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Working Paper

Is the Global Competitiveness Index a reliable tool for the design of labor market policies? Evidence from Peru

IZA Policy Paper, No. 180

Provided in Cooperation with:

IZA – Institute of Labor Economics

Suggested Citation: Vera, Celia P.; Rendón, Sílvia (2021) : Is the Global Competitiveness Index a reliable tool for the design of labor market policies? Evidence from Peru, IZA Policy Paper, No. 180, Institute of Labor Economics (IZA), Bonn

This Version is available at:

<https://hdl.handle.net/10419/243466>

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ABSTRACT

Is the Global Competitiveness Index a Reliable Tool for the Design of Labor Market Policies? Evidence from Peru*

Peru's national policy on productivity and competitiveness relies on the Global Competitiveness Index (GCI) by the World Economic Forum. We analyze the subjective component of GCI and show that, in the labor market area, this index has been largely constructed with opinion data coming from a particular group of the business sector. The opinion data is based on a survey of 98 business executives, which mainly represent firms with 100 or more employees and account for only 1% of total firms in Peru. Further, the questionnaire exhibits obvious flaws, and the underlying viewpoint that less employment protection promotes productive and formal work is not aligned with the evidence. Thus, we do not find that GCI provides a solid base for policy advice.

JEL Classification: J08, J32, 043

Keywords: labor markets, competitiveness, subjective data

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* The views expressed in this paper are our own; so are all errors and omissions. They do not represent the views of Universidad de Piura or any other institution that the authors were or are affiliated with.

1 Introduction

Using indexes to rank the competitiveness of countries has gained astounding popularity. Policymakers closely monitor these indexes to design economic and social policies. Favorable rankings are used to consolidate the country's strengths, while poor ones are used to adjust the country's economic policies to achieve sustained growth. However, the methodology of these indexes does not always capture the country's growth potential and can thus lead misleading policies. We analyze a competitiveness index that is constructed with subjective data from a particular set of individuals who benefit from certain policies.

The *Global Competitiveness Index* (GCI), developed by the World Economic Forum (WEF), has been used as a standard measure of a country's competitiveness. It is constructed from statistical data and survey questions to local business executives; it consists of baseline indicators, which are aggregated into sub-indicators. In this article, we discuss the accuracy of GCI for policy purposes through an analysis of its subjective component. We focus on its application in Peru, where it plays a key role in the design of the country's policy on competitiveness and productivity. We center our analysis on the labor market sub-indicator, as GCI is used as a roadmap for labor market flexibilization policies.

Despite GCI is broadly quoted in policy statements and in the media, its usefulness as a measure of competitiveness has been widely criticized. Lall (2001) pointed out several analytical, methodological and quantitative problems of the GCI. In the same line, Aleksynska and Cazes (2016) have raised concerns on the suitability of the GCI to compare countries and their regulations over time, given the significant variation of components not only across but also within the indicators. Another body of literature questions the use of business leaders' opinions as primary data, and has highlighted limitations such as the cultural bias inherent to survey responses (Zinnes et al. 2001), the lack of representation of other national groups (Kaufmann and Kraay 2008; Rosenau 2003; Soto-Rodriguez and Maiz-Vazquez 2016), the executive's orientation in favor or against the government (Kaufmann et al. 2004) and the ideological bias that rewards some policies rather than good outcomes (Bergsteiner and Avery 2012, 2019).

Taken together, these studies have illustrated limitations of the GCI with a broad approach, both in terms of countries and topic. We, instead, focus on a particular country and a specific GCI sub-indicator. This approach allows us to add a source of

potential bias that has been, to our knowledge, ignored in the literature: the lack of representativeness of the subjective data of the GCI. This deficiency, combined with inadequacies in the questionnaire, shapes our conclusion that the labor market reform in Peru is largely based on an index that prioritizes opinions and expectations of a particular business sector in the country. Thus, we argue that GCI should be used with caution or best simply avoided in policy design.

We develop our idea in two parts. First, GCI prioritizes the opinions and expectations of large firms. To the extent that Peru is undertaking a labor market reform on GCI, the policies suggested prioritize measures that benefit that particular group. Furthermore, any policy design based on GCI does not address productivity gaps in Peru; since these are concentrated in small firms (Céspedes et al. 2016), and the latter are underrepresented in the Survey. Second, questions in the subjective component of GCI are unclear and repetitive, and respondents cannot always provide an informed answer that allows comparison across countries. These flaws cloud rather than improve the rankings. More importantly, the scores assigned to potential answers penalize countries with protective employment legislation. However, Peru has already implemented reductions in labor costs and tax simplifications which have not led to significant increases in formalization. Research on simplifications of business registration as well as on effects of firing rules also suggests that labor market flexibilization policies will not necessarily increase formal and productive job creation.

The rest of this paper is set out as follows. In the next section, we present Peru's strategy on competitiveness and productivity. Sections 3 and 4 are devoted to the use of subjective data on the construction of GCI, particularly on indicators related to the labor market area. In Section 5 we develop our criticism to GCI, which is organized in the two parts mentioned above. Section 6 concludes.

2 The Peruvian Strategy for Competitiveness and Productivity

To enhance sustained economic growth and thus improve the well-being of its population, Peru adopted a comprehensive strategy to increase the productivity and competitiveness of its economy. In December 2018, the Peruvian government approved the National Competitiveness and Productivity Policy (the Policy, henceforth)¹ which

¹Supreme Decree No.345-2018-EF.

outlined the country strategy until 2030 by means of nine key objectives and 36 policy guidelines.² The Policy assigns the leading role in enhancing economic growth to increasing productivity, getting more goods and services from production factors, and competitiveness, the country’s ability to compete in global markets exploiting its comparative advantages (The Policy, p.12). In July 2019, the government published the National Competitiveness and Productivity Plan (the Plan, henceforth),³ which presented a set of policy measures to achieve the nine priority objectives of the Policy.

The Policy identifies the following structural challenges in the labor market: high informality, low-productive firms, several labor market regimes, and low compliance with regulations. The Policy diagnoses that this is produced by rigid employment legislation,⁴ and thus calls for labor market flexibilization, as in the 1990s.

Table 1 presents the Policy’s objectives and guidelines, as well as the Plan’s direct measures for the labor market area.

Objective	Policy guidelines	Measure
Dynamic and competitive Labor Market that is able of decent job creation	Create and improve the mechanisms to facilitate transit from the informal to the formal sector, increasing productivity.	- New employment regulation. - Part-time work. - Telework.
	Revise and adequate the regulations and employment services according to the labor market demand, considering the dialogue among employers, employees, and government.	- Upgrade the employment regime for micro and small firms - Improve training alternatives.
	Improve compliance with labor market regulation.	- Redesign job placement and employability policies. - Modernize the National Employment Service. - Modernize the labor inspection system.

Own elaboration based on the Policy and the Plan.

Table 1: Peru’s Strategy on Competitiveness and Productivity, Labor Market area.

There are contrasting views about the Peruvian strategy for the labor market among policymakers and academicians. Opponents argue that the suggested measures reduce the economic and social security of workers; in particular, they shift the burden of an unemployment fund from employers to workers and loosen the termination of labor contracts. By contrast, supporters of the Policy, mainly business associations, claim that flexible forms of employment incentivize permanent hiring. They also suggest tax incentives for firms that hire permanently and invest in workers’ training,

²The objective areas are infrastructure, human capital, innovation, public finance, labor market, business environment, trade, institutional structure, and environment.

³Supreme Decree No. 237-2019-EF.

⁴Peru has the highest labor costs in the region, with a non-wage labor cost of 59.7% of the worker’s salary, severance payments equivalent to 1.5 salaries per year worked, and administrative barriers for terminating employment contracts in case of economic hardship.

continuity of employment regimes that pay labor benefits as part of the workers' salaries, eradication of minimum quota for collective dismissals, revision of regulations concerning telework and part-time work in line with flexible forms of employment, compensation instead of reinstatements for unfair dismissals, among other measures.⁵

The Policy relies heavily on the GCI.⁶ and moreover, the Policy and the Plan objective areas are those of the GCI. This is not surprising, because the measures proposed by the leading business association in Peru that became part of the Policy were based on the GCI.

3 The Global Competitiveness Index

Since 1979 WEF publishes yearly Global Competitiveness Reports; since 2005 these reports rank countries by their competitiveness measured by the GCI.⁷ WEF constantly revises the methodology of the GCI to be up to date with changes that influence global productivity. In 2018, WEF introduced the GCI 4.0, which considers the Fourth Industrial Revolution. We discuss the methodology of the GCI of 2018, which was used to design the Policy.

The GCI combines 98 indicators into 12 sub-indicators, organized in 4 categories: i) business dynamism, ii) human capital, iii) markets, and iv) innovation capacity. The overall GCI score is the simple average of the 12 sub-indicators. Each indicator's value is converted into a score ranging from 0 to 100 using a min-max normalization approach.⁸ These normalized scores are then combined into sub-indicators and index scores, which can be interpreted as the distance to the ideal frontier of productivity, which is normalized at a score of 100.

WEF draws its data from two sources: international objective data and the Executive Opinion Survey (the Survey henceforth). Quantitative data come from multilateral statistical reporting agencies such as the World Bank, the International Monetary

⁵See Perú Compite (2019) and CONFIEP (2019a,b).

⁶The Policy relies on nine different indices, of which the GCI accounts for 62% of all index citations.

⁷WEF defines competitiveness as "the set of institutions, policies, and factors that determine the level of productivity of a country" (WEF 2018).

⁸The score of country c in indicator i is calculated as $\frac{value_{i,c} - wp_i}{frontier_i - wp_i}$, where $value_{i,c}$ is the raw value, $wp_{i,c}$ (worst performance) is the value at, or below which the score is 0, and $frontier_i$ is the value corresponding to the ideal value at or above which the score is 100. Depending on the indicator, this may be a policy target or aspiration, the maximum possible value, or a number derived from statistical analysis of the distribution (90th or 95th percentile). If a value is below the worst performance, its score is 0; if a value is above the frontier value, its score is capped at 100.

Fund (IMF), or the United Nations Educational, Scientific and Cultural Organization (UNESCO). The Survey is conducted across the world by the WEF’s network of Partner Institutes, which are committed to improving the competitiveness of their economies and network with leading business executives. In 2018, Partner Institutes were 17.6% universities, 47.2% research organizations, 20.8% business associations, 1.6% survey companies, 9.6% competitiveness councils, and 3.2% could not be identified. In Peru, the Survey is carried out by the *Centro de Desarrollo Industrial*, at the *Sociedad Nacional de Industrias*, the leading business association in the country and member of the committee for implementing the Plan⁹

Table 2 presents, for each sub-indicator, the distribution of indicators by data source.

Sub-indicator	Executive Opinion Survey	Institution	Total
1: Institutions	10	10	20
2: Infrastructure	5	7	12
3: ICT Adoption	0	5	5
4: Macroeconomic Stability	0	2	2
5: Health	0	1	1
6: Skills	6	3	9
7: Product Market	4	4	8
8: Labor Market	8	4	12
9: Financial System	3	6	9
10: Market Size	0	2	2
11: Business Dynamism	4	4	8
12: Innovation Capability	4	6	10
Total	44	54	98

Source: Own elaboration based on WEF (2018).

Table 2: Distribution of GCI’s indicators by data source

Out of the 98 indicators, 45% come from the Survey and the rest come from statistics by international institutions. Among the 12 sub-indicators, five are mostly based on subjective data. The Labor Market and Skills sub-indicators present the highest share of subjective data. On a small scale, three sub-indicators are partially based on the Survey, and only four come exclusively from objective data¹⁰

⁹The Board of Directors of the National Competitiveness and Formalization Council, managed by the Ministry of Economy, is in charge of implementing the Plan.

¹⁰See Figure 1 in the Appendix for scores of Peru in each sub-indicator.

4 Labor Market Pillar

The rationale of WEF’s labor market indicator is that well-functioning labor markets foster productivity through (i) flexibility, to match workers with the most suitable jobs for their skills, and (ii) talent-management, which develops the workers’ talent to reach their full potential. These two features characterize well-functioning labor markets and allow countries to be more resilient to shocks and reallocate production to emerging segments, incentivize workers to take risks, attract and retain talent, and motivate workers (WEF 2018).

Table 3 illustrates the scores and position of the Peruvian economy in the labor market sub-indicator of the GCI, as well as in each of its 12 indicators.

Indicator	Score	Rank ¹
Objective data		
Labor tax rate	95.8	34
Redundancy costs	84.5	40
Workers’ rights	70.1	71
Female participation in the labor force	56.86	82
Subjective data		
Flexibility of wage determination	76.3	16
Internal labor mobility	65.6	24
Ease of hiring foreign labor	52.5	63
Reliance on professional management	51.1	81
Pay and productivity	42.5	96
Cooperation in labor-employer relations	50.7	102
Active labor policies	17.9	126
Hiring and firing practices	31.5	128
Labor market Indicator	58.9	72

Source: WEF (2018).

1/. From 140 countries ranked.

Table 3: Peru’s Labor Market performance according to GCI

Labor market performance remains one of the biggest challenges for Peru. The country ranks in position 72 among 140 economies in the labor market area. While Peru is one of the countries with more flexible wage determination (76.3, 16th), the labor market is hindered by rigidities in terms of worker-employer relations (50.7, 102nd), hiring and firing practices (31.5, 128th), and active labor market policies (17.9, 126th). On average, Peru ranks better on indicators representing statistical

data than on indicators collected from the Survey.

Both the Policy and WEF associate an efficient labor market with labor market flexibilization policies, which is not an obvious identification for creating the type of work Peru aims to. The Policy explicitly sets as target decent work, which is a concept introduced by the International Labour Organization (ILO) in 1999 and first endorsed as a policy in Peru in 2010.^[11] Decent work has four key components: employment creation, social security, rights at the workplace, and social dialog. On the other hand, WEF recommends a combination of flexibility and protection of workers' basic rights. The latter, covered by the indicator *Workers' rights*, includes civil rights, the right to bargain collectively, the right to strike, the right to associate freely, and access to due process rights, but excludes firing regulations (WEF [2018]). It is not clear how policies oriented to minimize protection from firing, in a country with no unemployment insurance as Peru, will lead to decent work.

5 Subjective Data: the Survey

In the Survey respondents evaluate on a scale of 1 (worst) to 7 (best) specific areas for which, according to WEF, there are missing statistical data or it is impossible or extremely difficult to measure in a global scale.

Our first concern is the reliance on opinions data when there are objective data available. For instance, ILO has created a set of Employment Protection Legislation Indicators, which are based on legal information and contained in the ILO EPLex database. These data have national information on the regulation of temporary contracts and employment termination which could have been used to capture the indicator *hiring and firing practices*, instead of opinion data. Similarly, ILO uses administrative records to collect industrial relations data (IRData). These data include statistics on strikes and lockouts that could serve to capture the concept of labor relations in WEF's indicator *cooperation in labor-employer relations*, instead of opinion data.

Our second concern is on the Survey itself. For reliable survey results,^[12] participants should be carefully selected and the sample should be representative. To the extent that respondents compare their countries with other countries, surveys are

¹¹The National Council for Labor and Employment Promotion formulated the National Plan of Decent Work to promote decent work for the Peruvian population.

¹²See Aleksynska and Cazes ([2016]) and Lall ([2001]).

particularly helpful when the same respondents give their impressions on conditions over time and when participants share a common economic, business, and information context. On the other hand, there should be a high-quality questionnaire: questions should be clear, based on appropriate concepts to capture the different subjects, and should not be similar. In the following sections, we show that these conditions are not always fulfilled.

5.1 The Survey Sample

The Survey aims to “capture reality as best as possible, and business leaders are arguably the best positioned to assess these aspects” (WEF 2018, p.623). However, business executives have views that significantly differ from other types of respondents (Aleksynska and Cazes [2016](#); Kaufmann and Kraay [2008](#)) and their assessments reflect their ideological orientation in favor or against the government (Kaufmann et al. [2004](#)).

Moreover, even within surveyed firms, the literature questions the adequacy of business leaders as respondents. Soto-Rodriguez and Maiz-Vazquez ([2016](#)), for instance, argue that the questions in the Survey do not require particular expertise on the subject matter or a hierarchical position in the firm to be answered. To examine whether a change in the type of respondents would make a difference in the GCI, they compare the result of the Survey with those obtained from a non-executive sample. Their study finds significant differences between executives and employees regarding their perception of competitiveness and sub-indexes in all components of GCI. Literature on learning organizations, resource-based models and alternative approaches to competitiveness consider the organization’s human resource as a whole as the main driver to the competitive potential of any business (Ajitabh and Momaya [2004](#); Barney [2001](#); Fahy [2002](#)).

Focusing on a particular country and topic allows us to find out another inadequacy in the methodology adopted by GCI, which has been unnoticed by previous studies: subjective data reflecting opinions of a particular group that does not represent the whole business structure of the country. Consequently, the policies suggested might prioritize measures that benefit that particular group.

To reach a representative sample of Survey responses for each economy, the Partner Institutes are each year required to follow a detailed set of guidelines. First, they build a sample frame that reflects the structure of the economy by economic sector and

firm size.¹³ This results in a large list of potential business executives that have been chosen considering the share of GDP accounted for by their sector and size. Then, the Partner Institutes group the potential business executives that have the same size in different lists. These lists should represent the various economic sectors, which are classified as agriculture, industry, and services. Finally, the Partner Institutes randomly select firms from each list to receive the Survey.

The distribution of the Survey sample by firm size is informative about the impartiality of the sample frame and whether it prioritizes opinions and expectations from a particular business sector. Table 4 presents the evolution of WEF sampling guidelines and characterizes the resulting Peru Survey sample focusing on firm size. It also compares the distribution of firms in the sample of Survey for Peru with the actual distribution of firms in the country for the period 2008-2018.

Year	Lists on sample frame (2)	Definition firm size (3)	Avge respondents per country (4)	Number of respondents in Peru (5)	1-100 workers (%)			> 101 workers (%)		
					The Survey (6)	Peru* 1-10 (7) 11-100 (8) Total (9)		The Survey (10)	Peru* (11)	
2008	SMEs; large	Country-specific	91	84	2	97.13	2.52	99.65	91	0.34
2009	SMEs; large	Country-specific	95	89	9	95.34	4.49	99.83	91	0.17
2010	SMEs; large	Country-specific	98	86	12	98.10	1.67	99.78	88	0.22
2011	SMEs; large	Country-specific	98	88	16	98.06	1.71	99.77	83	0.23
2012	SMEs; large	Country-specific	100	83	n.a	98.49	1.46	99.95	n.a	0.05
2013	SMEs; large	Country-specific	94.7	79	n.a	98.79	1.18	99.97	n.a	0.03
2014	SMEs; large	Country-specific	92.8	85	n.a	98.58	1.37	99.96	n.a	0.04
2015	SMEs; large	Country-specific	98.6	91	n.a	98.58	1.38	99.96	n.a	0.04
2016	SMEs; large	Country-specific	102.8	88	n.a	98.62	1.34	99.96	n.a	0.04
2017	Micro; SMEs; large	<10; 11-250; >250	95.9	90	n.a	98.14	1.81	99.95	n.a	0.05
2018	SMEs; large	<250; >251	92.25	98	n.a	99.25	0.71	99.96	n.a	0.04

Note: n.a : Information not available; SMEs: small and medium-sized firms.

* For 2009, proportions represent shares of firms according to annual sales (Law 30056). For that year, columns 7, 8, and 11 represent, respectively, microenterprises, small-sized firms, and medium-sized firms. For 2009-2018, the universe of firms is micro, small and medium-sized firms, which together amount to 99% of all firms in Peru.

Source: WEF(2008-2018) for columns 2-6 and 10; National Economic Census 2008 for columns 7-9 and 11 in the year 2008;

Ministerio de la Producción (2013, 2014, 2015, 2016, 2017, 2018, 2019) for the same columns in years 2009-2018.

Table 4: Size stratification in WEF sampling guidelines, Survey sample size and business structure in Peru

Columns (2) and (3) illustrate changes in WEF sampling guidelines regarding size stratification. Except in 2017, the sample frame has been divided into two lists: small and medium-sized firms (SMEs) and large firms. Moreover, the number of workers that define SMEs and large firms has varied across countries until 2016. Specifically, Survey sample for Peru in 2018 is a random selection of SMEs and large firms, where the first group is defined as firms with less than 250 workers and the latter group

¹³ WEF uses the number of workers to define a firm's size.

represents all firms in the sample frame with 250 or more workers. That means that a microenterprise has the same chance to be selected as a firm with, say, 200 workers. Columns (4) and (5) show the average number of respondents in the Survey worldwide and in Peru, respectively. Over the period 2008-2018, WEF sampling guidelines have resulted in nearly 100 respondents per country. The number of executives interviewed in Peru has remained below average until 2017.

A key question is whether the distribution of firms by size in the Survey sample for Peru reflects well the actual distribution in the country. Columns (6)-(11) in Table 4 show that the Survey sample is far from representing the business environment in Peru. Micro and small enterprises (MSEs), firms with less than 100 employees, are a fundamental part of the productive structure in Peru, accounting for 99% of firms in the country. Moreover, Peru has a firm landscape oriented to microenterprises (less than 10 employees), which represent around 97% of firms nationally. In contrast, the Survey sample consists mainly of large firms. Throughout the period 2008-2011, firms with more than 100 workers have the highest participation in the Survey. A disaggregation of large firms (not shown in the Table) indicates that firms with 101-500 employees have the highest participation in the Survey, accounting for more than twice the share of larger firms. The share of firms with less than 101 employees, despite its increase over the period, has remained smaller than the share of larger firms with up to 20,000 employees except for 2009 and 2011 when only remains smaller than firms with up to 5,000 workers. The high reliance of the Survey on large firms is consistent with the emphasis by WEF on having a sample with a sufficient presence of large firms “because these companies tend to have a better knowledge about the overall economy and the relative quality of the business environment” (WEF 2008, 2009, 2010, 2011), which was explicit until 2011.

Overall, Table 4 indicates that the Survey prioritizes large firms. This is evident particularly in the 2018 edition when microenterprises are pooled together with firms that have up to 250 employees. Although WEF Reports do not present countries’ Survey profiles for recent periods, two facts suggest that the distribution of firms by size has not changed in favor of increasing representation of MSEs, and particularly microenterprises. First, there are no important changes in sampling guidelines. If any, a decade ago the definition of firm size has been more adequate to local conditions. Table 4 indicates, though, that even with country-specific size definitions, the Survey has underrepresented MSEs. Thus, the homogenization across countries of the number of workers defining firm size since 2017 would rarely increase the repre-

sentation of MSEs. Second, the Survey in Peru is managed by the same institution since the first edition of GCI. Considering that this is a business association and the business structure in the country has not undergone major changes, we expect that the institution’s network of business executives is unchanged over the years.

We argue that the underrepresentation of MSEs in the Survey prioritizes opinions and expectations of large firms, which face different regulations and barriers to grow than smaller firms. The 2015 National Enterprise Survey (ENE), a survey designed to represent firms of all sizes, indicates that the perceptions on labor market legislation varies across firm sizes. Whereas the perception that the paperwork to sign fixed-term contracts is cumbersome is more popular among MSEs, opinions concerning excessive inspections are more relevant among medium and large-sized firms. Furthermore, ENE respondents list labor regulation as the least important factor that limits their firms’ growth; instead, limited demand and lack of funding are the most important constraints. Only a 5% of medium and large firms report labor regulation as an important constraint to growth; for MSEs this percentage is even lower¹⁴

5.2 The Questionnaire

Survey questions can only be valuable when they are properly phrased and contain clear concepts. Three issues to analyze arise here. First, whether questions are clear and unambiguous, allowing respondents of different countries to interpret them identically. Second, whether respondents can provide an informed answer that is useful to ranking their country. Finally, whether questions are not repetitive. Deficiencies in these factors can create noise and redundant information and cloud rather than improve the rankings (Lall 2001). On the other hand, scores assigned to answer options reflect WEF’s rationale on competitiveness and productivity. Whether the evidence in Peru aligns with this rationale is informative on the adequacy of GCI for policy advise. The questions related to the labor market indicator as well as the scores assigned to each answer are presented in Table 5.

¹⁴It is not clear if this difference comes from who the respondent is (maybe not top executive) or the inclusion of all sizes of firms.

Indicator	Question (In your country...)	Answer
1. Hiring and firing practices	to what extent do regulations allow for the flexible hiring and firing of workers?	1 = not at all 7 = to a great extent
2. Cooperation in labor-employer relations	how do you characterize labor-employer relations?	1 = generally confrontational 7 = generally cooperative
3. Flexibility of wage determination	how are wages generally set?	1 = by a centralized bargaining process 7 = by each company
4. Active labor policies	to what extent do labor market policies help unemployed people to reskill and find new employment	1 = not at all 7 = to a great extent
5. Ease of hiring foreign labor	how restrictive are regulations related to the hiring of foreign labor?	1 = highly restrictive 7 = not restrictive at all
6. Internal labor mobility	to what extent do people move to other parts of the country for professional reasons?	1 = not at all 7 = to a great extent
7. Reliance on professional management	who holds senior management positions in companies?	1 = usually relatives and friends without regard to merit 7 = mostly professional managers chosen for merit
8. Pay and productivity	to what extent is pay related to employee productivity?	1 = not at all 7 = to a great extent

Source: WEF (2018).

Table 5: Questionnaire of the Survey's Labor Market pillar

The questions are often unclear or confusing and the assessment standards are not comparable across countries. That is, it is very likely that executives are not using the same benchmarks, leading to biased perceptions of the relative position of a country, and thus, misleading rankings (Lall [2001](#); Ochel and Rohn [2006](#)). The question for indicator 1, *hiring and firing practices*, asks whether the respondent believes that such practices are flexible in her country. Flexibility could be thought of as the amount of time in advance for an employer to dismiss a worker, in how much it costs to dismiss, or even in administrative burden. To the extent that WEF cannot make sure all business executives interviewed understand the metric as flexibility, this question is unclear and confusing. Even if they all think on time, the phrasing of the question leaves open any interpretation since one executive can think it is flexible to be able to hire and fire the same day whereas another can think in the same year. Furthermore, a business leader could say that it is difficult to hire and fire workers in her country. However, this answer does not mean that this business executive believes that there is any problem with that difficulty or that she prefers to be easier to hire and fire workers.

Question to assess indicator 2, *confrontational relations*, also challenges the soundness and reliability of the respondents' answers. Is asking for a raise being confrontational? Is to deny working overtime without extra payment being confrontational? This question could have different answers for different business executives. This is particularly relevant in Peru because regulations are sometimes specific to certain economic activities and firm size. What is considered flexible in agriculture might not be flexible in mining, so the responses can reflect such contextual differences.

Providing an informed answer that allows the respondent's country to be ranked with respect to others is another weak area of the Survey. Business executives can only assess how things work in their firm, but not in the whole country. For instance, if the firm has not hired or tried to hire any foreign worker, the respondent cannot provide an informed answer. This is relevant in the Peruvian case since foreign workers represent only, to 2018, 0.85% of all urban workers in the private sector (MTPE [2018](#)). Moreover, foreign workers in the private sector are concentrated in firms with less than 100 workers (MTPE [2019](#)), which are underrepresented in the Survey.

Finally, questions are repetitive. For instance, questions for indicators 3 and 8, *flexibility on wage determination* and *Pay and Productivity*, respectively, are asking the same information in different ways. From the scores assigned to potential answers, one can infer that wages set by firms, rather than determined on negotiation, increase

productivity. Thus, the underlying question here is the relationship between wages and productivity which is also asked explicitly in indicator 8, *Pay and Productivity*. What happens if a business executive perceives that wages are determined by the firm and are not related to productivity? This would be inconsistent with the channel between wages setting and productivity, according to WEF. Thus, respondents may try to differentiate their answers without really adding meaningful new information, with counterproductive results. From a different perspective, the question regarding flexibility on wage determination is indirectly asking for the role of labor unions, which is already covered as an objective indicator.

Another significant aspect of the Survey questionnaire is that the scores assigned to potential answers in Table 5 bring out WEF's views on the role of the government in a competitive economy. The State should not be burdensome for firms and create an efficient legal framework that makes it easy for private businesses to challenge government actions and regulations. The underlying premise of this reasoning is debatable. For instance, in indicator 3, *flexibility on wage determination*, the implicit assertion is that centralized bargaining is detrimental to productivity and competitiveness. This indicator ignores the role of wage coordination between sectors, such as the setting of common wage targets to take account of macroeconomic conditions. By using a mix of available cross-country micro and macro data, OECD (2018) provides evidence that systems that coordinate wages across sectors are associated with lower wage inequality and better employment outcomes than fully decentralized systems. Uncoordinated centralized systems hold an intermediate position, performing similarly in terms of unemployment to fully decentralized systems, but sharing many of the positive effects on other outcomes with coordinated systems. Thus, while centralized systems may reduce flexibility and potentially have adverse implications for productivity, WEF ignores the experience of several countries which shows that it is possible to balance inclusiveness and flexibility with high levels of representation at the local level and wage coordination across sectors.

From the scores in Table 5, one can also see that WEF penalizes countries with protective employment legislation and workers are taken into account in terms of costs incurred by businesses for advance notice requirements, severance, and redundancy payments. Peru, however, has already undergone a series of measures to improve flexibility in the labor market and has not achieved the desired result. Informality, an important barrier to sustained growth in the Peruvian strategy, remains high.¹⁵

¹⁵The informal sector includes a range of heterogeneous activities, from unpaid labor to several

One set of policies already implemented consists of reductions in labor costs. During the nineties, as part of liberalization policies, temporary contracts and reductions in severance payments were introduced. Such policies, according to Chacaltana (2001), did not increase labor formalization. A decade later, reductions in the payroll taxes for MSEs were implemented through the *Promotion and Formalization of Micro and Small Enterprises Act*, which was enacted in 2003 and then modified in 2008. This Act established differentiated treatment on labor and taxes for MSEs that registered under this scheme.¹⁶ For the initial period, Chacaltana (2008) finds that registered firms increase their sales and the share of formal workers, but also get lower profits, which explains why only 4% of MSEs registered under this Act. For more recent periods, Machado (2014) points out that in 2009 and 2010 the MSEs that registered under this Act were only half the number that registered over the traditional way, while Díaz (2014) adds that the formalization of recent years took place to a greater extent in the large firms sector than among small and medium-sized firms.

Along the business dimension, promotional regimes were introduced to encourage MSEs owners to formalize and pay their contributions. Specifically, the *Registro Unico Simplificado* system simplified and reduced the value-added tax while the *Regimen Especial de Renta* system reduced income taxes for small businesses. More recently, *MYPE tributario* reduces tax burdens for MSEs while encouraging compliance.

Another set of policies aims at simplifying the process of business registration. Jaramillo (2013) uses experimental data from microenterprises to analyze whether subsidizing the full money cost of formalization and providing guidance through the process of obtaining a license would increase formalization. Despite most firms reporting greater disadvantages than advantages of being informal, only 25% of them obtained an operating license, suggesting that firms' formalization may not be desirable at any cost. Using the same data, Jaramillo and Alcazar (2012) evaluate the effect of reductions in entry cost on firms' performance. The authors find that subsidies to operating licenses have not significantly affected important variables such as profit, sales, number of workers, access to credit, or investment.

Finally, legislation on employment termination has also experienced important changes. Up to 2002, workers dismissed without a "fair reason" were entitled to sev-

unregulated salaried jobs

¹⁶For workers in microenterprises (up to 10 workers), the Act in 2003 cut labor costs to almost one-seventh of those stipulated in the general regime. In 2008, an intermediary regime was set up for firms with more than 10 workers but fewer than 100, reducing labor costs to half what they were under the general regime.

erance payments.¹⁷ In 2002, the Supreme Court of Justice of Peru ordered the nullity of the unfair dismissal of a group of workers and ruled in favor of their reinstatement. The employment effects of this ruling were first examined by Jaramillo et al. (2017) who find that, by reestablishing reinstatement, the ruling is responsible for large and significant reductions in permanent hiring, real wages, and unionization rates. In a recent study, Rendon and Jiménez (2020) point out some pitfalls in Jaramillo et al.'s identification strategy and find, instead, no evidence about perverse effects of reinstatement laws on labor market outcomes. Their findings cast serious doubts in the alleged detrimental effects of employment protection legislation and on removing reinstatement laws as an effective policy tool to improving labor market conditions.

6 Conclusions

This article has analyzed the construction of the subjective component in the GCI and its application in policy advice in Peru. Given the rich labor market reform agenda in Peru, we center our analysis on indicators concerning the labor market. This matter is important, as Peru is currently promoting flexibilization measures, which are largely based on the country's performance in GCI. We show that Peru is following recommendations that are based on opinions and expectations of business executives representing large firms, a sector that is not representative of the business structure of Peru. Those recommendations express the interest of large firms and not those of small firms where wide productivity gaps are concentrated.

We have developed our idea in two stages. First, we have analyzed changes in WEF sampling guidelines as well as the profile of the Peru Survey sample for the period 2008-2011, and have concluded that the GCI Survey sample is not representative of the business structure in Peru. While small firms are the main business group in Peru, the Peru Survey sample has been in the past mainly integrated by business executives representing large firms. Both the evolution of WEF sampling guidelines and the persistence of the private organization that manages the Survey in Peru suggest that the sample of business executives in Peru has not experienced any change in favor of the inclusion of smaller firms.

Second, the Survey provides qualitative information on elusive concepts. Business executives do not always have the same benchmark to compare countries and it is not clear how a respondent answers questions about topics he does not know.

¹⁷Capability and misconduct are considered as fair reasons under the Law.

Furthermore, some concepts are double-counted in the Survey, which implies that indicators are biased toward these over-represented concepts. WEF has also ignored valuable statistical sources that could be used instead of opinions to cover important indicators. Furthermore, the underlying WEF's premise in favor of flexible forms of employment is debatable on many levels. Peru has undergone several institutional changes to decrease non-wage costs and to promote formalization. Empirical evidence concludes that they have not been effective or are not conclusive. In view of all that has been mentioned, we have concluded that GCI is not sufficiently sound for basing coherent policy advice.

Appendix

A Figures

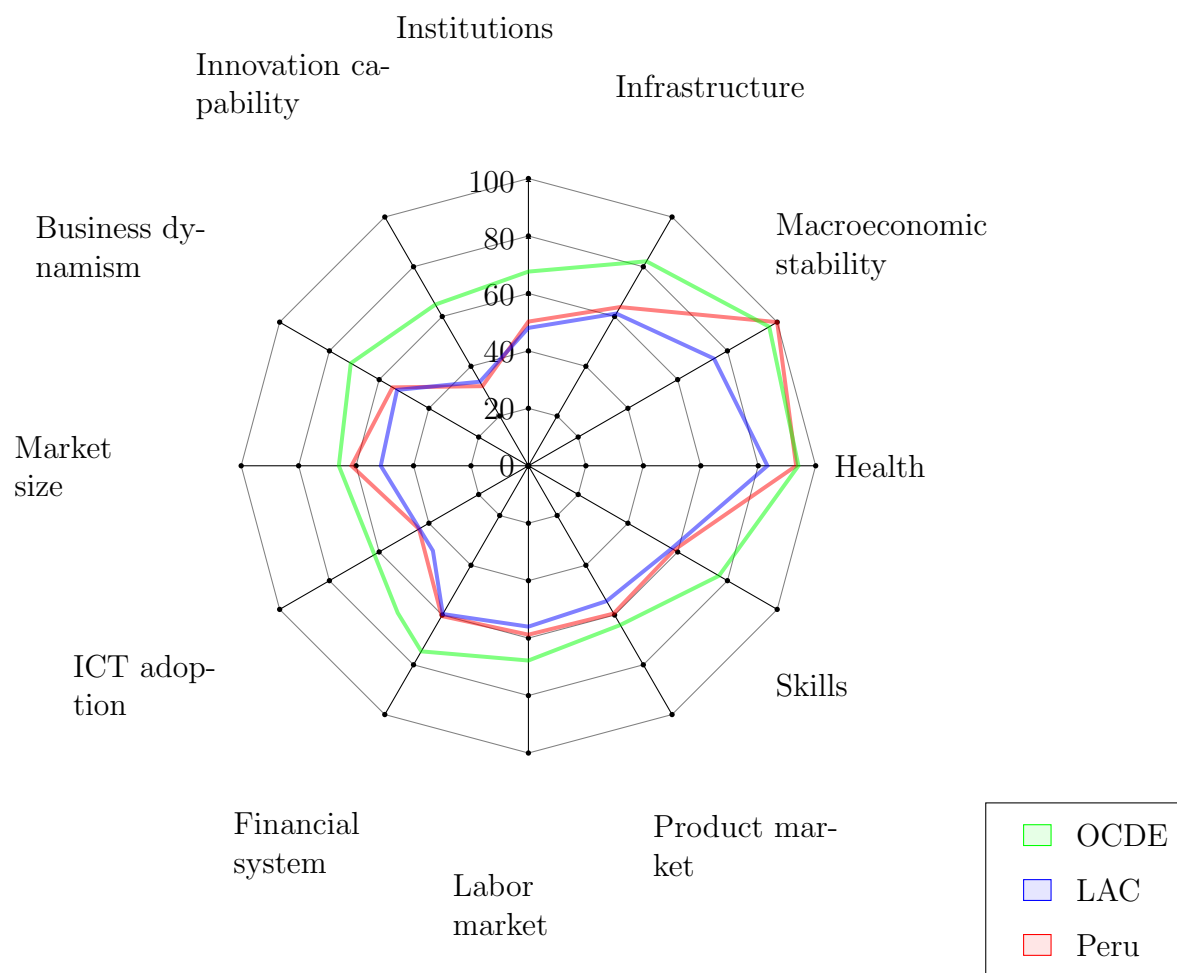


Figure 1: Peru's competitiveness landscape

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