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Doing Business in Bolivia: a case study in the Andean regulatory framework

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Abstract

This article researches on the evolution of the business regulatory framework of Bolivia from 2006 to 2017 and its relationship with the country's Labor productivity, Total Factor Productivity, and its Informal Economy size. To do this, it analyzes the Doing Business annual reports and standardizes each year overall score to the most recent methodology developed by the World Bank Group. Furthermore, it complements its finding with qualitative data through semi-structured interviews to key actors in the Bolivian economy. Overall, this paper finds that few steps have been taken to improve Bolivia's Business regulatory framework from the period of 2006-2017, result in a lower rank in the Doing Business report and keeping its score constant. The lack of initiative in working towards more efficient policies, complex nature and poor adaptability of new technological practices have stagnated the improvements of business regulations along their lifecycles. As a consequence, Bolivia Total Factor Productivity, Informal Economy size and Labor productivity have shown no improvement over the last 10 years.

JEL Classification: D23, H11, H21.
Keywords: World Bank, doing business, business regulatory framework, productivity, informality, Bolivia.

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Resumen

Este artículo investiga la evolución del marco regulatorio de negocios en Bolivia desde 2006 a 2017 y la relación con los índices de productividad laboral, productividad total de factores y el porcentaje de la economía operando en el sector informal en el país. Este articulo analiza los reportes anuales del *Doing Business* y estandariza el puntaje general de cada año a la metodología más reciente desarrollada por de Grupo del Banco Mundial. Además, este artículo complementa sus hallazgos con data cualitativa a través de entrevistas semi-estructuradas con actores fundamentales en la economía boliviana. En general, este artículo encuentra que los pocos pasos tomados para mejorar las regulaciones de negocios han resultado en una peor posición en el ranking del *Doing Business*, así como un puntaje general estancado. La poca iniciativa en trabajar hacia políticas más eficientes, la naturaleza compleja del país y la poca adaptabilidad de nuevas prácticas tecnológicas han estancado mejoras en las regulaciones de negocios sobre su ciclo vital. Como consecuencia, la productividad total de factores, sector informal y productividad laboral de Bolivia no han mostrado ninguna mejora en los últimos 10 años.

Códigos JEL: D23, H11, H21.
Palabras Clave: Banco Mundial, negocios, marco regulatorio de negocios, productividad, informalidad, Bolivia.

1. Introduction

Business regulation for entry and exit differs significantly among economies. While legally starting a business in Bolivia might take you 45 days, it takes you 20 days to do so in Brazil, 72 days in Iran or half a day in New Zealand. So, the question raises, what is the optimal regulation for opening a business? Or, is there an optimal regulation for opening a business? And what effects might these have in the economy? While researchers have struggled to answer these questions, recent studies suggest that there is an optimal regulation for business entry and exit regardless on the country and, more importantly, that 'more efficient' regulation leads to better economic output. A Harvard economic study in 2002 highlighted that "countries with heavier regulation of entry have higher corruption and larger unofficial economies, but no better quality of public or private good. Furthermore, countries with more democratic and limited governments have lighter regulation of entry" (Shleifer et al. 2002).

Similarly, other studies on the regulatory environment along the lifecycle of a company also suggest that there is a relation between heavier regulation in less developed economies and more efficient regulation in developed economies. For example, "while it takes several months for the top performers in industrialized countries to go through bankruptcy proceedings, in developing countries it takes several years. In most cases heavier regulation is associated with higher inefficiencies in public institutions that generate low productivity and high costs" (Strobel 2010). Not only that, but studies also suggest links exist between strong regulation and high levels of informality. "Heavier regulation encourages informal business activities (because it) tend(s) to grant fewer property rights to their citizens. In industrialized countries creditors, for example, there are considerable power to recover their money in case of a debtor's default, whereas developing countries often do not provide such rights" (Strobel 2010).

This working paper is focused in analyzing the current state of the regulatory environment in the lifecycle of businesses in Bolivia along with the effects this may have in the country's productivity and informality levels. For this reason, I will use the *Doing Business* annual reports to measures Bolivia's regulatory environment as well as gather qualitative data by interviewing several key actors in the Bolivian economy. After a short introduction of the *Doing Business* methodology, this paper is divided in two sections. The first section covers the methodology used to adjust Bolivia's *Doing Business* annual overall scores to a single methodology, allowing valid comparability over time. Furthermore, this section explains the methodology used in this working paper for the semi structured interviews used to get a deeper insight in the subject. The second part analyzes the results of the *Doing* Business post-adjusted scores and correlate them with variables measuring productivity and informality over time using the insights of the main stakeholders and experts regarding Bolivia's business regulatory environment to support and explain the results. Finally, I address the limitations of the study, persuade a more thorough analysis on the topic and give conclusions.

2. The *Doing Business* Initiative: a project founded in 2004

The *Doing Business* annual report is an initiative created by the World Bank group to measure the regulatory environments over a constituted business's lifecycle in every economy around the world. This project was led by Simeon Djankov with the help of Caralee McLiesh and Michael Klein and published its first report in 2004. Its main goal is to provide an "objective basis for understanding the regulatory environment for business around the world (…), recollecting and analyzing quantitative data in order to compare business regulation environments across economies and over time" (World Bank, 2020). The *Doing Business* initiative allows countries to compare their annual performance among each other and have "measurable benchmarks for reform" (World Bank, 2020). Furthermore, over the last decade, it has allowed further research in "the scope and manner of regulations that enhance business activity and those that constrain it" (World Bank, 2020).

Different to other indicators, the *Doing Business* report focuses on reforms for local firms in some of the least developed countries, representing a new approach to measurement. Not only that, but, according to the *Doing Business* report in 2004, it offers the following advantages:

- It is based on factual information concerning laws and regulations in force.
- It is transparent and easily replicable which allows annual updates and easy extension to new territories.

- It covers both regulatory outcomes (like time or cost to register a business) and actual regulations (such as the rigidity of employment law or procedure to enforce a contract).
- It investigates the efficiency of institutions, such as business registries, courts and public registries.
- It builds on extensive and detailed information on regulations, allowing the identification of specific problems and the designing of reforms.

Since 2004, the Doing Business project offers annual reports with a constantly evolving methodology and an increasing coverage of economies. While in 2004 it covered 5 topics and 133 economies, by 2019 it has expanded to 11 indicator sets and 190 economies. **Table Nº 1** shows the topics and the economies covered by each *Doing Business* (DB) report.

Table Nº 1. Topics and economies covered by the *Doing Business* report annually

Topic	DB 2005	DB 2006	DB 2007	DB 2008	DB 2009	DB 2010	DB 2011	DB 2012	DB 2013	DB 2014	DB 2015	DB 2016	DB 2017	DB 2018	DB 2019
Getting electricity															
Dealing with construction permits															
Trading across borders															
Paying taxes															
Protecting minority investors															
Registering property															
Getting credit															
Resolving insolvency															
Enforcing contracts															
Labor market regulation															
Starting a business															
Number of economies	145	155	175	178	181	183	183	183	185	189	189	189	190	190	190

Source: Table obtained from the World Banks' *Doing Business* website.

The first edition of the *Doing Business* report covered five 5 topics: Starting a business, Hiring and firing workers, Enforcing contracts, Getting credit, and Closing a business with a coverage of 133 countries. The *Doing Business* methodology for the five topics covered in 2004, is summarized in **Annex Nº 1.**

This 2004 methodology served as the base for the following *Doing Business* report which later added up to six more topics over time. In 2005, topics such as *registering property*, *dealing with construction licenses* and *protecting investors* were included. By 2006, *paying taxes*, *trading across borders* and *improving law and order* were also added to the *Doing Business* methodology. The last addition of topics occurred in 2010, when the *DB* team decided to replace the *hiring and firing workers* topic introduced in 2004 with the getting *electricity* topic. Currently, the 2019 *Doing Business* report enjoys of 11 topics and cover 190 economies around the world. It is important to denote that the Labor market regulation topic is not used to measure the *Doing Business* overall scores. The specific changes in methodology over time are listed in **Annex Nº 2**.

3. Methodology: Adjusting the *Doing Business* overall scores score for valid comparability

Given the evolving methodology of the *Doing Business* annual reports, the annual overall scores published by the World Bank in Bolivia cannot be compared over time. For these reasons it is necessary to recalculate each annual score under a single methodology. Each annual report covers a set of topics, which are measured by different sub indicators in terms of regulatory outcomes (such as the number of procedures implemented to formally create a business or the time it takes to pay taxes) and actual regulations (such as the strength of protection on minority investors or the recovery rate when resolving insolvency). A score is placed on each sub indicator based on its relative performance among all economies measured and a simple average is done on all scores to get each individual topic score. The *Doing Business* overall score is calculated by doing a simple average on all the topic scores, which varies depending on the year. So, in order to adjust Bolivia's overall scores several assumptions were made.

Fortunately, the *Doing Business* website provides all the data gathered since 2004 for every sub indicator measured annually as well as the 2019 methodology used to measure each country's overall score. While not all sub indicators in the 2019 methodology were collected in previous years, most of the sub indicators not measure were either modified indexes or new indexes. For the reasons, the following assumptions were made. First and foremost, the reports for 2004 and 2005 were omitted due to their lack of data used in the

2019 methodology (mostly because the biggest methodology changes were made in 2006).

Second, the reports from 2006 to 2019 were calculated without the getting electricity topic. These topics was eliminated to standardize the quantity of topics measured for the overall *Doing Business* score (from 10 to 9 topics used to measure the overall score), given that the overall score is measured using a simple average of the overall score in each topic. *Getting electricity* is the only topic created post 2006 methodology (in 2010), so, the elimination of these topics helped standardize the annual scores.

In addition, assumptions were made in the new sub indicators within each topic to calculate the overall score. Because the *Doing Business* is an evolving methodology, it is a report that has strongly built on the 2006 methodology but that has also expanded the sub indicators it uses in most topics. With the exception of the *Starting a Business* topic, all other topics have changed their methodologies, either through the addition of new indexes (to measure strength, depth, quality or reliability for example) and others being modifications in the methodology of previously measured sub indicators (such as the cost or time of importing products, for example). Out of the 19 indicators 16 where new sub indicators, and 3 where modifications from existent sub indicators and all where changes implemented in the 2016 methodology with data available since 2015.

Out of the 16 indicators which were added though time, only three saw change over time. The quality of judicial processes index in *enforcing contracts* moved from 4.5 to 5.5 in 2017, the time to comply documents to export moved from 192 hours to 144 hours in *trading borders* in 2018, and the time to comply documents to import moved from 96 hours to 72 hours in 2018. For this reason, we assumed that the score of these sub indicators was the same as the oldest score recorded (the 2015 score), assuming that the score in the new indicators has consistently been the same from 2006 to 2015.

In the case of the indicators where the methodology has changed over time, two of the three didn't have a change of score regardless of the change of methodology (strength of the legal right index *in getting credit* has always been 0 regardless of the methodology change in 2016, and ease of shareholder suits in *protecting minority investors* has consistently kept a score of 6 regardless of the methodology change in 2016). The only change in the modified indicators was the getting credit total score in *Getting Credit* which scored 5 in 2006, 6 in the period of 2007-2015 and 7 from 2015-2019 in the newest methodology. Given that the 2015 score changes with methodology from 5 to 6 it was assumed that the score was the same in all years except in 2006 when it was 5. The *Doing Business* overall scores pre and post adjustment are listed in **Table Nº 2**.

Table Nº 2. The *Doing Business* Scores – Pre-& Post-adjustment

Overall *Doing Business* scores		
Year	**Pre-adjustment**	**Post-Adjustment**
2006	46.41	46.59
2007	47.48	47.34
2008	47.49	47.20
2009	48.29	47.50
2010	50.08	47.71
2011	50.30	47.80
2012	50.63	47.98
2013	50.77	47.96
2014	50.46	47.71
2015	48.57	47.84
2016	49.83	47.81
2017	49.86	47.83
2018	50.17	48.18

Source: Own elaboration based on the *Doing Business* report data 2006-2018.

Additionally, there is a need to look at other economic variables in order to look at the possible relation these regulations have on productivity and informality. For these, the quantitative data was gathered from the following secondary sources: Labor productivity was measured by the GDP per person employed at 2011 constant PPP $ using data from the World Bank, the informal economy size % was measured by National Institute of Statistics in Bolivia (INE) from their household survey, and the Total Factor Productivity data was gathered from the Penn World Tables published by the University of Groningen. The time series for all variables is shown in **Graphic Nº 1**.

4. Methodology: Using semi-structured interviews to gather data on the expert's perceptions

The interviews main objective was to gather qualitative data from key actors and experts in the Bolivian economy about the current state of the Bolivian regulatory framework along with their perceptions on the effects it can have on the economic development of the country. For these reasons, a semi-structured interview was opted due to the flexibility provides to the participants. Given the limited structure of the interview, the open questions were guided for each participant to offer their perspective based on their field expertise, allowing actors to provide the different perceptions may have in the business regulatory environment.

The interview was estimated to last 20-30 minutes with each participant and will be divided in two phases. In the first phase the interviewer will briefly explain the purpose of this working paper along with the interview's main objectives. Then, the semi structured interview began and will cover 4 main questions:

Question Nº 1: What is your opinion regarding the current regulatory framework for the creation and/or closing of businesses in Bolivia?

- Do you think the current regulatory framework is efficient?

Question Nº 2: Do you think the regulatory framework for the creation and/or closing of businesses has changed in the last 15 years?

- If so, how has it changed?
- Do you see any improvements?
- Do you see any retrogressions?

Question Nº 3: Is there anything you think policy makers need to do to make this regulatory framework more expeditious?

- In terms of cost? In terms of time?
- What effects do foresee from these changes?

Question Nº 4: Do you think the current regulatory framework for the creation and/or closing of businesses has any effect in the country's economic development?

- If so, what effects?
- Do you think it has any effects on its current productivity levels?
- Do you think it has any effects on its current informality levels?

After all interviews concluded, the qualitative data gathered should reinforced the observations made from the data collected from the post-adjusted *Doing Business* annual overall scores. Furthermore, this data will provide insights on the effects the current regulatory framework for businesses is having in the economy, as well as the relation it has with the current productivity and informality levels in Bolivia.

5. The *Doing Business* case in Bolivia: Stagnation in the business regulatory environment

This section is narrated using simultaneously qualitative and quantitative information. As mentioned above, qualitative information has been provided by experts and quantitative data by the *Doing Business* report. In addition, I compare these data with variables measuring productivity and informality levels, to understand the effects that a regulatory environment has on the development of an economy.

In the 1990's, Luis Carlos Jemio explains, "(Bolivia) created a regulatory framework divided in sectors aiming to be more efficient in the sectors considered to be more strategic (mining and hydrocarbons) or that provided public services (telecommunications, electricity, transport, etc.) (…) and, while this system has been partially maintained in the last 14 years, they have lost partiality, favoring the state, state owned enterprises and their relationships with businesses and consumers" (Jemio 2019).

By looking at the Bolivian *Doing Business* scores over time we can notice small change in its score over the last 10 years (from 46.6 to 50.17, from 46.59 to 48.18 if adjusted) being one of the worst performers in the region (only above Suriname, Haiti and Venezuela) and with vast room for improvement. As of 2019, the Andean economy ranks 156 over 190 economies with a score of 50.32, also ranking 156 in 2018 (scoring 50.17) and ranking152 in 2017 (with a score of 49.86). And, while the score seems to have relatively stayed the same, Bolivia is falling behind considering that other developing economies are taking steps on policies that improve their Doing Business scores. "With advances and setbacks, as we can see in the *Doing Business*, Bolivia trend has been to worsen in his relative position between the countries that are being taken into account in these indicators, although, in terms of its score, this country has basically remained constant" (Jemio, interview in 2019).

Since the creation of the *Doing Business* report in 2004, Bolivia has never been able to rank higher that 50% of the world economies measured. And, while the country has shown improvements in some sub indicators such as the reduction in the cost of starting a business for both men and women (from 154% to 54%, measured in % of income per capita) or the cost of getting electricity (from 1450% to 705%, measured in % of income per capita) **most** indicators have either stagnated of even worsened over time. A list of all the sub indicators in the *Doing Business* reports from 2006 to 2019 are listed in **table Nº 3** for comparison. Again, the reports of 2004 and 2005 were not used because most of the methodology changes were done in that period and few comparability is possible.

The Andean country's poor regulatory framework is mainly due to its complex nature and its poor adaptability of new technological practices. As Marcelo Olguín explains that "institutions are condemned with big dispersion in the normative hierarchy. In some cases, you have issues by law, by supreme decree, by decree law, by multi ministerial resolutions, bi ministerial, you even have things that are regulated by administrative resolutions. This makes it very difficult to do an inventory on all the norm that regulates all the business economic activity (…) (furthermore), a lot of the normative today uses requirements that have lost sense in this technological era which suggests an urgent normative reform. But institutions are so heavy that these issues don't lie inside as their main priorities" (Olguín, interview in 2019). Efforts have been taken to improve policies, but overall initiatives have been poorly prioritized and rarely completed. As an example, a technological innovation was incentivized in 2007 to reduce the cost and time of exporting goods which is still pending on completion. "A technological initiative to connect ministries and simplify procedure load for exporting through AGETIC. But strategic projects for the country have not been correctly prioritized and projects have been delayed" (Olguín, interview in 2019).

Table Nº 3: The *Doing Business* report scores - 2006 & 2019

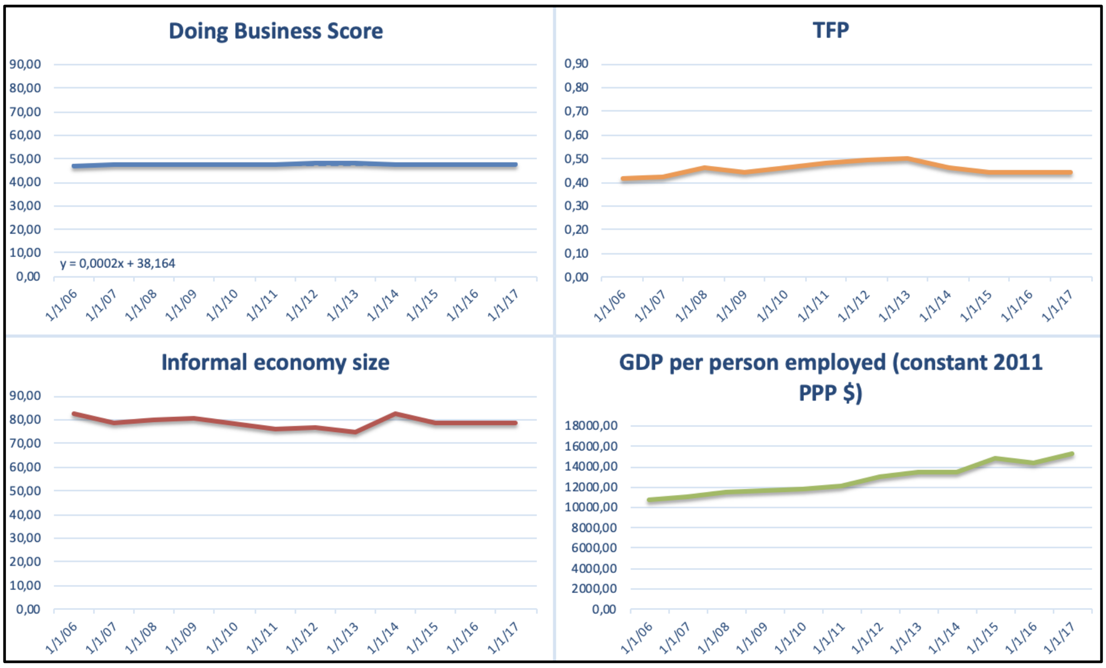
Starting a business		
	2006	**2019**
Procedures - Men & Women (number)	14	14
Time - Men & Women (days)	49	43.5
Cost - Men & Women (% of income per capita)	153.2	46
Paid-in Minimum capital (% of income per capita)	0	0
Dealing with construction permits		
	2006	**2019**
Procedures (number)	10	13
Time (days)	211	322
Cost (% of Warehouse value)	2.7	1.3
Getting electricity		
	2006	**2019**
Procedures (number)	8**	8
Time (days)	42**	42
Cost (% of income per capita)	1450.8**	691.3

Registering property		
	2006	**2019**
Procedures (number)	7	7
Time (days)	91	90
Cost (% of property value)	5	4.7
Getting credit		
	2006	**2019**
Strength of legal rights index (0-10)	0	0
Credit registry coverage (% of adults)	10.3	17.2
Credit bureau coverage (% of adults)	24.6	44.5
Protecting minority investors		
	2006	**2019**
Extent of disclosure index (0-10)	1	1
Extent of director liability index (0-10)	5	5
Ease of shareholder suits index (0-10)	6	6
Strength of investor protection index (0-10)	4	4
Paying taxes		
	2006	**2019**
Payments (number per year)	42	42
Time (hours per year)	1080	1025
Total tax and contribution rate (% of profit)	80	83.7
Profit tax (% of profit)	0	0
Labor tax and contributions (% of profit)	15.5	18.8
Other taxes (% of profit)	64.6	64.9
Time to comply with VAT refund (hours)	No VAT refund per case study scenario	No VAT refund per case study scenario
Time to obtain VAT refund (weeks)	No VAT refund per case study scenario	No VAT refund per case study scenario
Enforcing contracts		
	2006	**2019**
Time (days)	591	591
Cost (% of claim)	25	25
Resolving insolvency		
	2006	**2019**
Outcome (0 as piecemeal sale and 1 as going concern)	0	0
Time (years)	1.8	1.8
Cost (% of estate)	14.5	14.5
Recovery rate (cents on the dollar)	36.9	40.8

Source: Own Elaboration using the *Doing Business* reports data.
References:
*****Indicator changed methodology at a certain point.
******Indicator was introduced in 2010.

Table Nº 3 looks at the changes in all comparable sub indicators of the *Doing Business* from 2006 to 2019 there are improvements in 9 of the 34 indicators shown. Along with the cost of starting a business and the cost of getting electivity, we can highlight improvements in the time it takes to start a business (from 49 to 43.5, measured in days for both men and women), the time it takes to pay taxes (from 1080 to 1025, measured in hours per year), and the cost of dealing with construction permits (from 2.7 to 1.3, measured in % of warehouse value) among others. Other than that, out of the 34 indicators, 21 have kept the same, and 5 have worsened over time. The most noticeable reversals are the time it takes to get a construction license (from 211 days to 322, measured in days), the amount of procedures it takes to get a construction license (from 10 to 13, measured in number of procedures), and the increase in total tax (from 80 to 83.7, measured in % of profit). It is important to denote that around 35% of the sub indicators are not included in these lists due of their lack of data on 2006, with 80% of seeing no change since their creation.

Graphic Nº 1. Bolivian labor Productivity, Total Factor Productivity, Informal economy size and *Doing Business* overall score 2006-2017



Source: Own elaboration using data from the *Doing Business* report, the *Penn World Tables, Eminpro-Inesad* website and the *World Bank* from 2006-2017.

Graphic Nº 1 shows small changes in all variables measured over the period of 2006 to 2017. When looking at the post-adjusted *Doing Business* score, there is similar performance over time with a minimum score of 46.59 in 2006, a maximum score of 47.98 in 2012, and an average growth of 0.24%. The question is why? On one hand, it is arguable that the lack of improvement in the *Doing Business* overall score is due to the lack of initiative by current and previous administrations in Bolivia. As Mario Valori argues, “there is no fostering spirit for the private businesses. In particular, and regardless of the current government ideology, this doesn’t facilitate opening, hiring (not only labor but also suppliers) or closing a business” (Valori, interview in 2019).

Similarly, if we look at the informal economy size, we can notice that the high levels of informality have been a constant for over a decade with the highest levels of informality in 2006 at 82.70%, the lowest levels in 2003 at 74.98%, and an average reduction of 0.40%. Experts explain this is mainly due to the following reasons. On one hand, a complex regulatory framework that is inefficient leads on companies being unable to comply to its regulations. Marcelo Olguín explains that the complexity of Bolivia’s regulatory framework “forces the companies that want to comply with it to have a department in charge solely of completing the regulatory procedures imposed. In the case of small enterprises, they cannot spend their resources and time to a department that takes out hours of production. The redundancy of procedures, costs and time insides in the cost of businesses affecting productivity and competitiveness” (Olguín 2019). Bolivia’s market conditions limit the possibility for enterprises to comply with its regulatory framework. To put it in perspective, “If you tell someone with strong necessities and that barely has the capacity to survive: okay, it takes you 6 moths to register (your business), 150 steps, you need to hire a lawyer, and, on top of that, pay 3,000 dollars it is very likely for him to operate in the informal side. This is why the majority entrepreneurs in Bolivia do so today, the ones who do register tend to do so only because they have a closed contract, more so if it’s with the government.” (Valori, interview in 2019)

Furthermore, poor regulatory frameworks disincentivize investment in the country as a whole, decreasing the possibility to increase the country’s economy size as a whole and move these resources to other places given the poor legal security in place. “Red tape is one of the aspects that makes entrepreneurs, small or big, national or foreign, decide to invest in the country. There is the need for legal security for investment, contract compliance, clear and stable laws, etc.” (Jemio, interview in 2019).

As a result, the current regulatory framework is forcing stakeholders to work in the informal side of the economy, hindering both businesses and the state as a whole. “By being less investment in the formal sectors of the economy, employment is affected, hence, the currently active population has to look for its livelihood in the informal sector" (Jemio, interview in 2019).

Total Factor Productivity seems to be equally affected by this. In the time series provided, I see a minimum score of 0.41 in 2006, a maximum score of 0.50 in 2013 and an average growth of 0.73%, evidencing few improvements in the long-term economic growth of the country. Finally, labor productivity is the only variable with a slightly better performance[1]. Measured in GDP per person employed, we can see it's the only variable with an average growth of more than 1%, with 3.36% with its worst performance in 2006 under GDP/person employed of 10,731.2 and its best performance in 2016 with a GDP/person employed of 14,876.81. Businesses and investors are not incentivized on growth and innovation in Bolivia due to a regulatory framework that makes this costly, risky and time consuming. As an example, "The current legislature in Bolivia doesn't provide a legal entity for entrepreneurs that allows them to access to different financing options such as venture funds (…) making more expedite procedures incentives entrepreneurs to register formally and is necessary today" (Valori, interview in 2019). In general, Bolivia's current model hinders private investment as it at risk of competing with more favored State-owned enterprises. "a slanted regulatory framework disincentivizes stakeholders to invest and innovate, especially when you need to compete with state owned enterprises that obtain subsidies and special benefits from the state" (Jemio, interview in 2019).

6. Conclusion

Bolivia's regulatory framework is affected by the lack of initiative in working towards more efficient policies and its inability to implement new technological systems. This framework hinders both local and foreign investment in the country due to its risk, cost and time and it leads to less productive enterprises, less innovation and a big part of the population working in the informal sector. Furthermore, as the *Doing Business* shows, Bolivia has been unable to improve its *Doing Business* score and it is falling behind comparing to its neighbors and other developing economies. These highlights the need to increase the priority given over the last 15 years.

[1] Although, according to EMINPRO data (Eminpro-Inesad, 2020), labor productivity constructed by the World Bank is overestimated.

Having said that, it is also important to understand the limits of this study. On one hand "it's important to look at the methodology of the *Doing Business* given that they base their results on open interviews. This creates a bias due to the perceptions of the people interviewed, which prevents you from looking at a trend. The methodology is so broad with the purpose of comparing several economies around the world that when used in detail it is not as indicatively" (Olguín, interview in 2019). Furthermore, "having more expedited procedures, less taxes and lower costs for businesses will for sure promote more investment in the country, but it is also necessary to approach the themes of legal security, access to markets and labor productivity." (Jemio, interview in 2019).

All in all, the Doing Business reports highlights the importance Bolivia needs to give to its regulatory framework for the impact it can have in the economic and social development of the country. Its overall score and ranking provide an insight in the inefficiencies of current policies in place and, if it wants to increase competitiveness, there is urgent need for reforms.

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Annexes

Annex Nº 1: Summary of each of the 2004 *Doing Business Report* set of indicators (McLiesh et al 2010)

- ***Starting a business:***

The objective of the starting a business set of indicators is to measure the required time for an entrepreneur to operate legally, measuring the number of procedures, their cost, the time it takes, and minimum capital requirements to start (assuming the process is efficient and done without corruption). The indicators for starting a business are based on the laws and regulations of business entry and verified by experts in said country.

It's important to denote that in order to make the indicator comparable across countries several assumptions are to be made. First the business is a limited-liability company that operate in the most populated city which is domestically owned by 5 founders. Its capital is 10x the income per capita, has 50 national employees in its first month, leases its plants and offices and has a 100x income per capital turnover alone with a 10-page long company deed.

- ***Hiring and firing workers:***

The objective of hiring and firing workers set of indicators is to measure the employment laws and their flexibility of hiring index, the conditions of employment index and the flexibility of firing index with values between 0 and 100 (the highest meaning the most regulation).

As with all indicators, assumptions are made to make the data comparable across countries. It is assumed that the company is composed of 201 employees which aren't executive, serve as full time employees and have worked in the company for 20 years to support a family of two children and an unemployed wife.

- ***Enforcing contracts:***

The enforcing contracts set of indicators measure the number of procedures that "demand interaction between the parties or between them and the judge or a court officer", the time it takes for disputing resolution, the costs of going through court procedure and complexity of contract enforcement (measured with an index). Data is gathered from court regulations such as the codes of civil procedures coupled with surveys on domestic litigation attorneys.

It is assumed that it is a hypothetical case in with there is a 50% income per capita dispute in the most populous city, the data track the procedures of recovering debt through court, in a scenario where the company is 100% right.

- ***Getting Credit:***

The getting credit indicator set measures the sharing credit information and the legally protecting creditor. The credit information index is done through a survey to several banking supervisors by the Credit Reporting Systems project of the World Bank along with academic revisions. Information is gathered about the public credit registries as well as descriptive date on "credit market outcomes and information on related rules in credit markets". In countries with verified public registries a follow up survey is handed to evaluate their structure, laws and norms.

For the creditor-rights indicator there is a separate questionnaire measuring if there are restriction on entering into reorganization proceedings, if there is no automatic asset freeze on realizing collateral upon bankruptcy, if secured creditors are satisfied first on liquidation and if management is replaced by a creditor-appointed receiver in reorganization. Each variable has a binary score with countries having a range of scores from 0-4, 4 representing strong creditor rights.

- ***Closing a business:***

The closing a business indicator set measures the time it takes to go through bankruptcy, the cost, whether secured lenders absolute priority is preserved, and the court powers in bankruptcy. This is done through an aggregate-goals-of-bankruptcy index which averages the scores for time, cost, priority and efficient outcome and an index for court powers in bankruptcy. These indicators come from questionnaires given to bankruptcy judges and attorneys in private law firms.

It is assumed that the procedures are being tracked for a hypothetical limited-liability company going through bankruptcy. The business is domestically owned hotel in the most populous city hiring 201 employees, 1 main secured creditor and 50 unsecured ones. There are detailed assumptions about the debt structure and future cashflows and it is assumed the company becomes insolvent in January 1, efficient outcome is reorganization or sale.

Annex № 2: Changes in methodology of the *Doing Business* Report 2005-2017 (World Bank 2020)

- ***Doing Business* 2005:**

Changes were made to every topic in 2004:

- **Starting a business:**
  - Statutory requirement for minimum capital was taken as part of the initial cost of starting a business, the indicator was changed to reflect the up-front cost only.
  - Surveys collected information on how many such transactions the respondents completed to start their business rather than how they think entrepreneurs would do it.
- **Employing workers:**
  - A new indicator on the cost of firing a redundant worker was constructed, measured in terms of weeks of wages.
- **Enforcing contracts:**
  - The assumption that creditors were not allowed to seek recovery outside of courts was eliminated. Now administrative procedures are used when countries indicate they are more common.
- **Getting credit:**
  - Indicators on credit information were simplified to an index of six variables, covering information sharing from both public and privately-owned registries.
- **Closing a business:**
  - The measure of the legal rights of creditors in insolvency was expanded to cover collateral laws as well.
  - A new indicator was created which calculates how many cents on the dollar can be recovered in bankruptcy.'

New Topics were added to the *Doing Business* report:

- **Registering property**
- **Protecting minority investors**

Doing Business 2006:

New topics were added to the *Doing Business* report:

- **Dealing with licenses**
- **Trading across borders**
- **Paying taxes**

Furthermore, changes were made on two other topics:

- **Protecting minority investors:**
  - The disclosure index in *Doing Business 2005* was replaced by the strength of investor protection index in *Doing Business* in 2006 comprising not only on the extent of disclosure index, but also on the extent of directors' liability index, and the ease of shareholder suit index.
- **Employing workers:**
  - Now it includes the non-salary cost of hiring a worker, consisting of all social security and payroll taxes paid by employers on their workers.

Doing Business 2007:

The methodology for Three of the *Doing Business* topics changed:

- **Paying taxes:**
  - The total tax rate measure started including all labor contributions paid by the employer (such as social security contributions) and excluded consumption taxes (such as sales tax or value added tax).
    - Measure was changed from gross profits to percentage of commercial profits.
- **Trading across borders:**
  - *Doing* Business included the cost associated with exporting and importing cargo to the time and number of documents required.
- **Employing workers:**
  - Hiring costs were eliminated in the ease of employing workers.

Doing Business 2008:

The methodology for three of the *Doing Business* topics changed:

- **Dealing with licenses:**
    - Assumption regarding inspections were made. Inspection time of 1 day was held as a constant even where there is a delay between the request for an inspection and its occurrence to eliminate discretion in interpreting the time that respondents report for inspections.
    - Preconstruction inspections were added to the list of procedures.
- **Employing workers:**
    - Reforms were made to align the *Doing Business* methodology with the International Labor Organization (ILO) conventions making two main changes:
        - First, the calculation of firing costs was modified so that 8 or fewer weeks of salary now receives a score of 0 for purposes of calculating the rankings on the ease of employing workers.
        - Second, restrictions on night work such as higher overtime premiums or limitations on scheduling work hours are no longer coded as rigidities.
- **Enforcing contracts:**
    - 1 procedure is now subtracted for countries that have specialized commercial courts and 1 procedure for countries that allow electronic filing of court cases.
    - The cost indicator now includes all fees for enforcing judgments.

Doing Business 2009:

The methodology for one of the *Doing Business* topics changed:

- **Getting credit:**
    - Three specific changes were made to the legal rights index
        - The indicator was given a standardized case scenario with specific assumptions to bring this indicator into line with other *Doing Business* indicators.

- The legal rights index now focused on revolving movable collateral rather than on tangible movable collateral.
- The indicator eliminated considerations such as if whether management remains in place during a reorganization procedure among others.

***Doing Business* 2010:**

The methodology for one of the *Doing Business* topics changed:

- **Employing Workers:**
  - Assumptions changed to qualify a small- to medium size company in 60 employees rather than 201.
  - Legally mandated wage premiums for night and weekly holiday work up to a threshold are no longer considered a restriction.
  - The calculation of the minimum wage ratio was modified to ensure that an economy would not benefit in the scoring from lowering the minimum wage to below the poverty line ($1.25 a day).
  - The calculation of the redundancy cost was adjusted so that having severance payments or unemployment protections below a certain threshold does not mean a better score for an economy.

***Doing Business* 2011:**

The **Employing Workers** topic was eliminated from the ease of *Doing Business* score.

***Doing Business* 2012:**

The ease of *Doing Business* index started included the **getting electricity** topic:

- Procedures, time and cost related to obtaining an electricity connection were removed from the dealing with construction permits topic.

The methodology for 2 of the *Doing Business* topics changed:

- **Getting credit:**
  - The scoring of one of the 10 components of the strength of legal rights index was amended to recognize additional protections of secured creditors and borrowers.

    - The highest score of 1 is now assigned if secured creditors are not subject to an automatic stay or moratorium on enforcement procedures when a debtor entered a court-supervised reorganization procedure or if the law provides secured creditors with grounds for relief from an automatic stay or moratorium or sets a time limit for the automatic stay.
- **Paying taxes:**
    - A threshold was introduced for the total tax rate for the purpose of calculating the ranking on the ease of paying taxes.
        - All economies with a total tax rate below the threshold will now receive the same ranking on the total tax rate indicator to awarding economies for unusual low total tax rates for reasons unrelated to government policies toward enterprises.

Doing Business 2013:

The methodology for one of the *Doing Business* topics changed:

- **Paying Taxes:**
    - The threshold for the total tax rate introduced in 2012 was updated, being set at the lower end of the distribution of tax rates levied on medium-size enterprises in the manufacturing sector as observed through the paying taxes indicators.

Doing Business 2014:

The methodology for 5 of the *Doing Business* topics changed:

- **Trading across borders:**
    - Documents that are required purely for purposes of preferential treatment are no longer included in the list of documents
- **Paying taxes:**
    - The value of fuel taxes is no longer included in the total tax rate because of the difficulty of computing these taxes in a consistent way across all economies covered. Fuel taxes continue to be counted in the number of payments.

- Starting a business, dealing with construction permits and registering property
- The assumption establishing that each procedure must take at least 1 day was removed for procedures that can be fully completed online in just a few hours (these are now set at ½ a day).

Doing Business 2015:

Doing Business 2015 incorporates 2 important changes:

- The ease of Doing Business ranking as well as all topic-level rankings are now computed on the basis of distance to frontier scores.
- Second, for the 11 economies with a population of more than 100 million, data for a second city have been added to the data set and the ranking calculation.

The methodology for 5 of the *Doing Business* topics changed:

- **Dealing with construction permits:**
    - For dealing with construction permits, the cost of construction is now set at 50 times income per capita.
    - This topic eliminated the procedures for obtaining a landline telephone connection.
- **Getting credit:**
    - Methodology has been revised for both the strength of legal rights index and the depth of credit information index.
- **Enforcing contracts:**
    - The value of the claim changed to twice the income per capita or $5,000, whichever is higher.
- **Resolving insolvency:**
- The topic was expanded to include an index measuring the strength of the legal framework for insolvency.
- **Paying taxes:**
- Calculating the distance to frontier score for paying taxes changed.
- Financial statement variables have been updated to be proportional to 2012 income per capita; previously proportional to 2005 income per capita.

- ***Doing Business* 2016:**

The methodology for 5 of the *Doing Business* topics changed:

- **Dealing with construction permit:**
    - An index of the quality of building regulation and its implementation was included.
- **Getting electricity:**
    - A measure of the price of electricity consumption and an index of the reliability of electricity supply and transparency of tariffs were included.
- **Registering property:**
    - An index of the quality of the land administration system in each economy were added in addition to the indicators on the number of procedures and the time and cost to transfer property.
- **Enforcing contracts:**
    - An index of the quality and efficiency of judicial processes has been added.
    - The indicator on the number of procedures to enforce a contract was eliminated.
- **Protecting minority investors:**
    - A few points for the extent of shareholder governance index were fine-tuned, and now measures regulations applicable only to limited companies.

- ***Doing Business* 2017:**

The Methodology for 4 topics of the *Doing Business* changed

- **Starting a business, registering property and enforcing contracts:**
    - Topics now cover a gender dimension:
        - Starting a business was expanded to also measure the process of starting a business when all shareholders are women.
        - Registering property now also measures equality in ownership rights to property.

        - Enforcing contracts was expanded to measure equality in evidentiary weight for men and women.
- **Paying taxes:**
    - Post filing processes were added to the measurement of the indicator.

Annex Nº 3: List of the participants' interview in the study with their field of work

- **Mario Valori:** Mario Valori has over 10 years of experience managing programs/projects funded by international development cooperation organizations and over 12 years of experience in the private sector with expert knowledge in program/project management.
- **Marcelo OlguÍn:** General Manager at CANEB, Bolivia with over 15 years of experience in Bolivia's public sector in economic analysis and commerce policies.
- **Luis Carlos Jemio:** Senior Economist at INESAD, Bolivia. expert in Public Policies with a PHD in development economics.