate **access to electricity** is more likely to be negatively perceived by domestic firms compared with foreign-owned firms, as well as by the firms in the manufacturing sector rather than those in the retail sector. However, the difference in the costliness of electricity depends on the industry of the company (retail versus manufacturing), and the severity of the issue is less prominent in the EU-11 than in the Western Balkans.

Tax rates are also perceived as more problematic by firms in the manufacturing sector compared with those in the retail and other services sectors. Again, manufacturing companies in the EU-11 are not as different as those in retail and other services – they are less affected than manufacturing companies in the Western Balkans. Firms with a national market focus are less likely to see tax rates as an obstacle for doing business compared with those firms with a local market focus. This is perhaps an indication of how taxation in the region can be particularly burdensome for small and medium-sized enterprises (SMEs), which tend to concentrate on local markets.

Access to finance seems to be more of a problem for firms in the manufacturing sector rather than for those in the services sector. Also, older firms are significantly more likely to find access to finance as an obstacle. The older the company, the more it is concerned about access to finance. This might be due to self-selection bias. Older companies are more likely to have had some experience with banks in the first place, whereas younger firms are probably unable to determine their quality so they consider them to be a low or no obstacle.

With respect to **tax administration**, foreign-owned companies are less likely to see this as an obstacle than domestically owned companies are. This is probably because large companies have more resources available in dealing with tax requirements and the bureaucracy around them. Also, firms in the services sector find tax administration a less costly obstacle compared with firms in the manufacturing sector. Industry differences are not as prominent in the EU-11.

Crime, theft and disorder are perceived as more costly by the domestically owned companies and those with domestic market orientation. Larger firms, those with a male manager, and engaged in innovation activities and those that were privatised instead of being private from the beginning are the firms more concerned about the **inadequately educated workforce**. The difference with respect to the EU-11 is significant when it comes to the gender of the manager and the way the company was established.

Lastly, we rank the business obstacles according to the total revealed cost in each country. In other words, we show how obstructive each obstacle is for a benchmark company (as defined by the firm characteristics used throughout the analysis) while taking into account the institutional setting of each country. Recall that when we looked at unconditional means (Table 2), practices of competitors from the informal sector, political instability and corruption came out as the top three obstacles in the WB-6. Table 5 shows means conditional on the firm characteristics on a scale of 0 (no obstacle) to 4 (very severe obstacle): the higher the estimate, the higher the total revealed cost of a particular business obstacle. For a benchmark firm, tax rates represent on average the costliest obstacle in the Western Balkans, closely followed by competition from the informal sector. Electricity, tax administration, access to finance and corruption all feature prominently too in the WB-6.

Table 5: Obstacles to doing business, by revealed cost

	ALB	BIH	MKD	KOS	MNE	SRB	Average
Tax rates	3.47	3.65	3.36	4.02	3.39	3.84	3.62
Competition from the informal sector	3.28	3.09	3.73	4.50	3.22	2.93	3.46
Electricity	3.32	2.57	3.34	4.01	2.73	2.50	3.08
Tax administration	2.61	2.51	2.19	3.07	2.18	2.84	2.57
Access to finance	1.47	1.79	1.97	2.89	1.58	1.84	1.92
Corruption	1.82	1.94	1.41	2.89	0.84	1.81	1.78
Access to land	2.07	1.57	1.85	2.10	1.54	1.52	1.78
Labour regulations	1.36	1.67	1.57	1.64	1.40	1.82	1.58
Crime, theft, disorder	0.85	1.07	1.13	2.48	0.79	1.08	1.23
Transport	0.89	1.12	1.26	1.88	0.90	1.03	1.18
Political instability	0.82	1.58	1.04	1.83	0.03	1.69	1.17
Customs and trade regulations	0.56	1.08	0.83	1.68	0.82	0.90	0.98
Business licensing	0.69	1.14	0.78	0.90	0.59	0.76	0.81
Inadequately educated workforce	0.57	0.52	0.89	1.31	0.27	0.79	0.73
Courts	0.39	0.67	0.62	0.82	0.24	0.86	0.60
Telecommunications	0.15	0.12	0.64	0.75	0.01	0.09	0.29

Source: BEEPS V.

Note: Even though the dependent variable takes value between 0 and 4, conditional mean is slightly higher than 4 in some cases because the regression is not bounded.

5. Conclusion

On the basis of rich firm-level survey data, we now have a clearer idea of the reasons why productivity and living standards in the Western Balkans lag behind levels in the European Union. First, our estimates confirmed that the region shows a similar gap in labour productivity with the EU-11 as the one in GDP per capita. On average, both services and manufacturing sectors have lower productivity levels in the WB-6 than in the EU-11, with the productivity gap mainly driven by the manufacturing sector.

Second, we analysed the main problems that businesses perceive as hindering their activities. We find that businesses in this region are concerned principally about unfair competition from the informal sector. Other obstacles which are believed to impose a major burden on enterprises and adversely affect their performance are electricity, tax rates and administration, access to finance and corruption. The paper therefore highlights the need for tackling more rigorously all sorts of informality. This is important not only in the context of unfair competition, but also for the sustainability of public finances and social security systems. The evidence presented in this paper also highlights the importance of, among other things, creating a stable political environment, improving access to finance, having a clear and easy tax system and fighting corruption.

Third, we showed how costly some of these obstacles to doing business can be. We estimate that, on average, firms in the WB-6 lose more than 13 per cent of their annual sales because of crime, corruption and poor electricity and transport infrastructure. This is a significantly higher loss than in the EU-11. This represents a large hidden tax on output and productivity due to an inadequate business environment.

Our econometric analysis adds precision to the descriptive analysis earlier in the paper. We show that the effects of an inadequate business environment vary by firm characteristic, such as the sector in which they operate, market orientation, manager experience, type of ownership, and innovation track-record. The results show that manufacturing firms tend to perceive obstacles to doing business as being more severe for their performance than those in services. This is perhaps among the reasons why the region has a larger productivity gap in manufacturing than in services. It also confirms the need for business environment improvements across the board in order to unlock the potential of the WB-6's manufacturing sector.

One important finding is that export-oriented firms are disproportionately affected by problems associated with customs and trade regulations. As the role of export-oriented industries in driving growth is particularly important, the paper also highlights the urgency of tackling "soft" impediments to trade in addition to the major investment needs in the power and transport infrastructure. The results also show that companies with an international market are less concerned about competition from the informal sector, access to land issues and crime.

All WB-6 countries are keen to attract more FDI. For that reason it is important to understand which obstacles are particularly problematic for those foreign-owned firms already present in the market. The results show that those firms are more concerned about the courts compared with the domestically owned firms. As the major foreign owners of the companies in the Western Balkans come from EU countries, the big concern about the courts from their side is a good indication of the still poor and slow judiciary system in the region. The same companies are also less likely than locally owned ones to complain about crime, and they are also less worried about tax administration, possibly because some of them have benefited from tax breaks in the past.

References

D. Acemoglu, S. Johnson and J.A. Robinson (2005), Institutions as a Fundamental Cause of Long-Run Growth, *Handbook of Economic Growth*, ed. by Philippe Aghion and Stephen Durlauf, Elsevier, Amsterdam.

R. Aterido, M. Hallward-Driemeier and C. Pagés (2011), "Big constraints to small firms' growth? Business environment and employment growth across firms", *Economic Development and Cultural Change*, 59(3), 609-647.

E. H. Bah and L. Fang (2015), "Impact of the business environment on output and productivity in Africa", *Journal of Development Economics*, 114, 159-171.

B. Balassa (1965), "Trade liberalisation and "revealed" comparative advantage", The Manchester School, 33(2), 99-123.

H. G. Broadman (2004), *Building market institutions in South Eastern Europe: Comparative prospects for investment and private sector development*, World Bank Publications.

W. Carlin, M.E Schaffer and P. Seabright (2010), "A framework for cross-country comparisons of public infrastructure constraints on firm growth", CEPR Discussion Paper, No. 7662.

W. Carlin and M.E. Schaffer (2012), "The business environment in the transition", *CESifo* Working Paper No. 3934.

S. Commander and J. Svejnar (2011), "Business environment, exports, ownership, and firm performance", *The Review of Economics and Statistics*, 93(1), 309-337.

J. J. Dethier, M. Hirn and S. Straub (2010), "Explaining enterprise performance in developing countries with business climate survey data", *The World Bank Research Observer,* lkq007.

EBRD (2013), *Transition Report 2013: Stuck in transition?* London.

EBRD (2010), *Transition Report 2010: Recovery and reform*, London.

A. Gonzalez and F. Lamanna (2007), "Who fears competition from informal firms? Evidence from Latin America", *The World Bank Policy Research Working Paper.*

R. Hausmann, B. Klinger and R. Wagner (2008), "Doing growth diagnostics in practice: a 'mindbook'", CID Working Paper No. 177.

IMF (2015), *The Western Balkans: 15 Years of Economic Transition*, March 2015

OECD (2016), *SME Policy Index: Western Balkans and Turkey 2016: Assessing the Implementation of the Small Business Act for Europe*, OECD Publishing, Paris.

G. Pierre and S. Scarpetta (2004), "Employment Regulations through the Eyes of Employers: Do they matter and how do firms respond to them?", IZA Discussion Paper No. 1424

P. Sanfey, J. Milatovic and A. Kresic (2016), "How the Western Balkans can catch up", EBRD Working Paper No. 185.

Appendix

Table 1: OLS, diff in diff, 3 industries

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Customs and trade regulations	Electricity	Telecommunications	Transport	Crime, theft, disorder	Access to finance	Business licensing and permits	Corruption	Practices of competitors in informal sector	Access to land	Tax rates	Tax administration	Political instability	Courts	Labour regulations	Inadequately educated workforce
								WB-6								
Number of workers	-0.00417 (-0.53)	0.0413 (0.96)	0.00901 (0.32)	0.0500 (1.17)	0.0597 (1.02)	-0.0569 (-1.26)	0.0556 (1.20)	-0.0665* (-1.83)	-0.135*** (-3.19)	0.0402 (1.07)	0.0388 (1.07)	0.000369 (0.01)	0.0630 (1.72)	0.0652 (1.10)	0.0887** (2.21)	0.103** (2.59)
Expansion in the last 3 years	-0.142* (-1.90)	-0.0272 (-0.32)	-0.0523 (-0.66)	-0.0748 (-0.77)	0.0609 (0.47)	0.0523 (0.58)	-0.0635 (-1.45)	-0.112 (-0.97)	-0.142 (-1.66)	0.0344 (0.29)	0.0904 (0.88)	-0.0458 (-0.37)	-0.149 (-1.02)	0.0535 (1.50)	-0.0974* (-1.83)	0.231 (1.68)
Contraction in the last 3 years	0.129* (1.84)	0.0194 (0.11)	0.000720 (0.01)	-0.0708 (-0.57)	0.0704 (0.68)	0.0565 (0.33)	-0.0254 (-0.38)	-0.0322 (-0.25)	0.0689 (0.25)	0.188 (1.37)	0.0344 (0.39)	-0.0373 (-0.70)	-0.126 (-1.16)	0.200** (2.66)	0.0591 (0.83)	0.154 (1.35)
Foreign owned	-0.155 (-1.33)	-0.405** (-2.63)	0.0518 (0.68)	-0.226* (-1.82)	-0.361*** (-3.46)	-0.0985 (-0.30)	-0.156 (-1.29)	-0.0278 (-0.24)	-0.418 (-1.08)	-0.149 (-1.10)	-0.295 (-1.49)	-0.315** (-2.45)	-0.0640 (-0.71)	0.249* (1.80)	-0.183 (-0.78)	0.0856 (0.58)
Part of a larger firm	0.494 (1.44)	0.286 (1.72)	-0.300 (-1.47)	0.0815 (1.68)	0.198*** (3.19)	-0.0455 (-0.11)	0.0267 (0.24)	0.260 (1.46)	0.231 (1.17)	0.115 (0.40)	0.0168 (0.15)	0.134 (0.70)	0.262* (1.82)	-0.202 (-1.17)	0.00403 (0.05)	0.0446 (0.35)
Establishment	-0.440** (-2.14)	0.198 (0.90)	-0.186 (-1.63)	-0.256*** (-3.82)	-0.0963 (-0.81)	-0.193 (-0.67)	-0.0565 (-0.79)	0.145 (0.90)	0.0834 (0.31)	0.00721 (0.05)	0.233 (1.36)	-0.0600 (-0.43)	0.164 (0.97)	0.0990 (0.51)	-0.0722 (-0.60)	0.330** (2.23)
Firm age	0.159 (1.73)	0.101 (1.21)	0.0990*** (4.41)	0.00245 (0.03)	0.0209 (0.28)	0.192** (2.34)	0.0155 (0.68)	0.177 (1.50)	0.0859 (0.94)	-0.163** (-2.19)	-0.0425 (-0.34)	0.0802 (1.13)	0.119 (1.34)	0.156** (2.33)	-0.00998 (-0.34)	-0.0125 (-0.28)
Manager experience	-0.00879 (-0.16)	-0.0657 (-1.43)	-0.0181 (-0.32)	-0.0893 (-1.01)	0.0132 (0.17)	-0.0869 (-0.95)	0.00291 (0.06)	0.337*** (4.36)	0.189*** (3.72)	0.0251 (0.37)	0.0899 (0.66)	0.0831 (0.56)	0.324*** (4.88)	0.0693 (1.60)	-0.0832 (-1.03)	0.0357 (0.96)
Gender of the manager: male	-0.198** (-2.46)	0.103 (0.47)	0.0853*** (3.19)	0.000116 (0.00)	-0.104 (-0.72)	0.0644 (0.59)	0.140 (1.15)	0.167 (1.19)	-0.113 (-1.26)	-0.0130 (-0.09)	-0.0826 (-0.67)	0.0931 (0.46)	0.177 (1.16)	-0.149** (-2.19)	-0.190* (-1.91)	0.208* (1.78)
Main market: domestic	0.380*** (3.80)	-0.222 (-1.58)	0.0930 (1.22)	0.123 (0.87)	-0.111 (-1.32)	-0.0630 (-0.90)	-0.0332 (-0.38)	-0.110 (-0.97)	-0.177 (-1.74)	0.0121 (0.16)	-0.261*** (-3.10)	-0.0793 (-1.00)	-0.101 (-0.69)	-0.0322 (-0.28)	-0.0129 (-0.10)	-0.0914* (-1.85)

Main market: international	0.542***	0.0760	0.244	0.154	-0.382***	-0.139	-0.137	0.0498	-0.553**	-0.214***	-0.0985	0.0542	-0.270	-0.0207	0.0319	-0.233
	(5.86)	(0.28)	(0.96)	(0.66)	(-3.63)	(-0.77)	(-0.65)	(0.21)	(-2.77)	(-3.37)	(-0.46)	(0.52)	(-1.24)	(-0.16)	(0.19)	(-0.76)
Innovation	0.128	0.0562	0.226**	0.000265	0.196	-0.0302	-0.0926	0.334***	0.348***	0.101***	-0.0645	-0.0637	0.303	0.0343	0.189**	0.328***
	(0.97)	(1.57)	(2.49)	(0.00)	(1.11)	(-0.16)	(-0.55)	(3.31)	(4.43)	(3.39)	(-0.44)	(-0.48)	(1.69)	(1.05)	(2.32)	(3.00)
Services	-0.0849	-0.164	0.272**	0.0549	0.205	-0.244**	0.0379	0.00365	-0.184**	-0.0979	-0.198**	-0.128**	-0.0523	0.0409	0.0764	0.149
	(-1.14)	(-1.05)	(2.32)	(0.31)	(1.71)	(-2.38)	(0.33)	(0.02)	(-2.32)	(-1.13)	(-2.31)	(-2.72)	(-0.84)	(0.45)	(0.80)	(1.33)
Retail	0.0529	-0.324***	0.127	-0.0413	0.421**	-0.151	0.0126	-0.145	-0.102	-0.0963	-0.240*	-0.124	0.108	-0.0534	-0.0235	-0.0711
	(0.45)	(-3.12)	(1.56)	(-0.22)	(2.19)	(-1.36)	(0.15)	(-0.85)	(-1.56)	(-1.01)	(-2.05)	(-1.52)	(1.34)	(-0.52)	(-0.14)	(-1.21)

The difference between WB-6 and EU-11

Number of workers	0.0349	-0.0516	-0.0655	-0.0941*	-0.0531	0.0521	-0.0705	0.0440	0.0960*	-0.0576	-0.0164	-0.0132	-0.110*	0.0198	0.0382	0.0128
	(1.59)	(-0.79)	(-1.42)	(-1.93)	(-0.74)	(0.97)	(-1.32)	(0.99)	(1.98)	(-1.29)	(-0.35)	(-0.18)	(-2.31)	(0.29)	(0.68)	(0.23)
Expansion in the last 3 years	0.0563	-0.122	0.0991	0.200	-0.114	-0.0119	0.0605	0.0319	0.0225	0.00954	-0.228*	0.0322	0.103	-0.155**	0.0949	-0.253
	(0.65)	(-1.10)	(0.85)	(1.71)	(-0.81)	(-0.11)	(0.69)	(0.22)	(0.21)	(0.08)	(-1.87)	(0.23)	(0.63)	(-2.25)	(0.94)	(-1.61)
Contraction in the last 3 years	-0.228**	-0.0270	0.0292	0.0645	-0.109	0.180	0.0742	0.193	-0.0867	-0.146	0.120	0.153	0.430***	-0.155	0.0316	-0.0446
	(-2.61)	(-0.13)	(0.25)	(0.42)	(-0.92)	(0.90)	(0.89)	(1.17)	(-0.30)	(-0.99)	(0.86)	(1.23)	(3.27)	(-1.54)	(0.28)	(-0.31)
Foreign owned	0.0537	0.0629	-0.240*	0.180	0.312**	-0.278	0.114	-0.302*	0.247	0.102	-0.0355	-0.0387	-0.0141	-0.338*	-0.0233	-0.0756
	(0.39)	(0.30)	(-1.85)	(1.07)	(2.40)	(-0.77)	(0.78)	(-2.09)	(0.61)	(0.61)	(-0.16)	(-0.22)	(-0.07)	(-1.98)	(-0.10)	(-0.42)
Part of a larger firm	-0.527	-0.314	0.487**	0.0793	-0.147	-0.148	-0.0799	-0.142	-0.106	-0.230	-0.156	-0.0146	-0.317	0.197	-0.409**	-0.192
	(-1.48)	(-1.47)	(2.18)	(0.89)	(-1.00)	(-0.34)	(-0.65)	(-0.62)	(-0.39)	(-0.73)	(-0.81)	(-0.06)	(-1.43)	(0.97)	(-2.76)	(-0.70)
Establishment	0.617**	-0.0559	0.324	0.417**	0.342*	0.283	0.153	-0.119	0.304	0.0547	-0.244	-0.0614	-0.0783	-0.105	0.00297	-0.369*
	(2.23)	(-0.20)	(1.51)	(2.70)	(1.76)	(0.78)	(0.94)	(-0.50)	(1.05)	(0.26)	(-1.08)	(-0.34)	(-0.31)	(-0.39)	(0.02)	(-1.90)
Firm age	-0.0695	-0.174*	-0.0876	0.0452	0.0809	-0.250**	0.0879*	-0.0958	-0.0342	0.221**	0.0262	-0.0491	-0.112	-0.0827	0.0200	0.00402
	(-0.69)	(-1.79)	(-1.31)	(0.45)	(0.85)	(-2.29)	(2.00)	(-0.73)	(-0.32)	(2.55)	(0.20)	(-0.46)	(-1.01)	(-1.01)	(0.30)	(0.05)
Manager experience	-0.0711	0.172*	0.132	0.0304	-0.0741	0.0835	-0.184***	-0.263**	-0.183*	-0.143	-0.0612	-0.161	-0.207**	-0.0124	0.112	-0.0229
	(-1.00)	(2.01)	(1.52)	(0.30)	(-0.76)	(0.72)	(-3.01)	(-2.63)	(-2.11)	(-1.60)	(-0.42)	(-1.08)	(-2.28)	(-0.19)	(1.28)	(-0.32)
Gender of the manager: male	0.252**	-0.0796	-0.208***	-0.0229	-0.0876	-0.111	-0.156	-0.290	0.144	-0.0920	-0.0434	-0.152	-0.442**	0.106	0.153	-0.277*
	(2.57)	(-0.35)	(-2.96)	(-0.20)	(-0.53)	(-0.82)	(-1.09)	(-1.65)	(1.01)	(-0.52)	(-0.28)	(-0.72)	(-2.56)	(1.24)	(1.30)	(-1.99)
Main market: domestic	-0.277**	0.209	0.0795	0.0929	0.163	0.143	0.0809	0.322**	0.221	-0.0151	0.236**	0.0896	0.166	0.180	0.0519	0.117
	(-2.56)	(1.37)	(0.73)	(0.62)	(1.63)	(1.16)	(0.80)	(2.55)	(1.60)	(-0.18)	(2.27)	(0.90)	(1.04)	(1.43)	(0.41)	(1.36)

Main market: international	-0.119	0.0495	0.144	0.0721	0.346**	0.285	0.248	0.0865	0.247	0.219**	0.147	0.164	0.321	0.0209	0.172	0.392
	(-0.91)	(0.16)	(0.50)	(0.27)	(2.25)	(1.41)	(0.99)	(0.34)	(0.92)	(2.26)	(0.57)	(1.04)	(1.42)	(0.14)	(0.84)	(1.19)
Innovation	0.0782	0.0794	-0.100	0.0934	-0.0645	0.0221	0.122	-0.0520	-0.0156	0.0264	0.0678	0.142	-0.0381	0.0526	-0.0556	-0.214
	(0.54)	(1.30)	(-0.93)	(0.70)	(-0.35)	(0.10)	(0.70)	(-0.37)	(-0.15)	(0.38)	(0.40)	(0.94)	(-0.20)	(0.85)	(-0.54)	(-1.59)
Services	0.179	-0.0215	-0.0836	-0.0877	0.0407	0.172	-0.0245	0.178	0.412***	0.120	0.212*	0.190*	0.239**	0.0839	-0.0821	-0.0793
	(1.65)	(-0.13)	(-0.60)	(-0.45)	(0.30)	(1.42)	(-0.17)	(0.94)	(3.77)	(1.12)	(1.97)	(1.77)	(2.85)	(0.72)	(-0.58)	(-0.59)
Retail	0.0339	0.228*	0.0230	0.0930	-0.134	0.00399	0.0672	0.141	0.162	0.0816	0.342**	0.309**	-0.0849	0.0265	0.0709	-0.00153
	(0.26)	(1.78)	(0.22)	(0.48)	(-0.67)	(0.03)	(0.51)	(0.73)	(1.62)	(0.72)	(2.65)	(2.69)	(-0.80)	(0.24)	(0.38)	(-0.02)
Constant	0.153	1.837***	0.227**	0.611**	1.694***	2.307***	1.048***	0.743*	0.668**	0.658**	2.029***	0.707**	1.125***	0.208	0.784**	0.602***
	(0.87)	(3.08)	(2.40)	(2.46)	(3.57)	(4.74)	(6.19)	(1.75)	(2.49)	(2.49)	(5.18)	(2.80)	(6.54)	(0.91)	(2.83)	(3.36)
Observations	4440	4551	4558	4529	4534	4525	4485	4432	4320	4503	4542	4512	4500	4455	4541	4512
R^2	0.141	0.137	0.125	0.103	0.150	0.104	0.062	0.185	0.150	0.053	0.177	0.128	0.163	0.081	0.111	0.145
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

t statistics in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$