REM WORKING PAPER SERIES

Creating businesses in the Least Developed Countries: does the Regulatory Environment Matter?

António Afonso, M. Carmen Blanco-Arana

REM Working Paper 0377-2025

April 2025

REM – Research in Economics and Mathematics
Rua Miguel Lúpi 20,
1249-078 Lisboa,
Portugal

ISSN 2184-108X

Fundação para a Ciência e a Tecnologia
U LISBOA | UNIVERSIDADE DE LISBOA
ISEG Lisbon School of Economics & Management Universidade de Lisboa
REM RESEARCH IN ECONOMICS AND MATHEMATICS

REM – Research in Economics and Mathematics

Rua Miguel Lupi, 20
1249-078 LISBOA
Portugal

Telephone: +351 - 213 925 912
E-mail: rem@iseg.ulisboa.pt

https://rem.rc.iseg.ulisboa.pt/

https://twitter.com/ResearchRem

https://www.linkedin.com/company/researchrem/

https://www.facebook.com/researchrem/

Creating businesses in the Least Developed Countries: does the Regulatory Environment Matter?

António Afonso[$], M. Carmen Blanco-Arana[#]

April 2025

Abstract

This paper assesses the impact of the regulatory environment on the new business creation in 45 Least Developed Countries (LDC) using a panel data from 2000 to 2021. Empirical evidence, derived from a fixed effects (FE) model, indicates a strong relationship between business regulation and new business creation in LDC. This suggests that the regulatory framework of a country is a crucial factor that influences entrepreneurial decisions and can significantly contribute to economic growth. The overall economic situation of a country also has a positive and significant impact. Additionally, factors such as accessibility to financial services, political stability, control of corruption, and economic freedom clearly affect the establishment of new businesses in these countries. Similar results are obtained using the Generalised Method of Moments (GMM) estimator, through the use of a dynamic panel data approach. Finally, business regulation is also strongly associated with new business creation in OECD countries.

Keywords: New business, regulatory environment, FE, GMM, panel data, LDC.
JEL: M20, G18, C23

[$] ISEG – Lisbon School of Economics and Management, Universidade de Lisboa; REM – Research in Economics and Mathematics, UECE – Research Unit on Complexity and Economics. CESifo Research Fellow (Center for Economic Studies and Ifo Institute). email: aafonso@iseg.ulisboa.pt. ORCID ID: 0000-0002-6926-2653

[#] Faculty of Economics and Business Studies, University of Malaga, Department of Applied Economics (Public Finance, Economic Policy and Political Economy), Spain. Email: c.blancoarana@uma.es. ORCID ID: 0000-0002-8241-6573

1. Introduction

It is well known that entrepreneurial activity plays a vital role in a country's economic growth and overall economic development by creating new jobs, and this should also be relevant in the case of the Least Developed Countries (LDC). In this context, the businesses and the factors that influence their creation could contribute to the economic and social development of countries, especially in those with scant resources. Accordingly, entrepreneurial environment helps our understanding of businesses and the ways in which businesses survive and thrive through multiple generations. Thus, business creation drives job creation, economic diversification, and increased competitiveness in the global market. In addition, good rules create an environment where new participants with drive and innovative ideas can get started in business and where productive businesses can invest, expand and create new jobs for themselves and their families.

The unleashing of entrepreneurship requires an environment that enables the entrepreneur to create, operate, manage and, if necessary, close a business within a context that guarantees compliance with the rule of law governing disclosure, licensing and registration procedures, and the protection of physical and intellectual property(UNCTAD, 2024). The regulatory environment should encourage entrepreneurs and their families to set up their own businesses, to try new business ideas and to assume calculated risks, whilst maintaining administrative burdens to the minimum that is required to support public policy and sustainable development objectives.

Furthermore, in line with Dixon et al. (2006), as the economic power of private sector business has grown over the past century, so too has the number of laws regulating business activity. In broad terms, these laws typically serve one of two objectives: to promote market competition and control the market power of large companies over customers and smaller companies, or to mitigate the adverse effects of business activity on individuals and other organisations. The enforcement of regulations on businesses can benefit a range of stakeholders, including corporate and financial institutions, interest groups, employees, customers, and the general public.

In this context, businesses can thrive and drive economic growth only when a sound legal and regulatory environment is in place, characterised by a level playing field, transparent and supportive rules and regulations, as well as strong enforcement institutions and mechanisms. Such a legal and regulatory environment reduces transaction costs and non-commercial risks and helps to create fair competition for businesses (African Development Report, 2011).

According to Gashi et al. (2024), families' motivation to become entrepreneurs by creating new business is fuelled by both extrinsic (such as financial aspect, power, and social standing) and intrinsic rewards (such as job satisfaction, self-fulfilment, and wellbeing). Thus, while "being your own boss" is highly appealing and offers a fulfilling experience (Stephan et al., 2020), on the contrary, the path to entrepreneurial success is not a straight line (Gashi el al., 2024) and it is widely accepted that entrepreneurs often experience profound negative emotions, which can adversely affect their overall wellbeing. Therefore, the presence of a good regulatory environment is essential, especially in less-developed countries.

According to Aparicio and Iturralde (2023), studies on corporate sustainability have grown over the past two decades, partly in response to the social, human, and environmental costs and externalities of unsustainable company practices. Accordingly, the Sustainable Development Goals (SDGs) require companies to play an active role in their commitment to sustainable development. Furthermore, a well-developed sustainability plan can help the company reduce risk and position itself to leverage value creation opportunities (Carroll et al., 2022).

Entrepreneurship, or the activity of starting and running a business, is a vital ingredient of economic growth and development, especially for developing countries (see for instance, Kim, et al., 2022, Blanco-Arana and Angulo-Guerrero, 2024). Thus, entrepreneurs can contribute to broader economic dynamism. It is well known that creating new business plays a vital role in a country's growth and overall economic development by creating new jobs and opportunities; however, to achieve it, is a responsive business regulatory environment essential in LDC?

In this context, the role of governments is crucial: for the way that they set the minimum requirements for new businesses in order to increase their efficiency, expand and create new jobs. In this paper, specific measures to better address such situations in the future will be highlighted.

The stimulus of the regulatory environment on creating new businesses in 45 LDC during the period of 2000-2021 is assessed in this paper. The study uses a panel data set for the LDC, using different specifications through a FE model and the GMM method. Therefore, the question whether countries' regulatory environments are a prominent factor for the creation of new businesses and whether these play a significant role in boosting economic growth is considered. At the same time, other relevant characteristics of these countries, which could influence this achievement, such as accessibility of

financial services, political stability, the control of corruption and economic freedom are considered. In short, the empirical evidence, derived from a FE model, indicates a strong relationship between business regulation and new business creation in the LDC.

The remainder of the paper is as follows: Section 2 reviews the literature; Section 3 describes the data and the variables used in this work and discusses the methodology; and Section 4 presents the results. Section 5 concludes.

2. Literature

In the discourse on businesses and regulatory environment, excessive business regulations, complicated permit procedures, and opaque tax assessment rules are among the major business regulatory issues noted. For example, Africa's legal and regulatory environment ranks amongst the least business friendly in the world (African Development Report, 2011).

The African Development Report (2011) concludes that introducing one-stop shops for entrepreneurs, making the minimum capital requirement to start a business affordable, simplifying taxes, promoting fair competition, and strengthening insolvency laws would all significantly help the private sector develop and thrive. Over two thirds of businesses in Africa rated at least one or a combination of regulatory issues as major or severe business constraints. Other indicators confirm that the legal and regulatory environment in Africa is relatively restrictive. Starting a business in most African countries is complicated and costly compared to other developing regions, as is obtaining construction permits and property registration. Corruption also weighs on doing business. If Africa's private sector is to become more competitive, the region's legal and regulatory environment needs to make starting and doing business easier.

Cordier and Bade (2023) empirically examine the relationship between business regulation and total entrepreneurship using a unique panel data set. They estimate separate regressions for opportunity-driven and necessity-driven nascent entrepreneurship, as well as young business entrepreneurship, based on two different estimation methods: Pooled Ordinary Least Squares (OLS) and system GMM. Cordier and Bade's results show that business regulation generally hinders entrepreneurship; however, the authors find different results for high-income and lower-income countries. Firstly, they surprisingly find that stricter employment protection legislation positively affects entrepreneurship in lower-income countries where the informal sector is larger. This might be because more rigid employment laws make salaried employment less attractive to employers, obliging

employees to opt for dependent or informal self-employment. Secondly, the authors find that stricter insolvency regulation only restricts entrepreneurship in high-income economies. In the case of lower-income economies, where unregistered businesses are more prevalent, insolvency laws may be more difficult to enforce, and thereby entrepreneurship rates are less affected. Thirdly, the authors find that government intervention in the form of high-quality governmental support programmes stimulates nascent opportunities and young business entrepreneurship.

The relationship between businesses and the regulatory environment has been less acknowledged in the economic literature; albeit the relevant literature recognises entrepreneurship as a mechanism that can impact economic growth. For example, Ferreira et al. (2017) explore the effects of Schumpeterian and Kirznerian entrepreneurship on economic growth across 43 countries for the period of 2009-2013. Their results show that neither Schumpeterian nor Kirznerian entrepreneurship return any statistically-significant effects on the Global Competitiveness Index or on GDP growth. However, the Total Early-Stage Entrepreneurial Activity variable generates a positive effect on the Global Competitiveness Index.

Consequently, governments engage in infrastructure development across the globe, whose level of success is often related with the levels of institutional quality. Accordingly, Apphiah et al. (2024) show that the interaction of institutional quality measures and governance indicators significantly and positively instigate infrastructure in sub-Saharan Africa. The provision of policy frameworks by authorities to strengthen institutions and promote good governance is thus vital for articulating and facilitating infrastructure development plans for these regions.

Furthermore, the literature shows that entrepreneurial activity plays a vital role in a country's growth and overall economic development by creating new jobs. Much research has found that entrepreneurship can help facilitate economic growth by creating new jobs and increasing the income of families and vice versa; as well as improving the wellbeing of countries fostering the creation of new businesses (see, for example, van Stel et al., 2005; Acs, 2006; Kim et al., 2022).

Furthermore, other contextual factors exist in the poorest countries, which may influence the creation of new businesses. It is well known that different levels of these factors impact wellbeing in different regions; such as politics and corruption (Bayar and Aytemiz, 2015; Spyromitros and Panagiotidis, 2022), economic freedom (Angulo-

Guerrero et al., 2017; Afonso and Blanco-Arana, 2024), and the accessibility of financial services (Sawadogo and Semedo, 2021).

3. Data and methodology

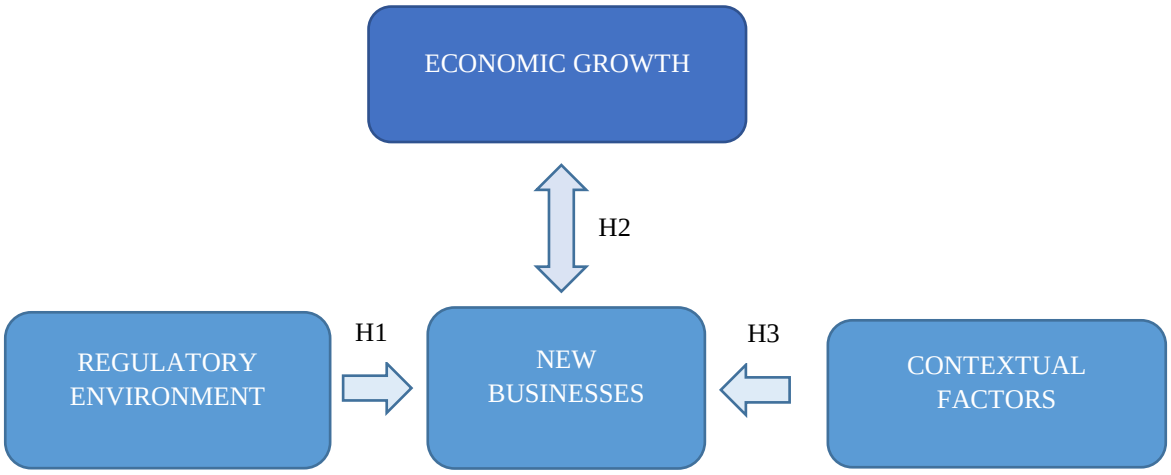
Based on the afore-mentioned findings and ideas that emerge from the literature review, the following main hypothesis for the LDC (see, Figure 1) may be formulated:

H1. Regulatory environment positively impacts the creation of new businesses. Furthermore, there other concerns related to the creation of new businesses may exist.

H2. Creation of new businesses promotes growth and, in turn, growth fosters the creation of new businesses.

H3. Contextual factors such as accessibility, political stability, the control of corruption and economic freedom have a clear impact on the creation of new businesses.

Figure 1. Links between new businesses, the regulatory environment, growth and other contextual factors



Source: Authors' own elaboration.

This section goes on to describe the database used and discusses the methodological approach proposed to analyse the influence of regulatory environment on the creation of new businesses in the 45 LDC under study (see the Appendix for the list of countries). These countries constitute the poorest and weakest economic segment of

the international community and, although there are significant differences among them, they present the lowest human development index ratings of all the countries in the world. Therefore, it is of interest to assess how the regulatory environment can foster the creation of new businesses in that group of economies.

3.1. Data

Data[1] from the World Development Indicators (World Bank, 2024) and from the Heritage Foundation (2024) has been used specifically. As the LDC constitute the poorest and weakest segment of the international community, it is accordingly difficult to obtain valid data that is required for the econometric analysis. Although the database used it is a rich source of data, it lacks statistical information for some countries in the LDC group and, accordingly, there are gaps in the data for some of the years analysed in the case of certain countries. Therefore, the analysis is carried out with an unbalanced panel that solely uses the information that is available for all the countries and periods under study, as is usually the case in the literature in studies about this group of countries.

Dependent variable

As a dependent variable, new businesses registered is used, which refers to the number of new limited liability companies (or its equivalent) registered in the respective calendar year.

Explanatory variables

The World Bank's Country Policy and Institutional Assessment (CPIA) assesses the conduciveness of a country's policy and institutional framework to sustainable growth. Thus, as a potential explanatory variable, the CPIA business regulatory environment rating (1=low to 6=high) is used. The business regulatory environment assesses the extent to which the legal, regulatory, and policy environments help or hinder private businesses in investing, creating jobs, and enable them to be more productive.

In addition, bearing in mind that GDP per capita measures the level of economic development, per capita GDP was introduced, having been adjusted for differences across countries at purchasing power parity (PPP) – more specifically real GDP per capita in constant 2017 international US dollars.

[1] More details are available in the Appendix.

Control variables

Gashi et al. (2024) demonstrate that greater political stability leads to an improved level of wellbeing for entrepreneurs, which is highly significant. Corruption, paying tax, regulations, and business freedom are also significant variables, which are related to the life satisfaction of entrepreneurs, which in turn can lead to the decision to create new family businesses. Similarly, El Ghoul et al. (2023) find supportive evidence that companies hold less cash when economic policy uncertainty is high.

The specification includes other variables related with politics and corruption, as different levels of these variables may impact wellbeing in different regions (Bayar and Aytemiz, 2015; Spyromitros and Panagiotidis, 2022; Afonso and Pinto, 2024). Political stability and the absence of violence/terrorism (political stability) measure perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism. The estimate provides a country's score for the aggregate indicator in units of a standard normal distribution, i.e., ranging from approximately -2.5 to 2.5. In this context, the World Bank's Country Policy and Institutional Assessment (CPIA) assesses the conduciveness of a country's policy and institutional framework to sustainable growth. Accordingly, CPIA transparency, accountability, and corruption in the public sector rating (corruption) are included in the study.

In addition, the Index of Economic Freedom published by the Heritage Foundation to measure economic freedom is used, particularly as it is frequently used by scholars, policy-makers, and international organisations alike. The Index measures economic freedom based on 12 quantitative and qualitative factors which are grouped into four broad categories, or pillars, of economic freedom, namely: i) rule of law (property rights, government integrity, judicial effectiveness); ii) government size (government spending, tax burden, fiscal health); iii) regulatory efficiency (business freedom, labour freedom, monetary freedom); and iv) open markets (trade freedom, investment freedom, financial freedom). Each of the 12 economic freedom factors within these categories is graded on a scale of 0 to 100 (where 0 corresponds to the highest restraints, and 100 corresponds to the maximum level of flexibility). A country's overall score is derived by averaging these 12 economic freedoms, with equal weights being given to each. Thus, in line with Angulo-Guerrero et al. (2017) and Afonso and Blanco-Arana (2024), the Economic Freedom (EF) index is included as an explanatory variable in the models developed.

Furthermore, in line with Sawadogo and Semedo (2021), an accessible and open financial system can improve economic and social prospects, especially in countries eager

to become more developed. Accordingly, countries suffering from inadequate or scant banking services and a lack of bank branches need to improve in order to encourage people to participate in the financial system and, which in turn fosters growth – for example, by creating new businesses. Accessibility is measured as the number of commercial bank branches per 100,000 adults. Commercial bank branches are retail outlets of resident commercial banks (and other resident banks that function as commercial banks) that provide financial services to customers and which are physically separated from the main office, but not organised as legally separated subsidiaries.

3.2. Methodology

With the objective of analysing the effects of regulatory environment on creating new business in the LDC during the period 2000–2021, a baseline model with panel data is first estimated. Some of the advantages and disadvantages of the use of panel data are listed in the study carried out by Baltagi (2001). Among the advantages, the following are pertinent: control over individual heterogeneity, greater variability, less collinearity between variables, more degrees of freedom, greater efficiency, better adaptation to the study of adjustment dynamics, better adequacy for identifying and measuring effects that are not detectable in pure cross-sectional or time-series data, and better analysis capacity in more complicated behaviours. In terms of disadvantages, panel data presents the problem of data collection, distortions due to measurement errors, and the short time dimension that is generally found in the data sets.

According to Hausman and Taylor (1981), one of the most noteworthy characteristics of the use of panel data is the ability to control specific individual effects that may be correlated with other variables. Firstly, the basic approach to regression analysis with panel data such as pooled regression needs to be considered. The advantage of using estimation through Ordinary Least Squares (OLS) lies in the simplification that results from the ability to determine the value of a certain endogenous variable through a linear relationship with all the exogenous variables employed in the system. In contrast, the main drawback of the OLS method lies precisely in the simplification of the model, where the correlation of individual errors with observations is not corrected and, therefore the resulting estimates will be biased. In this direction, the null hypothesis of ‘no country effects’ is rejected by the Breusch-Pagan test, implying that a pooled regression model is inappropriate, as estimates made with pooled OLS would be biased (Breusch and Pagan, 1980). Therefore, the use of panel data is key, as it enables consideration of the existence

of individual effects that are not controlled by the explanatory variables observed in the model and, in addition, controlling for variables that change over time. Furthermore, the use of panel data offers more informative data and, as stated above, more variability, less collinearity, and a greater degree of freedom (Klevmarken, 1989; Hsiao, 2003). Thus, and because the considered series are sufficiently long, an estimation based on panel data is used. Therefore, given the specification of the baseline model, a FE model is estimated. The random effect model is rejected by the standard Hausman (1978) test in favour of the FE model, which supports the choice of assuming a FE regression method. The FE estimator ensures that differences between states are a constant correlation. Thus, the panel data model is conventionally estimated with country FE.

In sum, the baseline model proposed is as follows:

$$NB_{it} = \beta_0 + \beta_1 BR_{it} + \beta_2 LnGDP_{it} + \beta_3 X_{it} + \beta_4 crisis_{it} + \beta_5 pandemic_{it} + v_i + u_{it} \quad (1)$$

where NB_{it} refers to the new businesses registered of each country *i* at time *t*; BR_{it} refers to business regulatory environment rating of each country *i* at time *t*; GDP_{it} refers to the log GDP per capita for each country *i* at time *t*; X_{it} are the control variables of each country *i* at time *t* mentioned above; v_i is the intercept for each country *I*; and u_{it} are the individual errors. The effect of crisis through a dummy variable that takes a value of 1 if it covers the crisis period (2008-2011), and 0 otherwise, is then introduced. Finally, the effect of the pandemic crisis through a dummy variable that takes a value of 1 if it covers the years of the pandemic (2020-2021), and 0 otherwise, is included.

As an additional robustness test, a dynamic variant of the base model is inserted, applying the GMM estimator developed by Arellano and Bover (1995) and Blundell and Bond (1998. This method estimates a system of equations in both first differences and levels, in which the instruments in the level equations are the lagged first differences of the variables. This dynamic approach permits the inclusion of lagged values of explanatory variables, which control for omitted variables that change over time, in contrast with FE estimations, which control for country characteristics. Thus, the one-step GMM estimator with robust standard errors is used, as follows:

$$NB_{it} = \beta_0 + \beta_1 NB_{it-1} + \beta_2 BR_{it} + \beta_3 LnGDP_{it} + \beta_4 X_{it} + \beta_5 crisis_{it} + \beta_6 pandemic_{it} + \zeta_i + \omega_{it} \quad (2)$$

where NB_{it} refers to the new businesses registered of each country *i* at time *t*; NB_{it-1} refers to the new businesses registered of each country *i* at time *t-1*; BR_{it} refers to business regulatory environment rating of each country *i* at time *t*; GDP_{it} refers to the log GDP per capita for each country *i* at time *t*; X_{it} are the control variables of each country *i* at time *t* mentioned above; ζ_i captures individual-specific effects that are constant over time and not directly observed or included in the model; and ω_{it} is a normally distributed error term. Finally, the effect of crisis through a dummy variable that takes a value of 1 if it covers the period of crisis (2008-2011), and 0 otherwise, is introduced; as well as the effect of the pandemic crisis through a dummy variable that takes a value of 1 for the years 2020-2021, and 0 otherwise.

The validity of the system GMM estimator moment conditions can be tested using the null hypothesis of no order serial correlation in the error term, given the lags of the endogenous variable, using the test proposed by Arellano and Bond (1991). The Arellano–Bond test for second-order autocorrelation is thus checked to ascertain whether there is no significant serial correlation, implying that the estimator should be consistent.

4. Results and discussion

The empirical evidence shows that business regulation is strongly related to creating new businesses in the LDC in FE models (see Table 1), inferring that the existence of a good regulatory environment in a country is a key factor for the decision to create new businesses, in accordance with the expectations outlined in Hypothesis H1. Therefore, it is vital to foster a better regulatory environment where companies may operate with better conditions, which, according to Abaidoo and Agyapong (2024), promote and support efficient regulatory structures and policy measures that in turn provide a stable political environment for economies in the sub-region and contribute to promoting financial inclusiveness, fostering the creation of new businesses and promoting growth.

As expected, the economic situation of countries is also a contributing factor, confirming the hypothesis that the creation of new businesses plays a significant role in promoting growth in the LDC (H2). According to Koellinger (2008), entrepreneurs in developing countries have more confidence in their ability to transform these opportunities into new businesses. Thus, creating new businesses could be deemed a key factor in the process of development and revitalisation of certain regions endowed with

few resources leading to economic growth[2]. Furthermore, during the pandemic period, entrepreneurs made efforts to set up their own businesses, owing to the ensuing disastrous circumstances. These results are in line with those of Miroshnychenko et al. (2024), who find that the financial performance of family businesses was significantly higher than that of non-family businesses during the COVID-19 pandemic. Likewise, during the post-Covid period, it seems that, although the crisis was especially virulent for developed countries, it affected the creation of new businesses less.

Table 1. FE models

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Business regulatory	17.602***	15.268***	18.112***	17.112***	20.162***	17.680***
	[5.157]	[4.115]	[5.352]	[5.100]	[5.128]	[4.138]
LnGDP	119.433***	88.265***	112.590***	107.710***	113.523***	70.147***
	[11.406]	[10.892]	[12.096]	[12.222]	[11.308]	[11.617]
Crisis	-0.027	-0.037	-0.039	-0.043	-0.032	-0.047*
	[0.033]	[0.026]	[0.034]	[0.033]	[0.032]	[0.026]
Pandemic	0.132**	0.117**	0.126**	0.141***	0.116**	0.088*
	[0.055]	[0.046]	[0.055]	[0.054]	[0.054]	[0.046]
Accesibility		4.845***				4.827***
		[0.710]				[0.712]
EF			0.600			1.369***
			[0.549]			[0.426]
Political				8.529*		5.608*
				[4.536]		[3.687]
Corruption					-15.548***	-18.209***
					[5.628]	[4.647]
Constant	-937.595***	-712.564***	-917.821***	-840.035***	-855.384***	-600.244***
	[88.609]	[83.418]	[90.278]	[96.073]	[89.756]	[87.340]
Observations	298	262	280	292	292	253
Number of countries	34	32	33	33	33	32
Breusch-Pagan test	0.000	0.000	0.000	0.000	0.000	0.000
Hausman test	0.000	0.000	0.000	0.000	0.000	0.000

Data source: World Development Indicators & Worldwide Governance Indicators (World Bank, 2024) and Heritage Foundation (2024). Standard deviations in brackets. *** p<0.01, ** p<0.05, * p<0.1.

[2] Alternatively, a model is estimated with the objective to check if NB also causes economic growth, as suggested in H2, which is thus corroborated (see Table 1' in the Appendix with similar FE models, where instead of using NB as a dependent variable, the log of GDP per capita is used instead as a dependent variable).

Table 2. GMM models

Variables	(1)	(2)	(3)	(4)	(5)	(6)
L.NB	0.312***	0.605***	0.309***	0.301***	0.288***	0.600***
	[0.047]	[0.069]	[0.047]	[0.046]	[0.047]	[0.077]
Business regulatory	9.303**	2.646	11.023***	6.071*	6.979*	5.438
	[4.339]	[4.152]	[4.201]	[4.180]	[4.120]	[4.248]
LnGDP	103.095***	42.964***	97.664***	96.575***	97.672***	37.414**
	[13.102]	[14.906]	[13.118]	[13.235]	[12.830]	[15.579]
Crisis	-0.041*	-0.024	-0.058**	-0.049**	-0.052**	-0.032
	[0.025]	[0.024]	[0.025]	[0.024]	[0.024]	[0.025]
Pandemic	0.102***	0.049*	0.086***	0.091***	0.083**	0.045
	[0.034]	[0.035]	[0.033]	[0.033]	[0.032]	[0.036]
Accesibility		2.039***				1.950**
		[0.769]				[0.805]
EF			0.570			0.647*
			[0.477]			[0.465]
Political				4.355		4.828
				[4.530]		[4.531]
Corruption					-8.986*	-3.856
					[4.904]	[5.430]
Constant	-795.742***	-331.213***	-788.597***	-731.401***	-719.107***	-318.216***
	[101.141]	[114.633]	[104.326]	[103.277]	[101.083]	[122.555]
Observations	233	202	219	228	228	195
Number of countries	31	29	30	30	30	29
Arellano-Bond test	0.4513	0.5342	0.5155	0.5147	0.5238	0.5368

Data source: World Development Indicators & Worldwide Governance Indicators (World Bank, 2024) and Heritage Foundation (2024). Standard deviations in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Furthermore, other determinants are considered which can influence new business creation in the LDC and that may help foster economic growth. Besides the significant importance of business regulation in all the models analysed, accessibility has a clear impact on the creation of new businesses. These results are in line with those of Goel and Sharma (2017), who also stated that access to and the use of financial services are among the key drivers of economic growth and, therefore for the wellbeing of less-developed countries. In this context, Abaidoo and Agyapong (2024) find that an improved regulatory

environment promotes financial inclusion among economies in the sub-region of Sub-Saharan Africa.

In addition, political stability and absence of violence/terrorism was found to positively and significantly influence the creation of new businesses in the LDC. Furthermore, as expected, the impact of corruption negatively and significantly influences these countries, leading to the understanding, that addressing corruption in these countries is essential for some of the challenges for economic growth, in line with Afonso and Blanco-Arana (2024). The potential effects of freedom on creating new businesses were also corroborated, revealing that economic freedom is a growth stimulus factor in the LDC. In this context, similar to Afonso and Blanco-Arana (2024), the benefits of economic freedom on developing countries are that, as a system, economic freedom is most conducive to widespread prosperity and for increasing income levels, an example being the creation of new businesses, and a consequent increase in consumption by the bulk of the population. These results confirm Hypothesis H3. In turn, the findings from the FE models (in Table 1) are similar to those estimated by GMM models (Table 2), which take into consideration the lag of the dependent variable. Here, the importance of a "good" regulatory environment to promote pro-business policies which encourage entrepreneurial activities and attract investment is corroborated, which, in turn fosters economic growth in the LDC.

- **Robustness assessment**

In this case, the "Ease of doing business score (0 = lowest performance to 100 = best performance)" was used, benchmarking the ease of doing business scores across economies with respect to regulatory best practice, showing the proximity to the best regulatory performance on each Doing Business indicator. An economy's score is indicated on a scale from 0 to 100, where 0 represents the worst regulatory performance, and 100 represents the best regulatory performance. In addition, with regard to contextual variables, the Control of Corruption was used as a variable, instead of using the CPIA corruption variable.

With this analysis (see Table 1A and Table 1B), it was important to determine whether 'business regulations', as measured either by the business regulatory environment rating or by the ease of doing business scores, is strongly linked to the creation of new businesses in the LDC, in line with the expectations outlined in Hypothesis H1. Furthermore, the economic situation of countries helps growth,

confirming the hypothesis that the creation of new businesses plays a significant role in promoting growth in the LDC (H2).

Therefore, the model is the following:

$$NB_{it} = \beta_0 + \beta_1 Ease\ of\ business\ score_{it} + \beta_2 GDP_{it} + \beta_3 X_{it} + v_i + u_{it} \quad (3)$$

and the following model is also proposed:

$$GDP_{it} = \beta_0 + \beta_1 Ease\ of\ business\ score_{it} + \beta_2 NB_{it} + \beta_3 X_{it} + v_i + u_{it}. \quad (4)$$

Table 1A. FE models for LDC

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Ease business score	0.929*	0.985*	1.087**	0.871	0.846	0.922*
	[0.581]	[0.588]	[0.543]	[0.591]	[0.591]	[0.556]
GDP	0.021***	0.018***	0.014**	0.022***	0.022***	0.012**
	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]
Accesibility		3.022***				2.594**
		[1.101]				[1.012]
EF			0.074			0.055
			[0.239]			[0.235]
Political				-4.002		-3.830
				[6.604]		[6.403]
Control of Corruption					-10.415	-18.277
					[12.980]	[13.211]
Constant	-69.728**	-81.523***	-57.512**	-70.422**	-75.245***	-73.838**
	[26.974]	[28.560]	[27.936]	[27.074]	[27.878]	[28.906]
Observations	148	129	138	148	148	123
Number of countries	33	29	31	33	33	28
Breusch-Pagan test	0.000	0.000	0.000	0.000	0.000	0.000
Hausman test	0.014	0.0063	0.0185	0.0012	0.0081	0.0008

Data source: World Development Indicators & Worldwide Governance Indicators (World Bank, 2024) and Heritage Foundation (2024).
Standard deviations in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table 1B. FE models for LDC

Variables	(1)	(2)	(3)	(4)	(5)	(6)
NB	4.834***	4.678***	3.649**	4.872***	4.888***	3.770**
	[1.337]	[1.550]	[1.563]	[1.337]	[1.325]	[1.823]
Ease business score	29.885***	28.533***	31.347***	31.003***	31.588***	33.147***
	[8.364]	[9.064]	[8.516]	[8.433]	[8.342]	[9.302]
Accesibility		19.495				19.442
		[18.138]				[18.348]
EF			5.686			5.600
			[3.872]			[4.090]
Political				101.064		122.928
				[98.509]		[112.209]
Control of Corruption					337.117*	335.095*
					[190.598]	[232.385]
Constant	1,504.662***	1,615.817***	1,121.052**	1,513.923***	1,655.267***	1,340.648***
	[391.852]	[445.501]	[452.742]	[391.865]	[397.441]	[507.724]
Observations	148	129	138	148	148	123
Number of countries	33	29	31	33	33	28
Breusch-Pagan test	0.000	0.000	0.000	0.000	0.000	0.000
Hausman test	0.014	0.0063	0.0185	0.0012	0.0081	0.0008

Data source: World Development Indicators & Worldwide Governance Indicators (World Bank, 2024) and Heritage Foundation (2024).
Standard deviations in brackets. *** p<0.01, ** p<0.05, * p<0.1.

The main objective for the choice of these variables is to enable comparison with OECD countries, when this information is available, whereas CPIA values refer to support from the World Bank to low-income countries. The results (see Table 1C and Table 1D) confirm Hypothesis H1, which demonstrates that business regulation is strongly related to the creation of new businesses in OECD countries as well as other variables. In addition, the creation of new businesses plays a significant role in promoting growth in the OECD countries (H2). With regard to other contextual variables, it can be observed that economic freedom and control of corruption play a very significant role in promoting growth in OECD countries, while accessibility is negative and significant, suggesting that there are no problems of access to financial services in developed countries.

Table 1C. RE models for OECD countries

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Ease business score	28.851***	24.180***	28.852***	31.745***	27.366***	26.431***
	[9.284]	[7.926]	[9.295]	[9.535]	[9.312]	[8.188]
GDP	0.004	0.001	0.004	0.004	0.004	0.003
	[0.004]	[0.003]	[0.004]	[0.004]	[0.004]	[0.003]
Accesibility		-1.541				-1.160
		[2.618]				[2.665]
EF			-1.744			-5.700
			[5.800]			[5.038]
Political				-92.888		-62.668
				[70.080]		[61.321]
Control of Corruption					-119.325	-118.345
					[93.883]	[69.616]
Constant	-1,779.702**	-1,379.691**	-1,674.942**	-1,948.781***	-1,535.085**	-1,102.768*
	[705.255]	[623.347]	[784.085]	[716.348]	[728.182]	[725.908]
Observations	179	172	179	179	179	172
Number of countries	37	36	37	37	37	36
Breusch-Pagan test	0.000	0.000	0.000	0.000	0.000	0.000
Hausman test	0.4877	0.0925	0.6874	0.2477	0.5239	0.2259

Data source: World Development Indicators & Worldwide Governance Indicators (World Bank, 2024) and Heritage Foundation (2024).
Standard deviations in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table 1D. RE models for OECD countries

Variables	(1)	(2)	(3)	(4)	(5)	(6)
NB	1.582	1.177	1.530	1.456	1.119	2.198
	[1.570]	[2.020]	[1.495]	[1.576]	[1.549]	[2.083]
Ease business score	756.655***	519.603**	659.378***	736.076***	798.607***	476.499**
	[193.464]	[204.672]	[185.930]	[205.048]	[205.482]	[220.020]
Accesibility		-243.999***				-157.231**
		[66.665]				[70.327]
EF			487.377***			442.189***
			[111.352]			[127.888]
Political				939.411		1,089.004
				[1,522.359]		[1,618.978]
Control of Corruption					3,302.390*	2,783.696*
					[1,941.803]	[1,926.169]
Constant	-8,947.952	15,711.488	-36,231.736**	-7,818.803	-15,484.848	-18,693.135
	[15,107.951]	[16,464.080]	[15,687.555]	[15,684.636]	[16,035.214]	[19,485.261]
Observations	179	172	179	179	179	172
Number of countries	37	36	37	37	37	36
Breusch-Pagan test	0.000	0.000	0.000	0.000	0.000	0.000
Hausman test	0.4877	0.0925	0.6874	0.2477	0.5239	0.2259

Data source: World Development Indicators & Worldwide Governance Indicators (World Bank, 2024) and Heritage Foundation (2024).
Standard deviations in brackets. *** p<0.01, ** p<0.05, * p<0.1.

5. Conclusion

In this paper, an empirical analysis of the impact of the regulatory environment on the creation of new businesses in the poorest countries of the world, referred to as LDC, using an unbalanced panel dataset with various specifications spanning the period of 2000-2021. The objective of this study is to provide empirical data regarding the characteristics of the regulatory environment that may influence policymakers in designing and implementing policies to stimulate the creation of new businesses in these countries and, consequently, enhance their overall wellbeing. The findings underscore that business regulation is strongly linked to the creation of new businesses in LDC, emphasising the regulatory environment as a critical factor for influencing entrepreneurial decisions. Effective business regulations can benefit a wide range of stakeholders, ranging from corporate and financial institutions through to interest groups, employees, customers and the public. In summary, a supportive regulatory framework can drive business creation and, in turn, promote economic growth, establishing a reciprocal relationship between these elements. Furthermore, other contextual factors influencing

the creation of new businesses in the LDC were identified, such as access to financial services, political stability, the control of corruption and economic freedom.

This work reveals that creating new businesses and the regulatory environment are interlinked dynamics that significantly shape economies and, consequently, promote economic growth. Indeed, entrepreneurship as a mechanism for successful economic development can ensure the provision of goods and services to communities whilst also fostering employment and the consequent creation of wealth. Governments should take a leading role in implementing policies designed to nurture such regulatory environments in order to assist entrepreneurs identify opportunities and take risks to create products, services, and technologies, which, in turn, boost economic activity and improve standards of living. Therefore, governments may perform a crucial role in creating an appropriate environment where businesses can thrive. In this context, pro-business policies nurture an entrepreneurial culture and attract investment, which may lead to economic growth in LDC. Furthermore, in the context of the poorest countries of the world, entrepreneurship, as measured by new business creation, is beneficial for promoting economic growth in countries with less resources, where the regulatory environment is poor, and where there is a need to improve regulations with the objective to present opportunities through legal and political forces. Accordingly, a favourable policy framework is relevant for entrepreneurial activities in itself (Bilan and Apostoaie, 2023). Entrepreneurship is also affected by the economic conditions of the regions where it occurs. In this respect, the key aspect is to encourage the implementation of efficient and transparent regulation in order that businesses can thrive and promote the economic and social progress of families and countries.

In addition, in the context of LDC, other significant contextual factors exist. This paper highlights the importance of access to financial services for the creation of new businesses which are closely linked to access to financial services, as entrepreneurs need funding to grow and sustain their businesses. Access to financial services is one of the most critical enablers of entrepreneurship; without which, even the most pioneering ideas or ambitious business models may never come to fruition. Consequently, financial reform policies designed to expand access to financial services, as well as enhance financial efficiency and stability, should all be encouraged in LDC.

From a rational point of view, it can be argued that greater economic freedom provides greater flexibility and higher rewards and that new businesses may be created in response to economic opportunities. In effect, an increase in economic freedom is

conceptually equivalent to the reduction of transaction costs that inhibit entrepreneurial activity. This phenomenon is important for the development of a dynamic economy in which business trial and error is prevalent. Market economy-oriented institutions and policies that provide an appropriate legal and regulatory framework may thus facilitate predictable and rational decision-making and favour the recognition and exploitation of entrepreneurial opportunities (see, for example, Berggren, 2003; Powell and Weber, 2013).

It was also found that political stability and an absence of violence/terrorism positively and significantly influence the creation of new businesses and, therefore, foster economic growth in LDC, in line with other studies (see, for example, Bayar and Aytemiz, 2015; Spyromitros and Panagiotidis, 2022, Afonso and Blanco-Arana, 2024). In this context, the control of corruption emerges as a crucial factor for these countries. This finding is aligned with the work of Afonso and Pinto (2024), who demonstrate that higher levels of corruption in a country negatively affect global economic growth. Similarly, consistent with the findings of Spyromitros and Panagiotidis (2022), it can be concluded that corruption hampers economic growth in developing countries, exacerbating their economic challenges. Therefore, it is imperative for these countries to implement robust compliance programmes and anti-corruption strategies to mitigate these adverse effects.

In summary, it may be concluded that entrepreneurship is a driver of economic development. Numerous studies highlight that business activity is a dominant source of economic growth and job creation, and that productive entrepreneurship is crucial in terms of economic welfare (see, for example, van Stel et al. 2005; Acs et al. 2012; Naudé 2013). Accordingly, it is essential to have a "good" regulatory environment. Nevertheless, it should be emphasised that this study sheds light on the synergies between regulatory environment, new business and economic growth, and thus it gives rise to a number of potential policy implications. However, when interpretating these findings, it should borne in mind that they are based on an unbalanced panel data set for LDC. Therefore, it is recommended that further analysis going into greater detail of all factors that impact business in each country's specific institutional settings in order to provide a more detailed prognosis to policymakers.

In the robustness analysis, it becomes apparent that business regulation is also strongly associated with new business creation in OECD countries. Furthermore, the establishment of new businesses is identified as a key driver of economic growth in

OECD countries. Additionally, concerning other contextual variables, this research concludes that economic freedom and control of corruption have a positive and significant impact on promoting economic growth in both OECD countries and LDC. Conversely, the effect of accessibility to financial services appears to be negative, suggesting indirectly that access to funding is already well-established in developed countries, thereby has reduced marginal impact on growth.

References

Abaidoo, R. and Agyapong, E. K. (2024): "The regulatory environment, access innovations and financial inclusiveness: perspective from emerging economies", *SN Business Economics,* 4(53).

Acs, Z. J. (2006). "How is entrepreneurship good for economic growth?", *Innovations,* 1(1): 97–107.

Afonso A. and Blanco-Arana M.C. (2024): "The Nexus Between Economic Freedom and Economic Growth in the Least Developed Countries. An Empirical Analysis for the Period of 2000-2021", *Czech Journal of Economics and Finance (Finance a uver),*74(2): 191-220.

Afonso, Ó. and Pinto, M. (2024): "Impact of inter-country corruption differences on wages and economic growth", *Economic Change and Restructuring*, 57: 74.

Angulo-Guerrero M., Pérez-Moreno S. and Abad-Guerrero I (2017): "How economic freedom affects opportunity and necessity entrepreneurship in the OECD countries", *Journal of Business Research*, 19(4):327–347.

African Development Report (2011): THE LEGAL AND REGULATORY ENVIRONMENT, Chapter 2.

Aparicio, G. and Iturralde, T. (2023): "New Research Trends in Sustainability in Family Businesses: A Bibliometric Literature Review", *European Journal of Family Business,* 13: 36-55.

Appiah, M., Onifade, S.T. and Gyamfi, B.A. (2024): "Analysing governance-led infrastructural development nexus in sub-Saharan Africa: Does the moderating role of institutional quality matter?", *Growth and Change,* forthcoming.

Arellano, M. and Bover, O. (1995): "Another Look at the Instrumental Variable Estimation of Error-components Models", *Journal of Econometrics,* 68: 29–51.

Arellano, M., and S. Bond. (1991): "Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations", *Review of Economic Studies,* 58: 277–297.

Baltagi, B. (2001): Econometric Analysis of Panel Data. 2nd Edition. Wiley.

Bayar Y, Aytemiz L (2015): "Impact of Economic Freedom, Political Stability and Economic Growth in the USA on Emerging Asian Economies", *Actual Problems of Economics*, 168(6):62-73.

Berggren, N. (2003): "The benefits of economic freedom", *The Independent Review*, 8(2): 193–211.

Bilan, I. and Apostoaie, CM. (2023): "Unemployment benefits, entrepreneurship policies, and new business creation", *Small Business Economics*, 61: 1411–1436.

Blanco-Arana, M. C. and Angulo-Guerrero, M. J. (2024): "Financial Development and Poverty Reduction in Developing Countries: The Role of Entrepreneurial Activity", *Panoeconomicus*, 1–24, forthcoming.

Blundell, R., and Bond, S. (1998): "Initial Conditions and Moment Restrictions in Dynamic Panel Data Models", *Journal of Econometrics*, 87: 115–143.

Breusch, T., and Pagan, A. (1980): "The Lagrange Multiplier Test and its Applications to Model Specification in Econometrics", *The Review of Economic Studies*, 47(1): 239–253.

Cordier, I., and Bade, M. (2023): "The relationship between business regulation and nascent and young business entrepreneurship revisited", *Small Business Economics* 61, 587–616.

Dixon, L., Gates, S. M., Kapur, K., Seabury, S. A., and Talley, E. (2006). The Impact of Regulation and Litigation on Small Business and Entrepreneurship: An Overview. *In the Name of Entrepreneurship?: The Logic and Effects of Special Regulatory Treatment for Small Business*.

El Ghoul, S., Guedhami, O., Mansi, S. and Wang, H. (2023): "Economic policy uncertainty, institutional environments, and corporate cash holdings", *Research in International Business and Finance*, 65, 101887.

Ferreira, J. J., Fayolle, A., Fernandes, C. and Raposo, M. (2017): "Effects of Schumpeterian and Kirznerian entrepreneurship on economic growth: panel data evidence", *Entrepreneurship & Regional Development*, 29(1–2), 27–50.

Gashi, A., Krasniqi, B. Ramadani, V. and Berisha, G. (2024): "Evaluating the impact of individual and country-level institutional factors on subjective well-being among entrepreneurs", *Journal of Innovation & Knowledge*, 9(2): 100486.

Goel, S. and Sharma, R. (2017): "Developing a financial inclusion index for India", *Procedia Computer Science*, 122: 949–956.

Hausman J, Taylor WE (1981): Panel Data and Unobservable Individual Effects. *Econometrica*, 49(6):1377-1398.

Hausman, J. A. (1978). "Specification Tests in Econometrics", *Econometrica*, 46(6): 1251-1272.

Heritage Foundation (2024): Available from < https://www.heritage.org/index > (accessed May 2024).

Hsiao, C. (2003): Analysis of Panel Data Cambridge: Cambridge University Press.

Kim, J., Castillejos-Petalcorin, C., Yothin, J., Donghyun, P., Pilipinas, Q and Shu, T. (2022): "Entrepreneurship and Economic Growth: A Cross-Sectional Analysis Perspective", ADB Economics Working Paper Series 672, Asian Development Bank.

Klevmarken, N.A. (1989): "Panel studies: What can we learn from them? Introduction", *European Economic Review*, 33: 523-529.

Koellinger, P. (2008): "Why Are Some Entrepreneurs More Innovative than Others?", *Small Business Economics*, 31 (1): 21–37.

Miroshnychenko, I., Vocalelli, G., De Massis, A., Grassi, S. and Ravazzolo, F. (2024): "The COVID-19 pandemic and family business performance", *Small Business Economics*, 62: 213–241.

Naudé, W. A. (2013). Entrepreneurship and Economic Development: Theory, Evidence and Policy. IZA Discussion Paper, 7507.

OECD (2024): Organisation for Economic Co-operation and Development. Available from < https://www.oecd.org/en/about/members-partners.html> (accessed May 2024).

Powell, B. and Weber, R. (2013): "Economic Freedom and Entrepreneurship: A Panel Study of the United States", *American Journal of Entrepreneurship*, 6(1): 64–84.

Sawadogo, R. and Semedo, G. (2021): "Financial inclusion, income inequality, and institutions in sub-Saharan Africa: Identifying cross-country inequality regimes", *International Economics*, 167: 15-28.

Spyromitros E. and Panagiotidis M. (2022): “The Impact of Corruption on Economic Growth in Developing Countries and a Comparative Analysis of Corruption Measurement Indicators”, *Cogent Economics & Finance* 10:2–4.

United Nations Conference on Trade and Development (UNCTAD, 2024): “Entrepreneurship Policy Framework and Implementation Guidance”.

United Nations (2024). Available from < https://www.un.org/> (accessed May 2024).

van Stel, A., Carree, M., and Thurik, R. (2005): “The Effect of Entrepreneurial Activity on National Economic Growth”, *Small Business Economics*, 24: 311–321.

World Bank (2024): World Development Indicators 2024. World Bank, Washington DC. Available from < https://databank.worldbank.org/source/world-development-indicators> (accessed May 2024).

World Bank (2024): Worldwide Governance Indicators2024. World Bank, Washington DC. Available from < https://databank.worldbank.org/source/worldwide-governance-indicators> (accessed May 2024).

Appendix

Table A.1. List of LDC

Countries			
Afghanistan	Eritrea	Mali	South Sudan
Angola	Ethiopia	Mauritania	Sudan
Bangladesh	Gambia, The	Mozambique	Tanzania, Ud.
Benin	Guinea	Myanmar	Timor-Leste
Burkina Faso	Guinea-Bissau	Nepal	Togo
Burundi	Haiti	Niger	Uganda
Cambodia	Kiribati	Rwanda	Vanuatu
Central Af. Rep	Lao PDR	S. Tome and	Yemen, Rep.
Chad	Lesotho	Senegal	Zambia
Comoros	Liberia	Sierra Leone	
Congo, Dem. Rep.	Madagascar	Solomon	
Djibouti	Malawi	Somalia	

Source: United Nations (2024)

Table A.2. List of OECD countries

Countries			
Australia	Finland	Korea	Slovak Republic
Austria	France	Latvia	Slovenia
Belgium	Germany	Lithuania	Spain
Canada	Greece	Luxembourg	Sweden
Chile	Hungary	Mexico	Switzerland
Colombia	Iceland	Netherlands	Turkiye
Costa Rica	Ireland	New Zealand	United Kingdom
Czechia	Israel	Norway	United States
Denmark	Italy	Poland	
Estonia	Japan	Portugal	

Source: OCDE (2024)

Table A.3. – Data sources

Acronym	Variables	Source
NB	New businesses registered (year)	World Development Indicators (World Bank)
Business regulatory	CPIA business regulatory environment rating (1=low to 6=high)	World Development Indicators (World Bank)
Ease business score	Ease of doing business score (0 = lowest performance to 100 = best performance)	World Development Indicators (World Bank)
GDP per capita	Real GDP per capita, PPP (constant 2017 international $)	World Development Indicators (World Bank)
Accessibility	Commercial bank branches (per 100,000 adults)	World Development Indicators (World Bank)
EF	Economic Freedom Index	Heritage Foundation (2024)
Political	Political Stability and Absence of Violence/Terrorism	Worldwide Governance Indicators (World Bank)
Corruption	CPIA transparency, accountability, and corruption in the public sector rating (1=low to 6=high)	World Development Indicators (World Bank)
Control of corruption	Perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests, ranging from approximately -2.5 to 2.5.	Worldwide Governance Indicators (World Bank)

Sources: World Development Indicators & Worldwide Governance Indicators (World Bank, 2024) and Heritage Foundation (2024).

Table A.3. Summary statistics for LDC

Variables	Obsv.	Mean	Std. Dev.	Min.	Max.
NB	316	3870.31	5030.431	2	34912
Business regulatory	715	2.948951	0.6113844	1	4.5
GDP per capita	895	2425.753	1382.625	621.2493	8183.165
Accessibility	636	3.970932	4.097689	0.136835	32.2417
EF	778	52.70797	5.670714	24.3	71.1
Political	880	-0.7383801	0.92673	-3.31295	1.42273
Corruption	686	2.656706	0.5535607	1.5	3.5

Table A.4. Summary statistics for OECD countries

Variables	Obsv.	Mean	Std. Dev.	Min.	Max.
NB	567	59558.15	104675.8	1639	790311
Ease business score	190	77.22973	4.797638	66.92296	87.16633
GDP per capita	912	47379.34	22019.25	10975.52	140435.8
Accessibility	732	28.26973	18.15075	4.009827	110.8609
EF	912	70.7966	6.572697	50.6	84.4
Political	836	0.637453	0.7119	-2.37603	1.758681
Control of Corruption	836	1.155665	0.818544	-1.02031	2.459118

Table 1'. FE models

Variables	(1)	(2)	(3)	(4)	(5)	(6)
NB	0.002***	0.003***	0.002***	0.002***	0.003***	0.002***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Business regulatory	-0.021	-0.033	-0.030	-0.023	-0.023	-0.030
	[0.024]	[0.023]	[0.025]	[0.023]	[0.025]	[0.023]
Crisis	-0.001***	-0.000**	-0.001***	-0.001***	-0.001***	-0.000**
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Pandemic	0.000	0.000	0.000	0.000	0.000	0.000
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Accesibility		0.014***				0.013***
		[0.004]				[0.004]
EF			0.008***			0.007***
			[0.002]			[0.002]
Political				0.087***		0.058***
				[0.020]		[0.020]
Corruption					0.008	-0.024
					[0.027]	[0.026]
Constant	7.701***	7.678***	7.300***	7.757***	7.671***	7.394***
	[0.074]	[0.072]	[0.147]	[0.074]	[0.097]	[0.142]
Observations	298	262	280	292	292	253
Number of countries	34	32	33	33	33	32
Breusch-Pagan test	0.000	0.000	0.000	0.000	0.000	0.000
Hausman test[3]	0.7965	0.3026	0.5337	0.5337	0.8143	0.3649

Data source: World Development Indicators & Worldwide Governance Indicators (World Bank, 2024) and Heritage Foundation (2024). Standard deviations in brackets. *** p<0.01, ** p<0.05, * p<0.1.

[3] We now estimate both the fixed effects model and the random effect model, as the fixed effects model is rejected by the standard Hausman (1978) test in favour of the RE model. Results are similar for both models.

Table 1''. RE models

Variables	(1)	(2)	(3)	(4)	(5)	(6)
NB	0.002***	0.002***	0.002***	0.002***	0.002***	0.002***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Business regulatory	-0.021	-0.032	-0.030	-0.023	-0.022	-0.030
	[0.024]	[0.023]	[0.025]	[0.023]	[0.024]	[0.023]
Crisis	-0.001***	-0.000**	-0.001***	-0.001***	-0.001***	-0.000**
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Pandemic	0.000	0.000	0.000	0.000	0.000	0.000
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Accesibility		0.016***				0.015***
		[0.004]				[0.004]
EF			0.008***			0.008***
			[0.002]			[0.002]
Political				0.093***		0.062***
				[0.019]		[0.019]
Corruption					0.009	-0.026
					[0.027]	[0.026]
Constant	7.719***	7.678***	7.306***	7.783***	7.680***	7.396***
	[0.110]	[0.106]	[0.166]	[0.108]	[0.127]	[0.159]
Observations	298	262	280	292	292	253
Number of countries	34	32	33	33	33	32

Data source: World Development Indicators & Worldwide Governance Indicators (World Bank, 2024) and Heritage Foundation (2024). Standard deviations in brackets. *** p<0.01, ** p<0.05, * p<0.1.