



The Doing Business ranking and the GDP. A qualitative study[☆]

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ARTICLE INFO

Keywords:

Entrepreneurship
The Doing Business
Africa
fsQCA

ABSTRACT

The topics of economic development and the importance of the business environment are repeatedly being studied by academia. Funding issues focus the debate, in particular on SME financing and the importance of the financial sector (especially the banking sector).

Some institutions have developed specific indicators that seek to synthesize the greater or lesser ease of doing business and/or the resulting competitiveness. This research specifically focuses on one of them, namely, the ease of Doing Business index.

The survey compares the bulk of African countries over two years, 2008 and 2017.

This research uses fsQCA methodology to conclude that the factors affecting the capacity for doing business change over time. In 2008, only one set of Doing Business indicators was related to high wealth, but by 2017 there were four. We also conclude that credit is not only the determining factor for the ease of doing business and paperwork, as difficulties in dealing with the authorities are also highly significant.

1. Introduction

We frequently assume that a favorable business environment is a major development factor (Besley, 2015; Fernández-Serrano & Romero, 2014). One of the most important topics associated with economic development is the question of the easiness of doing business and the factors that decrease or increase the ability to do so (see Fernández-Serrano & Romero, 2014).

This notion has prompted many academic, governmental, and other institutions to develop research projects or programs not only to promote a better legislative framework but also to simplify it (Arruñada, 2007; Krever, 2013). These legislative improvement programs have been called “Better Regulation”, and usually include the basis for strengthening the business environment.

In addition to policy development, instruments have also been used to assess the impact these policies have and determine how countries evolve over time, establishing a hierarchy of those with better frameworks. These analyses are sometimes encapsulated in rankings, which although simplistic can hardly be ignored (Michaels, 2009). The Doing Business ranking (DB) has these characteristics, and this research focuses on them.

The issue of economic growth has a solid presence in the literature.

There is usually a single factor at the core of the discussion, namely:

- The importance of the financial sector (for the most cited, see: Arestis, Demetriades, & Luintel, 2001; Beck & Demirgüç-Kunt, 2006; Demirgüç-Kunt & Maksimovic, 1998; Levine, 1998),
- The importance of small businesses (see also Craig, Jackson, & Thomson, 2007; Thurik & Wennekers, 2004; Naudé, 2010), or
- The importance of accessing finance for small businesses (Abor & Quartey, 2010; Berger & Udell, 2006; de la Torre, Martínez Pería, & Schmukler, 2010; Del Brío & Junquera, 2003; Hyytinen & Toivanen, 2005; Michaelas, Chittenden, & Poutziouris, 1999).

The DB and similar rankings (e.g., The Global Competitiveness Report from the World Economic Forum) consider several different aspects of the business environment and, therefore, unlike the research previously mentioned they are multidimensional. Competitiveness, and therefore the capacity to grow, are not due to a single factor (e.g., the financial system) but instead are the outcome of a series of factors.

The DB has been used in a significant number of studies, but they generally focus solely on a single moment (Corcoran & Gillanders, 2015; Morris & Aziz, 2011; Schueth, 2011). This research seeks to determine the extent to which the wealth produced in a country, as

[☆] The authors acknowledge financial support from FCT- Fundação para a Ciência e Tecnologia (Portugal), national funding through research grant (UID/SOC/04521/2019).

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<https://doi.org/10.1016/j.jbusres.2019.11.067>

Received 25 June 2019; Received in revised form 18 November 2019; Accepted 21 November 2019

Available online 31 December 2019

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measured by GDP *per capita*, relates to DB sub-indicators; that is, whether one or more of the dimensions considered in the DB assume a more dominant role (configurations of the sub-indicators that can be associated with better performance in terms of the wealth generated).

In addition, we have sought to determine whether the dominant configurations record temporal stability. We have chosen African countries for the study because they are among the poorest, and so there is a pressing need to create the conditions that most favor the continent's development.

Entrepreneurship is one way of observing a country's degree of development (Van Stel, Storey, & Thurik, 2007). In less developed countries, entrepreneurship has a significant impact on GDP (Atiase, Mahmood, Wang, & Botchie, 2018). Studying how the business environment works and entrepreneurship evolves can help to improve living conditions.

The next sections will present the literature review and the methodological framework, explaining how we retrieved the sample, which databases are used, and the variables measured; finally, we present the results and the conclusion.

2. Literature review

For many years, scholars, business experts, and economic agents have sought to describe the best framework for business development. One way to do so is to look at how certain aspects - the financial system, the dynamics of small businesses, or their access to finance - affect this development. Yet some institutions have chosen a different path. They have developed specific indicators to synthesize the greater or lesser ease of doing business and/or the resulting competitiveness, linking the business environment and business regulations to the ability to compete. Thus, a dominant current of analysis regarding the impact the regulatory framework has on the dynamics of growth uses multi-country surveys to benchmark the ability to create good environments for doing business (Benjamin, Bhorat, & Cheadle, 2010).

The Doing Business ranking, the World Competitiveness Rankings, the rankings of the Global Competitiveness Report of the World Economic Forum, and the Global Competitiveness Index of the World Bank are all examples of efforts to produce indicators of this nature that not only provide a snapshot of each country's relative position, but also monitor its evolution from one year to the next.

Unlike other approaches, these rankings focus on the regulatory issue and its importance for growth.

The close relationship between improving the legislative framework and growth underpins an important set of developments that has been repeated since the beginning of this century. The seminal work by Djankov, McLiesh, and Ramalho (2006) confirms this association. This premise is based on the introduction of better regulatory policies, common in Europe since the beginning of this century (see Radaelli (2007), "[...] the reformulation of the Lisbon agenda in terms of 'growth and jobs' has spawned the debate among EU policy-makers around the question as to whether better regulation is fit for Lisbon", Radaelli and Meuwese (2009), "[...] European policy-makers are eminently interested in how much BR policies can deliver in terms of growth and competitiveness", and Tombs (2016)).

Other authors, however, without contradicting the previous premise, associate this impetus for better regulation to the desire to decrease the distance between the legislator and the citizens. This gap between the two has widened significantly following the measures the EU has taken to address the economic downturn in recent years, and the need to regain the legitimacy of the European Commission's executive role (de las Heras, 2019). However, the association between better regulation (legislation) and economic growth clearly prevails.

The impact of this type of analysis, focused on the usefulness of ratings for the characteristics of doing business, is significant, even within academia, with a succession of studies and publications based on this type of ranking.

This research focuses on one of these rankings, namely, Doing Business (DB).

The DB report is a hierarchical country index that has been published by The World Bank since 2004. The index is composed of a main indicator - ease of doing business - which is a function of ten sub-indicators: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency (a more complete description of the DB can be seen on the project website or in Besley (2015)).

The robustness of the report and its methodology have been the subject of frequent reviews, including an evaluation by an independent panel (Manuel, Arruda, Guriev, Azour, Labelle, & Wolff, 2013).

The DB has been the subject of repeated criticism, and certain weaknesses have been pointed out. Arruñada (2009) considers there is a danger of an overly literal reading of the questionnaire's results and the use of inadequate strategies for each country's specific situation (seeking solutions of the type "one size fits all"). Benjamin et al. (2010) analyze DB's shortcomings in assessing labor law. Fernández-Serrano and Romero (2014) find that the regulatory environment does not sufficiently explain the propensity to start a business. It should be noted, however, that these initial evaluations (with the exception of Fernández-Serrano & Romero) precede methodological changes made to the survey. In a wider critique, Michaels (2009) considers that DB reproduces a narrow neoliberal conception of law as a platform for private business and entrepreneurial activity, and supports a *laissez-faire* market system (see also Høyland, Moene, & Willumsen, 2012). For a more general critical evaluation, see Arruñada (2007) and Perry-Kessaris (2017).

Several studies use the DB ranking, although they generally consider only one-year data (Fernández-Serrano & Romero, 2014; Kalyvas & Mamatzakis, 2014; Pinheiro-Alves & Zambujal-Oliveira, 2012). We choose a different strategy, comparing the situation in two different years almost a decade apart.

Africa has been the subject of several studies in which the DB is used. Benjamin et al. (2010), Goedhuys and Sleuwaegen (2010), Morris and Aziz (2011), and Corcoran and Gillanders (2015) are examples of these studies. However, none of them analyzes the data comparing different moments and/or the sub-indicators that generate the DB.

This research proposes to study two aspects of African countries that the aforementioned studies do not address: the temporal question and the question of sub-indicators.

In temporal terms, two years were chosen that were almost a decade apart (2008 and 2017); 2008 is defined by the onset of the financial crisis, with many countries then embarking upon legislative streamlining processes, so it can be considered the last year of a cycle. In turn, 2017 was the last year for which there are data, and it is intended to provide a comparison between the period prior to the subprime crisis and the current period to see whether there have been any changes in the ranking behavior. It should be noted that the DB reports refer to data from the year prior to publication, so the data used were from the 2009 and 2018 DB reports.

3. Methodology

The fuzzy-set Qualitative Comparative Analysis (fsQCA) is a method that is normally used in different fields of research, and primarily in the marketing area, due to factors such as a small sample. However, this technique has been spreading to other fields, in this case to the area of entrepreneurship, as shown by the study by Kraus, Ribeiro-Soriano, and Schüssler (2018).

As mentioned by Ragin (2008b), the fsQCA methodology is designed to identify causal "recipes", and not the individual independent variable. The fsQCA method caters for a theoretical selection of the outcome of interest and its causes. It is then possible to find how those causes provide a set of paths that lead to the outcome (Park, El Sawy, &

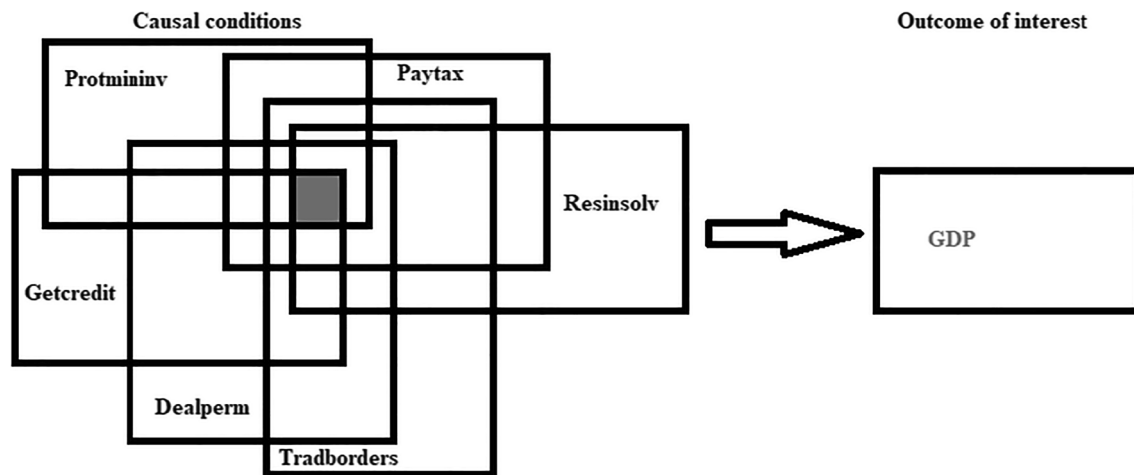


Fig. 1. Conceptual framework (adapted from Yadav, Balaji, & Jebarajakirthy, 2019).

Fiss, 2017). Use is made of fsQCA 3.0 software for analyzing the indicators of the level of entrepreneurship in African countries, seeking to understand the indicators that make up the DB and together help to explain each country's GDP *per capita*. Fig. 1 presents this study's conceptual framework. There is no one perfect configuration that determines the outcome, which in our case is GDP *per capita*. As Misangyi et al. (2017) contend, this method explains how different attributes converge into distinct paths that lead to the same outcome, and also reveals the presence and/or absence of attributes linked to it.

3.1. Data collection/sample

This investigation set out to analyze the configurations to determine the extent to which the wealth produced in the country, as measured by GDP, was related to the sub-indicators used in this sample. The DB database was therefore used to obtain the sub-indicators that make up this indicator of the conditions companies require to invest in a particular business in a specific country. In order to identify the sub-indicators, a first selection was made of all African countries, with the exception of Eritrea, Libya, Somalia, and South Sudan due to the absence of data available for at least one of the years.

3.2. Measuring variables

The DB project provides objective measures of business regulations for local firms in 190 economies. DB collects detailed and objective data on ten areas of business regulation. However, we cannot use all ten because we do not have data on 'getting electricity' in 2009.

This study considers six indicators or causal conditions considered for analysis. The variables used were as follows: dealing with construction permits, getting credit, protecting minority investors, paying taxes, trading across borders, and resolving insolvency.

The indicators obtained for 2008 and 2017 were selected for each country (2009 and 2018 DB reports, respectively). These data will be used to analyze these countries' evolution from the point of view of the settings (configurations) that contribute to doing business. Ultimately, the outcome of GDP *per capita* aims to explain how configurations based on the presence or absence of each element help to explain the growth in GDP *per capita* in African countries.

3.3. Data analysis technique – fsQCA

The fsQCA technique was used to analyze which variables of doing business contribute to the GDP of African countries. This technique allows us to analyze the variables of DB that are scale variables, which are not comparable between each other. According to Fiss (2011),

based on Boolean algebra, the fsQCA allows finding associations of necessity (the output cannot take place if the condition is absent) and sufficiency (the presence of that condition guarantees the output) between the conditions and the outcome. The great advantage of this technique compared to traditional statistical ones is that a smaller number of observations can be used (e.g., between 5 and 50) (Rihoux & Ragin, 2009). The fsQCA analysis requires the cases to be grouped into significant clusters that reflect the level of country growth in terms of GDP. The degree ranges from one (highest GDP growth) to zero (lowest GDP growth). A score of 0.5 corresponds to the boundary point (Ragin, 2008a).

We understand that a possible growth in the number of configurations is a sign of the ease that investors perceive in doing business, and thereby contribute to GDP *per capita* growth in African countries.

The fsQCA technique begins with a calibration process, where the variable is assigned a rating based on certain characteristics, providing its degree of membership. This calibration provides the necessary conditions and the truth table (Schneider & Wagemann, 2010). The output obtained provides a set of conditions (parsimonious, intermediate, and complex) for the outcome of interest, in this case GDP *per capita*. Using Boolean algebra, the truth table allows identifying the core and peripheral conditions (Fiss, 2011) (Ragin, 2008b). This technique will be used here to determine the possible configurations of conditions that lead to higher growth in GDP *per capita* in African countries and compare different periods. In a supplementary analysis, this will also be used to analyze the configurations that lead to the absence of growth in GDP *per capita*, as recommended by Woodside and Zhang (2013).

An initial analysis for detecting the variables that best contributed to the model's stability identified six conditions that ensured a better performance: dealperm, credit, provtmininv, paytax, tradborders, and resinsolv. If the analysis is focused solely on these conditions, the interpretation of the stability of relations is reinforced, so we decided to continue the study with them only.

4. Results

4.1. Descriptive analysis and data calibration

As already noted, the sample used here involves variables contained in the DB indicator, with these being scale variables of each one of the 50 countries in the sample. Table 1 presents these variables' descriptive statistics.

The conditions need to be calibrated after collecting the data; that is, the values must be transformed into fuzzy scores (Fiss, 2011). Fuzzy scores take values between 0 and 1, and the corresponding value

Table 1
Descriptive statistics and calibration (2008).

Variable	Mean	Std. Dev.	Minimum	Maximum	N	Cases Missing	Calibration
GDPpc 2008	2416.25	3793.605	196.25	22,742	50	0	(10000;1100;330)
Dealperm	54.7252	15.1808	26.24	86.52	50	0	(75;60;33)
Getcredit	30.375	17.94131	6.25	81.25	50	0	(62;25;18)
Protmininv	40.3998	13.9942	16.67	80.00	50	0	(62;35;24)
Paytax	54.2404	19.47369	14.44	91.45	50	0	(82;57;15)
tradborders	46.2676	21.43101	6.43	84.54	50	0	(78;52;13)
resinsolv	22.3952	17.2058	0	61.92	50	0	(55;23;0)

reflects the degree of membership (Woodside & Zhang, 2013). In this work, the cuts were made at 95% in the case of full membership (presence), 50% in the case of ambiguity, and 5% for absence (Ragin, 2008a).

The same table shows the calibration of the several conditions in this study. For example, in the case of dealperm, full membership is when the value is above 75%, and full non-membership occurs below 33%. The crossover point is 60% (maximum ambiguity). Thus, the presence of dealperm is related to this indicator's top values, while absence is associated with low ones. For identification purposes, the calibrated indicators use the prefix “fs” before the label (e.g., fsdealperm). After determining the necessary conditions, the next step is to analyze the sufficient condition (Curado, Henriques, Oliveira, & Matos, 2016). The following cut-off consistency score used is 0.75, being categorized as sufficient. The truth table therefore took the value 1 in this case and 0 otherwise.

4.2. Main analysis

This research has set out to identify the configurations that lead to higher GDP growth among African countries. An analysis is therefore required of the necessary conditions that could be crucial for the outcome of fsGDP. Table 2 shows that mention should be made in 2008 of all the indicators that are not necessary conditions. As cited by several authors, a condition is considered “necessary” if the consistency value exceeds 0.9, and “almost always necessary” if it exceeds 0.8 (Ragin, 2008b; Schneider, Schulze-Bentrop, & Paunescu, 2010), and the value of 0.8 is adopted in this study for the necessary condition. For the case of 2017, all the indicators have values lower than 0.8 from a positive point of view, and lower than the reference value in the case of the absence of GDP *per capita* indicators (Table 2). These results suggest that higher values for resolving insolvency values are almost always present when the countries in the sample have lower GDPs *per capita*.

The analysis of the necessary conditions is followed by an analysis of sufficiency and the causal configurations that can drive GDP growth in African countries. Following Fiss (2011) and; Fiss, Sharapov, and

Cronqvist (2013), an initial step involves calibrating the conditions (see Table 1), and then obtaining the causal configurations. According to Table 3, the output shows that fsQCA finds one solution in 2008. A further analysis suggests that the conditions dealperm, protmininv, paytax, tradborders, and resinsolv have higher values. The variable getcredit is precisely the opposite. Furthermore, the conditions dealperm and tradborders are core solutions, as they are present in the parsimonious solution. Based on the configuration, it may be deduced that a higher GDP in African countries is associated with a positive performance by the conditions dealperm, protmininv, paytax, tradborders, and resinsolv; that is, a higher value for these conditions contributes to a higher GDP. As regards the variable getcredit, this records the opposite behavior to GDP; that is, when we are facing a higher GDP *per capita*, the variable getcredit has a lower value as a solution for a higher GDP *per capita*.

The same procedure was followed for 2017 (Table 4), and the results obtained by the fsQCA have no core condition and four configurations that lead to a higher GDP in the countries in this sample. In the four configurations obtained, almost all the conditions are essential for determining the paths that lead to GDP growth. The exception is the variable resinsolv, which does not have a significant impact on the performance of half of the configurations. One of the solutions found shows that all the conditions behave in the same way; that is, they have a positive correlation with GDP. For a higher GDP, the explanatory conditions must also have high values. Elsewhere, the variable dealperm is always present in the configurations and has a core solution. In two of the solutions found, the conditions getcredit and paytax have an inverse performance between them, while the other two solutions have a similar performance. In the case of the conditions protmininv and tradborders in the other two solutions, they behave in an identical manner. When GDP is high, the conditions also have high values; in the other case, with a high GDP, the conditions have lower values. Comparing 2008 and 2017, the first major finding is that the variable dealperm is a core variable, featuring in all the solutions in the two years under analysis. The other five conditions behave differently over time, and with the exception of getcredit all the remaining conditions

Table 2
Results of the necessary conditions (GDP).

Outcome variable: fsgdp2008 Conditions tested:			Outcome variable: fsgdp2017 Conditions tested:		
	Consistency	Coverage		Consistency	Coverage
Fsdealperm	0.552529	0.551035	fsdealperm	0.731375	0.551617
~fsdealperm	0.668740	0.446708	~fsdealperm	0.585375	0.492041
Fsgetcredit	0.615322	0.560510	fsgetcredit	0.581506	0.499316
~fsgetcredit	0.722056	0.515033	~fsgetcredit	0.766559	0.567418
Fsprotmininv	0.616554	0.597130	fsprotmininv	0.703349	0.517673
~fsprotmininv	0.745318	0.507979	~fsprotmininv	0.681827	0.589361
Fspaytax	0.634722	0.590296	fspaytax	0.731604	0.558979
~fspaytax	0.715880	0.502552	~fspaytax	0.607102	0.503092
Fstradborders	0.661069	0.567209	fstradborders	0.660150	0.553604
~fstradborders	0.673714	0.504930	~fstradborders	0.686528	0.518876
Fsresinsolv	0.643329	0.564260	fsresinsolv	0.497883	0.666591
~fsresinsolv	0.679795	0.499988	~fsresinsolv	0.681827	0.589361

Table 3
Results of intermediate solutions (outcome GDP 2008 and GDP 2017).

	fsGDP2008		fsGDP2017			
Causal configurations	1		1	2	3	4
Fsdealperm	●		●	●	●	●
Fsgetcredit	O		O	O	O	●
Fsprotmininv	●		o	●	●	●
Fspaytax	●		●	●	o	●
Fstradborders	●		●	o	●	●
Fsresinsolv	●				o	●
Consistency	0.752343		0.805613	0.795099	0.800248	0.806722
Raw coverage	0.316917		0.319445	0.322357	0.279546	0.243647
Unique coverage	0.316917		0.069488	0.051174	0.036812	0.037995
Overall solution consistency	0.752343		0.752833			
Overall solution coverage	0.316917		0.474526			

Label: According to Besley (2015), (dealperm) “is a measure of the procedures, time, and cost required to build a warehouse”; (getcredit) “assesses the strength of the Legal Rights index, which measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders, and the depth of the Credit Information index, which measures the sharing of credit information”; (protmininv) “measures the extent of disclosure and director liability, and the ease of shareholder lawsuits”; (paytax) “measures the number of taxes paid, hours per year spent preparing tax returns and the total tax payable as a share of gross profit”; (tradborders) “is a measure of the number of documents, cost, and time required to export and import goods”; and (resinsolv) “is a measure of the time, cost, and percentage recovery rate involved with bankruptcy proceedings”.

Full black circles (●) indicate the presence of a condition, and center white circles (o) indicate its absence. Large circles indicate core conditions; small ones, peripheral conditions. Blank spaces indicate “does not contribute to configuration”.

have a positive association with a higher GDP in the initial period, and then record some solutions with inverse relations in relation to the higher GDP. The same happens with the variable getcredit, also has high values only in one case leading to a higher GDP. However, there is still a configuration that continues to present a solution in which the conditions all have an inverse association with higher GDP.

4.3. Additional analysis

A complementary analysis can be conducted to identify the configurations that lead to a lower GDP in African countries (~fsGDP) by following Woodside and Zhang (2013), with the same procedure as that used to determine the configurations for the existence of a higher GDP in the countries in the sample. First, the necessary conditions are

analyzed, then the parsimonious solution is used to determine the core conditions, and finally, the intermediate solution is used to determine the configurations that lead, as appropriate, to a lower GDP.

The results obtained for the necessary conditions in 2008 for ~GDP (Table 5) show there are no necessary conditions, although the same occurs in the case of a higher GDP (Table 2). This is because we are dealing with a composite of conditions that help explain a country's level of entrepreneurship. On the other hand, almost all the indicators in 2017 have values lower than the reference value (0.8) in the case of the absence of GDP *per capita* indicators, with the exception of ~ fsresinsolv (Table 5), thereby making it a necessary condition.

In 2008, there are two paths for the absence of lower GDP *per capita* (see Table 6). A careful study of the configurations obtained by the fsQCA reveals that all the conditions are present in all the solutions, and

Table 4
Descriptive statistics and calibration (2017).

Variable	Mean	Std. Dev.	Minimum	Maximum	N	Cases Missing	Calibration
GDPpc 2017	2430.82	3028.46	320.09	15,504	50	0	(9800;1500;400)
Dealperm	60.406	11.15307	28.94	82.45	50	0	(73;63;39)
Getcredit	41	22.11334	5	95	50	0	(90;40;10)
Protmininv	45.7668	10.96555	21.67	73.33	50	0	(66;43;27)
Paytax	59.3718	16.91702	17.92	90.85	50	0	(85;60;27)
Tradborders	54.9224	19.80582	1.26	92.92	50	0	(85;60;20)
Resinsolv	22.3952	17.2058	0	61.92	50	0	(54;38;0)

Table 5
Results of the necessary conditions (\sim GDP).

Outcome variable: \sim fsgdp2008 Conditions tested:			Outcome variable: \sim fsgdp2017 Conditions tested:		
	Consistency	Coverage		Consistency	Coverage
fsdealperm	0.447709	0.669636	fsdealperm	0.601262	0.687282
\sim fsdealperm	0.699829	0.701096	\sim fsdealperm	0.607737	0.774206
fsgetcredit	0.546655	0.746815	fsgetcredit	0.614400	0.799554
\sim fsgetcredit	0.678301	0.725614	\sim fsgetcredit	0.615260	0.690225
fsprotmininv	0.518651	0.753341	fsprotmininv	0.686543	0.765821
\sim fsprotmininv	0.722638	0.738658	\sim fsprotmininv	0.567604	0.743579
fspaytax	0.527515	0.735767	Fspaytax	0.604345	0.699808
\sim fspaytax	0.706259	0.743573	\sim fspaytax	0.619140	0.777587
fstradborders	0.559555	0.720041	fstradborders	0.579973	0.737121
\sim fstradborders	0.663672	0.745981	\sim fstradborders	0.648773	0.743142
fsresinsolv	0.546706	0.719150	fsresinsolv	0.378486	0.767992
\sim fsresinsolv	0.668746	0.737669	\sim fsresinsolv	0.835688	0.716102

Table 6
Results of intermediate solutions (outcome \sim GDP 2008 and \sim GDP 2017).

Causal configurations	\sim fsGDP2008		\sim fsGDP2017			
	1	2	1	2	3	4
fsdealperm	o	•	o	•	•	•
fsgetcredit	O	O	•	O	O	
fsprotmininv	•	•		o		•
fspaytax	•	•	•	O	O	•
fstradborders	o	•	O	•	•	O
fsresinsolv	•	•	O		O	O
Consistency	0.918571	0.839665	0.938109	0.934787	0.918008	0.940309
Raw coverage	0.270269	0.235839	0.268489	0.264203	0.242249	0.286391
Unique coverage	0.083343	0.048913	0.065238	0.034281	0.007698	0.047510
Overall solution consistency	0.864951		0.926764			
Overall solution coverage	0.319182		0.463382			

Label: (dealperm) is a measure of the procedures, time, and cost required to build a warehouse; (credit) assesses the strength of the Legal Rights index, which measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders, and the depth of the Credit Information index, which measures the sharing of credit information; (protmininv) measures the extent of disclosure and director liability, and the ease of shareholder lawsuits; (paytax) measures the number of taxes paid, hours per year spent preparing tax returns and the total tax payable as a share of gross profit; (tradborders) is a measure of the number of documents, cost, and time required to export and import goods; (resinsolv) is a measure of the time, cost, and percentage recovery rate involved with bankruptcy proceedings. Full black circles (•) indicate the presence of a condition, and center white circles (o) indicate its absence. Large circles indicate core conditions; small ones, peripheral conditions. Blank spaces indicate “does not contribute to configuration”.

four conditions behave in the same way in both solutions. However, the other two conditions (dealperm and tradborders) do not have the same behavior in the solutions found, as they change from positive to absent in the configurations.

In the second period (2017), the number of paths leading to a low GDP increases (4), thus indicating that is not so difficult to find settings for the aforementioned GDP. A closer look at the configurations reveals that the majority of the conditions are core. In solutions 2 and 3, the difference between them involves the variables protmininv and resinsolv, as when one of these conditions is present in the configuration the other is not, and vice versa. In the case of solutions 1 and 4, the conditions paytax, tradborders, and resinsolv are the same, but the pattern is not clear in the other three variables, either being the inverse or, if one variable has a better performance in one solution, the other condition is not present in the configuration. The last consideration concerns the condition resinsolv, which is almost always absent, except in one configuration in which it is not part of the solution for a lower GDP.

5. Conclusions

Based on the results obtained through the fsQCA methodology, a comparison between the two years under analysis indicates that the number of configurations increased both for the solutions that are at the origin of GDP and for the solutions for a higher GDP in the African countries analyzed.

We understand that a possible growth in the number of configurations is a sign of the ease investors perceive doing business, thus contributing to growth in GDP *per capita* in African countries.

The study of fsGDP output in 2008 provides only one configuration of conditions associated with a higher GDP *per capita*, while in 2017 there are four configurations, which means that in 2017 there are several alternative ways of obtaining high GDP *per capita*.

Both years have a variable with a strong correlation (core condition) with GDP *per capita* - dealperm. In contrast, the absence of the variable getcredit is noted in the 2008 configuration, as well as in three of the four configurations for 2017.

These results have major implications. The dealperm variable is associated with difficulties in dealing with government and local authorities, constituting what is commonly referred to as red tape. The getcredit variable is associated with ease of obtaining credit. What the study unequivocally shows is that when there is a choice between debureaucratizing or making the financial system more efficient and effective, the option should be the former, as was the case in both 2008 and 2017.

An analysis of the output ~ fsGDP shows that no correlations can be established between conditions and GDP *per capita*.

The purpose of this research has been to determine the extent to which the wealth produced in a country is related to DB sub-indicators; that is, whether among the different dimensions considered in the DB some assume a more dominant role (configurations of the sub-indicators that may be associated with a better performance in terms of wealth produced).

In addition, we have sought to determine whether these dominant configurations record temporal stability. The study shows that configurations of the sub-indicators that best relate to higher levels of wealth can be associated in each moment.

The study also shows that these dominant configurations change over time. Yet the study also suggests that these factors related to higher GDP are predominantly linked to regulatory issues (red tape or bureaucracy).

The study thus establishes two important orientations in the design of public policies that boost GDP growth through the ease of doing business. First, it is essential to focus on debureaucratization policies, and therefore roll out better regulatory initiatives. Second, as the dominant configurations evolve over time, there are better ways to

implement more robust regulatory initiatives at any given moment.

In sum, better regulatory initiatives are needed, but their effectiveness varies over time, which means that at each specific moment they should be appropriately chosen and prioritized. Earlier theoretical models are very focused on credit, access to finance and entrepreneurship support and this study concludes that better regulation is also relevant.

6. Limitations and further research

This study is limited by the fact it reflects a very specific reality - Africa. It is therefore difficult to directly transpose these results into other geographical contexts.

On the other hand, the study refers only to two years. Extending the timeframe will also be important.

The results indicate the existence of several sufficient solutions but likely no necessary condition for achieving high GDP in African countries. According to Fiss (2011) “These

findings demonstrate the ability of a set-theoretic approach to examine the necessity and sufficiency of configurations and their elements, conditions that are not easily examined using standard, non-Boolean approaches”.

This framework is valid for the conclusions obtained; however, it would be interesting to replicate the study with other variables that were not used in doing business, and compare them with our own findings. Substituting the variables used here by others that have not been considered (replacement) will show whether the results are similar.

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