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The Impact of the Business Environment on the Formalization of Informal Firms. The Case of Kosovo

Abstract. The research presented here investigates the impact of the business environment on the formalization of informal firms, using firm-level data for 243 informal firms in Kosovo. The findings indicate that business-environment variables such as limited access to financing, the cost of financing, the unavailability of subsidies, tax rates, and corruption have a significant negative impact on the formalization of informal firms. In addition, firm-level characteristics analysis suggests that the age of the firm also exercises a significant negative impact, whereas sales volume exerts a significant positive impact on the formalization of informal firms. These findings have important policy implications and suggest that the abolition of barriers preventing access to financing, as well as tax reforms and a consistent struggle against corruption may have a positive influence on the formalization of informal firms. On the other hand, firm owners should consider formalization to be a means to help them have greater opportunities for survival and growth.

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Introduction

This paper examines the impact of the business environment on the formalization of informal firms, using firm-level data drawn from a sample of informal firms in Kosovo. The findings suggest that external business-environment indicators, such as limited access to financing, the cost of financing, the unavailability of subsidies, tax rates, and corruption, exercise a significant negative impact on the formalization of informal firms. In addition, firm-level characteristics analysis suggests that a given firm's age exerts a significant negative impact on

the formalization of informal firms, in contrast to the significant positive impact in this regard of sales volume.

Not only an important part of the economy, the informal sector is, from a policy point of view, a complex phenomenon. On the one hand, informal enterprises provide employment and help alleviate poverty for people in transition economies. On the other hand, when informal enterprises avoid taxes, they reduce state revenue and hinder fair competition.¹ Nevertheless, appropriate policy and institutional reforms shrink the informal sector in a way that encourages informal firms to formalize.² The analysis of data from developed and developing countries indicates a steady decline in the informal sector's contribution to gross domestic product (GDP) when low-income countries (47.2 %) are compared to high-income countries (13 %). The sector's contribution to total employment also shows a general decline from the low-income group (29.41 %) to the high-income group (15.16 %), though it increases slightly in the middle-income group. However, as income increases, there is a marked shift from the informal to the formal sector.³

The instability and unreliability of the business environment in transition economies contributes to the high prevalence of the informal economy and a general lack of investment. Transition and political instability in the Balkan region specifically have hindered foreign direct investments.⁴ The lack of funds, alongside a generally stronger dependence on the domestic economic environment, has disrupted the operations and investments of small firms to a large extent.⁵ Over the past two decades, Kosovo has been undergoing a transitional process characterized by a dynamic and unreliable business environment, including a high rate of informal economic activity. During this period Kosovo established basic institutional, financial, and regulatory dealings with small and medium-sized enterprises (SMEs). However, the government

¹ Martha Alter Chen, *The Informal Economy. Definitions, Theories and Policies*, WIEGO Working Paper No. 1, August 2012, https://www.wiego.org/sites/default/files/publications/files/Chen_WIEGO_WP1.pdf. All internet references were accessed on 14 September 2020.

² Rafael La Porta / Andrei Shleifer, *Informality and Development*, *Journal of Economic Perspectives* 28, no. 3 (2014), 109–126, DOI: 10.1257/jep.28.3.109.

³ Meghana Ayyagari / Thorsten Beck / Asli Demirguc-Kunt, *Small and Medium Enterprises Across the Globe*, *Small Business Economics* 29 (2007), 415–434, DOI: 10.1007/s11187-006-9002-5.

⁴ Joseph C. Brada / Ali M. Kutan / Taner M. Yigit, *The Effects of Transition and Political Instability on Foreign Direct Investment Inflows*, *Economics of Transition* 14, no. 4 (2006), 649–680, DOI: 10.1111/j.1468-0351.2006.00272.x.

⁵ Sandra Leitner / Robert Stehrer, *What Determines SMEs' Funding Obstacles to Bank Loans and Trade Credits? A Comparative Analysis of EU-15 and NMS-13 Countries*, The Vienna Institute for International Economic Studies, Working Paper 114, May 2015, <https://wiiw.ac.at/what-determines-smes-funding-obstacles-to-bank-loans-and-trade-credits-dlp-3596.pdf>.

has not yet succeeded in creating a friendly business environment that would strengthen competitiveness among SMEs and contribute to the formalization of informal firms. Limited access to financing and institutional barriers are among the primary concerns regarding SME development.⁶ Additionally, one survey dedicated to the informal economy showed that 34.4 % of total sales are not declared; 37 % of the total employed workforce is not legally declared by registered businesses in Kosovo.⁷ Moreover, there are many businesses unregistered with the Tax Administration of Kosovo which have not been explored by researchers, and the government has not managed to incorporate this sector into its development agenda. Therefore, Kosovo represents an interesting example where studying the business environment's impact on the formalization of informal firms represents a challenging task.

Literature Review

The “informal economy” was introduced as a concept in 1971 by the British anthropologist Keith Hart, referring to the informal economic activities in Ghana's towns.⁸ In the report of the International Labour Organization (ILO) in the Kenya Mission (1972), the informal sector was held up as a solution to poverty and unemployment. Thus, starting in the 1970s and driven by ILO, the perception of the informal economy has shifted towards a more positive view of its potential economic role. In this regard, the policy recommendations of the ILO and World Bank in the 1970s helped to foster a changing attitude towards the informal sector. Furthermore, many governments embarked on various projects to promote specific elements of the informal sector with the aim of increasing their potential and of registering/formalizing their actors and activities.⁹

One key aspect in understanding the informal sector's evolution is its interaction with the formal sector.¹⁰ In the earliest studies of the informal economy,

⁶ Riinvest Institute, Business Climate in Kosovo. A Cross Regional Perspective, Research Report (2014), https://www.riinvestinstitute.org/uploads/files/2016/September/23/Business_Climate_in_Kosovo1474619815.pdf.

⁷ Riinvest Institute, Assessment of Corruption in Kosovo, Research Report (2016), https://www.riinvestinstitute.org/uploads/files/2016/September/20/Assessment_of_Corruption_in_Kosovo1474359621.pdf.

⁸ Keith Hart, Informal Income Opportunities and Urban Employment in Ghana, *Journal of Modern African Studies* 11, no. 1 (1971), DOI: 10.1017/S0022278X00008089.

⁹ Deborah Potts, The State and the Informal in Sub-Saharan African Urban Economies. Revisiting Debates on Dualism, Crisis States Research Centre, Working Paper 18, October 2007, <https://www.lse.ac.uk/international-development/Assets/Documents/PDFs/csrc-working-papers-phase-two/WP18.2-the-state-and-the-informal.pdf>.

¹⁰ Rob Davies / James Thurlow, Formal-Informal Economy Linkages and Unemployment in South-Africa, *South Africa Journal of Economics* 78, no. 4 (2010), 437–459, DOI: 10.1111/j.1813-6982.2010.01250.x.

the dominant theory considered the informal economy to be a separate economic domain: in other words, this approach supported a dualistic view. The theories later evolved and recognized the role and significance of the informal sector and its integration into national economies. The informal sector is not isolated; numerous links connecting enterprises in the formal and informal sectors have been noted, including for instance the sub-contracting of work by formal enterprises to informal enterprises.¹¹ The formal and the informal ends of the economic continuum are often dynamically linked. For instance, many informal enterprises have production or distribution relations with formal enterprises, supplying inputs, finished goods, or services, either through direct transactions or sub-contracting arrangements.¹² However, informal firms avoid taxes and regulations, and they do not trade with the formal sector.¹³ Moreover, informal entrepreneurs act as a source of unfair competition for the enterprises of the formal sector, which must comply with regulations and pay taxes. Thus, informal sector activity may even undermine formal sector activity.¹⁴

In recognition of the wide diversity of informality across countries, the International Labour Organization has used the term “informal economy” to refer to “all economic activities by workers and economic units that are—in law or in practice—not covered or insufficiently covered by formal arrangements.”¹⁵ The informal economy contains those activities that exploit opportunities occurring outside of formal institutional boundaries but within informal institutional boundaries where some groups recognize these activities to be socially acceptable, so long as they are consistent with their norms, values, and beliefs.¹⁶

¹¹ Madhura Swaminathan, Understanding the Informal Sector. A Survey, Centre for International Studies, WIDER Working Paper No. 95, December 1991, 1–39, <https://www.wider.unu.edu/sites/default/files/WP95.pdf>.

¹² Martha Alter Chen, Rethinking the Informal Economy. Linkages with the Formal Economy and the Formal Regulatory Environment, UN Department of Economic and Social Affairs, DESA Working Paper No. 46, July 2007, https://www.un.org/esa/desa/papers/2007/wp46_2007.pdf.

¹³ La Porta / Shleifer, Informality and Development.

¹⁴ Collin Williams, Small Business in the Informal Economy. Making the Transition to the Formal Economy. Evidence and the Stakeholder Opinion, Small Business Council, 2005.

¹⁵ International Labour Organisation, Measuring Informality. A Statistical Manual on the Informal Sector and Informal Employment, Geneva, October 2012, http://www.ilo.org/wcms-sp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_222979.pdf.

¹⁶ Justin Web et al., You Say Illegal, I Say Legitimate. Entrepreneurship in the Informal Economy, *Academy of Management Review* 34, no. 3 (2009), 492–510, DOI: 10.5465/amr.2009.40632826.

Different Views on Informality

Since the definition of “informal economy” in 1972, the ILO has played a leading role in analyzing the conceptual as well as the underlying social and economic problems related to this phenomenon. On the one hand, some firms neither register nor comply with regulations; they make sales and pay inputs, including labor, in cash; and they pay no taxes. On the other hand, as we have seen in transition economies, registered firms hide some of their sales revenue from the authorities in order to reduce their tax payments but still hire formal employees and comply with many regulations.¹⁷ There are different ways for firms to avoid paying taxes and making social contributions, either entirely or in part. These ambiguities represent difficulties in measuring and defining the extent of the informality. Nonetheless, four basic paradigms have been established to explain the existence of the informal sector: dualist, structuralist, legalist, and voluntarist.

Dualist View

According to the dualist view, an economy is divided into two distinct sectors, formal and informal. Dualists conceive the informal and formal sectors to be entirely disconnected and predict that economic development would transform the informal sector or cause it to be absorbed into the formal economy.¹⁸ The informal sector is deemed an autonomous segment characterized by its provision of employment, goods, and services for the lower-income groups of a country’s urban population.¹⁹ This assessment implies a lack of links connecting the informal sector with the formal sector, and informal firms almost never become formal enterprises.²⁰ The dualist paradigm situates the informal sector as the residual component of an economy, existing as a subsistence economy that reflects the formal economy’s inability to provide sufficient jobs for its labor force.²¹

¹⁷ Simon Johnson / Daniel Kaufmann / Andrei Shleifer, *The Unofficial Economy in Transition*, *Brookings Papers on Economic Activity* 28, no. 2 (1997), 159–239, <https://www.jstor.org/stable/2534688>.

¹⁸ March Bacchetta / Ekkehard Ernst / Juana Bustamante, *Globalization and Informal Jobs in Developing Countries*, International Labour Organization / World Trade Organization, Geneva 2009, https://www.wto.org/english/res_e/booksp_e/jobs_devel_countries_e.pdf.

¹⁹ Salem Sethuraman, *The Urban Informal Sector. Concept, Measurement and Policy*, *International Labour Review* 114, no. 1 (1976), 69–81.

²⁰ Rafael La Porta et al., *Investor Protection and Corporate Governance*, *Journal of Financial Economics* 58 (2000), 3–27, DOI: 10.1016/S0304-405X(00)00065-9.

²¹ International Finance Cooperation World Bank Group, *Closing the Credit Gap for Formal and Informal Micro, Small, and Medium Enterprises*, Washington 2013, <https://www.indexinsuranceforum.org/sites/default/files/Closing%2Bthe%2BCredit%2BGap%2BReport-FinalLatest.pdf>.

Structuralist View

The critics of the dualistic view, as promoted by scholars espousing the structuralist view, consider the co-existence and interconnections between informal and formal sectors. They recognize a continuum of economic activities rather than adhere to a two-sector economic split. In this view, the informal sector should be regarded as subordinated economic units—micro-firms and workers that serve to reduce input and labor costs and thereby increase the competitiveness of large firms.²² The informal sector is economically efficient and possesses comparative advantages in relation to similar activities developed in the formal sector.²³ Therefore, the informal sector produces positive economic effects in developing countries because, by providing sources of livelihood and economic opportunities unavailable in the formal sector, it drives growth.

Legalist View

According to the legalist view, government deregulation would lead to increased economic freedom and entrepreneurship among working people, especially in developing countries.²⁴ Scaling down regulatory barriers, removing unnecessary bureaucracies, and formalizing property rights for the informal workforce will help them to convert their informally held assets into real assets. Undefined legal property represents a source for the informal economy and serves as a barrier to entrepreneurial activity.²⁵

Voluntarist View

In the voluntarist conception, informal enterprise in developing countries is viewed as a part of a voluntary small-firm sector similar to those in advanced countries that, due to the lax enforcement of labor and other codes, can choose the optimal degree of participation in formal institutions. Frequently the formal sector's provision of benefits in the developing world is extremely inefficient and of poor quality. Because workers pay for these deficiencies implicitly or explicitly to the degree that perceived benefits fall short of tax expenditure, there is an incentive to engage in tax evasion and to become part of the informal economy. Informal enterprises choose to operate informally after weighing the

²² Caroline Moser, Informal Sector or Petty Commodity Production. Dualism or Independence in Urban Development, *World Development* 6, 9/10 (1978), 1041–1064, DOI: 10.1016/0305-750X(78)90062-1.

²³ Victor Tokman, An Exploration into the Nature of the Informal-Formal Sector Relationship, *World Development* 6, 9/10 (1978), 1065–1075, DOI: 10.1016/0305-750X(78)90063-3.

²⁴ Hernando De Soto, *The Other Path. The Economic Answer to Terrorism*, New York (1989).

²⁵ Hernando De Soto, *The Mystery of Capital. Why Capitalism Triumphs in the West and Fails Everywhere Else*, New York (2000).

costs and benefits of informality relative to those of formality.²⁶ The informal economy's causal roots are grounded in efforts made to avoid taxation and costly regulation in the formal economy.²⁷

The Role of the Informal Economy

The informal economy thrives within a context of high unemployment, underemployment, poverty, gender inequality, and precarious work. It plays a significant role under such circumstances, especially in income generation, because of its relative ease of entry it offers and its low requirements vis-à-vis education, skills, technology, and capital.²⁸ More dynamic than the formal economy, the informal economy allows those with few resources to build businesses, availing themselves of family labor and kinship networks.²⁹ In some developing countries, informal enterprises far outnumber formal enterprises of comparable size. In 2007 India, one of the few countries with reliable data on informal enterprises, reported 17 unregistered enterprises for every registered enterprise.³⁰

Formal economies are severely affected by reductions in employment and production capacity during economic crises as well as in times of economic transition, conditions that have contributed to the expansion of informal economies.³¹ In Bulgaria, the increase in the informal sector during its transitional phase is attributable to two sources: a downsizing of the public sector after privatization and a shift in which those not working sought some sort of remunerative activity—the economic crisis caused a great amount of hardship and many people had to find informal work to get by.³² The large informal economy in Albania during its transition has been significant in two respects: (1) it

²⁶ William Maloney, Informality Revisited, *World Development* 32, no. 7 (2004), 1159–1178, DOI: 10.1016/j.worlddev.2004.01.008.

²⁷ Donald Brown / Gordon McGranahan / David Dodman, Urban Informality and Building a More Inclusive, Resilient and Green Economy, IIED Working Paper, London 2014, DOI: 10.13140/RG.2.2.31381.32483.

²⁸ International Labour Organisation, Transition from the Informal to the Formal Economy Recommendation, Report No. 204, Geneva 2015, https://www.ilo.org/wcmsp5/groups/public/@ed_dialogue/@actrav/documents/publication/wcms_545928.pdf.

²⁹ Bryan Roberts, Informal Economy and Family Strategies, *International Journal of Urban and Regional Research* 18, no. 1 (1994), 6–23, DOI: 10.1111/j.1468-2427.1994.tb00248.x.

³⁰ International Labour Organisation, Small and Medium-Sized Enterprises and Decent and Productive Employment Creation, Report 104/IV, Geneva 2015, https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_358294.pdf.

³¹ David Smallbone / Friederike Welter, The Distinctiveness of Entrepreneurship in Transition Economies, *Small Business Economics* 16, no. 4 (2001), 249–261, DOI: 10.1023/A:1011159216578.

³² Ralitza Dimova / Ira Gang / John Landon-Lane, The Informal Sector during Crisis and Transition, WIDER Research Paper No. 2005/18, April 2005, <https://www.wider.unu.edu/sites/default/files/rp2005-18.pdf>.

has helped people make a living and survive during the difficult transitional years but (2) it has not sufficed to support long-term economic investments and growth.³³ The transition in Macedonia, for its part, was characterized by a high rate of unemployment. However, in the case of long-term unemployment, informal employment plays an important role as a labor market adjustment mechanism.³⁴

Formalization of Informal Firms

Over the last two decades, the procedures required to register a business have been simplified in many countries around the world. This push began as a result of Hernando De Soto's emphasis on the costs of registration, which in turn encouraged the systematic data collection of entry costs around the world. This approach was then adopted by the World Bank in its Doing Business report, which has, since 2003, published a variety of measures regarding business regulation, including entry regulations, and has compiled country rankings. These efforts have contributed to a wave of policy reforms in many countries aimed at improving the (formal) business environment.

Evidence of changes in registration costs provides one indicator of informality; another is access to financing and the cost of credit.³⁵ Also important is the institutional environment, which encourages the registration of firms through taxes, consulting, and grants on the one hand and through legal enforcement on the other. Firms in developing countries tend to start off as informal enterprises, and if they perform well, they tend to grow and join the formal economy.³⁶ In this sort of context, informal firms should naturally evolve into formal enterprises.³⁷ Formalization must be seen as an inclusive process, not only linked to legal economic activities but also serving as a tool helping to define the social contract and to support nation-building.³⁸

³³ Klarita Gërxhani, *The Informal Sector in Transition. Tax Evasion in an Institutional Vacuum*, PhD Thesis, University of Amsterdam 2002, <https://dare.uva.nl/search?identifier=f8500626-0efe-4303-b794-257ed80bd81c>.

³⁴ Dimitar Nikoloski / Ljupcho Pechijareski, *The Unemployment Workers Perceptions of Stress and Employment Prospects in Macedonia. The Role of Alternative Adjustment Mechanisms*, *South East European Journal of Economics and Business* 12, no. 1 (2017), 68–79, DOI: 10.1515/jeb-2017-0007.

³⁵ Stijn Claessens / Luc Laeven, *Financial Development, Property Rights and Growth*, *Journal of Finance* 58, no. 6 (2003), 2401–2436, DOI: 10.1046/j.1540-6261.2003.00610.x.

³⁶ Alec Levenson / William Maloney, *The Informal Sector, Institutional Participation, and Micro-firm Dynamics*, World Bank, Policy Research Working Paper Series No. 1988, 1989, <https://econpapers.repec.org/paper/wbkwbrwps/1988.htm>.

³⁷ Boyan Jovanovic, *Selection and the Evolution of Industry*, *Econometrica* 50 (1982), 649–670, DOI: 10.2307/1912606.

³⁸ Ethel del Pozo-Vergnes, *From Survival to Competition. Informality in Agrifood Markets in Countries under Transition. The Case of Peru*, International Institute for Environment and Development, Research Report, London 2013, <https://pubs.iied.org/pdfs/16533IIED.pdf>.

In developing countries, a large proportion of the nation's employment and output generation is concentrated in the informal sector.³⁹ Even in countries experiencing strong economic growth, the informal sector often remains large and relatively unproductive, pulling down labor productivity and aggregate economic growth.⁴⁰ Formalization is seen as a means of breaking the vicious circle of low productivity and precarious working conditions that prevail in the informal economy.

The Effects of Institutional and Financial Barriers in Formalization

Informal economies arise when governments impose excessive taxes and regulations that they are unable to collect and enforce.⁴¹ Complicated administrative processes for license permits and access to financing, along with burdensome tax administration, create costs for informal operations that may outweigh the benefits of going formal. In transition economies, higher levels of regulation lead to a significantly higher incidence of bribery.⁴² Amounting to a higher effective tax on official activity, this situation induces firms to be part of the informal economy.⁴³

An increasing tax burden and rising state regulatory activities are the major driving forces determining the size and growth of the informal economy. Economic institutions exercise an important influence on whether or not one registers a business because they influence the costs of entry, of doing business, and of exit.⁴⁴ Tax evasion by firms is positively influenced by low trust in government and the judicial system as well as by a greater perception of corruption.⁴⁵

³⁹ Friedrich Schneider / Andreas Buehn / Claudio Montenegro, Shadow Economies All over the World. New Estimates for 162 Countries from 1999 to 2007, World Bank, Policy Research Working Paper 5356, July 2010, <http://documents1.worldbank.org/curated/en/311991468037132740/pdf/WPS5356.pdf>.

⁴⁰ Simeon Djankov et al., Debt Enforcement around the World, *Journal of Political Economy* 116, no. 6 (2008), 1105–1149, DOI: 10.1086/595015.

⁴¹ Norman Loayza, The Economics of the Informal Sector. A Simple Model and Some Empirical Evidence from Latin America, Carnegie-Rochester Conference Series on Public Policy 45, February 1997, 129–162, <https://ideas.repec.org/p/wbk/wbrwps/1727.html>.

⁴² Simeon Djankov et al., The Regulation of Entry, *The Quarterly Journal of Economics* 117, no. 1 (2002), 1–37, DOI: 10.1162/003355302753399436.

⁴³ Simon Johnson / Daniel Kaufmann / Pablo Zoido-Lobaton, Regulatory Discretion and the Unofficial Economy, *The American Economic Review* 88, no. 2 (1998), 387–392, <https://www.jstor.org/stable/116953>.

⁴⁴ Erko Autio / Kun Fu, Economic and Political Institutions and Entry into Formal and Informal Entrepreneurship, *Asia Pacific Journal of Management* 32, no. 1 (2014), 67–94, DOI: 10.1007/s10490-014-9381-0.

⁴⁵ Lumir Abdixhiku et al., Firm-Level Determinants of Tax Evasion in Transition Economies, *Economic Systems* 41, no. 3 (2017), 354–366, DOI: 10.1016/j.ecosys.2016.12.004.

Institutional theory has been used to explain poor economic growth in transition countries. Formal and informal rules are related to the role of the state: formal measures include tax policies and business legislation, whereas an informal regime emerges out of different practices, such as unofficial acceptable government culture that includes various forms of corruption and failure of formal rule development.⁴⁶ Institutions, formal and informal alike, are important factors in shaping entrepreneurial activities in Kosovo.⁴⁷ Employing cross-country data on informal firms, one research study indicates that most firms there would like to formalize but tend not to opt for it due to tax reasons; they also state that relatively easier access to financing would be the most important benefit to ensue from formalizing.⁴⁸ Informal firms may also be unproductive due to their circumscribed access to financing.⁴⁹ Therefore, firms choose not to formalize when facing limited access to financing and extensive government regulations and other barriers.⁵⁰ To evaluate what the literature indicates within the context of informal firms in Kosovo, the following hypothesis will be tested:

H1: Financial barriers decrease the likelihood of informal firms to formalize.

H2: Institutional barriers decrease the likelihood of informal firms to formalize.

The Effects of the Owner and of Firm Characteristics in Formalization

The key predictors of the level of informality of micro-enterprises in the city of Lahore in Pakistan are the characteristics of the entrepreneur and the enterprise, rather than their motives or the wider formal and informal environment of institutional compliance. Lower degrees of informality are associated with

⁴⁶ Ruta Aidis / Arnis Sauka, Entrepreneurship in a Changing Environment. Analyzing the Impact of Transition Stages on SME Development, in: Friederike Welter, ed, Challenges in Entrepreneurship and SME Research, Turku 2005, 5–36, <http://www.africres.org/SMME%20Research/SMME%20Research%20General/Conference%20Papers/CHALLENGES%20IN%20ENTREPRENEURSHIP.pdf>.

⁴⁷ Durim Hoxha, Barriers to Doing Business in Kosova. An Institutional Approach, *International Journal of Entrepreneurship and Small Business* 8, no. 2 (2009), 186–199, DOI: 10.1504/IJESB.2009.024376.

⁴⁸ Subika Farazi, Informal Firms and Financial Inclusion, *Journal of International Commerce, Economics and Policy* 5, no. 3 (2014), 1–28, DOI: 10.1142/S1793993314400110.

⁴⁹ Donald Sparks / Stephen Barnett, The Informal Sector in Sub-Saharan Africa. Out of the Shadows to Foster Sustainable Employment and Equity, *International Business and Economics Research Journal* 9, no. 5 (2010), 1–11, DOI: 10.19030/iber.v9i5.563.

⁵⁰ Michael Ingram / Ramachandran Vijaya / Vyjayanti Desay, Why Do Firms Choose to Be Informal? Evidence from the Africa Investment Climate Surveys, World Bank Regional Program on Enterprise Development, September 2007, <http://documents1.worldbank.org/curated/en/665731468194662235/pdf/419710AFR0Info1rms0rped13401PUBLIC1.pdf>.

female and with older, educated, and higher-income entrepreneurs, and with older enterprises with employees in the manufacturing sector.⁵¹

A low level of education is a key determinant for participation in the informal sector, with other relevant determinants being related to gender, age, and place of residence.⁵² Assessing owner attributes in business formalization in a Tanzanian context, one research study indicates that attributes likely to increase the probability of formalizing one's business include being male and having at least a secondary education.⁵³

Research based on a survey sample of formal firms in Kosovo indicate that neither gender nor age nor education has a statistically significant effect on unreported sales. However, there is a statistically significant correlation between underreported sales and firm age and size, respectively; older firms state underreported sales more often than younger firms.⁵⁴ Another research study indicates that the owner's education level positively affects the performance of micro-firms in Kosovo.⁵⁵ As an investigatory inquiry the following hypothesis will be tested:

H3: Owner and firm characteristics affect the likelihood of informal firms to formalize.

Evidence on SMEs in Kosovo

After the war of 1998–1999, Kosovo's economy started from scratch, with destruction and poverty everywhere in evidence in the country. The public sector was the major employer, though with symbolic wages subsidized by international donors. The private sector, having few businesses engaged in trade, began developing under informal structures. The manufacturing sector was almost nonexistent for a decade after the war, a time when all products for consumption were imported.

⁵¹ Collins Williams / Muhhamad Shahid / Alvaro Martinez, Determinants of the Level of Informality of Informal Micro-Enterprises. Some Evidence from the City of Lahore, Pakistan, *World Development*, 84 (2016), 312–325, DOI: 10.1016/j.worlddev.2015.09.003.

⁵² Jean Abel Traoré, Revisiting the Determinants of Informal Sector in Burkina Faso, MPRA Paper No. 49006, November 2012, https://mpa.ub.uni-muenchen.de/49006/1/MPRA_paper_49006.pdf.

⁵³ Esther Ishengoma, Entrepreneur Attributes and Formalization of Micro, Small and Medium Enterprises in Tanzania, *Journal of African Business* 19, no. 4 (2018), 491–511, DOI: 10.1080/15228916.2018.1472480.

⁵⁴ Collin Williams / Besnik Krasniqi, Explaining Informal Sector Entrepreneurship in Kosovo. An Institutional Perspective, *Journal of Development Entrepreneurship* 23, no. 15 (2018), DOI: 10.1142/S1084946718500115.

⁵⁵ Durim Hoxha, The Performance of Micro Firms in Kosova. Size, Age and Educational Implications, *International Journal of Globalisation and Small Business* 3, no. 1 (2009), 25–39, DOI: 10.1504/IJGSB.2009.021568.

Table 1. Basic figures for SMEs in Kosovo

<i>Enterprise size</i>	<i>Number of enterprises</i>		<i>Number of persons employed</i>		<i>Value added</i>	
	Number	Share (%)	Number	Share (%)	Million EUR	Share (%)
Micro	34,611	93.1	62,450	34.9	39,9	13.2
Small	2,182	5.9	40,727	22.8	61,5	20.3
Medium	322	0.9	33,075	18.5	144,1	47.5
Large	52	0.1	42,588	23.8	57,7	19.0
Total	37,167	100	178,840	100	303,3	100

Source: European Commission, 2019 SBA Fact Sheet. Kosovo, https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/sba-fs-2019_kosovo.pdf.

The United Nations, co-administering Kosovo's institutions until 2008 and overseeing economic development and privatization, has supported Kosovo's efforts to build a new market-oriented economy. Unfortunately, the SME sector has still not developed to fulfill its potential with regard to job creation, innovation, and productivity. The business environment in Kosovo is still far from optimal, given that institutional barriers and limited access to financing are critical determinants (in a negative way) in private sector development.

Table 1 presents the contribution of SMEs to employment and value added in Kosovo.

SMEs play a particularly important role in the business economy of Kosovo outside the finance sector, accounting for 99.9 % of all firms in 2016. SMEs in Kosovo generated 81.0 % of total value added. Also, SMEs in Kosovo are very important for the labor market, contributing 76.2 % of total employment. According to recommendations made by the European Union (EU) two main indicators determine the definitions of micro, small, and medium enterprises: the number of employees, and business turnover or balance sheet. In Kosovo, unlike in the EU's definition of micro, small, and medium enterprises, the only criterion defining this category of firms is the number of employees. As presented in Table 2, micro-firms consist of 1 to 9 employees, small firms 10 to 49, and medium firms 50 to 249.

Note, however, the large discrepancy between the number of enterprises registered with the Kosovo Business Registration Agency and those registered with the Tax Administration of Kosovo in fiscal year 2011. Respectively, 100,000 enterprises registered with the Business Registry, compared to only 18,000 with the Tax Department (Table 2).

This discrepancy could indicate that a large number of registered firms are no longer active. Also, the data show that the SME's contribution to Kosovo's national budget depends on a very small number of companies. The data also

Table 2. Number of enterprises from the business registry and tax department, 2011

Enterprise size	Business Registration Agency		Tax Administration		Discrepancy	
	No. of firms	Share (%)	No. of firms	Share (%)	No. of firms	Share (%)
Micro (1 to 9 employees)	99,110	98.4	16,279	89.6	82,911	83.6
Small (10 to 49 employees)	1,605	1.4	1,390	8.8	215	15.5
Medium (50 to 249 employees)	286	0.2	190	1.6	96	50.5
Total	100,770	100	18,170	100	82,600	82.0

Source: Ministry of Trade and Industry of the Republic of Kosovo, Private Sector Development Strategy 2013–2017, March 2013, http://www.kryeministri-ks.net/repository/docs/PRIVATE_SECTOR_DEVELOPMENT_STRATEGY_2013-2017.pdf.

indicate that much of Kosovo's economic activity is still pursued in the informal economy.⁵⁶

Within SMEs, micro-firms, predominantly in the informal sector, make up a substantial sector providing jobs to the poor. Therefore, many firms were registered with the Kosovo Business Registration Agency but had no fiscal number with the Tax Administration of Kosovo, as they avoid paying taxes.

Despite the rapid growth in the literature, studies have largely failed to analyze the varying levels of informality among informal enterprises. One research study, based on a survey of micro-firms in Pakistan, defines an unregistered enterprise as a business that has not registered with the tax authorities for tax purposes. Moreover, firms that operate at a high level of informality opt not to formally register with the tax office.⁵⁷ Informal firms show a lack of compliance with government regulations, in particular regarding registration with various authorities, the payment of taxes and social contributions, and adherence to labor regulations.⁵⁸ In many aspects, informal enterprises show a large range of

⁵⁶ Ministry of Trade and Industry of the Republic of Kosovo, Private Sector Development Strategy 2013–2017, March 2013, http://www.kryeministri-ks.net/repository/docs/PRIVATE_SECTOR_DEVELOPMENT_STRATEGY_2013-2017.pdf.

⁵⁷ Williams / Shahid / Martinez, Determinants of the Level of Informality of Informal Micro-Enterprises.

⁵⁸ International Labour Organization, Enterprise Formalization. Fact or Fiction? A Quest for Case Studies, May 2014, https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/---ifp_seed/documents/publication/wcms_245359.pdf.

heterogeneity as a group.⁵⁹ For example, the informality of firms is determined by the extent of their participation in societal institutions. Formality can thus be defined not as a dichotomy (set against informality) but rather as a continuum where the number of societal institutions that an enterprise participates in determines its level of formality.⁶⁰

Formal firms are the units that pay taxes and other contributions either entirely or at a significant level, whereas informal firms are those units that neither pay taxes and other social contributions nor comply with labor regulations. In order to formalize, informal firms must register with the Tax Administration and declare their income and number of employees. In March 2017 a one-stop-shop was promoted, a means whereby newly registered businesses could receive a unique registration number from both the Kosovo Business Registration Agency and the Kosovo Tax Administration.

The tax system for businesses in Kosovo consists of a corporate income tax, a personal income tax, and a value added tax (VAT). Taxpayers having a gross annual income over EUR 50,000, and those who have voluntarily opted to be taxed on real income, are taxed at the rate of 10 %, whereas taxpayers with an annual gross income of EUR 50,000 or less are taxed with either 3 % (for the activities of trade, transport, agriculture, and similar commercial activities) or 9 % (for the activities of services, professional, artisanal, entertainment, and similar activities) of gross income. Personal income taxes are progressive, ranging from 0 to 10 %, whereas the value-added tax rate is fixed at 10 %. Tax rates in Kosovo fall on the lower bound of regional and EU ranges, but firms nevertheless find them high, mainly because they are operating in an environment with an already high cost of doing business. However, there is no special tax regime applied for certain categories of firms, such as tax exemptions for newly registered SMEs for a period after registration, and no simplified tax regimes or tax holidays for SMEs, including micro and small enterprises.⁶¹

To get a more complete picture of the SME finance landscape, it is necessary to estimate the number of firms in the informal sector and to examine their access to financial services. In the case of Kosovo, the banks have all complained about poor and inaccurate financial record-keeping by firms, reporting that

⁵⁹ Michael Grimm / Peter Knorringa / Jann Lay, *Constrained Gazelles. High Potentials in West Africa's Informal Economy*, *World Development* 40, no. 7 (2012), 1352–1368, DOI: 10.1016/j.worlddev.2012.03.009.

⁶⁰ Alec Levenson / Williams Maloney, *The Informal Sector, Firm Dynamics and Institutional Participation*, World Bank, Policy Research Paper, Washington, September 1988, <http://documents1.worldbank.org/curated/en/199771468757482154/pdf/multi0page.pdf>.

⁶¹ Organization of Economic and Co-Operation and Development, *SME Policy Index Western Balkan and Turkey 2019*, Kosovo: Small Business Act Profile, Paris 2019, https://www.oecd-ilibrary.org/development/sme-policy-index-western-balkans-and-turkey-2019_g2g9fa9a-en.

many businesses keep separate sets of books for bank and tax purposes, do not adhere to business plans, and misappropriate funds.⁶² The three top barriers that hinder access to the financing of firms in Kosovo are: (i) the high level of SME informality, (ii) a lack of collateral and of enforcement mechanisms, and (iii) insufficient diversity in the financial sector.⁶³

Sample and Data

The data in informal firms in Kosovo are scarce, which may account for there being no empirical evidence on this topic thus far. The survey presented here, with a sample size of 243 informal firms, was carried out by the authors of this paper in 2016 using a questionnaire tailored to the specifics of the informal sector. The sample consists of firms not registered with the Tax Administration, thus avoiding taxes. In addition, these firms employ workers without contractual arrangements so as to avoid paying income taxes on salaries and pension contributions. To check the applicability of the survey questionnaire, a pilot survey conducted interviews with eight informal firms. It was concluded that the survey questionnaire was applicable to the informal sector, and the pilot test was also useful in finding the appropriate approach with which to access informal firms. The survey was conducted in all regions of Kosovo; however, most of the interviews took place in the open markets on the outskirts of major cities in Kosovo, mostly frequented by informal firms.

Due to the lack of official registration and the tendency of informal firms to keep their activities hidden from public authorities, it is a challenging task to gather their data for empirical study. Therefore, the most appropriate approaches to access informal firms were the snowball technique and convenience sampling. Snowball sampling is a special non-probability method for developing a research sample where existing study subjects recruit future subjects from among their acquaintances. This sampling technique is often used in hidden populations which are difficult for researchers to access, or in cases where a sampling frame is hard to establish and it is assumed that cases are affiliated through links that can be exploited to locate other respondents based on existing participants.⁶⁴ A convenience sample, for its part, is one of the main types

⁶² European Investment Bank, *Assessment of Financing Needs of SMEs in the Western Balkan Countries*, August 2016, https://www.eib.org/attachments/efs/assessment_of_financing_needs_of_smes_kosovo_en.pdf.

⁶³ Koen Wasmus, *SME Finance in Kosovo. A Tale of Price and Prejudice*, The Kosovo Banker, December 2012, 8, <http://docplayer.net/163079542-The-kosovo-banker-finance-for-development-sme-finance-in-kosovo-a-tale-of-price-and-prejudice-the-role-of-commercial-banks-in-economic-development.html>.

⁶⁴ Hagai Katz, *Global Surveys or Multi-National Surveys? On Sampling for Global Surveys*. Thoughts for the Globalization and Social Science Data Workshop, Conference Paper,

Table 3. Size categories in the sample and willingness of firms to formalize

<i>Enterprise size</i>	<i>No. of firms</i>	<i>% of sample</i>	<i>Willing to formalize</i>	<i>% of sample</i>	<i>Not willing to formalize</i>	<i>% of sample</i>
Micro (1 to 9 employees)	225	92.6	139	61.8	86	38.2
Small (10 to 20 employees)	18	7.4	14	77.8	4	22.2
Total	243	100	153	63	90	37

Source: Sample of the survey of firms conducted by the authors.

of non-probability sampling methods, though it is the least rigorous technique and involves the selection of the most accessible subjects.⁶⁵ The interviews with owners of informal firms were conducted face to face. The field interviews are the most promising investigative method when it comes to exploration of the informal economy.⁶⁶

The sample structure of the informal firms varies in enterprise size category, sectors of business, and geographic distribution in Kosovo. The summary descriptive statistics, providing the size of the firms and their willingness to formalize, is presented in Table 3.

From Table 3, the sample of 243 firms consists of 92.6 % micro-size enterprises with 1 to 9 employees, whereas small firms with 10 to 20 employees consist of 7.4 %. The informal sector in Kosovo mostly comprises micro-sized enterprises, while firms with a larger number of employees find it more difficult to survive in this sector. This captures the idea that larger firms are more visible and more readily detected by government inspectors. Informal firms with a larger number of employees appear in farming and related forms of agriculture, although they usually employ part-time workers. The number of firms that actually want to switch to the formal sector is 155 or 63 % of the sample, compared to 90 or 37 % unwilling to formalize. Small firms are more willing to formalize (77.8 %) than micro-firms (61.8 %).

Many of informal firms in the sample were registered with the Business Registration Agency but not with the Kosovo Tax Administration. However, these firms entirely avoid paying taxes, as they do not declare the number of

9 November 2006, www.global.ucsb.edu/orfaleacenter/conferences/ngoconference/Katz_for-UCSB-data-workshop.pdf.

⁶⁵ Martin Marshall, Sampling for Qualitative Research, *Family Practice* 13, no. 6 (1996), 522–525, DOI: 10.1093/fampra/13.6.522.

⁶⁶ David Ketchen / Duane Ireland / Justin Web, Towards a Research Agenda for the Informal Economy. A Survey of the Strategic Entrepreneurship Journal's Editorial Board, *Strategic Entrepreneurship Journal* 8, no. 1 (2014), 95–100, DOI: 10.1002/sej.1175.

Table 4. Gender of the owner, education, age of the firm, and sales category per year

<i>Gender of the owner</i>			<i>Education of the owner</i>			<i>Age of the firm</i>			<i>Sales</i>		
Male (1)/ Female (0)	No. of firms	% of sample	Level	No. of firms	% of sample	Group	No. of firms	% of sample	Group	No. of firms	% of sample
1	225	92.6	1	12	4.9	1	80	33.4	1	47	19.6
0	18	7.4	2	211	86.9	2	68	28.5	2	141	58.7
			3	20	8.2	3	58	24.3	3	45	18.8
						4	33	13.8	4	7	2.9
Total	243	100		243	100		239	78.2		240	100

Source: Sample of the survey of firms conducted by the authors.

employees to the state authorities, nor their sales and profits. In this way, they reduce the cost of transactions but lose opportunities for various supports that might potentially be provided by institutions and international donors, including grants, access to financing, consulting, and training.

The following table presents owner and firm characteristics such as the gender of the owner, education level of the owner, the firm's age, and per-year sales.

As noted in Table 4, most of the owners of informal firms in the sample are male: 92.6 %. The 7.4 % rate of female ownership indicates the power imbalance between men and women in Kosovo's informal sector. In terms of the education level of firm owners, 86.9 % have completed secondary school but no further, 7.2 % have in addition a university degree, and 5.9 % no more than elementary school. These firms are run by owners with low levels of education and tend to remain informal as long as they can survive. The formal education level of the owner is explained via the designations 1 = elementary school, 2 = secondary school, and 3 = university degree.

Firm age is divided into four categories: 1) 0–5 years; 2) 5–10 years; 3) 10–15 years; 4) 15 years or more. Moreover, the first category consists of a larger number of firms, with a declining trend of older categories in the sample. Sales are introduced as ordinal figures in four categories that represent firms' per-year sales: 1) EUR 0 to EUR 10,000; 2) EUR 10,000 to EUR 50,000; 3) EUR 50,000 to EUR 100,000; 4) EUR 100,000 to EUR 200,000. The second category represents 58.7 % of the firms, which indicates that these firms have a low volume of sales and are struggling to survive.

The distribution of the sample of informal firms for sectors of business activity and the region is presented in Table 5.

Table 5 indicates that trade is the largest sector, amounting to 33 % of total firms. These types of informal firms, in most cases, sell products in different markets across regions in Kosovo. The service sector is represented by 26 % of

Table 5. Distribution of the sample over sectors of business and region

<i>Sector</i>	<i>No. of firms</i>	<i>% of sample</i>	<i>Region</i>	<i>No. of firms</i>	<i>% of sample</i>
Trade	80	33	Center	82	34
Service	63	26	East	53	22
Agriculture	53	22	North	41	17
Manufacture	36	16	South	37	15
Construction	11	4	West	30	12
Total	243	100	Total	243	100

Source: Sample of the survey of firms conducted by the authors.

total firms. Although this sector is among the largest in Kosovo's formal sector, this is not the case in the informal sector because it is difficult for these companies to operate without registration and licenses. The informal agriculture firms are represented by 22 % with employees, mostly employed in the farming of crops and the raising of livestock. The informal manufacturing firms are represented in the sample with 16 %, with most of them producing handicraft products. Finally, the construction sector is represented with only 4 % of the total number of firms. Despite its small proportion in the sample, the construction sector contains many informal firms. Due to the specifics of the business, it is difficult to reach these workers for interviews. Concerning the region, 34 % of firms are located in the center of Kosovo, namely in the capital city and its surrounding area. Regionally, the sample contains 22 % of firms from the eastern, 17 % from the western, 15 % from the southern, and 12 % from the western part of the country.

To scale perceptions of respondents, we apply the well-known Likert scale with the following modalities: 1-no obstacle; 2-minor obstacle; 3-neutral; 4-moderate obstacle; 5-major obstacle. In the table below we represent descriptive statistics regarding access to financing and institutional barriers.

Limited access to financing is related to the administrative procedures of loan approval from banks. These procedures involve loan documents, collateral, and business plan analysis. Firms perceive limited access to financing to be an average obstacle. Informal firms regard the high cost of financing, which includes interest rates and administrative costs levied by the banks, to be their biggest obstacle. Informal firms also deem the unavailability of subsidies to be an obstacle.

Concerning institutional barriers, informal firms believe that high taxes and corruption are among the biggest obstacles presented by the institutional environment. A dysfunctional judiciary system is perceived as a minor obstacle, and there are other institutional barriers which informal firms do not take to

Table 6. Descriptive statistics of business environment barriers

<i>Perceived business environment barriers</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. deviation</i>
Limited access to finance	1	5	3.06	1.41
Cost of finance	1	5	4.29	1.23
Unavailability of subsidies	1	5	3.62	1.52
High taxes	1	5	3.95	1.16
Inefficient tax administration	1	5	1.91	1.30
Custom tariffs	1	5	2.04	1.40
License procedures and permit	1	5	1.74	1.16
Labour law	1	5	1.79	1.22
Dysfunctional judiciary system	1	5	2.07	1.47
Corruption	1	5	3.52	1.39

Source: Sample of the survey of firms conducted by the authors.

be obstacles vis-à-vis their willingness to formalize. This reflects informal firms lacking a willingness to interact with institutions.

Empirical Analysis

Gathering statistics about who is engaged in the informal economy, the frequency with which these activities occur, and their magnitude is crucial for making the right decisions regarding the allocations of a country’s resources in this area.⁶⁷ The effect of the business environment on the formalization of informal firms will be captured using probit analysis. The probit model predicts the future values of the dependent variable Y, based on known or expected future values of the independent variable X. To examine the effects of the business environment on the formalization of informal firms, we begin by estimating the following simple probit specification:

$$P_i = E(Y = 1/X_i) = \beta_0 + \beta_1 \textit{Limited access to finance} + \beta_2 \textit{Cost of finance} + \beta_3 \textit{Unavailability of subsidies} + \beta_k X_k \quad (1)$$

In this specification, the dependent variable is the likelihood that a firm will formalize. The dummy variable was coded 1 if the respondent reported that the firm will formalize and 0 if it will not formalize. Independent variables include financial barriers: limited access to financing, high cost of financing, and the

⁶⁷ Friedrich Schneider / Dominik Enste, *The Shadow Economy. Theoretical Approaches, Empirical Studies, and Political Implications*, Cambridge 2002.

unavailability of subsidies. Limited access to financing for informal firms in Kosovo is a concern, because these firms have lack assets, loan records, and reliable bookkeeping and the educational level of their owners is low. However, informal firms can potentially access financing from microfinance institutions, which are more flexible and accessible in their lending but charge very high interest rates, approximately twice the rate offered by banks. In order to estimate results for specifications, we will interpret them using marginal effects and odds ratios.

Marginal Effects

Marginal effects show the percentage-point change in the probability of the event occurring as a result of each one-unit change in the independent variable in question. Coefficients and marginal effects for all estimated equations are given in table 5. As we see from the first specification, all predictors included in the model have the expected sign and are significant at 5 %. Looking at the marginal effects in the first specification, we see that if the firm has reported that limited access to financing is a major obstacle, then, holding other variables at the constant value, the probability of formalizing will decrease by 16.5 % (supporting H1). The high cost of financing is an important factor which decreases the likelihood of formalization by 17.2 % (supporting H1). Similarly, the unavailability of subsidies appears to decrease the probability of informal firms to formalize by 33.9 %, holding other variables at a constant value (supporting H1). Hypothesis 1, that limited access to financing barriers decreases the likelihood of informal firms to formalize, is confirmed.

In the next specification, we add seven variables of institutional barriers, namely tax rates, inefficient tax administration, custom tariffs, license procedures and permits, labor law, inefficient judiciary system, and corruption, as we seek to check their effects on the formalization of informal firms.

$$P_i = E(Y = 1/X_i) = \beta_0 + \beta_1 \text{Limited access to finance} + \beta_2 \text{Cost of finance} + \beta_3 \text{Unavailability of subsidies} + \beta_4 \text{Tax rates} + \beta_5 \text{Inefficient tax administration} + \beta_6 \text{Custom tariffs} + \beta_7 \text{Licence procedures and permits} + \beta_8 \text{Labor law} + \beta_9 \text{Inefficient judiciary system} + \beta_{10} \text{Corruption} + \beta_k X_k \quad (2)$$

In the second specification, coefficients are significant for tax rate and corruption. Marginal effects indicate that if the firm has reported tax rates to be a major obstacle, the probability of formalizing, holding other variables at the constant value, will decrease by 21.2 % (supporting H2). Similarly, based on results, corruption obstacles decrease the likelihood of informal firms to formalize by 21.5 % (supporting H2). Contrary to expectations, other coefficients

Table 7. Probit estimates for potential formalization of informal firms

	(1)		(2)		(3)		<i>Odds ratio</i>
	<i>Coeff- icient</i>	<i>Marginal effect</i>	<i>Coeff- icient</i>	<i>Marginal effect</i>	<i>Coeff- icient</i>	<i>Marginal effect</i>	
Limited access to finance	-0.165	0.016**	-0.190	0.008***	-0.262	0.001***	-0.233
Cost of finance	-0.172	0.056*	-0.249	0.010**	-0.229	0.030**	-0.204
Unavailability of subsidies	-0.339	0.000***	-0.349	0.000***	-0.306	0.000***	-0.263
Tax rates			-0.212	0.014	-0.213	0.020	-0.191
Inefficient tax administration			-0.050	0.562	-0.056	0.538	
Custom tariffs			0.120	0.150	0.126	0.160	
Licence procedures and permits			-0.119	0.280	-0.079	0.506	
Labour law			0.020	0.824	0.003	0.976	
Inefficient judiciary system			0.059	0.419	0.028	0.727	
Corruption			-0.215	0.006***	-0.193	0.018**	-0.175
Education					-0.201	0.474	
Age of the firm					-0.172	0.027**	-0.158
Gender					-0.156	0.670	
Age of the owner					0.069	0.238	
Number of employees					-0.049	0.264	
Sales per year					0.367	0.050**	0.443
Region					-0.075	0.728	
Sector of business					-0.142	0.510	
Observations		239		235		221	
Log likelihood		107.33		241.76		224.32	
Chi ²		53.25		70.16		75.92	
Prob>chi ²		0.000		0.000		0.000	
Pseudo-R ²		0.27		0.35		0.39	

Source: Authors’ calculations.
Note: Standard errors and p-values for coefficients respectively marginal effects are in parenthesis.
*** significant estimate at 1 % level; ** significant estimate at 5 % level; * significant estimate at 10 % level.

for institutional variables are not significant (not supporting H2). This finding indicates that the informal sector is fragile and operates in a marginalized environment, avoiding communication and interactions with institutions. Coefficients of the other three independent variables from the first specifications have slightly increased and still remained significant. Hypothesis 2, that institutional barriers decrease the likelihood of informal firms to formalize, is partially supported.

In the third specification, we include additional control variables on firm characteristics, such as education, age of the firm, the gender of the owner, age of the owner, number of employees, sales, sector of activity, and location.

$$P_i = E(Y = 1/X_i) = \beta_0 + \beta_1 \text{Limited access to finance} + \beta_2 \text{Cost of finance} + \beta_3 \text{Unavailability of subsidies} + \beta_4 \text{Tax rates} + \beta_5 \text{Inefficient tax administration} + \beta_6 \text{Custom tariffs} + \beta_7 \text{Licence procedures and permits} + \beta_8 \text{Labor law} + \beta_9 \text{Inefficient judiciary system} + \beta_{10} \text{Corruption} + \beta_{11} \text{Education} + \beta_{12} \text{Age of the firm} + \beta_{13} \text{Gender of the owner} + \beta_{14} \text{Age of the owner} + \beta_{15} \text{Number of employees} + \beta_{16} \text{Sales} + \beta_{17} \text{Region} + \beta_{18} \text{Sector of business} + \beta_k X_k \quad (3)$$

In the third regression, all indicators that were significant in the previous specification remained significant, also here with minor changes to the coefficients. On the firm level, the age of the firm is significant, indicating that the older the firm the less likely it is that the firm will formalize. As categorized by the period of operations, if the firm becomes older by one category (5 years), then the likelihood of formalization decreases by 17.2 % (supporting H3). The coefficient for the firm's sales is significant and positive. The marginal effects indicate that if the firm reported sales increase per one category, then the likelihood of formalization will increase by 36.7 % (supporting H3).

We introduced into the model the educational level of the owner because earlier studies have found positive relations between the level of education and firm formalization. Nevertheless, in this analysis, the educational level of the owners of informal firms is not found to affect the formalization (not supporting H3). This result might not be so conclusive because this sample majority of 86.9 % of firm owners hold the same educational level or amount of secondary school completed. Also, the coefficient for gender is not a significant predictor in the model (not supporting H3). As mentioned in the data description, females' participation in the sample consists of only 7.4 %, so this high disproportion may even impede a yield of reliable results. Hypothesis 3, that owner and firm characteristics affect the likelihood of informal firms to formalize, is partially supported.

We include the location as dummies because one-third of the firms are located in the central region, which includes the capital Pristina (center = 1, other

region = 0). Similarly, sector dummies were included, as trade firms represent the most frequent cases in the informal sector, hence we use, trade = 1, other sector = 0. The assumption is that informal firms that are closer to markets as well as institutions have greater opportunities and are more likely to formalize. In addition, the informal trade firms are more frequent compared to the firms in other business sectors, as well as showing greater fluctuation in the market. However, the results show that neither the business sector nor the location has any effect on the willingness of firms to formalize.

Odds Ratios

We now proceed with interpreting the results of significant variables from the last specification in terms of odds ratios. An odds ratio is a measure of association between an exposure and an outcome. The odds ratio represents the odds that an outcome will occur given a particular exposure, compared to the odds of the outcome occurring in the absence of that exposure. Based on the results, we conclude that odds in favor of formalization for firms that consider limited access to financing as an obstacle drops by 0.23 or about 77 % compared to other firms that do not consider this to be an obstacle. If the high cost of financing is deemed a barrier, then the odds in favor of formalizing decrease by 0.20 or 80 % compared to firms that do not consider this to be an obstacle. Similarly with firms that consider the unavailability of subsidies to be an obstacle: then the odds in favor of formalizing drops by 0.26 or 74 % compared to the firms that do not deem this an obstacle. The coefficient of the tax rate is highly significant, which implies that if the firm perceives the tax rate as a major obstacle its odds decreases by 0.19 or 89 % compared to the firm that did not perceive this to be an obstacle. Similar results are found for corruption: if the firm perceives corruption as a major obstacle then the odds of formalization is reduced by 0.17 or about 83 % compared to the firm that does not perceive corruption to be an obstacle.

The coefficient of the firm's age is also negative and highly significant. If the firm is older, the odds in favor of formalizing decreases by 0.16 or 84 % compared to the newer firm as categorized in the sample analysis. By contrast, the coefficient of sales is positive, implying that if the firm reports a higher sales portfolio as categorized in the sample its odds in favor of formalizing increase by 0.44 or 56 % compared to the firm that reports a lower sales portfolio.

R-squared is a statistical measure that indicates the explanatory power of the independent variables in a regression model. The explanatory power of the variables analyzed, as indicated by R-squared in Table 7, ranges from 27 % (first model) to 39 % (final model), explaining thereby 39 % of variation in the dependent variable. Coefficients of some important variables are significant,

with their magnitude and direction of effects yielding expected results. While there are some insignificant individual coefficients, taken together all independent variables have a significant impact, as the Chi ² in this specification is 75.92 with a p-value of absolute zero.

Conclusions

Although there have been several analyses and reports regarding the effects of the business environment on the informal economy and performance of Kosovan firms, until now there has been, to our knowledge, no published empirical work on the impact of the business environment on the formalization of informal firms. Hence, providing empirical evidence on this topic will probably increase awareness among relevant institutions of the importance of improving the business environment in Kosovo.

The majority of informal enterprises operate as survivalist entities, with limited development and growth potential.⁶⁸ Formalization should be a priority from a public policy and a private sector perspective alike, given that formalization could lead to higher tax revenues and higher rates of productivity.⁶⁹

The research results presented here are relevant for practitioners and policymakers since they show the impact of business environment barriers on the formalization of informal firms. Firms cannot achieve growth within isolated and marginalized contexts, and therefore formalization is the predominant condition granting firms access to financing, markets, courts, advertising possibilities, and institutional support. Informal firms' owners should understand that connections with the external environment, including the formal sector, banks, and institutions, are the key determinants that will allow them to take advantage of business opportunities. To improve performance, informal firms should consider formalization to be a rational choice.

Due to the role of informal firms in employment, particularly in the case of Kosovo where the unemployment rate represents a major concern, policymakers should further reform the business environment and include the informal sector in the development agenda. To encourage the formalization of informal firms, institutions should, in their own respective ways, develop the financial sector. In this context, guaranteed credit scheme funds should be supported, as

⁶⁸ Andre Ligthelm, A Targeted Approach to Informal Business Development. The Entrepreneurial Route, *Development Southern Africa* 25, no. 4 (2008), 367–382, DOI: 10.1080/03768350802316138.

⁶⁹ Peer Stein / Pinar Ardic / Martin Hommes, Closing the Credit Gap for Formal and Informal Micro, Small, and Medium Enterprises, Consultative Group to Assist the Poor (CGAP) Blog, 13 November 2013, <https://www.cgap.org/blog/closing-credit-gap-micro-small-and-medium-enterprises>.

such schemes have been shown to facilitate small firms' access to financing. In addition, governments should support the sort of consulting and training that helps firms to prepare business plans, engage in accurate financial reporting, and adopt reliable approaches when applying for loans or grants.

Transition economies have higher levels of regulation than their more established counterparts, leading to a significantly higher incidence of bribery, higher effective taxes on official activities, and a large discretionary framework of regulations—and thus to a more pervasive informal economy.⁷⁰ However, a show of consistency among institutions in simplifying business regulations and a determination to fight corruption and tax evasion would encourage informal firms to formalize. The government should consider a special tax regime for micro-firms so that they can afford to pay taxes, given their small financial capacity. Moreover, the government should make more small subsidies available for micro-firms in the formal sector, as these payments increase the benefits in this sector and at the same time encourage informal firms to formalize.

The research presented here has certain limitations related to data collection, given that informal firms' representatives can be reluctant to provide precise information on their business activities. We have here used a quantitative approach, whereas a qualitative one might allow the researcher to gain an in-depth knowledge of firms' perceptions of business-environment barriers. A qualitative approach may help avoid the pitfalls of inaccurate information provided by respondents and might overcome potential misunderstandings.

The results of the research given here open up avenues for further research. Although we included many independent variables in the model, other components of the business environment should be included in future studies. With regard to the reliability of data and the accuracy of research outcomes, future research may use mixed methods in its research approach. The combination of quantitative and qualitative research approaches may be appropriate to gain in-depth information on how respondents perceive business-environment obstacles.

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⁷⁰ Friedrich Schneider, The Shadow Economy in Germany. A Blessing or a Curse for the Official Economy?, *Economic Analysis and Policy* 38, no. 1 (2008), 89–111, DOI: 10.1016/S0313-5926(08)50008-7.