CRIME AND FIRM PERFORMANCE: EMPIRICAL EVIDENCE FROM THE BALKAN REGION

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Abstract

This paper aims to analyze the impact of business-related crime on the performance of Kosovo firms. This also represents the research problem of this paper. The sample of firms consists of 200 firms from different economic sectors. This research is based on the research of Moyo (2012) and Botrić (2021) who used similar variables related to this issue. Through the ordinary least squares (OLS) econometric model, the results have been obtained that show that criminality or different types of crime of a business nature have a negative impact on the performance of these firms. Also, the results obtained prove that firms from the region of Pristina and Mitrovica are more exposed to crime, while as for the size of the firms, medium-sized firms are more exposed to crime compared to other firms. Firms in the textile and wood sectors, compared to firms in other sectors, are most affected by crime. Business associations and government institutions should design state policies that would ensure a safe environment for all firms in all regions of Kosovo and economic sectors. The relevance of this research lies in the fact that these findings have never been elaborated on by other authors from Kosovo.

Keywords: Crime, Firm Performance, Ordinary Least Squares, Security Cost, Business

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1. INTRODUCTION

The exposure of firms to different types of crime is considered one of the main barriers to doing business in all countries of the globe. The reduction of the level of crime affects the growth and development of entrepreneurial activities, the increase of foreign investments, etc. However, with the increase in the level of criminality, the exposure of firms to crime is inevitable; this results in reducing employment, worsening business performance, specifically reducing the level of sales of firms (Qorraj & Jusufi, 2019; Botrić, 2021; Jusufi & Ukaj, 2021).

Therefore, the ability to eliminate economic criminality and all types of criminality today has turned into a competitive advantage for all firms around the globe, in particular for the firms from the countries of the Western Balkans, which have a marked degree of criminal activity (Schnatterly, 2003; Qorraj & Jusufi, 2021). According to Moyo (2012), the types of crime that firms face are financial misrepresentation, theft, product piracy, corruption, counterfeiting, and bribery. All these types of crime have different effects on the performance of firms from different economic sectors. Likewise, the location or the city where the firms carry out their business activity has

a significant impact on the firms' exposure to crime (Amin, 2009; Jusufi, Ramaj, & Ramaj, 2021).

Also, the types of crimes, both in the medium term and in the long term, have an impact both on the performance of firms and on their investment decisions. In addition to these, crimes also negatively affect innovations or the innovative system of firms. Therefore, it is essential that the government provides a safe environment for firms of all economic sectors (Saridakis, Mohammed, & Sookram, 2015; Jusufi & Gashi-Sadiku, 2020). Without a safe environment, especially for firms in countries in transition, such as Kosovo, criminality cannot be eliminated and foreign direct investments can't be attracted (Jusufi, Ukaj, & Ajdarpašić, 2020).

There is a large literature gap related to the problem investigated in this paper. This issue has never been researched for Kosovo, specifically for Kosovar firms. So here lies the relevance and significance of this paper. The purpose of this paper is to study the impact of types of crime on the performance of Kosovar firms, specifically on their sales. Also, the research aim is to study the impact of the region where the firms operate on their exposure to crime, the impact of the economic sector on the exposure of the firms to crime, insurance (security) costs and their impact on the performance of the firms. The research questions of this paper are:

RQ1: Does crime affect the performance of Kosovo firms?

RQ2: Are there differences according to regions regarding the exposure to crime of Kosovar firms?

RQ3: Do these firms have security costs and do these costs affect the level of sales?

RQ4: Are there differences according to economic sectors regarding the exposure to crime of Kosovar firms?

The hypotheses of this paper will be generated based on the sources in the literature review section, while their validation will be done in the statistical results achieved. The theoretical/conceptual framework applied and research methodology (ordinary least squares (OLS) regressions) used in this paper are based on the papers of Moyo (2012) and Botrić (2021). The main findings and contributions lie in the findings that confirm that criminality or different types of crime of a business nature have a negative impact on the performance of these firms. The results obtained prove that firms in the region of Pristina and Mitrovica are more exposed to crime, while as for the size of the firms, medium-sized firms are more exposed to crime compared to other firms.

The structure of this paper is as follows. Section 2 reviews the relevant literature. Section 3 analyses the methodology that has been used to conduct empirical research on crime and its impact on Kosovo firms' performance. Section 4 presents the results obtained from the processed statistics, while Section 5 provides the discussions related to these results. Section 6 presents the conclusions reached.

2. LITERATURE REVIEW

Usually, the topic of the connection between crime and the economy is treated in terms of macroeconomics. So different authors like Daniele and Marani (2008), Detotto and Otranto (2010), Altindag (2012), Goulas and Zervoyianni (2013), Janko and Popli (2015), Duarte and Barros (2018), Cabral, Mollick, and Saucedo (2019) have researched the impact of the relationship between crime and unemployment, foreign direct investment, economic growth, corporate tax avoidance, etc. So these authors have offered theoretical and empirical arguments that crime negatively affects these economic indicators. Meanwhile, other authors have studied crime at the firm level, that is, the impact that crime has on the microeconomic aspect or on the business and financial performance of firms in a country or region, etc. So, commercial agents such as firms are greatly affected by criminal behavior in a country. Khan, Nijhof, Diepeveen, and Melis (2018) even claim that governance is an important factor in the performance of different firms.

Krkoska and Robeck (2006) group the literature on crime into three categories, such as institutional literature, literature on the economy of crime and literature on the informal economy. The first group of literature includes sources of literature such as Frye and Schleifer (1997), Hay and Shleifer (1998), Frye and Zhuravskaya (2000), N'Guilla Sow, Basiruddin, Mohammad, and Abdul Rasid (2018) who studied the institutional aspect of crime, specifically the failure of the institutions of a country or region in fighting crime. So, as long as the state does not ensure the rule of law, the institutions are weakened so that they fail to fight the high level of crime.

The literature on the economics of crime deals with the factors that explain the reason or decision to commit a crime. According to the literature from this field, criminal offenses are committed because benefits and costs differ. So, if the benefits are greater from committing a criminal offense, then a certain person commits a certain crime. The authors who have researched and produced such theoretical and empirical evidence are Becker (1968), Glaeser and Sacerdote (1999), Motta (2017). The labor market, the location of the firm, the education of the social circle where the particular firm operates are the determining factors of the development or non-development of various crimes. In a country where economic activity takes the upper hand, where finding a job is a difficult process, the tendencies of the development of criminal activities are great, so this also affects the performance of firms.

Gaviria (2002) studied by means of econometric methods the impact of crime on the performance of different firms. His empirical results show that crime reduces the competitiveness of firms. However, this finding varies from country to country, simply in some countries, it is more pronounced (Latin America), while in some other countries (OECD countries) it is less pronounced. According to the World Bank (2003), the substantial costs of doing business in a given country are the main causes of crime. This crime has a negative impact on the economic circulation of firms in this country. Such results were also achieved by Andoh, Quaye, and Akomea-Frimpong (2018).

Amin (2009) in his research found that firms in underdeveloped countries are more exposed to crime than individuals. Also, he provided evidence that firms located in large cities suffer more from

crime than those located in provincial or small towns. This is because firms in big cities are more resource-rich and criminals are hard to spot in big cities. Regarding the size of the firms, crime has a more negative effect on large firms than on small firms. However, if the losses of firms as a result of crime are analyzed, then small firms have greater losses in terms of sales than large firms. Similar results were achieved by Gaviria and Pagés (2002), Alkhatib and Maria (2021). However, Glaeser and Sacerdote (1999) provided evidence that large firms suffer more from the consequences of crime than small firms.

Mohan (2021) found that firm sales and violent crime are negatively associated, even after firm characteristics, other factors which influence sales, and country and sector fixed effects were taken into account. The findings underscore the importance of crime prevention, control and reduction policies to grow the private sector. Calamunci and Drago (2020) achieve similar results regarding the effects of economic crime on the business performance of different firms. Bianchi, Marra, Masciandaro, and Pecchiari (2022) suggest that connections to organized crime can drain a firm's resources, possibly through money-laundering schemes, and jeopardize its existence, thereby harming its shareholders.

Bourguignon, Nunez, and Sanchez (2002) provided evidence showing that the distribution of income in a country, especially in developing countries, affects economic crime. According to them, in countries where there is no big difference in the distribution of income, whether it is low or high, there is no significant impact on the development of crime by individuals or firms. However, in countries where there is a large disproportion in the distribution of income, there are suitable conditions for the birth and development of economic criminality. In the research of Krkoska and Robeck (2006), theoretical evidence was obtained that in large countries with a high level of unemployment, and where firms are weak both in terms of financial resources and in terms of human resources, the effects of crime are devastating for firms. Likewise, according to these authors, crime has very negative effects on the market entry of various firms, especially international ones, as well as crime has negative effects on their expansion and growth from an economic point of view.

Cho, Choi, Lee, and Yang (2020) pay special attention to the location of the firm. According to them, if the region or city where the firm is located is known for economic crime, where there is fiscal evasion and illegal use of resources, then the firms of this region will also be included in such criminal activities. So, the degree of influence on companies by the region or city where they operate is great. Islam (2014) in his research provided evidence showing that crime against firms negatively affects economic growth. So, apart from the fact that crime negatively affects the small and medium enterprises (SMEs) of a country, it also reduces the growth of the gross domestic product (GDP) of that country. So, policies for the economic growth of a country should also aim to reduce the level of economic crime.

Czinkota, Knight, Liesch, and Steen (2010) and Ganau and Rodriguez-Pose (2018) in their study prove that the firms operating in regions with a high level of criminality have high operating costs because they must invest in security measures. One of these measures is the security camera. Likewise, criminality in these regions makes it difficult to distribute material goods, thus reducing the level of sales of firms. Each type of crime has a different impact on a firm's business performance. For example, theft as a serious crime increases the company's costs, while other crimes, especially violent ones, negatively affect the company's level of sales, specifically reducing the level of sales.

Rosenthal and Ross (2010) assert that the characteristics of firms exposed to crime play an important role in elaborating the crime-firm problem. These characteristics are not universal but usually relate to the sector where the firms belong and also to the region or city where they are concentrated. Islam (2013) in his research has found interesting data, where according to him, firms that are owned by women are likely to be more affected by criminality. Lotspeich (1995) in his study affirms that the privatization of enterprises in the former countries of the socialist bloc has been a factor that has influenced the increase in criminality in the firms in these countries. The rapid changes in the justice system, in the psychological mentality of the societies of these countries, influenced economic criminality, in particular, in the firms from these countries.

Bjelalac and Bingulac (2016) assert that economic criminality, in particular corruption, in some countries of the Western Balkans has become a fundamental condition for the survival of firms in the market. Allum and Sands (2004) even claim that the EU principles and rules related to the free movement of goods and people have stimulated criminal activities. So, they have increased the exposure of firms to economic criminality.

It should be emphasized that there are no sources of literature that, as an object of study, have studied the impact of crime on the business performance of companies in the Western Balkans, much less in Kosovo. This paper, therefore, tends to be one of the first sources that deal with such a problem, which is very necessary to be dealt with for companies in the region, specifically a country like Kosovo, where criminal activities inhibit socio-economic development and especially the development of the SME sector. Based on the detailed literature review, the hypotheses of this paper will be formulated:

H1: Crime negatively affects the performance or sales of Kosovar firms.

H2: There are no differences according to regions regarding the exposure to crime of Kosovar firms.

H3: The security costs of these firms affect the level of sales.

3. RESEARCH METHODOLOGY

The methodology of this paper is based on the econometric equation of Moyo (2012). Through the statistical evidence and its processing in the SPSS program, the impact of crime on the performance of firms in the 7 regions (Prishtina, Mitrovica, Peja, Prizren, Ferizaj, Gjilan and Gjakova) of Kosovo will be investigated. Another alternative

method that would be suitable for conducting this research is multiple linear regression. 200 firms in Kosovo were interviewed by the authors of the paper during the period January 2022–June 2022. The chief executive officers (CEOs) of these firms were interviewed by the authors of the paper at the locations of these firms. The interviews lasted about 40 minutes. The econometric equation of this research can be presented in this form:

$$y = \beta_0 + \beta_1 Crime\ variables + \beta_2 Firm\ characteristics + \varepsilon \quad (1)$$

The dependent variable y represents the firm's sales. β_0 presents the expected (average) change in y. β_1 presents the variables related to crime such as *pillage losses* (% of sales), *theft losses* (% of sales), *vandalism losses* (% of sales), and *security costs* (% of sales). Meanwhile, the independent variables consist of the *crime* variable as well as β_2 which represents the characteristics of the analyzed firms, such as the economic sector they belong to, the region where they are located, their size based on the number of employees, their age from the establishment until now, as well as being an exporter in the EU or not. Kosovo firms as a result of the Stabilisation and Association Agreement (SAA) aim to increase their exports to the EU market (Osmani, Leka, & Jusufi, 2022). Therefore, the analysis of this topic is also important in the field of criminality.

The crime variables relate to whether the analyzed firms experienced losses as a result of pillages or not, whether they have suffered losses as a result of various thefts or not, whether they have suffered losses as a result of various types of vandalism or not. Also, two variables like *security costs* (% of sales) and *crime as the main barrier to doing business* were included in the research as control variables. ε is a random error term. It should be emphasized that Kosovo has a small number of firms, therefore, this sample of 200 firms represents about 40% of Kosovar firms. Considering the fact that these firms are also exporting firms, it can be said that they represent the most progressive or powerful firms in Kosovo. So, the selection of firms was made according to the criterion of whether they are exporters, taking into account the fact that exporting firms are the most powerful firms in Kosovo. It can be affirmed that the results achieved can be generalized for Kosovar firms. The following table shows the statistics of the World Bank for Kosovo companies related to business crimes.

Table 1. Kosovo enterprise surveys indicator data

Indicator	*Value of indicators*
Firms that pay for security (%)	57.3
Average security costs as % of annual sales	13.1
Firms suffering losses due to theft and vandalism (%)	3.70
Average firm losses due to theft and vandalism as a % of annual sales	10.5
Domestic products lost to theft as % of product value	0
% of Kosovo firms identifying crime types as a major constraint	45.7

Source: The World Bank (2022).

This table is a factual overview of how crime affects the environment of Kosovar firms. Meanwhile, the variables of this research are based on the indicators of this research. The data for these firms were provided by the Ministry of Trade and Industry of Kosovo. These firms are from the following economic sectors: food, textile, metals, construction-transport, plastics, other. It should be emphasized that most of the firms are from the manufacturing sector. These economic sectors are the most widespread and developed sectors in Kosovo.

4. RESULTS

In this section, descriptive statistics will be presented, specifically, the statistical values obtained for the variables of this research. In the table below, it can be seen that in terms of the age of the researched firms, a significant number of firms are younger than 20 years old. As far as size is concerned, large firms are older than small and medium-sized firms. As for the other values, specifically the values related to the crime variables, they differ from variable to variable. Medium firms have stated that crime is the main barrier to doing business.

Table 2. Crime and other firm characteristics

Variables	*Firm size*			*Firm age*	
	Small	*Medium*	*Large*	*< 20 years*	*> 20 years*
Age of firms	15.2	18.3	22.1	7.50	37.8
Firm size	19.1	48.3	28.2	51.7	84.3
Exporter in the EU	11.4	23.1	18.5	28.4	71.2
Pillage losses (% of sales)	4.27	5.89	2.44	4.02	3.54
Theft losses (% of sales)	4.51	6.77	10.0	7.16	4.04
Vandalism losses (% of sales)	4.23	5.09	3.22	6.05	5.84
Security costs (% of sales)	2.98	3.24	3.08	3.84	2.97
Crime as the main barrier to doing business	35.0	39.8	28.9	38.4	40.1

Source: Authors' calculation.

The following table presents the crime statistics classified according to the economic sectors to which the analyzed firms belong. Regarding *pillage losses* (% of sales), the wood sector is the most affected, while the textile sector is the sector most affected by *theft losses* (% of sales). Also, this sector is most affected by *vandalism losses* (% of sales). The wood sector has the highest costs for security.

Table 3. Sectorial distribution of theft, pillages, vandalism losses

Variables	*Food*	*Textile*	*Metals*	*Wood*	*Construction-transport*	*Plastics*	*Other*
Pillage losses (% of sales)	2.82	4.87	2.00	3.82	1.66	3.20	3.29
Theft losses (% of sales)	3.08	5.09	2.06	3.41	1.50	3.14	3.24
Vandalism losses (% of sales)	3.01	5.03	2.21	3.89	1.98	3.18	3.21
Security costs (% of sales)	80.9	71.6	68.8	84.5	60.2	78.2	77.1

Source: Authors' calculation.

The following table will present the statistics related to crime in firms according to the regions where the analyzed firms develop their business activity.

Table 4. Regional distribution of theft, pillages, vandalism losses and security costs

Variables	*Prishtina*	*Mitrovica*	*Peja*	*Prizren*	*Ferizaj*	*Gjilan*	*Gjakova*
Pillage losses (% of sales)	4.36	5.03	1.05	4.16	4.20	2.00	2.19
Theft losses (% of sales)	5.12	4.44	1.00	3.02	4.06	2.66	2.45
Vandalism losses (% of sales)	4.88	4.27	1.29	3.18	3.96	2.32	2.28
Security costs (% of sales)	68.1	91.7	60.4	66.7	66. 2	59.3	57.9

Source: Authors' calculation.

Firms that conduct their business activities in the region of Mitrovica are more affected by *pillage losses* (% of sales), while the companies that develop their business activity in the capital of Kosovo (Pristina) are more affected by *theft losses* (% of sales). Also, the firms located in the capital are most affected by *vandalism losses* (% of sales). Firms from the Mitrovica region have the most *security cos*ts compared to firms from other regions. This is probably due to the fact that this region is ethnically divided, and the tendency to have ethnic riots is higher compared to other regions which are very calm compared to this region.

5. DISCUSSION

This section presents the statistical data obtained from correlation analysis as well as OLS regression. Based on these statistics, the findings of the research will be discussed. First, the correlation results are presented in the table below. From the results, it can be seen that some variables have a positive relationship, and some others have a negative relationship with each other. Some relationships between the variables are significant. Similar results were also obtained by Masurel (2004) and Mohamad, Zakaria, and Hamid (2016).

Table 5. Correlation matrix

Variables	*V1*	*V2*	*V3*	*V4*	*V5*	*V6*	*V7*	*V8*
Age of firms ***V1***	1.00	0.045	0.311*	-0.079*	0.019*	0.049	0.331*	0.018
Firm size ***V2***	0.432*	1.00	0.264*	-0.011*	-0.008*	-0.021	-0.009*	-0.004
Exporter in the EU ***V3***	0.004	0.016	1.00	-0.072*	-0.181*	0.128*	0.0467	0.0781*
Pillage losses (% of sales) ***V4***	0.078*	-0.011*	0.032	1.00	-0.007	0.227*	0.046	0.221*
Theft losses (% of sales) ***V5***	0.057	-0.041*	0.321	0.263	1.00	0.386	-0.016*	0.216*
Vandalism losses (% of sales) ***V6***	-0.081*	-0.007	0.039	0.081*	0.556*	1.00	0.221*	0.431*
Security costs (% of sales) ***V7***	0.377	0.032	0.032	0.144*	0.221*	0.08*	1.00	0.06*
Crime as the main barrier to doing business ***V8***	0.076	-0.008	-0.004	0.082*	0.130*	0.280*	0.0382	1.00

*Note: * significant at 5%.*
Source: Authors' calculation.

For example, the firm that is an *exporter in the EU* has a negative and even significant relationship with *pillage losses* (% of sales) of the firm. This type of crime negatively affects the export tendencies of these firms. The variables *vandalism losses* (% of sales) and *age of firms* also have a negative and significant relationship. Regardless of the *age of firms*, this type of criminality affects the performance of the analyzed firms. The following table presents the data from the two OLS regression models.

Table 6. OLS regressions

Variables	*OLS (I)*	*OLS (II)*
Age of firms	0.1420 (0.0291)***	0.1733 (0.0499)***
Firm size	1.4008 (0.0413)***	1.7988 (0.0591)***
Exporter in the EU	0.5342 (0.0221)	0.6027 (0.0179)
Economic sector	0.5992 (0.0311)	0.4898 (0.0349)
Pillage losses (% of sales)	-0.0442 (0.0219)**	-0.1974 (0.0236)***
Theft losses (% of sales)	-0.0124 (0.0301)***	-0.0593 (0.0291)*
Vandalism losses (% of sales)	-0.0213 (0.0109)***	-0.0490 (0.0111)***
Security costs (% of sales)	-	0.1667 (0.0313)***
Crime as the main barrier to doing business	-	0.0527 (0.0796)
Constant	10.2104	11.5107
Number of observations	200	200

*Note: *** significant at 1%; ** significant at 5%; * significant at 10%. Standard errors in parenthesis.*
Source: Authors' calculation.

In the first OLS model, except for two variables such as *economic sector* and *exporter in the EU*, all other variables present significance. Even though all types of crime represent significance and negatively affect the performance of the analyzed firms, simply the level of sales of these firms decreases if they are exposed to crimes such as *vandalism losses*, *theft losses*, *pillage losses*. Similar results were also achieved by Botrić (2021) who investigated the impact of crime on the performance of firms. Therefore, based on these results, it can be affirmed that *H1* of this paper is supported because all types of crime researched in this paper negatively affect the level of sales of these firms. Based on the descriptive statistics, *H2* of this paper is not supported because the statistics obtained from the firms of the seven regions of Kosovo show that there are differences in terms of the exposure of these firms to types of crime. In some regions, such as Pristina and Mitrovica, companies are more exposed to crime, while in others they are less exposed.

Despite the incorporation of these two variables, the variables that were not significant in the first model such as *economic sector* and *exporter in the EU*, do not present significance either. Meanwhile, the incorporated variable *security costs* (% of sales) represents significance in the model. Therefore, based on these statistics, *H3* of this paper is supported because firms that invest or have *security costs* have better business performance, better sales, etc. The following table presents the hypotheses and their support by the findings of this research.

Table 7. Analysis of the hypotheses

Hypotheses	***Supported/Not supported***
Crime negatively affects the performance or sales of Kosovar firms.	Supported
There are no differences according to regions regarding the exposure to crime of Kosovar firms.	Not supported
The security costs of these firms affect the level of sales.	Supported

Source: Authors' work.

6. CONCLUSION

The results of this research related to the problem of the impact of crime of a business nature on the business performance of Kosovo firms show that crime has a negative impact on the business performance expressed in the form of sales in Kosovo firms. All types of crime which were indicators (variables) in our econometric model have a negative relationship with the level of sales of firms. So, any crime has very harmful effects on these firms, which have not yet raised their capacities equal to those in the EU countries.

As for the economic sector, the wood and textile sector firms are more affected by business crime. The wood sector is among the most developed sectors of the Kosovar economy. This sector includes many firms. Firms in this sector have a long tradition in the domestic and foreign markets. The products of this sector are also exported to the EU, Turkey and America. Therefore, it is believed that for this reason, this sector is the most affected by criminal activity.

As a recommendation to the firms in this sector, the development and provision of security systems can be given. So, all firms in this sector must develop security systems identical to those of firms in the EU countries. Firms in this sector usually use cameras as security tools, but statistics show that cameras alone are not enough to increase security and, therefore, protect wood products. So, the managers of these firms should pay more attention to security systems, specifically to their perfection.

Another sector that is affected by criminality is the textile sector. This sector was also developed in the period of former Yugoslavia. The textile factories of that time had a name in the federation. With the collapse of the socialist economy, several micro-firms were created during the nineties that produced clothing and textile products. So, the firms in this sector have a good experience of over 20 years. Their good image in the Kosovar market, qualitative products, and their powerful capacities to export to the EU market are some of the hypothetical reasons why these firms in this sector are also attacked and exposed to business crime.

The recommendation for wood sector firms should also apply to textile sector firms. Managers of these firms must develop sophisticated protection systems, which reduce criminality and protect textile products from various crimes. Despite the fact that some firms which are mini-textile factories have such protection and safety systems, many other firms do not possess such systems. They usually hire people who deal with the company's security and have cameras that track suspicious movements.

Crime indicators from the point of view of the region of the firms where they operate give us information that Prishtina and Mitrovica are the two regions most affected by crime, so the firms of these two regions are among the most affected. Prishtina, besides being the capital of Kosovo, is the most populated city of Kosovo, a large number of firms are concentrated there, and at the same time, the possibility for the development of criminality is quite large. Therefore, these characteristics make the firms of this region the most affected by criminal activities. Apart from Pristina, Mitrovica is another region where crime is high compared to other regions. As known, this city is ethnically divided, and economic criminality is very pronounced in this city.

State authorities must develop real strategies that would fight every type of criminality in these two regions. The penal code must be strictly enforced in these two regions. Inspectors fighting economic crime should be in much greater numbers in these regions than in other regions. This is the only way to ensure a safer business environment for companies in these regions. The security cost is another important element that affects the level of sales or performance of Kosovar firms. In Kosovo, there are many insurance companies that are from Slovenia, Turkey, Albania and that provide insurance for any risk that is posed to Kosovar firms. Although this brings costs, it should be ensured by each firm

because it minimizes criminality and improves business performance.

This paper is of special importance because it is among the first papers that addressed the problem of the impact of crime on the business performance of Kosovo firms. The performance is expressed through the sales of the analyzed firms. The findings of the paper are of special importance for those interested in the field of business, criminal law, economics and other sciences that are related to these fields. Future research should build on this research and expand the range of variables related to criminality. As for the limits of this research, it can be said that similar results from other countries of the Western Balkans have not been included in this paper, specifically in the future similar research should be carried out for other regional countries and comparisons should be made regarding the impact of criminality on the performance of companies, the consequences for the perpetrators of these crimes from the point of view of the criminal code of these countries, etc.

REFERENCES

1. Alkhatib, A. A., & Maria, A. A. (2021). The impact of corruption in encouraging the crime of income tax evasion among the Palestinian SMEs. *Journal of Research in Business and Management, 9*(2), 1–9. Retrieved from https://www.researchgate.net/publication/349607179_The_Impact_of_Corruption_in_Encouraging_the_Crime_of_Income_Tax_Evasion_among_the_Palestinian_SMEs
2. Allum, F., & Sands, J. (2004). Explaining organized crime in Europe: Are economists always right? *Crime, Law and Social Change, 41*(2), 133–160. https://doi.org/10.1023/B:CRIS.0000016223.49968.17
3. Altindag, D. T. (2012). Crime and unemployment: Evidence from Europe. *International Review of Law and Economics, 32*(1), 145–157. https://doi.org/10.1016/j.irle.2011.10.003
4. Amin, M. (2009). *Crime, security and firms in Latin America* (World Bank Enterprise Note No. 2). Retrieved from https://documents.worldbank.org/en/publication/documents-reports/documentdetail/312201468276881183/crime-security-and-firms-in-latin-america
5. Andoh, C., Quaye, D., & Akomea-Frimpong, I. (2018). Impact of fraud on Ghanaian SMEs and coping mechanisms. *Journal of Financial Crime, 25*(2), 400–418. https://doi.org/10.1108/JFC-05-2017-0050
6. Becker, G. S. (1968). Crime and punishment: An economic approach. *Journal of Political Economy, 76*(2), 169–217. https://doi.org/10.1086/259394
7. Bianchi, P. A., Marra, A., Masciandaro, D., & Pecchiari, N. (2022). Organized crime and firms' financial statements: Evidence from criminal investigations in Italy. *The Accounting Review, 97*(3), 77–106. https://doi.org/10.2308/TAR-2019-0079
8. Bjelalac, Ž., & Bingulac, N. (2016). Impact of corruption on the process of Eurointegration of Serbia. *Journal of Eastern-European Criminal Law, 1*, 208–223. Retrieved from https://www.jeecl.ro/vol-1-2016/84-impact-of-corruption-on-the-process-of-eurointegration-of-serbia
9. Botrić, V. (2021). Does crime affect firm performance: Evidence from post-transition economies. *InterEULawEast: Journal for the International and European Law, Economics and Market Integrations, 8*(1), 57–74. https://doi.org/10.22598/iele.2021.8.1.4
10. Bourguignon, F., Nunez, J., & Sanchez, F. (2002). *What part of the income distribution does matter for explaining crime? The case of Colombia* (DELTA Working Paper No. 2003-04). Retrieved from https://www.researchgate.net/publication/4861725_What_part_of_the_income_distribution_does_matter_for_explaining_crime_The_case_of_Colombia
11. Cabral, R., Mollick, A. V., & Saucedo, E. (2019). Foreign direct investment in Mexico, crime, and economic forces. *Contemporary Economic Policy, 37*(1), 68–85. https://doi.org/10.1111/coep.12401
12. Calamunci, F., & Drago, F. (2020). The economic impact of organized crime infiltration in the legal economy: Evidence from the judicial administration of organized crime firms. *Italian Economic Journal, 6*, 275–297. https://doi.org/10.1007/s40797-020-00128-x
13. Cho, H., Choi, S., Lee, W.-J., & Yang, S. (2020). Regional crime rates and corporate misreporting. *Spanish Journal of Finance and Accounting/Revista Española de Financiación y Contabilidad, 49*(1), 94–123. https://doi.org/10.1080/02102412.2019.1582194
14. Czinkota, M. R., Knight, G., Liesch, P. W., & Steen, J. (2010). Terrorism and international business: A research agenda. *Journal of International Business Studies, 41*(5), 826–843. https://doi.org/10.1057/jibs.2010.12
15. Daniele, V., & Marani, U. (2008). *Organised crime and foreign direct investment: The Italian case* (CESifo Working Paper No. 2416). https://doi.org/10.2139/ssrn.1281380
16. Detotto, C., & Otranto, E. (2010). Does crime affect economic growth? *International Review for Social Science, 63*(3), 330–345. https://doi.org/10.1111/j.1467-6435.2010.00477.x
17. Duarte, D., & Barros, V. (2018). Corporate tax avoidance and profitability followed by mergers and acquisitions. *Corporate Ownership & Control, 15*(2–1), 148–160. https://doi.org/10.22495/cocv15i2c1p2
18. Frye, T., & Shleifer, A. (1997). The invisible and the grabbing hand. *The American Economic Review, 87*(2), 354–358. Retrieved from http://www.columbia.edu/~tmf2/The%20Invisible%20Hand%20and%20the%20Grabbing%20Hand.pdf
19. Frye, T., & Zhuravskaya, E. (2000). Rackets, regulation and the rule of law. *The Journal of Law, Economics, & Organisation, 16*(2), 478–502. https://doi.org/10.1093/jleo/16.2.478
20. Ganau, R., & Rodríguez-Pose, A. (2018). Industrial clusters, organized crime, and productivity growth in Italian SMEs. *Journal of Regional Science, 58*(2), 363–385. https://doi.org/10.1111/jors.12354
21. Gaviria, A. (2002). Assessing the effects of corruption and crime on firm performance: Evidence from Latin America. *Emerging Markets Review, 3*(3), 245–268. https://doi.org/10.1016/S1566-0141(02)00024-9
22. Gaviria, A., & Pagés, C. (2002). Patterns of crime victimisation in Latin American cities. *Journal of Development Economics, 67*(1), 181–203. https://doi.org/10.1016/S0304-3878(01)00183-3
23. Glaeser, E. L., & Sacerdote, B. (1999). Why is there more crime in cities? *Journal of Political Economy, 107*(6), 225–258. https://doi.org/10.1086/250109
24. Goulas, E., & Zervoyianni, A. (2013). Economic growth and crime: Does uncertainty matter? *Applied Economics Letters, 20*(5), 420–427. https://doi.org/10.1080/13504851.2012.709596

25. Hay, J. R., & Shleifer, A. (1998). Private enforcement of public laws. A theory of legal reforms. *The American Economic Review, 88*(2), 398–403. Retrieved from https://www.jstor.org/stable/116955
26. Islam, A. (2013). Is there a gender bias in crime against firms in developing economics? *Women's Studies International Forum, 37*, 1–15. https://doi.org/10.1016/j.wsif.2013.01.005
27. Islam, A. (2014). Economic growth and crime against small and medium sized enterprises in developing economies. *Small Business Economics, 43*(3), 677–695. https://doi.org/10.1007/s11187-014-9548-6
28. Janko, Z., & Popli, G. (2015). Examining the link between crime and unemployment: A time-series analysis for Canada. *Applied Economics 47*(37), 4007–4019. https://doi.org/10.1080/00036846.2015.1023942
29. Jusufi, G., & Gashi-Sadiku, F. (2020). Impact of fiscal policies in Western Balkans SMEs growth: Evidence from Kosovo. *Central European Public Administration Review, 18*(2), 135–164. https://doi.org/10.17573/cepar.2020.2.07
30. Jusufi, G., & Ukaj, F. (2021). Turkey's trade with Western Balkans: Looking beyond the Turkish foreign policy. *InterEULawEast: Journal for the International and European Law, Economics and Market Integrations, 8*(2), 133–160. https://doi.org/10.22598/iele.2021.8.2.7
31. Jusufi, G., Ramaj, V., & Ramaj, A. (2021). Increasing the exports of Western Balkan SMEs to the EU market through innovative activities: Empirical insights from Kosovo. In *Proceedings of The Perspective of Integration of the Western Balkans into the EU* (pp. 23–47). Retrieved from https://aab-edu.net/wp-content/uploads/2021/07/BOOK-OF-PROCEEDINGS-2021-PRILL-online.pdf#page=24
32. Jusufi, G., Ukaj, F., & Ajdarpašić, S. (2020). The effect of product innovation on the export performance of Kosovo SMEs. *Management: Journal of Contemporary Management Issues, 25*(2), 215–234. https://doi.org/10.30924/mjcmi.25.2.12
33. Khan, B., Nijhof, A., Diepeveen, R. A., & Melis, D. A. M. (2018). Does good corporate governance lead to better firm performance? Strategic lessons from a structured literature review. *Corporate Ownership & Control, 15*(4), 73–85. https://doi.org/10.22495/cocv15i4art7
34. Krkoska, L., & Robeck, K. (2006). *The impact of crime on the enterprise sector: Transition versus non-transition countries* (European Bank for Reconstruction and Development Working Paper No. 97). Retrieved from https://www.ebrd.com/downloads/research/economics/workingpapers/wp0097.pdf
35. Lotspeich, R. (1995). Crime in transition economies. *Europe-Asia Studies, 47*(4), 555–589. https://doi.org/10.1080/09668139508412276
36. Masurel, E. (2004). SMEs and crime: Evidence from the Netherlands. *International Small Business Journal: Researching Entrepreneurship, 22*(2), 197–205. https://doi.org/10.1177/0266242604041314
37. Mohamad, A., Zakaria, M. H., & Hamid, Z. (2016). Cash economy: Tax evasion amongst SMEs in Malaysia. *Journal of Financial Crime, 23*(4), 974–986. https://doi.org/10.1108/JFC-05-2015-0025
38. Mohan, S. P. (2021). Violent crime and firm performance: Evidence from the Caribbean. *International Journal of the Economics of Business, 28*(2), 309–327. https://doi.org/10.1080/13571516.2021.1896926
39. Motta, V. (2017). The impact of crime on the performance of small and medium-sized enterprises: Evidence from the service and hospitality sectors in Latin America. *Tourism Economics, 23*(5), 993–1010. https://doi.org/10.1177/1354816616657940
40. Moyo, B. (2012). Crime, security and firm performance in South Africa. *Corporate Ownership & Control, 9*(4–2), 241–252. https://doi.org/10.22495/cocv9i4c2art5
41. N'Guilla Sow, A., Basiruddin, R., Mohammad, J., & Abdul Rasid, S. Z. (2018). Fraud prevention in Malaysian small and medium enterprises (SMEs). *Journal of Financial Crime, 25*(2), 499–517. https://doi.org/10.1108/JFC-05-2017-0049
42. Osmani, F., Leka, D., & Jusufi, G. (2022). Regional economic cooperation in the Western Balkans: Promoter or inhibitor of EU integration of this region. *Advances in Business-Related Scientific Research Journal, 13*(1), 68–89. Retrieved from https://www.absrc.org/wp-content/uploads/2022/06/PAPER-Jusifi.pdf
43. Qorraj, G., & Jusufi, G. (2019). EU vs. local market orientation: Western Balkan entrepreneur's challenge. *Entrepreneurial Business and Economics Review, 7*(4), 21–32. https://doi.org/10.15678/EBER.2019.070402
44. Qorraj, G., & Jusufi, G. (2021). Does EU trade integration support export promotion: Probit analysis, evidence from Kosovo. *InterEULawEast: Journal for the International and European Law, Economics and Market Integrations, 8*(1), 75–90. https://doi.org/10.22598/iele.2021.8.1.5
45. Rosenthal, S. S., & Ross, A. (2010). Violent crime, entrepreneurship, and cities. *Journal of Urban Economics, 67*(1), 135–149. https://doi.org/10.1016/j.jue.2009.09.001
46. Saridakis, G., Mohammed, A.-M., & Sookram, S. (2015). Does crime affect firm innovation? Evidence from Trinidad and Tobago. *Economics Bulletin, 35*(2), 1205–1215. Retrieved from https://eprints.kingston.ac.uk/id/eprint/31645/1/Saridakis-G-31645.pdf
47. Schnatterly, K. (2003). Increasing firm value through detection and prevention of white-collar crime. *Strategic Management Journal, 24*(7), 587–614. https://doi.org/10.1002/smj.330
48. The World Bank. (2003). *Jamaica: The road to sustained growth* (World Bank Country Economic Memorandum Report No. 26088). Retrieved from https://documents.worldbank.org/en/publication/documents-reports/documentdetail/962971468756325065/jamaica-the-road-to-sustained-growth-country-economic-memorandum
49. The World Bank. (2022). *Enterprise surveys: Kosovo.* Retrieved from https://www.enterprisesurveys.org/en/data/exploreeconomies/2019/kosovo