

The role of political and economic institutions in informal entrepreneurship

Eunice Santos, Cristina I. Fernandes and João J. Ferreira

*Department of Management and Economics,
NECE Research Unit in Business Sciences,
University of Beira Interior, Covilhã, Portugal*

Abstract

Purpose – There has been a diverse range of research on the factors enabling informal entrepreneurship as well as the means to avoid or to eradicate its incidence. However, the authors may also identify how a significant proportion of research on this field of study centres around developing economies and correspondingly justifying the application of such analysis to countries with different levels of economic development as is the case of Europe. The purpose of this paper is to depict the ways in which economic and political institutions influence informal entrepreneurship.

Design/methodology/approach – To this end, the authors apply aggregate data at the national level collected from different sources, in particular the World Bank, the Organisation for Economic Cooperation and Development, the Global Entrepreneurship Monitor and Freedom House, for the years between 2006 and 2015 and for 23 European countries amounting to a total of 229 observations (unbalanced panel).

Findings – Through recourse to econometric estimations, based upon multiple regression model methodologies for panel data, the authors may report that the greater the quality of economic and political institutions, the lower the level of informal entrepreneurship.

Originality/value – The authors thus seek to contribute towards a better understanding of the influence of institutions and the policies that may feasibly influence informal entrepreneurship.

Keywords Informal entrepreneurship, Economic institutions, Institutions trust, Political institutions, Quality institutions

Paper type Research paper

Introduction

Various researchers maintain that an appropriate institutional environment provides the necessary conditions for individuals to identify market opportunities, begin new activities, introduce innovations and new products and services and thereby create employment (Verheul *et al.*, n.d.; Baumol, 2002; Aparicio *et al.*, 2016). Baumol (1990) defends that the quality of the institutional context influences the allocation of different types of entrepreneurship. Within this framework, North (1990) defines institutions as the rules of the game that orient the behaviours of individuals and provide incentive structures for agents while reducing transaction problems. In this sense, according to Boettke and Coyne (2009), institutions may facilitate economic, political and social interactions, providing incentives for different courses of action and guiding the options taken by economic actors. When these rules are well-defined, opportunism declines, confidence rises and with the implementation of long-term contracts, reducing transaction costs and driving the emergence of efficient institutional structures (Arias and Caballero, 2006). Furthermore, low-quality institutions reduce the incentives for investing and hindering the allocation of resources to the most productive ends (Knowles and Weatherson, 2006). Indeed, various authors also establish the relationship between the quality of institutions and entrepreneurship: the government (Dau and Cuervo-Cazurra, 2014), economic freedom (McMullen *et al.*, 2008), rights of ownership and financial capital (Desai *et al.*, 2003; Bowen and De Clercq, 2008), regulation over market entries (Klapper *et al.*, 2006) and controlling corruption (Anokhin and Schulze, 2009) feature among the leading institutional



factors taken into consideration. McMullen *et al.* (2008) defend how the institutional context shapes entrepreneurship out of need in different ways. Bowen and De Clercq (2008) demonstrate that the allocation of business resources to high growth activities positively correlates with financing and education and relates negatively to the level of corruption prevailing in a country. Similarly, Anokhin and Schulze (2009) and Bowen and De Clercq (2008) identify how controlling corruption boosts the confidence of individuals in the government and encourages entrepreneurial activities and innovation. Fuentelsaz *et al.* (2018), following their analysis of Global Entrepreneurship Monitor (GEM) data, confirm how countries displaying more individualist orientations towards relationships between formal institutions and entrepreneurship make them more intense as happens in societies with lower levels of uncertainty.

Researchers that deploy institutional theory correspondingly apply a distinction between the formal institutions (the laws and codified regulations) and the informal institutions (norms, values and codes of behaviour) and the informal sector, portraying how entrepreneurs operate beyond the limits of formal institutions but within those of informal institutions (De Castro *et al.*, 2014; Webb *et al.*, 2009, 2013, 2014; Welter and Smallbone, 2014; Williams and Vorley, 2014; OIT, 2019). Based on the institutional perspective, the trend for entrepreneurs to operate in the informal sector stems from the asymmetries between the formal and informal institutions in any society. The greater the incongruence between these institutions, the greater the tendency for businesses to operate in the informal sector. We thus enter a gap in the literature, as this institutional explanation for the informal entrepreneurial sector has tended to facilitate analysis in separating informal entrepreneurs from their formal and “traditional” counterparts and studying them as a separate category or sub-field (Williams and Shahid, 2016). There thus emerges our objective: ascertaining in what ways does the quality of institutions influence the advance or retreat of informal entrepreneurship.

The informal economy has represented a constant problem both in the developing world and in more advanced economies, such as those of the European Union (EU). Since the 1970s, industrial downsizing and tertiarisation processes renewed the importance of small scale firms that are better positioned to hide data about their activities than large scale companies. Simultaneously, the EU economies have become increasingly regulated, which has raised the costs of launching and running businesses and therefore driven more companies and their staff into the informal sector (OECD, 2015; Nielsen and Smeets, 2018). We may thus portray the need to study the relationship between the quality of institutions and the existence of informal entrepreneurship. Thus, we arrive at our research question:

RQ1. What influence does the quality of political and economic institutions hold over informal entrepreneurship?

Our research aims to contribute to this field of study as, despite the existing studies on the impact of institutions on entrepreneurship, there is a shortage of research findings on informal entrepreneurship in the case of various countries. A large proportion of informal entrepreneurship studies did not extend beyond a single country due to the lack of robust data for comparisons among countries. Williams (2014) reports that this theme does not usually get approached in Europe and thereby furthermore justifying its importance. Hence, we contribute to the literature through highlighting the important influence that political and economic institutions have on the decisions of individuals at the point in time of opting whether or not to formally register their companies. We demonstrate that the quality of economic and political institutions does have an effect on the inverse reflected proportionality of informal entrepreneurship. Given that the extent to which the perceptions held by individuals about these two types of

institutions improve, informal entrepreneurship tends to decrease. We believe that our empirical results hold important implications both for researchers and for the drafting of public policies.

The structure of this paper is as follows: first, we set out the theoretical framework for our focus on the quality of economic and political institutions to the prevalence of informal entrepreneurship. We then present the methodology, the data and the results based on the World Bank (WB), the Organisation for Economic Cooperation and Development (OECD), the GEM and Freedom House (FH). Finally, we provide our conclusions, the limitations and the future lines of research.

Literature review

According to Pejovich (1999), formal institutions represent a multidimensional concept that includes aspects such as political, economic and legislative systems. These dimensions define the nature of political processes, reduce uncertainty, facilitate the management efforts necessary to acquire the resources at the beginning of any new business (Busenitz *et al.*, 2000), boost the availability of financial resources (Holmes *et al.*, 2013) and provide the basis for the infrastructures that render development feasible (de Soto, 2000).

The economic institutions are thus the formal institutional agreements that establish and regulate the conditions necessary to undertaking commercial transactions within a specific economy. The economic institutions of relevance to entrepreneurial activities include, for example, the regulation of new entrants (Djankov *et al.*, 2002); the regulation of ongoing commercial concerns (Levie and Autio, 2011); bankruptcy laws and regulations (Ayotte, 2007; Lee *et al.*, 2011); and the regulation of financial markets and transactions (La Porta *et al.*, 2006). Greater quality of these institutions shall mean, in general terms, lighter, smoother and more intelligent regulation of both new entrants and ongoing businesses, which reduces the costs of compliance, inhibiting unjust and socially harmful practices. High-quality economic institutions also reduce the costs of departures and facilitate access to external services and resources, in particular to financial capital (Autio and Fu, 2015). In turn, Autio and Fu (2015) suggest that economic institutions exercise an important influence over the options taken by individuals over whether or not to formally register businesses. According to various authors (Djankov *et al.*, 2002; Gentry and Hubbard, 2000; Lee *et al.*, 2011), the quality of economic institutions, especially those interconnected with commercial operations in the private sector, impacts on decision making over launching, operating and closing businesses and companies. Within a business environment characterised by high-quality economic institutions, government officials adopt and implement benevolent policies that reduce the regulatory load to new companies and, therefore, the costs of conformity. In such environments, the costs of launching and running new businesses are lower and entrepreneurs therefore display a greater propensity to register their companies in order to secure the benefits associated with registration. These include the legal capacity to own and trade properties, the capacities to sign formal contracts and defend their rights through legal proceedings and the reduction of risk of sanctions due to informal market activities, for example (de Soto, 2000). Hence, high-quality economic institutions generate a negative influence on the options of their population to enter into informal business dealings (de Soto, 2000, 2002; Djankov *et al.*, 2003). We correspondingly arrive at our first research hypothesis:

H1. The quality of economic institutions generates a negative effect on informal entrepreneurship.

While the effects of economic institutions on entrepreneurial actions have received a great deal of study attention, the political institutions have not attracted the same level of scrutiny

(Autio and Fu, 2015). Various researchers dedicated to studying institutional theory have demonstrated how political institutions may return long-term impacts on the functioning of economic systems as well as on the creation of social wealth (Farr *et al.*, 1998; North, 1993; Weingast, 1995, 1997; Acemoglu and Robinson, 2012).

As Weingast (1995) maintains, strong government, able to protect property rights and ensure due compliance, is also strong enough to confiscate the wealth of its citizens. A well-designed political system protects property, human rights and political freedoms and thus encouraging the participation of citizens in economic life (Autio and Fu, 2015).

According to Levie and Autio (2011), political institutions are the institutional agreements that establish and regulate access to opportunities, the Rule of Law (RL) and the appropriation of business earnings. The political institutions relevant to business activities include, for example, the protection of property (Autio and Acs, 2010); and inclusion in terms of equality of access to opportunities, demographic representation and equality before the law (Acemoglu and Robinson, 2012; Başbay *et al.*, 2018). In countries with high-quality political institutions, the government authorities and their legislative representatives are freely and fairly elected. In turn, Puddington (2012) states that high-quality political institutions incorporate the inclusive political representation, without interference, of military, religious, economic and other groups with high levels of influence on power. To the extent that individuals feel safe and without fear of expropriation, they no longer have to ponder over whether or not to register their businesses (Feng, 2002; Li and Resnick, 2003). In democratic and representative political regimes, violations of property, rights and abuses of privilege are swiftly punished through the Electoral Process (EP), which naturally inhibits such abuses of power. In contrast, citizens in countries with low-quality political institution gain few political rights and even those that they do access receive only poor protection. Given such conditions, individuals hold little influence over the political process and perceive the application of laws and regulations as unpredictable and tending to favour the privileged elites. This raises fears over the expropriation of potential opportunities and earnings and encourage the population to “fly under the radar” and not register their businesses (Feng, 2002; Webb *et al.*, 2009, 2013; De Castro *et al.*, 2014). This further boosts the prevailing level of uncertainties and lowers the willingness of entrepreneurs to invest (Root, 1996; Welter and Smallbone, 2014; Williams and Vorley, 2014).

The arguments set out above suggest that the quality of political institutions holds a symmetrical effect on the density of formal and informal entrepreneurial entrants, respectively: the attention to these relationships is, therefore, important to understanding the effect of political institutions about different forms of entrepreneurship. Hence, we define our second research hypothesis:

H2. The quality of political institutions generates a negative effect on informal entrepreneurship.

Methodology

Data

The data studied derive from national-level aggregate statistics drawn from different sources, specifically the WB, the OECD, the GEM and FH, for the period between 2006 and 2015 and for 23 European countries, corresponding to 229 observations (an unbalanced panel). The following list sets out the 23 countries, and the respective years of study.

European countries under analysis:

- Austria
- Belgium

- Croatia
- Czech Republic
- Denmark
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- The Netherlands
- Norway
- Poland
- Portugal
- Romania
- Slovenia
- Spain
- Sweden
- Switzerland
- UK

Measures

Dependent variable. As its dependent variable, this study deployed informal entrepreneurship corresponding to the incidence rate of informal new entrants into business per 100 adult-age persons. As informal entrepreneurs are not eligible for direct measurement, this study applied the Autio and Fu (2015) approach to estimating informal entrepreneurship.

Hence, we applied the data collected from GEM to resolving the following simultaneous equations:

$$\begin{cases} y_{nova} = x \times \left(0.5 + \sum_{t=1}^3 e^{-\lambda t} \right), \\ y_{establecida} = \int_3^{+\infty} e^{-\lambda t} dt \end{cases}$$

in which y_{nova} represents the incidence rate of new entrepreneurs, the owners of new businesses who pay salaries and/or make any other payments to owners or employees for between 3 and 42 months. $y_{establecida}$ provides the incidence rate for established entrepreneurs who have paid salaries for over 42 months. x corresponds to the new entrepreneur entrance rate and λ is the parameter for the exponential distribution of the survival rate.

We normalised the estimated new entrepreneur entrance rate by dividing the GEM estimate by the average size of the team founding the new businesses to obtain an estimated annual entrance rate for all types of new businesses, registered and unregistered. Finally, in order to determine the entrance rate for informal entrepreneurship (number of informal businesses per 100 adult individuals), we subtracted the annual entrance rate for every type of new business from the WB estimate for the entrance rate for registered new businesses. This measurement thus conveys the level of informal entrepreneurship prevailing in a specific country.

Predictive variables. Control variables. As control variables, we applied the national macroeconomic factors associated with entrepreneurial activities. Thus, we calculated GDP per capita for each country, adjusted by purchasing power parity (GDP and the respective annual growth rate (GDPGrowth), the size of the population at an active age (POP) and the annual national population growth rate (POPGrowth)). In order to control for the domestic industrial structure and internal competition, we deployed the density of new companies (COMP). In general, higher taxation rates lead some companies and entrepreneurs not to formally register their businesses as this tends to reduce costs and boost profitability. We therefore also applied the rate of earnings, profits and capital gains, as a percentage of revenues and turnover (TX) as a control variable.

Economic institution variables. The quality of economic institutions represents the overall weight of regulation and the efficiency of the regulatory process and of the greatest relevance to managing commercial operations (Autio and Fu, 2015). In this study, we measure the quality of economic institutions by some of the components making up the Business Freedom Index, determined by the International Bank for Reconstruction and Development of the WB. The specific components applied were starting a business (SB), registering property (RP), getting credit (GC), paying taxes (PT), trading across borders (TAB), enforcing contracts (EC) and resolving insolvency (RI). The higher the score registered for each component, the better the regulatory performance.

Political institution variables. In order to ascertain the quality of the political institutions, we applied the dimensions of EP, Political Pluralism and Participation (PPP) and Functioning of Government (FG) to capture the political rights dimensions and the variables Freedom of Expression and Belief (FEB), Associational and Organizational Rights (AOR), RL and Personal Autonomy and Individual Rights (PA) to take civil liberties into account and sourced from the annual Freedom in the world report from FH. For the EP, PPP and FG variables, the higher the score, the higher the level of freedom while for the FEB, AOR, RL and PA variables, the greater the score, the lower the level of freedom.

Table I presents an overall summary of the variables applied in this study.

Data analysis

Within the scope of evaluating the impact of the quality of the political and economic institutions in informal entrepreneurship, the broad form of the equation estimated is as follows:

$$\text{InfEmp}_{it} = f(\text{Economic institutions}_{it}, \text{Political institutions}_{it}, \text{ControlVar}_{it}),$$

in which i are the countries (1, 2, ..., 23) and t the respective years (2006, 2007, ..., 2015).

Formal regression analysis served to validate these relationships with the econometric analysis applied based on multiple regression models for panel data for the set of 23 countries having undertaken estimates based on fixed effect models.

Hence, we calculated the following econometric models:

$$\text{InfEnt} = \alpha_0 + \alpha_1 \text{GDP} + \alpha_2 \text{GDPGrowth} + \alpha_3 \text{Pop} + \alpha_4 \text{PopGrowth} + \alpha_5 \text{Comp} + \alpha_6 \text{TX}, \quad (1)$$

Variables	Description	Source	Authors	Hypotheses
<i>Dependent variable</i>				
Informal entrepreneurship	Average of the population prevalence in informal entrepreneurship. Prevalence rates derived as numbers of new informal business entries per 100 adult-age population	GEM and World Bank (Enterprise Surveys)	Autio and Fu (2015)	
<i>Predictive variables</i>				
<i>Control variables</i>				
National GDP per capita adjusted for purchasing power parity	GDP per capita based on purchasing power parity (PPP). PPP GDP is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the US dollar has in the USA. Data are in constant 2011 international dollars	World Bank and OECD (National Accounts)	Quinn (1997), GGDC (2009), Gwartney and Lawson (2009), Ouardighi (2011), Chen and Quang (2014)	
Fiscal costs	Taxes on earnings, profits and capital gains as a percentage of turnover (TX)	World Bank		
The domestic industrial structure and internal competition	Density of new company creation (COMP)	GEM		
Size of the active aged population	Total population aged between 15 and 64. Population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship	United Nations (Population Division) and Eurostat (Demographic Statistics)		
Annual national population growth rate	Annual population growth rate for year t is the exponential rate of growth of midyear population from year $t-1$ to t , expressed as a percentage	United Nations (Population Division) and Eurostat (Demographic Statistics)		
<i>Independent variables</i>				
Quality of economic institutions				
Business Freedom Index	Starting a business (SB), registering property (RP), getting credit (GC), paying taxes (PT), trading across	International Bank for Reconstruction and Development do World Bank	Ayotte (2007), Lee <i>et al.</i> (2011), Djankov <i>et al.</i> (2002), Gentry and Hubbard (2000),	H1

Table I.
Variables subject
to analysis

(continued)

Variables	Description	Source	Authors	Hypotheses
Quality of political institutions	borders (TAB), enforcing contracts (EC) and resolving insolvency (RI)		Lee <i>et al.</i> (2011), Levie and Autio (2011), Autio and Fu (2015)	
	Electoral Process (EP), Political Pluralism and Participation (PPP) and Functioning of Government (FG) to portray political rights and the Freedom of Expression and Belief (FEB), Associational and Organizational Rights (AOR), Rule of Law (RL) and Personal Autonomy and Individual Rights (PA) variables to capture civil liberties	Freedom in the World da Freedom House	Farr <i>et al.</i> (1998), North (1993), Weingast (1995, 1997), Acemoglu and Robinson (2012), Levie and Autio (2011), Autio and Fu (2015)	H2

Table I.

$$\text{InfEnt} = \alpha_0 + \alpha_1\text{SB} + \alpha_2\text{RP} + \alpha_3\text{GC} + \alpha_4\text{PT} + \alpha_5\text{TAB} + \alpha_6\text{EC} + \alpha_7\text{RI}, \quad (2)$$

$$\text{InfEnt} = \alpha_0 + \alpha_1\text{EP} + \alpha_2\text{PPP} + \alpha_3\text{FG} + \alpha_4\text{FEB} + \alpha_5\text{AOR} + \alpha_6\text{RL} + \alpha_7\text{PA}, \quad (3)$$

$$\begin{aligned} \text{InfEnt} = & \alpha_0 + \alpha_1\text{GDP} + \alpha_2\text{GDPGrowth} + \alpha_3\text{Pop} + \alpha_4\text{PopGrowth} + \alpha_5\text{Comp} + \alpha_6\text{TX} \\ & + \alpha_7\text{SB} + \alpha_8\text{RP} + \alpha_9\text{GC} + \alpha_{10}\text{PT} + \alpha_{11}\text{TAB} + \alpha_{12}\text{EC} + \alpha_{13}\text{RI}, \quad (4) \end{aligned}$$

$$\begin{aligned} \text{InfEnt} = & \alpha_0 + \alpha_1\text{GDP} + \alpha_2\text{GDPGrowth} + \alpha_3\text{Pop} + \alpha_4\text{PopGrowth} + \alpha_5\text{Comp} + \alpha_6\text{TX} \\ & + \alpha_7\text{EP} + \alpha_8\text{PPP} + \alpha_9\text{FG} + \alpha_{10}\text{FEB} + \alpha_{11}\text{AOR} + \alpha_{12}\text{RL} + \alpha_{13}\text{PA}, \quad (5) \end{aligned}$$

$$\begin{aligned} \text{InfEnt} = & \alpha_0 + \alpha_1\text{GDP} + \alpha_2\text{GDPGrowth} + \alpha_3\text{Pop} + \alpha_4\text{PopGrowth} + \alpha_5\text{Comp} \\ & + \alpha_6\text{TX} + \alpha_7\text{SB} + \alpha_8\text{RP} + \alpha_9\text{GC} + \alpha_{10}\text{PT} + \alpha_{11}\text{TAB} + \alpha_{12}\text{EC} + \alpha_{13}\text{RI} \\ & + \alpha_{14}\text{EP} + \alpha_{15}\text{PPP} + \alpha_{16}\text{FG} + \alpha_{17}\text{FEB} + \alpha_{18}\text{AOR} + \alpha_{19}\text{RL} + \alpha_{20}\text{PA}. \quad (6) \end{aligned}$$

Results and discussion

Descriptive statistics

We tested for the existence of multicollinearity among the exogenous variables (variance inflation factor (VIF)) in every equation calculated as well as estimating the standard robust errors for the coefficients in order to eliminate any potential problems with heteroscedasticity.

We processed the data obtained through the software programme Stata version 12.0 (StataCorp LP, Texas, USA).

Table II displays the descriptive statistics and the correlation coefficients for the endogenous variables deployed in the econometric modelling as well as the VIF and may correspondingly report that we did not observe any effects of multicollinearity among these variables (VIF < 10). With these results we are able to apply the desired econometric models.

Table II.
Matrix of correlated
variables applied in
the empirical analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
No. of valid observations	229	229	229	229	228	224	228	229	229	229	229
Mean	0.45	10.36	1.24	14.42	0.30	4.29	23.34	85.47	70.53	68.91	76.56
SD	0.18	0.62	3.74	15.55	0.69	2.75	10.04	8.24	14.78	16.38	11.85
(1) InfEnt	na										
(2) GDP	0.03	7.04									
(3) GDPGrowth	0.10	-0.01	1.14								
(4) Pop	-0.16*	0.03	-0.03	2.13							
(5) PopGrowth	0.03	0.72**	0.02	0.00	3.04						
(6) Comp	-0.11	0.08	0.12	-0.16*	0.00						
(7) TX	-0.12	0.54**	0.01	0.17*	0.53	1.67	3.03				
(8) SB	0.20**	-0.06	-0.04	-0.16*	-0.04	0.19**	0.13*				
(9) RP	0.23**	-0.07	0.06	-0.22**	-0.15*	0.24**	-0.27**	2.08			
(10) GC	0.08	0.09	-0.11	-0.34**	-0.04	-0.14*	-0.23**	0.11	1.87		
(11) PT	-0.01	0.09	-0.03	-0.03	-0.06	0.27**	-0.07	0.43**	0.38**	2.41	
(12) TAB	-0.23**	-0.15	0.05	-0.15*	-0.26**	0.08	-0.23**	0.37**	0.34**	0.24**	2.43
(13) EC	0.02	-0.06	-0.15*	-0.05	-0.26**	-0.20**	-0.22**	0.36**	0.14*	0.34**	0.56**
(14) RI	-0.32**	-0.02	0.12	-0.28**	-0.10	0.13*	-0.24**	0.35**	0.31**	0.36**	0.36**
(15) EP	0.02	0.27**	-0.13*	-0.02	0.18**	-0.01	0.06	-0.14*	-0.16*	0.11	0.59**
(16) PPP	-0.17*	0.57**	-0.02	-0.07	0.46**	0.06	0.41**	-0.01	-0.03	-0.11	-0.12
(17) FG	-0.07	0.82**	-0.03	0.13*	0.69**	-0.05	0.47**	-0.11	-0.19**	0.05	-0.05
(18) FEB	0.23**	0.43**	0.03	-0.16*	0.33	0.04	0.33**	-0.12	-0.19**	-0.10	-0.07
(19) AOR	-0.07	0.36**	-0.15*	0.05	0.25**	0.06	0.11	-0.05	-0.12	-0.01	-0.03
(20) RL	0.02	0.78**	0.03	-0.06	0.55**	0.07	0.34**	-0.04	-0.03	0.03	0.01
(21) PA	0.07	0.80**	-0.06	0.08	0.59**	0.00	0.41**	-0.20**	-0.16*	0.10	0.01
No. of valid observations	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	
Mean	229	229	229	229	229	229	229	229	229	229	
SD	83.80	67.52	67.71	11.95	15.38	10.85	15.42	11.90	13.99	14.53	
(1) InfEnt	6.63	10.35	24.30	0.31	0.67	1.42	0.78	0.34	1.59	1.18	

(continued)

Econometric modelling

Table III presents the results returned by estimating the different fixed effect models.

In relation to the control variables, the results demonstrate that the population has a statistically significant negative influence on informal entrepreneurship (Model 1: $\beta = -0.018$; $p < 0.01$; Model 4: $\beta = -0.017$; $p < 0.05$; Model 5: $\beta = -0.019$; $p < 0.05$; Model 6: $\beta = -0.020$; $p < 0.05$). As regards the variables portraying the economic institutions, we may observe how the trading across borders (TAB) factor returns a statistically significant and negative predictive effect on informal entrepreneurship (Model 2: $\beta = -0.009$; $p < 0.05$; Model 3: $\beta = -0.009$; $p < 0.05$; Model 9: $\beta = -0.010$; $p < 0.05$) in which the higher the score, the lower the level of informal entrepreneurship. This thus confirms our *H1*. In general, the formal institutions provide a structure for trust and confidence that entrepreneurs need in order to engage in business. They facilitate the perception of opportunities for business and influence both their numbers and their characteristics (Verheul *et al.*, n.d.). This results in a rise in the level of entrepreneurial activities as well as triggering heightened growth expectations and boosting the size of new companies (Levie and Autio, 2008) and the proportion of registered businesses and firms in comparison with those taking place outside of companies (de Soto, 1989, 2000). In this sense, a surrounding environment with a transparent legal system and clearly defined property rights mitigates against the risks taken by the agents supplying resources to entrepreneurs (Estrin *et al.*, 2013). This thus facilitates access to financing and broadly constitutes a key factor to the creation and growth of new businesses (Rajan and Zingales, 1998). As a consequence, more developed formal institutions encourage, for example, risk capital investments (Sobel, 2008; Li and Zahra, 2012), a particularly relevant alternative source of financing for projects emerging from highly uncertain contexts but with great growth potential (Bowen and De Clercq, 2008). As Anokhin and Schulze (2009) also defend, controlling corruption boosts the prevailing level of trust in institutions and markets and increases the likelihood that entrepreneurs appropriate a part of the awards that may potentially result from their initiatives to provide further incentives for entrepreneurship and innovation. All of these aspects are synonymous with high-quality economic institutions.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
GDP	0.039 (0.038)			0.041 (0.046)	0.042 (0.037)	0.044 (0.04)
GDPGrowth	-0.001 (0.001)			-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Pop	-0.018 (0.008)*			-0.017 (0.009)*	-0.019 (0.008)*	-0.020 (0.008)*
PopGrowth	0.005 (0.005)			0.006 (0.005)	0.006 (0.005)	0.007 (0.005)
Comp	0.001 (0.002)			0.002 (0.002)	0.000 (0.002)	0.001 (0.002)
TX	0.000 (0.001)			0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
SB		0.004 (0.003)		-0.001 (0.004)		-0.003 (0.004)
RP		-0.002 (0.004)		-0.003 (0.004)		-0.004 (0.004)
GC		0.000 (0.003)		0.000 (0.003)		-0.001 (0.003)
PT		-0.002 (0.003)		0.000 (0.003)		0.000 (0.004)
TAB		-0.009 (0.003)*		-0.009 (0.004)*		-0.010 (0.004)*
EC		-0.001 (0.006)		-0.001 (0.008)		0.005 (0.008)
RI		0.000 (0.002)		-0.001 (0.002)		0.000 (0.002)
EP			-0.013 (0.003)**		-0.011 (0.004)**	-0.013 (0.004)**
PPP			-0.009 (0.008)		-0.008 (0.010)	-0.009 (0.011)
FG			-0.005 (0.004)		-0.006 (0.004)	-0.006 (0.004)
FEB			-0.003 (0.004)		-0.003 (0.005)	-0.004 (0.005)
AOR			0.014 (0.006)		0.006 (0.005)	0.010 (0.006)
RL			0.004 (0.003)		0.004 (0.004)	0.004 (0.005)
PA			0.005 (0.007)		0.008 (0.008)	0.007 (0.01)
<i>n</i>	222	229	229	222	222	222
<i>R</i> ²	0.128	0.087	0.065	0.161	0.188	0.229
<i>F</i> -statistic	1.98	4.94*	9.79**	3.48**	6.40**	177.94**

Notes: * $p < 0.05$; ** $p < 0.01$

Table III.
Coefficients estimated
by the econometric
models (standard
errors)

As regards the variables covering the political institutions, we may report that the greater the liberty and freedom prevailing in terms of the EP, the level of informal entrepreneurship drops significantly lower (Model 2: $\beta = -0.013$; $p < 0.01$; Model 3: $\beta = -0.011$; $p < 0.01$; Model 9: $\beta = -0.013$; $p < 0.01$). This correspondingly confirms our *H2*. Previous research has concentrated on formal institutions and their effects on the type of entrepreneurship with Klapper *et al.* (2006) reporting from their transnational comparison of European countries that simplifying the procedures for obtaining licenses and authorisations for launching new companies boosts the rate of start-ups. Levie and Autio (2011) observe that lower levels of government regulation interlink with higher levels of entrance rates even while also finding that this relationship is subject to moderation by the quality of the RL. Similarly, formal institutions such as educational institutions (Yang *et al.*, 2014) and risk capital entities (Lerner and Schoar, 2005), and certification processes (Sine *et al.*, 2007; Lee *et al.*, 2011) all generate influences. Furthermore, the policies in themselves, the ways in which they undergo implementation, also reflect an important influence on the ways in which entrepreneurs and company owners benefit from them (Armanios *et al.*, 2017). In summary, formal regulations shape entrepreneurial activities with their specific effects depending on more than the regulations themselves. Our results reveal that political and economic institutions wield influences over decisions whether or not to engage in informal business practices and opting therefore not to “fly under the radar”. This is a substantial effect that deserves far greater attention on behalf of political decision makers. Furthermore, we may report that the quality of economic institutions emerges as a factor on which decisions over whether or not to engage in informal entrepreneurship do depend. Our findings therefore demonstrate the important and combined effects of political and economic institutions. These patterns echo the results of Levie and Autio (2011) who identify how the RL and market entrance regulations wield a joint effect on “strategic” entrepreneurial entrants but not on low commitment entrepreneurial entrants.

Final considerations

The objective of this research involved ascertaining the ways in which the quality of political and economic institutions influences informal entrepreneurship. We may now conclude that both the quality of economic institutions and the quality of political institution generate consequences for informal entrepreneurship. Indeed, the greater the quality of these institutions, the lower the level of informal entrepreneurship.

There is a series of research findings demonstrating that economic institutions influence the option taken for formal or informal entrepreneurship: such as labour market flexibility (Kanniainen and Vesala, 2005), the barriers to new market entrants when the greater the difficulties of entering, the greater the likelihood of getting involved in informal entrepreneurship (Djankov *et al.*, 2002), fiscal burden (Gentry and Hubbard, 2000), the regime of ownership rights (Autio and Acs, 2010; Autio and Fu, 2015) and bankruptcy legislation (Lee *et al.*, 2011). As also detailed above, the greater the quality of the economic institutions, the lower the probability of individuals opting to engage in informal economic activities (*H1*). Other research studies have explored the effects of corruption levels and the RL of a country, the existence of free elections as factors influencing the incidence of informal entrepreneurship (Levie and Autio, 2011; Autio and Fu, 2015). While not specifically focussing on the issue of whether or not entrepreneurs choose to register their companies, these authors highlight the important role that political institutions play in the regulation of entrepreneurial choices. We may, however, also report that political institutions have received a lack of attention despite some institutional researchers having demonstrated that political institution may return long-term impacts both on the functioning of economic systems and on the generation of wealth (Weingast, 1995, 1997; Acemoglu and Robinson, 2012). Our results serve to confirm that this impact does exist and

bears a negative impact on options for informal entrepreneurship. Hence, the greater the quality of political institutions, the lower the incidence of entrepreneurs engaging in informal sectors (*H2*).

Through to the mid-twentieth century, the organisation of economic activities took place on a mass scale and attentions particularly focussed on major companies and corporations on the grounds they hold the greatest responsibility for national economic performance. However, over the course of the second half of the last century, the entrepreneurship of small- and medium-sized companies emerged as a new economic policy strategy with the objective of stimulating the generation of employment in conjunction with economic growth (Birsch, 1979; Audretsch, 2003; Ashcroft *et al.*, 2007). According to various authors, the formation of new companies continues to perform a fundamental role in the development of regional policies around the world (Bogliacino and Pianta, 2016; Subramaniam *et al.*, 2015). Informal sector production and circulation have brought about their own internal logics and extending well beyond a residual feature of the typically capitalist sector of the economy; furthermore, the appearance of informal activities also interconnects with the excess of manual labour produced by capitalism and with the informal sector emerging as an economic environment able to absorb and integrate this contingent hitherto located on the outer fringes of the economy (Chen, 2012).

Our results thus enable us to respond to our research question:

RQ1. What influence does the quality of political and economic institutions have on informal entrepreneurship?

We demonstrate how the inherited economic and political institutional structure may isolate the government against democratic processes and thereby establishing the scope for the undue usage of government powers and even observing the absolute abuse of power, consequently leading to options in favour of informal entrepreneurship. Whenever there are already mechanisms that impose reliable and consistent restrictions and appropriate conduct and behaviour on behalf of the government, encouraging its members of staff to comply with the rules and regulations, this impacts through decreasing the incidence of the option for informal entrepreneurship. As well-designed political system protects property, human rights and political liberties, thus encouraging the participation of citizens in economic life. Attention to these relationships thus holds significant relevance to understanding the effects of political and economic institutions on the different forms of entrepreneurship.

As a result of this research, we have pointed out some fundamental implications of our research. Taking into account that companies are embedded in a medium of great uncertainty and complexity, the ability to adapt to these contingencies is fundamental. The greater their adaptability, the greater their competitive advantage over their competitors. Thus, these entrepreneurs who live in the shadow of formalised entrepreneurs will only be able to compete with their competitors in the formal sector if they make the choice to legalise their businesses. On the policy side we can suggest an interventionist option such as deregulating slightly formal entrepreneurship. Relying on the belief that the EI arises due to excessive market regulation, the aim is to deregulate the formal economy so that all activities are carried out in a simpler and less bureaucratic way. Another interventionist option is to try to eradicate entrepreneurship in the informal sector. To achieve this, informal entrepreneurs have to be seen as “rational economic actors” who will avoid taxes while the payment is greater than the expected cost of being caught and punished and the change is sought to change the cost/benefit ratio by confronting those involved or thinking about participating in the IE.

For future research, we would point to the relevance of deepening some of the questions raised by the empirical evidence obtained here and requiring answering by future research studies: What is the impact of informal entrepreneurship on risk capital flows? Risk capital and attracting investors are also highly important to innovation processes and companies

entering the formal sector. Hence, investors tend to place their investment options in economies where the quality of their political and economic institution is not open to question. Hence, this would determine whether informal entrepreneurship generates a negative impact on the availability of risk capital. Finally, and no less importantly, we know that behind these companies are their entrepreneurs and identifying the motives that drive recourse to informal entrepreneurship holds the greatest of importance. A final question for future research might thus be: What are the motives driving recourse to informal entrepreneurship? While the current study makes contributions towards clarifying the role of economic and political institutions in informal entrepreneurship, this field of research still has a long path ahead.

References

- Acemoglu, D. and Robinson, J.A. (2012), *Why Nations Fail: The Origins of Power, Prosperity and Poverty*, Profile Books, London.
- Anokhin, S. and Schulze, W.S. (2009), "Entrepreneurship, innovation, and corruption", *Journal of Business Venturing*, Vol. 24 No. 5, pp. 465-476.
- Aparicio, S., Urbano, D. and Audretsch, D. (2016), "Institutional factors, opportunity entrepreneurship and economic growth: panel data evidence", *Technological Forecasting and Social Change*, Vol. 102, pp. 45-61, available at: <http://doi.org/10.1063/1.2756072>
- Armanios, D.E., Eesley, C.E., Li, J. and Eisenhardt, K.M. (2017), "How entrepreneurs leverage institutional intermediaries in emerging economies to acquire public resources", *Strategic Management Journal*, Vol. 38 No. 7, pp. 1373-1390.
- Arias, X.C. and Caballero, G. (2006), El retorno de las instituciones y lateoría de política económica, Netbibli
- Ashcroft, B., Plotnikova, M. and Ritchie, D. (2007), "New firm formation in British counties: comparing the 1990s with the 1980s", No. 6, Centre for Public Policy for Regions, University of Glasgow, Glasgow.
- Audretsch, D.B. (2003), *Entrepreneurship: A Survey of the Literature*, European Commission, Brussels, Enterprise Papers No. 14.
- Autio, E. and Acs, Z. (2010), "Intellectual property protection and the formation of entrepreneurial growth aspirations", *Strategic Entrepreneurship Journal*, Vol. 4 No. 3, pp. 234-251.
- Autio, E. and Fu, K. (2015), "Economic and political institutions and entry into formal and informal entrepreneurship", *Asia Pacific Journal of Management*, Vol. 32 No. 1, pp. 67-94.
- Ayotte, K. (2007), "Bankruptcy and entrepreneurship: the value of a fresh start", *Journal of Law, Economics, and Organization*, Vol. 23 No. 1, pp. 161-185.
- Başbay, M.M., Elgin, C. and Torul, O. (2018), "Socio-demographics, political attitudes and informal sector employment: a cross-country analysis", *Economic Systems*, Vol. 42, pp. 556-568.
- Baumol, W.J. (1990), "Entrepreneurship: productive, unproductive, and destructive", *Journal of Political Economy*, Vol. 98 No. 5, pp. 893-921.
- Baumol, W.J. (2002), *The Free-Market Innovation Machine: Analyzing the Growth Miracle of Capitalism*, Princeton University Press, Princeton, NJ.
- Birsch, D.G.W. (1979), *The Job Generation Process. MIT Program on Neighborhood and Regional Change*, Vol. 302, Massachusetts Institute Technology.
- Boettke, P.J. and Coyne, C.J. (2009), "Context matters: institutions and entrepreneurship", *Foundations and Trends in Entrepreneurship*, Vol. 5 No. 3, pp. 135-209.
- Bogliacino, F. and Pianta, M. (2016), "The Pavitt Taxonomy, revisited: patterns of innovation in manufacturing and services", *Economics & Politics*, Vol. 33 No. 2, pp. 153-180, available at: <http://dx.doi.org/10.1007/s40888-016-0035-1>

- Bowen, H. and De Clercq, D. (2008), "Institutional context and the allocation of entrepreneurial effort", *Journal of International Business Studies*, Vol. 39 No. 4, pp. 747-767.
- Busenitz, L., Gómez, C. and Spencer, J. (2000), "Country institutional profiles: unlocking entrepreneurial phenomena", *Academy of Management Journal*, Vol. 43 No. 5, pp. 994-1003.
- Chen, J. and Quang, T. (2014), "The impact of international financial integration on economic growth: new evidence on threshold effects", *Economic Modelling*, Vol. 42, pp. 475-489.
- Chen, M. (2012), "The informal economy: definitions, theories and policies", WIEGO Working Paper No. 1, available at: www.wiego.org/sites/default/files/publications/files/Chen_WIEGO_WP1.pdf
- Dau, L.A. and Cuervo-Cazurra, A. (2014), "To formalize or not to formalize: entrepreneurship and pro-market institutions", *Journal of Business Venturing*, Vol. 29 No. 5, pp. 668-686.
- De Castro, J.O., Khavul, S. and Bruton, G.D. (2014), "Shades of grey: how do informal firms navigate between macro and meso institutional environments?", *Strategic Entrepreneurship Journal*, Vol. 8 No. 1, pp. 75-94, doi: 10.1002/sej.1172.
- Desai, M., Gompers, P. and Lerner, J. (2003), "Institutions, capital constraints and entrepreneurial firm dynamics: evidence from Europe", Organizations and Markets Research Papers No. 03-59, Harvard Negotiation, available at: www.pon.harvard.edu/courses-and-training/3-day/special-three-day-combined-program/?c1=GAW_SE_NW&source=USA_BR&cr2=search-nw-usa-brand-harvard-negotiation-mod&kw=PLUSharvardPLUSnegotiation&cr5=201436611280&cr7=c&mqsc=GAWSENW-USABR-PLUSharvardPLUSnegotiation-201436611280&gclid=CjwKCAjw-vjqBRA6EiwAe8TCkyjRaPGL4VCZP4-b8X5riRoNH1x28tXKMRAKISsFeo9SWcEP4yq4WRoC4qkQAvD_BwE
- de Soto, H. (1989), *The Other Path: The Invisible Revolution in the Third World*, Harper & Row, New York, NY.
- de Soto, H. (2000), *The Mystery of Capital*, Bantam Press, New York, NY.
- de Soto, H. (2002), *The Other Path: The Economic Answer to Terrorism*, Harper & Row, London.
- Djankov, S., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2002), "The regulation of entry", *Quarterly Journal of Economics*, Vol. 117 No. 1, pp. 1-35.
- Djankov, S., Lieberman, I., Mukherjee, J. and Nenova, T. (2003), "Going informal: benefits and costs", in Belev, B. (Ed.), *The Informal Economy in the EU Accession Countries: Size, Scope, Trends and Challenges to the Process of EU Enlargement*, Center for the Study of Democracy, Sofia.
- Estrin, S., Korosteleva, J. and Mickiewicz, T. (2013), "Which institutions encourage entrepreneurial growth aspirations?", *Journal of Business Venturing*, Vol. 28 No. 4, pp. 564-580.
- Farr, W.K., Lord, R.A. and Wolfenbarger, J.L. (1998), "Economic freedom, political freedom, and economic well-being: a causality analysis", *CATO Journal*, Vol. 18 No. 2, pp. 247-262.
- Feng, Y. (2002), "Political freedom, political instability, and policy uncertainty: a study of political institutions and private investment in developing countries", *International Studies Quarterly*, Vol. 45 No. 2, pp. 271-294.
- Fuentelsaz, L., González, C. and Maicas, J.P. (2018), "Formal institutions and opportunity entrepreneurship: the contingent role of informal institutions", *BRQ Business Research Quarterly*, Vol. 22 No. 1, pp. 5-24, doi: 10.1016/j.brq.2018.06.002.
- Gentry, W.M. and Hubbard, R.G. (2000), "Tax policy and entrepreneurial entry", *American Economic Review*, Vol. 90 No. 2, pp. 283-287.
- GGDC (2009), "The Conference Board Total Economy Database", Groningen Growth and Development Centre, available at: www.rug.nl/ggdc/overview-databases/tedaccessonline10feb.2019
- Gwartney, J. and Lawson, R. (2009), "Economic freedom of the world: 2009 annual report", The Fraser Institute, Vancouver, available at: www.fraserinstitute.org/sites/default/files/EconomicFreedomoftheWorld2009.pdf (accessed 20 February 2019).
- Holmes, R.M., Miller, T., Hitt, M. and Salmador, M.P. (2013), "The interrelationships among informal institutions, formal institutions, and inward foreign direct investment", *Journal of Management*, Vol. 39 No. 2, pp. 531-566.

- Kanniainen, V. and Vesala, T. (2005), "Entrepreneurship and labor market institutions", *Economic Modelling*, Vol. 22 No. 5, pp. 828-847.
- Klapper, L., Laeven, L. and Rajan, R. (2006), "Entry regulation as a barrier to entrepreneurship", *Journal of Financial Economics*, Vol. 82 No. 3, pp. 591-629, doi: 10.1016/j.jfineco.2005.09.006.
- Knowles, S. and Weatherson, C. (2006), "Informal institutions and cross-country income differences", Economics Discussion Papers No. 0604, University of Otago, Dunedin.
- La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2006), "What works in securities laws?", *Journal of Finance*, Vol. 61 No. 1, pp. 1-67.
- Lee, S.H., Yamakawa, Y., Peng, M.W. and Barney, J.B. (2011), "How do bankruptcy laws affect entrepreneurship development around the world?", *Journal of Business Venturing*, Vol. 26 No. 5, pp. 505-520.
- Lerner, J. and Schoar, A. (2005), "Does legal enforcement affect financial transactions? The contractual channel in private equity", *Quarterly Journal of Economics*, Vol. 120 No. 1, pp. 223-246.
- Levie, J. and Autio, E. (2008), "A theoretical grounding and test of the GEM model", *Small Business Economics*, Vol. 31 No. 3, pp. 235-263.
- Levie, J. and Autio, E. (2011), "Regulatory burden, rule of law, and entry of strategic entrepreneurs: an international panel study", *Journal of Management Studies*, Vol. 48 No. 6, pp. 1392-1419.
- Li, Q. and Resnick, A. (2003), "Reversal of fortunes: democratic institutions and foreign direct investment inflows to developing countries", *International Organization*, Vol. 57 No. 1, pp. 175-212.
- Li, Y. and Zahra, S. (2012), "Formal institutions, culture, and venture capital activity: a cross-country analysis", *Journal of Business Venturing*, Vol. 27 No. 1, pp. 95-111.
- McMullen, J.S., Bagby, D.R. and Palich, L.E. (2008), "Economic freedom and the motivation to engage in entrepreneurial action", *Entrepreneurship Theory and Practice*, Vol. 32 No. 5, pp. 875-895.
- Nielsen, B. and Smeets, S. (2018), "The role of the EU institutions in establishing the banking union: collaborative leadership in the EMU reform process", *Journal of European Public Policy*, Vol. 25 No. 9, pp. 1233-1256, doi: 10.1080/13501763.2017.1285342.
- North, D.C. (1990), *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, Cambridge.
- North, D.C. (1993), "Institutions and credible commitment", *Journal of Institutional and Theoretical Economics (Zeitschrift Fur Die Gesamte Staatswissenschaft)*, Vol. 149 No. 1, pp. 11-23.
- OECD (2015), "Policy brief on informal entrepreneurship: entrepreneurial activities in Europe", Publications Office of the European Union, Luxembourg.
- OIT (2019), "Trabalhar Para um Futuro Melhor", OIT, Lisboa, available at: www.ilo.org/wcmsp5/groups/public/—europe/—ro-geneva/—ilo-lisbon/documents/publication/wcms_677383.pdf (accessed 1 April 2019).
- Ouardighi, J. (2011), "Pro-development economic growth and international income mobility: evidence worldwide", *International Economics*, Vol. 128, pp. 77-96.
- Pejovich, S. (1999), "The effects of the interaction of formal and informal institutions on social stability and economic development", *Journal of Markets and Morality*, Vol. 2 No. 2, pp. 164-181.
- Puddington, A. (2012), "Freedom in the world 2012: the Arab uprisings and their global repercussions", Freedom House Report, available at: <https://freedomhouse.org/report/freedom-world/freedom-world-2012> (accessed 10 February 2019).
- Quinn, D. (1997), "The correlates of change in international financial regulation", *American Political Science Review*, Vol. 91 No. 3, pp. 531-551, doi: 10.2307/2952073.
- Rajan, R. and Zingales, L. (1998), "Financial dependence and growth", *American Economic Review*, Vol. 88 No. 3, pp. 559-586.
- Root, H.L. (1996), *Small Countries, Big Lessons: Governance, and the Rise of East Asia*, Oxford University Press, New York, NY.

- Sine, W.D., David, R. and Mitsuhashi, H. (2007), "From plan to plan: effects to certification on operational start-up in the emergente independet power sector", *Orgazation Sciente*, Vol. 18 No. 4, pp. 578-594.
- Sobel, R. (2008), "Testing Baumol: institutional quality and the productivity of entrepreneurship", *Journal of Business Venturing*, Vol. 23 No. 6, pp. 641-655.
- Subramaniam, M., Ernst, H. and Dubiel, A. (2014), "From the special issue editors: innovations for and from emerging markets", *Journal of Product Innovation Management*, Vol. 32 No. 1, pp. 5-11, doi: 10.1111/jpim.12167.
- Verheul, I., Wennekers, S., Audretsch, D. and Thurik, R. (n.d.), "An eclectic theory of entrepreneurship: policies, institutions and culture", *Entrepreneurship: Determinants and Policy in a European-US Comparison*, pp. 11-81, doi: 10.1007/0-306-47556-1_2.
- Webb, J.W., Ireland, R.D. and Ketchen, D.J. (2014), "Towards a greater understanding of entrepreneurship and strategy in the informal economy", *Strategic Entrepreneurship Journal*, Vol. 8 No. 1, pp. 1-15.
- Webb, J.W., Bruton, G.D., Tihanyi, L. and Ireland, R.D. (2013), "Research on entrepreneurship in the informal economy: framing a research agenda", *Journal of Business Venturing*, Vol. 28 No. 5, pp. 598-614.
- Webb, J.W., Tihanyi, L., Ireland, R.D. and Sirmon, D.G. (2009), "You say illegal, I say legitimate: entrepreneurship in the informal economy", *Academy of Management Review*, Vol. 34 No. 3, pp. 492-510.
- Weingast, B.R. (1995), "The economic role of political institutions: market-preserving federalism and economic development", *Journal of Law, Economics, & Organization*, Vol. 11 No. 1, pp. 1-31.
- Weingast, B.R. (1997), "The political foundations of democracy and the rule of law", *American Political Science Review*, Vol. 91 No. 2, pp. 245-263.
- Welter, F. and Smallbone, D. (2014), "Institutional perspectives on entrepreneurial behavior in challenging environments", *IEEE Engineering Management Review*, Vol. 42 No. 2, pp. 35-50.
- Williams, C. and Shahid, M. (2016), "Informal entrepreneurship and institutional theory: explaining the varying degrees of (in)formalization of entrepreneurs in Pakistan", *Entrepreneurship & Regional Development*, Vol. 28 Nos 1-2, pp. 1-25, doi: 10.1080/08985626.2014.963889.
- Williams, C.C. (2014), "Tackling enterprises operating in the informal sector in developing and transition economies: a critical evaluation of the neo-liberal policy approach", *Journal of Global Entrepreneurship Research*, Vol. 2 No. 9, available at: www.journal-jger.com/content/2/1/9 <http://dx.doi.org/10.2139/ssrn.1884493>
- Williams, N. and Vorley, T. (2014), "Institutional asymmetry: how formal and informal institutions affect entrepreneurship in Bulgaria", *International Small Business Journal*, Vol. 33 No. 8, pp. 840-861, doi: 10.1177/0266242614534280.
- Yang, D., Eesley, C.E., Tian, X. and Roberts, E. (2014), "Institutional flexibility and entrepreneurship", available at: <https://pdfs.semanticscholar.org/48b6/42b39d4b543403a4d9bd53ef1a20c42b17b4>.
pdf <http://dx.doi.org/10.2139/ssrn.1884493> (accessed 20 February 2019).

Further reading

- Autio, E. and Fu, K. (2012), "Allocation of effort into informal entrepreneurship: institutional and individual-level effects", working paper, Imperial College Business School, London.
- Fu, X., Mohnen, P. and Zanello, G. (2018), "Innovation and productivity in formal and informal firms in Ghana", *Technological Forecasting & Social Change*, Vol. 131, pp. 315-325.
- Goel, R.K., Saunoris, J.W. and Zhang, X. (2015), "Innovation and underground entrepreneurship", *Journal of Technology Transfer*, Vol. 40 No. 5, pp. 800-820.
- ILO (2012), "Statistical update on employment in the informal economy", International Labour Organisation, Geneva.

- Mujeyi, K., Mutambara, J., Siziba, S., Sadomba, W. and Manyati, T. (2015), "Entrepreneurial innovations for agricultural mechanization in Zimbabwe: evidence from an informal metal industry survey", *African Journal of Science, Technology, Innovation and Development*, Vol. 7 No. 4, pp. 276-285, doi: 10.1080/20421338.2015.1082367.
- Welter, F., Smallbone, D. and Pobol, A. (2015), "Entrepreneurial activity in the informal economy: a missing piece of the entrepreneurship jigsaw puzzle", *Entrepreneurship & Regional Development*, Vol. 27 Nos 5-6, pp. 292-306.
- Williams, C.E. and Bezeredi, S. (2018), "An institutional theory of informal entrepreneurship: some lessons from for Macedonia", *Journal of Development Entrepreneurship*, Vol. 23 No. 3, 22pp., available at: <https://Doi.Org/10.1142/S108494671850019x>

Corresponding author

Cristina I. Fernandes can be contacted at: cristina.isabel.fernandes@ubi.pt