

# An Employment Diagnostic Approach to Address Labor Market Stagnation in Argentina

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## Executive Summary

Having high levels of labor formality is practically a necessary condition for any genuine process of economic development. However, Argentine formal labor market is experiencing a striking stagnation and an underperformance relative to regional peers. Although this underperformance is undoubtedly linked to the historic macroeconomic instability of the country, there are clear signals that recovering the path of economic growth through a fiscal and monetary program is a necessary but not sufficient condition to break with the structural limitations of Argentina to ensure a dynamic formal labor market.

This work develops a diagnostic strategy with the aim of addressing in a rigorous, exhaustive and organized way each of the potential determinants of such a multi-causal and complex phenomenon as the creation of formal private employment. This strategy seeks to develop a comprehensive and exhaustive set of empirical tests to analyze sequentially and independently the relevance of multiple possible constraints to the development of the formal labor market that are independent of economic growth. This analysis allows to distinguish two major policy challenges in which we have considerable economic signals indicating that they are relevant constraints for the creation of formal employment: the recent underperformance in access to and completion of higher education in young cohorts and, fundamentally, the negative impact of labor institutions that inhibit the creation of formal employment.

Regarding the design of existing labor regulations, it is suggested to implement four short-term initiatives such as i) transitioning from unemployment protection based on severance payments to one based on unemployment insurance, ii) launching a short-term employment promotion program, iii) reforming the fine system of non-compliance with formal contracting in order to subsequently guarantee a higher enforcement of labor regulations, and iv) implement targeted sectoral reductions of payroll taxes. However, a hypothetical long-term scenario with a structural transformation of the labor market will require an institutional reconfiguration towards a new Welfare State and a comprehensive transition towards a complete de-linking between formality and access to social protection whose main guidelines are detailed.

Regarding the challenges in tertiary education, it is recommended to analyze the implementation of i) digital tools and active campaigns to make visible the returns to tertiary education, ii) a better design of conditional cash grants more compatible to overcome potential opportunity costs and iii) some main guidelines to redesign national vocational training policies.

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## 1. Problem Motivation: Why formal employment? Why in Argentina? Why a diagnostic strategy?

**High labor formality is a fundamental feature of any genuine process of economic development due to its considerable social and economic externalities and the financing of a robust network of social security and labor benefits.** First, following Rodrik and Sabel (2021), we can understand the absence of “good jobs” not only as a problem of inclusion or inequality but also as a problem of gross economic inefficiency. According to the authors, “good jobs” provide workers with clear career paths, possibilities of self-development, flexibility, responsibility, and fulfillment where the scarcity of this type of labor relations can have deep social, economic and even political consequences. Formality can then be understood as a policy objective in itself insofar as it is an enabler of jobs with enormous externalities on social welfare as a whole. Second, an obvious concern linked to the importance of formal employment is linked to social security financial sustainability. This is especially relevant in Welfare States with a “corporatist” nature such as Argentina, in which both labor benefits and access to social security are directly linked to mandatory contributions of formal jobs (Esping-Andersen, 1990). The contributory essence of social and labor protection in Argentina has a historical and political root, as benefits are the product of decades-old struggles between activity-specific unions and business chambers being then instrumented for union insiders and, by extension, non-unionized salaried workers in the same activity.

**Regardless of these normative considerations, formality also represents an enormous economic opportunity for social inclusion in Argentina.** A quick review of some binary Mincer premiums allows us to appreciate the economic potential of formality in Argentina (Figure 1)<sup>1</sup>. When comparing the labor income of a university graduate with an individual who did not even finish elementary school, we observe, other things being equal, a gap of 30% in real labor income. That value is only six percentage points higher than the wage premium of a formal worker. In other words, the gap in wages associated with the benefits of formality is relatively comparable to the individual return to an investment of more than fifteen years in the formal educational system. Far from being a sporadic phenomenon, the formality wage premium has been sustained over the last fifteen years, regardless of the economic cycle ([Figure A1](#)). While

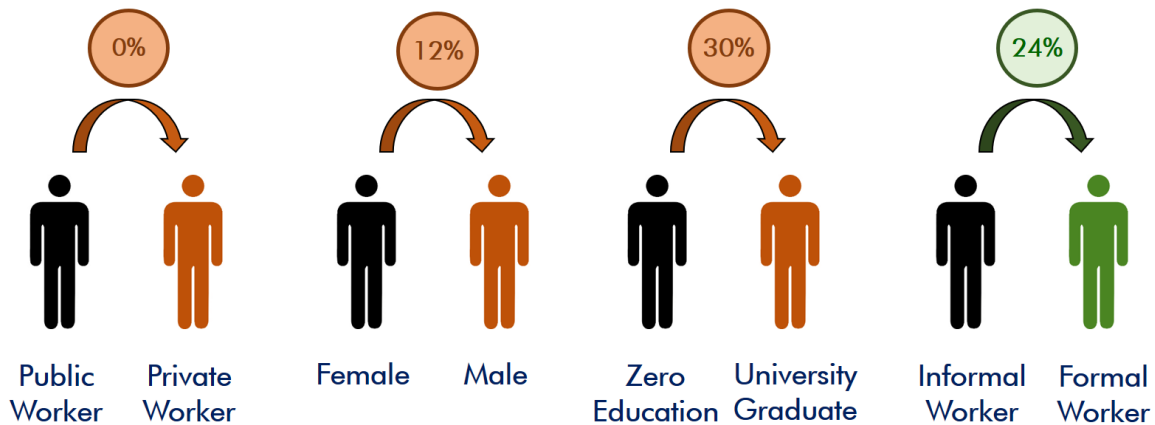
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<sup>1</sup> A detailed methodological and data sources description of each wage Premium estimated in this work is available in the [Methodological Note](#) in Appendix.



these simple comparisons do not address the complexity of the non-linear interaction between all these determinants of wages and the presence of some relevant unobservables, they are informative to dimension the sometimes overlooked potential of formalization.

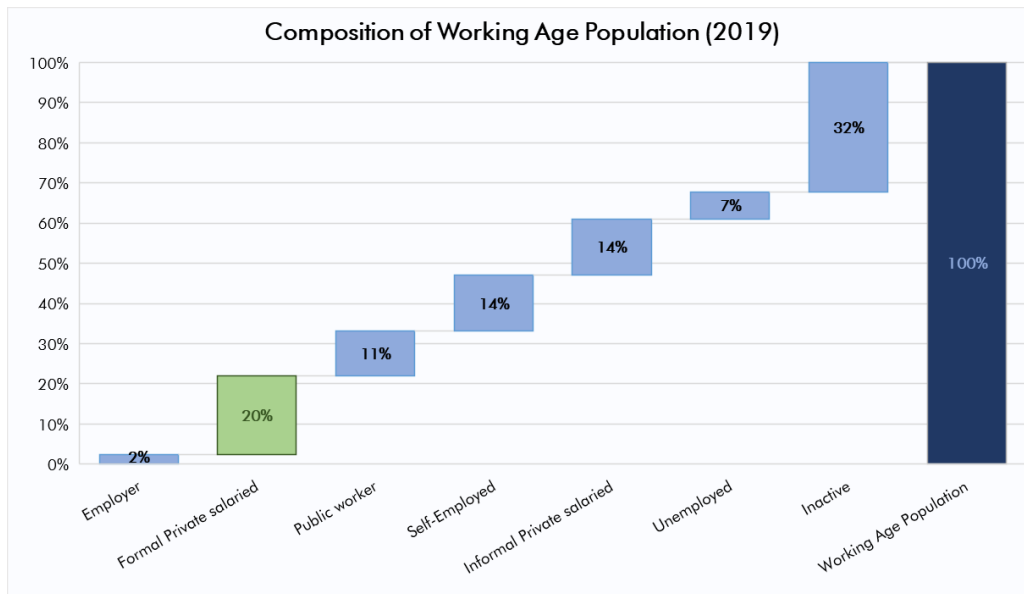
**Figure 1: Selected Mincer Wage Premiums (Argentina, 2019)**



Source: Own elaboration using SEDLAC.

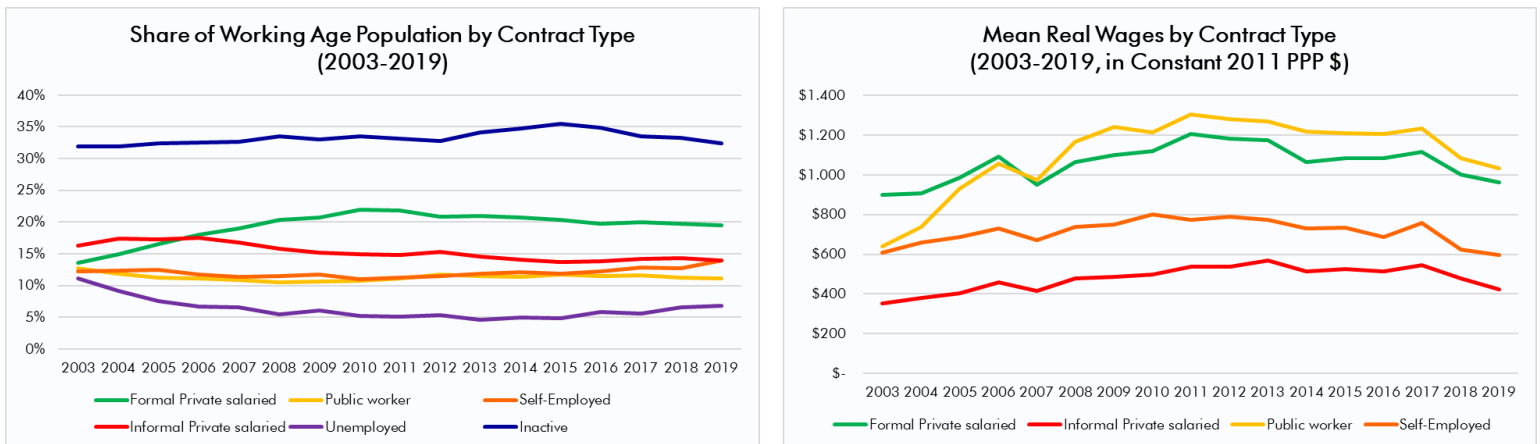
**However, despite this enormous opportunity, formal employment in Argentina is low and with a stagnant trend that is especially worrying given the emergence of global challenges.** Currently, only 2 out of 10 Argentines in the working age population have a private and formal salaried job (Figure 2) and from 2010 onwards, both the share of formal private employment over the active population and their average salary are stagnant and even decreasing in recent years (Figure 3, Panels A and B). These domestic trends become even more concerning in the face of the deepening of global structural changes. These include employment automation, which puts a wide range of routine occupations at risk fostering employment polarization and income inequality (Goos et al. 2014, Autor 2015, Dao et al. 2019), the emergence of global value chains that stimulates strong competition worldwide (Baldwin, 2013), ageing populations that predict future stagnation of labor force levels (Bloom et al., 2015) and trends towards premature deindustrialization of developing economies that prevent the absorption of significant quantities of unskilled labor in formal jobs in the manufacturing sector (Rodrik, 2016).

**Figure 2: Contractual Composition of the Working Age Population (Argentina, 2019)**



Source: SEDLAC.

**Figure 3: Panel A - Share of Active Population by Contract Type, Panel B - Mean Real Wages by Contract Type (Argentina, 2003-2019)**



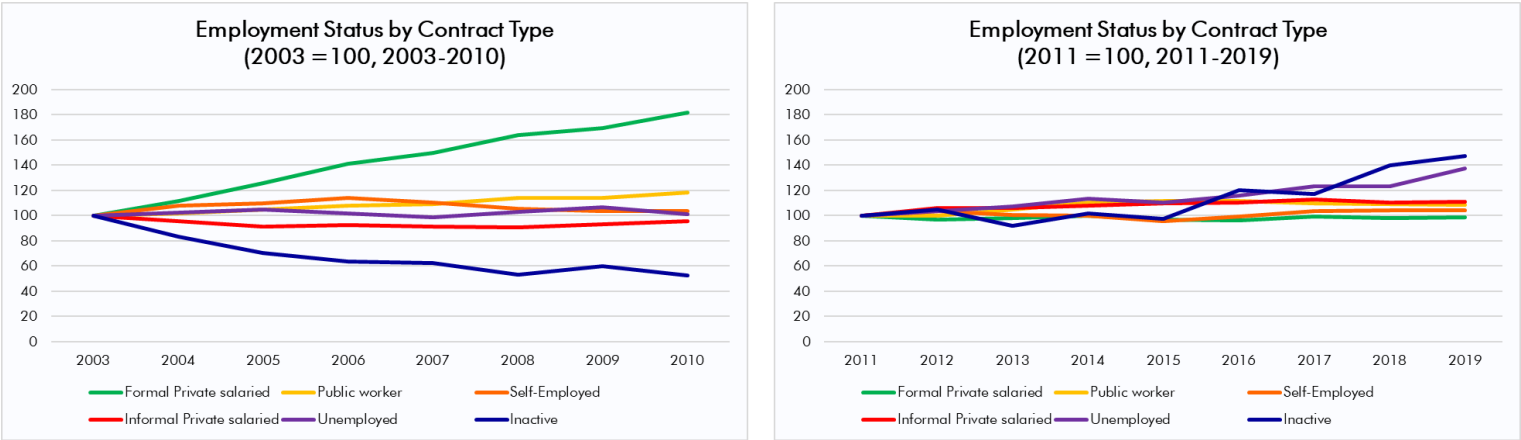
Source: SEDLAC.

**Formality seems to be closely related with the business cycle, where economic growth seems to be a fundamental driver of formal private employment in Argentina.** The dynamism of the Argentine formal labor market, both in its employment levels (Figure 4, Panels A and B) and in its real wage evolution (Figure A2, Panels A and B) seem to have a very close relationship with the macroeconomic cycle. While during the recovery from the crisis of the



early 2000s, where the GDP per capita grew at a 5.0% CAGR, the country exhibited a sharp drop in unemployment and a strong growth in formal private employment, in the last ten years the poor macroeconomic performance and a negative GDP per capita CAGR of -1.4% were linked to a notable stagnation of the market formal employment and a greater incidence of unemployment, public employment and informality.

**Figure 4: Evolution of Employment by Contract Type (Argentina, Panel A - 2003-2010, Panel B - 2011-2019)**

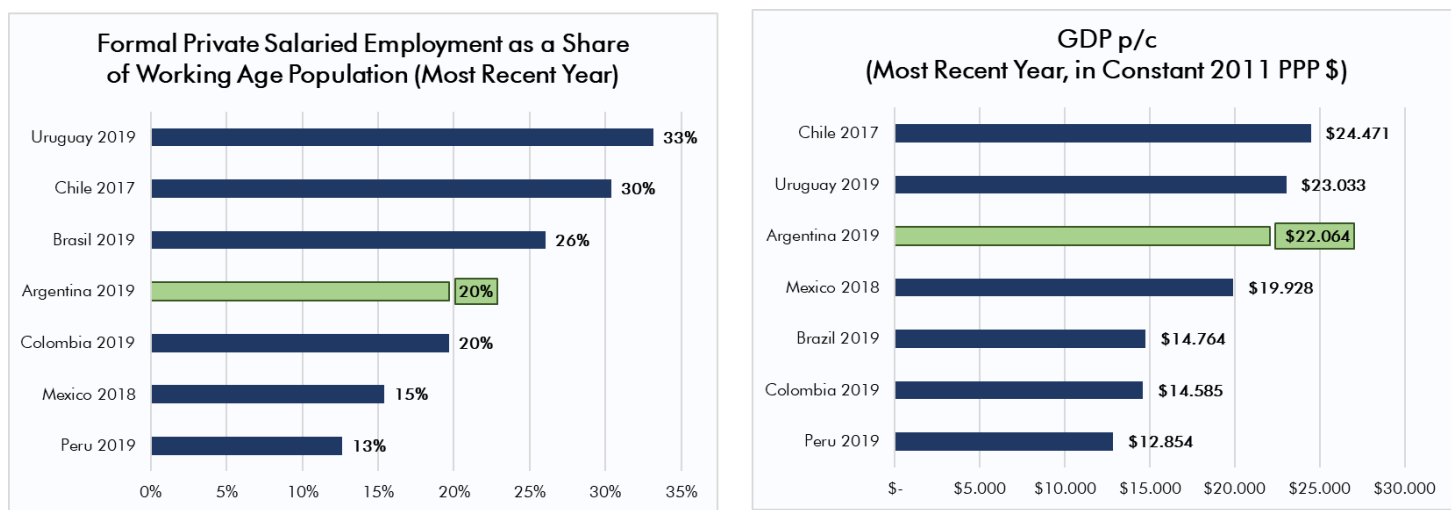


Source: SEDLAC.

**However, it would be a simplification to believe that a more sustainable macroeconomic outlook would be a sufficient condition to solve the challenges of the formal labor market.** First, the extraordinary levels of economic growth in the early 2000s were driven by a recovery from a severe crisis, a highly competitive exchange rate, very favorable terms of trade during the commodity boom, and a relatively low global interest rates that favored the macroeconomic perspectives of emerging countries. The levels of GDP per capita of the Argentine economy grew at 4.5% during 2004-2010, values that are exceptional in its economic history, hardly sustainable in the long term and that seem unlikely in the short term in a macroeconomic outlook that presents strong fiscal and monetary imbalances. Second, private salaried formal employment in Argentina seems low relative to its peers when considering its income levels (Figure 5, Panels A and B): while Uruguay has a GDP per capita relatively similar to that of Argentina, it has 13 p.p. more of share of private salaried employment (33%) and Brazil has also higher levels of private formal employment (26%) even when having significantly lower income levels. Similar conclusions also hold when comparing the formality rates of private

employment with national income levels ([Figure A3, Panels A and B](#)). The difficulty of repeating a growth boom in the short term, coupled with the highly multi-dimensional nature of informality, requires a comprehensive conceptual framework that addresses in depth all the drivers and constraints of the formal labor market in Argentina.

**Figure 5: Panel A - Formal Private Salaried Employment as a Share of Working Age Population, Panel B - GDP p/c (Argentina and benchmark, most recent year)**



Sources: SEDLAC and World Bank.

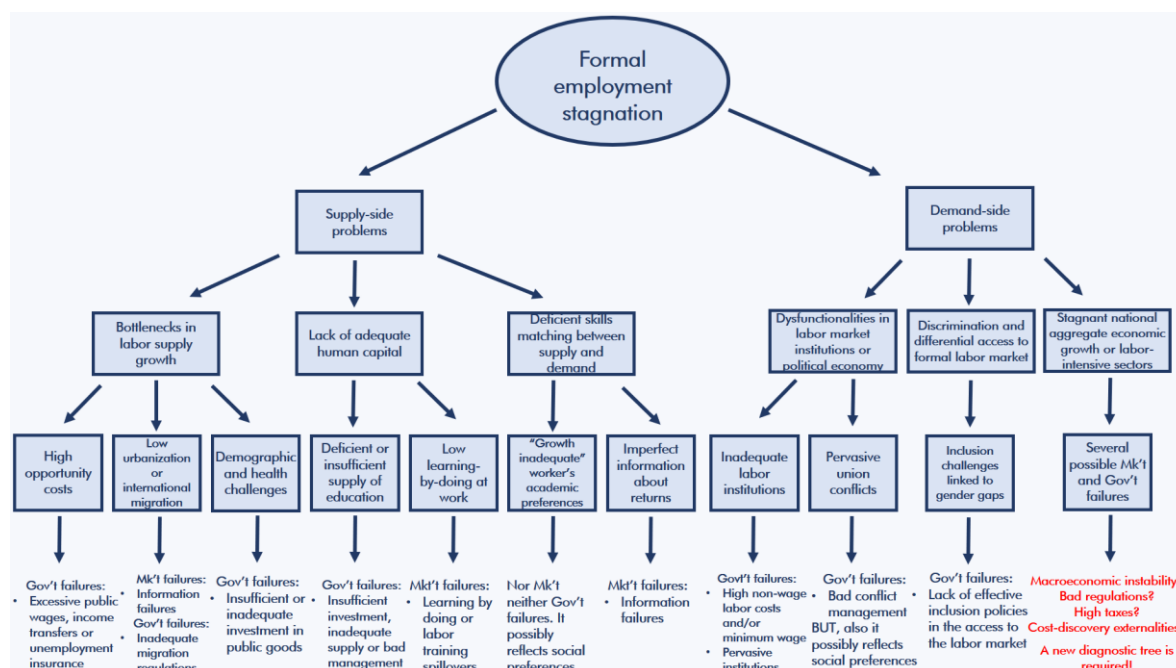
## 2. The Diagnostic Approach: a “detective work” to exhaustively address the multidimensional nature of formal employment creation

### 2.1. A first version of a potential diagnostic framework

A problem as multi-causal as the creation of formal employment needs to be analyzed through a systematic framework that allows addressing all its underlying complexity in an analytical, rigorous and organized way in order to generate effective, specific and contextual policy recommendations. With the aim of addressing in a rigorous, exhaustive and organized way each of the potential determinants of formal private employment, the present work seeks to adapt the diagnostic framework presented by Hausmann, Rodrik and Velasco (2008) to the analysis of the labor market. Figure 6 presents a logical tree that organizes a wide set of potential supply and demand constraints of the creation of private formal employment, that are finally associated with a short and tentative list of some examples of market and

government failures that require specific policy solutions. Although the objective of this work is to apply this methodology to the Argentine case, this framework aims to be holistic and applicable to any particular context in which the dynamics of formal employment wants to be analyzed.

**Figure 6: A Labor Diagnostics Decision Tree**



2.1.1. *The supply-side constraints to formal employment dynamism*

**First, a labor market may not grow sufficiently because the supply of labor is not offered in sufficient quantity in the formal labor market.** This may be due to demographic issues with a population aging process, stagnations in the projections of the active population (Bloom et al., 2015), something that some studies suggest is beginning to occur in several countries of Latin America (Apella and Rofman, 2020). Moreover, insufficient urbanization can limit the labor supply in the formal market, the lack of transport connectivity may raise the costs of accessing sufficient opportunities in the formal labor market (Boisjoly et al., 2017) and migratory barriers can prevent the attraction of job offers to firms, sectors and locations with higher productivity, blocking the realization of welfare gains (Clemens et al, 2019; Hani and Pritchett, 2020). Finally, opportunity costs linked to excessive public wages or income policies with unemployment or informality conditionalities may eventually reduce the incentives for job

searching in the formal labor market. While some recent evidence from the Argentine labor market documents that conditional cash transfers did not reduce work incentives (Mauricio and Monsalvo, 2017), the rapid erosion of the public wage penalty ([Figure A1](#)) and the impressive growth in public wages during the 2000s ([Figure A2, Panel A](#)) suggests that a potential crowding-out of formal labor supply in the private sector may be a relevant area of research in Argentina.

**Moreover, the growth of the formal labor market may be limited by the low qualification of its labor supply, either by deficiencies in the formal education system or by the inability to accumulate valuable work experience.** While the concern for dimensioning educational upgrading and returns to formal education in Argentina and Latin America has received considerable attention in the literature (Acosta et al., 2011; Messina and Silva, 2017), much less has been documented on the returns to the experience and tenure to give magnitude to the dimension of learning by doing effects in the labor markets of the region.

**Finally, there may be an imperfect matching between the skill intensity of the labor supply and the changing skill requirements of the labor demand, where it may happen that this economy is demanding skills that are not those in which the workforce chooses to train.** A recent work by Pascuariello et al (2021) documents the extension of this possible skills mismatch in Argentina when estimating the premium wage of different university careers in the labor market. This imperfect matching may be due to individual preferences but also to imperfect information on the returns of different educational trajectories. Using data from a panel survey of boys in the Dominican Republic, Jensen (2010) find that perceptions of the returns to secondary schooling are extremely low for most students. More specifically to the point of skill-mismatch in tertiary education, Hastings, Neilson and Zimmerman (2015) use a large-scale survey and field experiment to evaluate a policy that provided information about college- and major-specific earnings and cost outcomes to college applicants in Chile. The authors show that the low-income and low-achieving students who apply to low-earning college degree programs overestimate earnings for past graduates by over 100% (while beliefs for high-achieving students are correctly centered) and, conversely, students choosing high-earning programs underestimate earnings for past graduates. They also document that disclosing degree-specific earnings reduces demand for the lowest-earning programs, particularly among low-income students.

### 2.1.2. *The demand-side constraints to formal employment dynamism*

**In addition, labor market institutions and the political economy of the labor market are another determining factor in the dynamics of formal employment.** The evidence on the effect of Argentine labor regulations offers some conflicting evidence that highlights the need for a more comprehensive and systematic approach: for example, while estimates by Cruces et al. (2010) from the analysis of major policy shifts in labor taxation during the period 1995–2001 suggest that changes in payroll taxes did not affect employment levels, the estimates by Mondino and Montoya (2007) conclude the opposite. However, there is no conclusive evidence on the economic effect of hiring and firing regulations, collective bargaining or the propensity for labor litigation. The labor institutions represent a very broad set of regulations that may have divergent effects from each other and require a more detailed analysis.

**Furthermore, potential gender discrimination in the labor market can limit women's wages from a high gender wage premium or limit their access to managerial positions, affecting the dynamics of formal employment.** The gender gap can affect the dynamism of the formal labor market through two channels. On the one hand, gender discrimination can generate a gender wage gap where women earn relatively low wages with the same qualification requirements, experience, age in the same sector and productive occupation as an equivalent man. Indeed, Cabezón and Trombetta (2020) document an average wage gender gap of around 14%, with high sector heterogeneity, where in some sectors such as wood and furniture, financial services, chemicals or textiles it exceeded 30%. On the other hand, differential access to the labor market can also be expressed by lower labor force participation rates in women than in men after marriage or in restricted labor force participation in certain productive sectors where cultural patterns are behind relatively low female employment rates. Gasparini and Marchionni (2015) document considerable gaps in labor force participation rates between married and single women in Latin America, that was considerably persistent during the 2000s after a reduction during the 1990s. Moreover, Cabezón and Trombetta (2020) document considerable differences in the feminization rates of different productive sectors in Argentina especially in a very broad set of industrial activities where female participation does not exceed 30% of total employment.

**Finally, both macroeconomic instability and structural transformation processes can affect employment dynamics through labor demand, even when these are not phenomena that are limited to the labor market.** Many times the presence of negative

symptoms in the labor market such as high unemployment, the strong incidence of informality or low wages are not necessarily a consequence of problems in the labor market. Naturally, the lack of economic growth can affect the dynamics of the labor market, fundamentally in an economy with poor macroeconomic performance in recent years such as Argentina. In turn, even in contexts of economic growth, the stagnation of sectors intensive in formal employment and high wages can explain problems in the main labor market outcomes. Both are problems that require a specific diagnostic strategy in itself but that can be the fundamental drivers of the stagnation of the labor market.

## **2.2. An empirical strategy to identify the most relevant constraints to formal employment**

**In order to identify the major binding constraints of the formal labor market, a diagnostic approach requires a top-down sequence in the sequence of empirical research.** The methodology combines a start with a high-level analysis that seeks to determine whether formal employment is demand-constrained, supply-constrained or both. Then, it goes sequentially descending the levels until it reaches a very exhaustive empirical check of the bottom nodes looking to determine which of these nodes are effectively constraining the labor market and which are the specific market and government failures that generate them. This sequential and structured procedure allows for a focused, adapted and effective policy response in each particular context that is being analyzed.

**When determining whether a particular problem is a potential constraint, it is important to analyze whether it is economically affecting the creation of formal employment in a significant magnitude.** In order to analyze whether any of the problems mentioned is a potential binding constraint, it is important to determine if the magnitude of the distortion is high (“quantity tests”), but not sufficient. For this, the analysis must be complemented with empirical tests that determine if this distortion is economically constraining the creation of formal employment. Following Hausmann, Klinger and Wagner (2008), four principles of differential diagnosis can be considered for this purpose:

- i. **“Shadow” Price tests:** relieving the factor “X” has an underlying value that may signaling the constraining effect of “X” in formal employment.

- ii. **Changes in Changes tests:** changes in the factor “X” must affect the evolution of formal employment.
- iii. **Camels and Hippos tests:** in an economic environment in which the factor “X” is a binding constraint, agents less intensive on “X” should be succeeding in creating formal employment than agents which are very dependent on the factor “X”.
- iv. **Hippos in the Desert tests:** if factor “X” is a binding constraint, then agents should be trying to find alternative ways to bypass the constraint.

Tables [A1](#), [A2](#), [A3](#), [A4](#), [A5](#), [A6](#) and [A7](#) illustrate a preliminary list of potential versions of these tests for the different sections of the diagnostic tree and its corresponding datasets. In several of them it will be useful to compare Argentina with a benchmark of countries including Brazil, Chile, Colombia, Mexico Peru and Uruguay. The Socio-Economic Database for Latin America and the Caribbean (SEDLAC), produced jointly by the World Bank and the Center of Distributive, Labor and Social Studies (CEDLAS), contains harmonized microdata from households surveys from all Latin American countries and will serve as a fundamental input for this work. In addition to this main dataset, the work will frequently refer to the World Bank's Enterprise Surveys or some useful cross-national databases of educational indicators (mainly UIS-UNESCO) or competitiveness or regulatory indicators (mainly Global Competitiveness Report of the World Economic Forum), among others.

### **3. Analyzing potential supply-side constrains to the dynamism of the formal private labor market**

#### **3.1. Are there bottlenecks in labor supply growth that constrain the formal private labor market?**

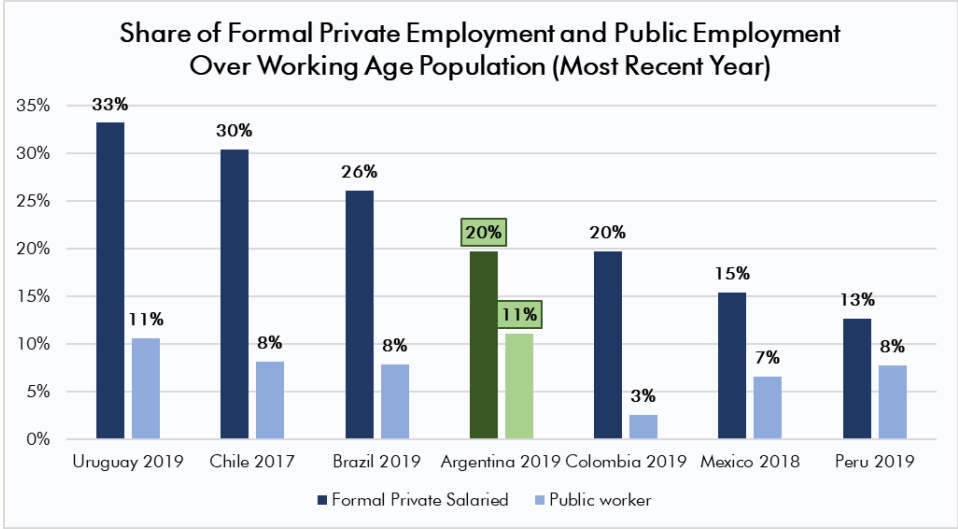
##### *3.1.1. Analyzing a possible potential crowding-out effect due to an over expansion of public employment or social protection programs*

**Argentine public employment is relatively high at the regional level and had a considerable expansion in the early 2000s that could eventually generated high opportunity costs for working in the private labor market.** When compared to its regional peers, Argentina has the highest share of public employment over the working age population (Figure 7). In turn, public real wages had a remarkable expansion during the early 2000s, growing well above private wages when the economy was growing at a rapid rate (Figure 8, Panel A).



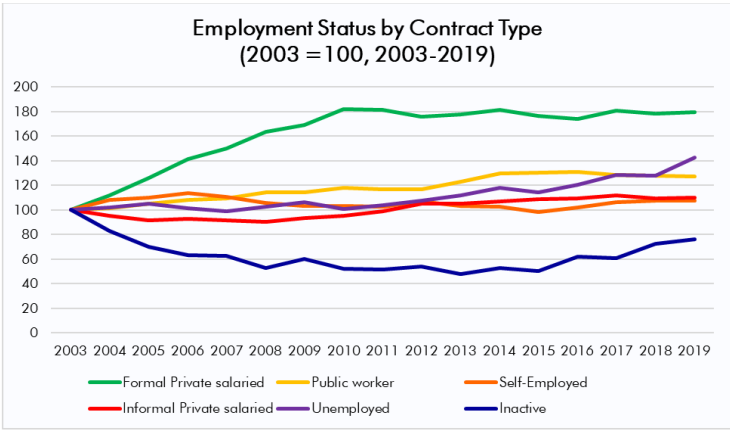
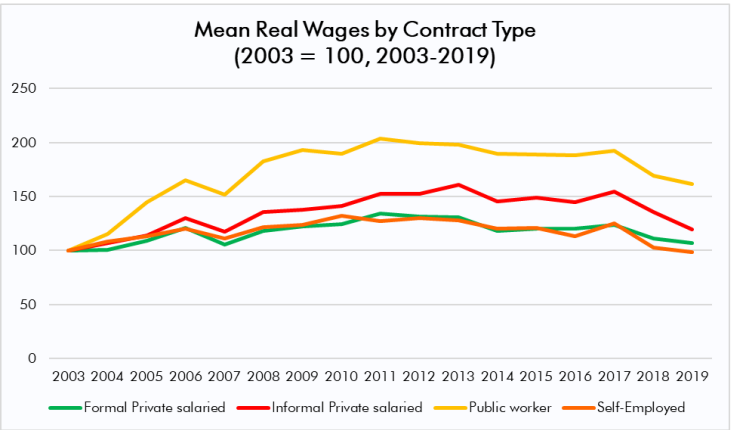
Although the levels of public employment did not grow at a comparable rate than salaries (Figure 8, Panel B), the high level compared to peers in the region and the high expansion of public wages is for many analysts a possible cause of the stagnation of the private formal labor market by generating opportunity costs of migrating from public to private employment.

**Figure 7: Shares of Formal Private Employment and Public Employment over the Working Age Population (Argentina and benchmark, most recent year)**



Source: SEDLAC.

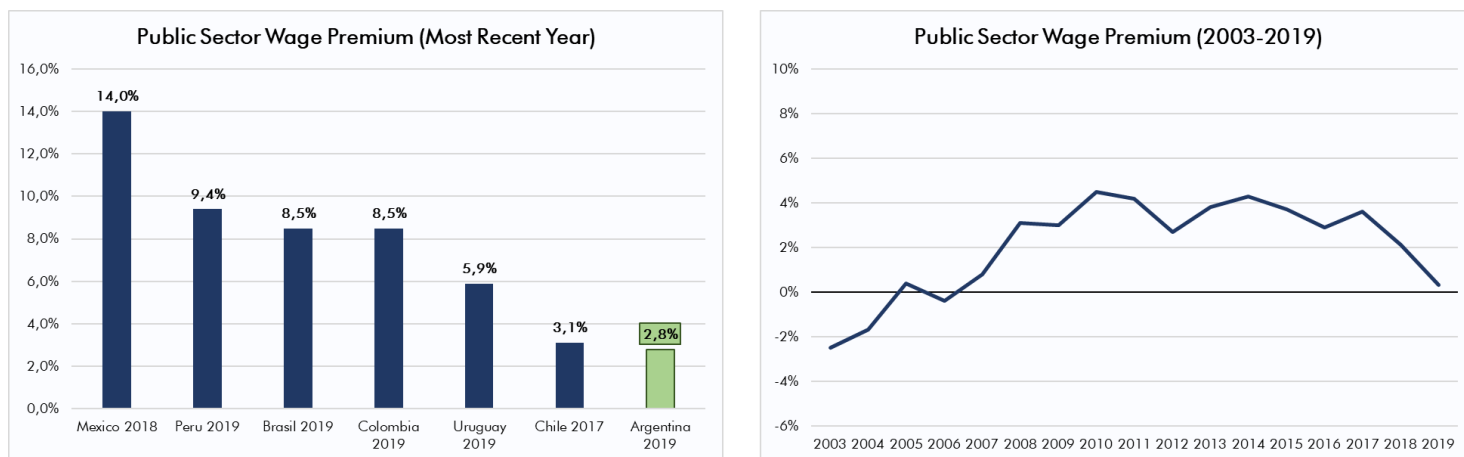
**Figure 8: Panel A – Mean Real Wages by Contract Type, Panel B – Employment Evolution by Contract Type (Argentina and benchmark, most recent year)**



Source: SEDLAC.

However, this claim seems incompatible with the low wage premiums of the Argentine public employment, so this can hardly explain the stagnation of formal private employment at the national level. Argentina has a public sector wage premium that is lower than that of all of its regional peers (Figure 9, Panel A) and despite having some growth during the early 2000s, it remained at fairly low levels quite persistently during the last few years (Figure 9, Panel B). Eventually, this could be an interesting topic to be analyzed in further research at the subnational level, as there are some urban agglomerates where public employment seems to have a disproportionate level, doubling or tripling the national average (Table A8). However, it is highly implausible to think that the relative underperformance of Argentine formal private employment can be explained by a crowding out of the public sector when Argentine public workers, other factors being equal, are the ones who earn less in relation to their peers in the private sector throughout the region.

**Figure 9: Public Sector Wage Premium (Panel A – Argentina and benchmark, most recent year, Panel B – Argentina, 2003-2019)**



Source: Own elaboration using SEDLAC.

Moreover, according to recent research, the expansion of conditional cash transfers and other social protection programs seem also not to be reducing the labor supply in the private labor market. In 2009, the national government launched the “Universal Child Allowance” (AUH) program, a conditional cash transfer designed to provide income coverage to the unemployed or informal workers with children. The AUH is the most important social program in Argentina and consists in a monthly sum paid for each son or daughter under the age of 18 who belongs to a family group without work or who works in the informal economy

(or without age limit in the case of people with disabilities). The conditionalities of the program establish that the children must not be involved in any type of paid or unpaid work and must comply with both health and vaccination controls and provide evidence of their attendance at public educational establishments. This could eventually generate opportunity costs for adults to go out and look for work in the formal labor market, given that if they abandon their status as unemployed or informal workers, they would no longer receive the benefit of the AUH. In a recent work, Maurizio and Monsalvo (2018) use differences-in-differences estimators and propensity score matching techniques to evaluate the effect of the AUH on the labor participation and income generation of adults during 2009-2015. Their estimates suggest that the program did not cause relevant employment disincentives as it did not significantly discourage the work of adults nor did it cause a reduction in the number of hours worked. These results are in line with the extensive literature on conditional cash transfers in Latin America and other developing countries, suggesting that the recent developments in social protection are not a relevant constraint for the development of the formal private labor market.

3.1.2. *Dismissing the presence of other structural trends that may affect the growth of labor supply such as demographic change and ageing populations, lack of international migration or low levels of urbanization*

**None of the other potential causes that can generate bottlenecks in labor supply growth seem relevant to explain the relative stagnation of the formal private labor market in Argentina.** First, although the Argentine demographic structure tends to be increasingly less dependent on the young population, these changes are still too slow to explain the recent dynamics of the labor market ([Figure A4, Panel A](#)). Furthermore, the Argentine demographic structure does not differ too much in relation to its regional peers in order to explain the relevant differences in their labor market outcomes previously described ([Figure A4, Panel B](#)). In addition, it is difficult to argue that the lack of international migration can be a factor that limits the growth of the labor supply in the country. Argentina has very low legal requirements for immigration and according to the Global Competitiveness Indexes it has a *de jure* ease of hiring foreign labor that is greater than that of all its regional peers with the exception of Uruguay, a country that still has a lower *de facto* share of migrants over the working-age population, which is a third of that of Argentina ([Figure A5, Panels A and B](#)). Finally, one can hardly argue that in

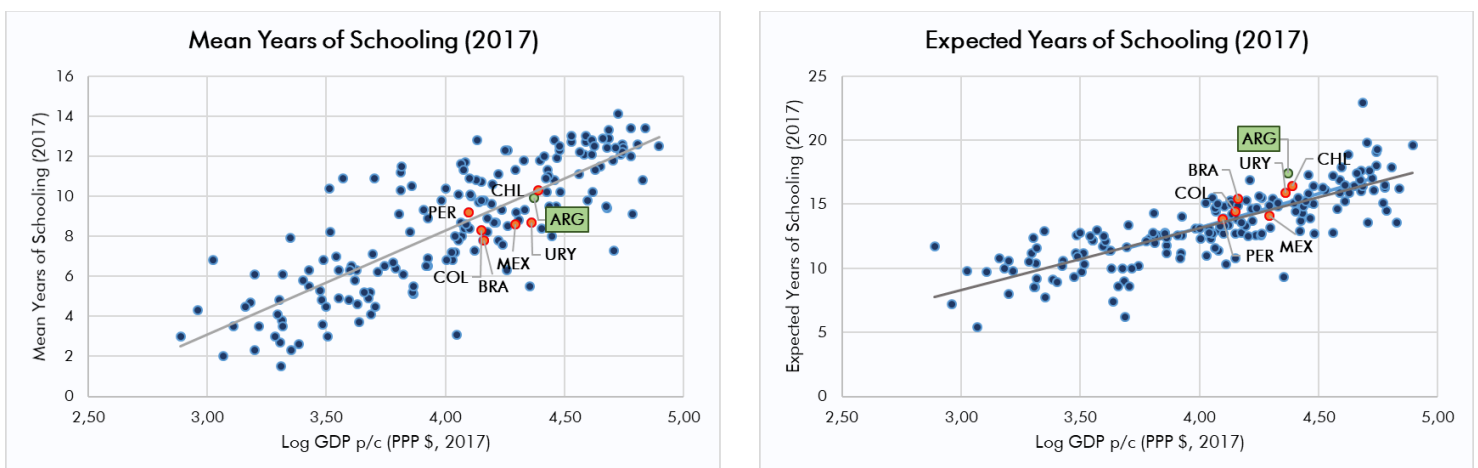
Argentina there is little rural to urban migration due to insufficient urbanization. The country has a share of urban population over total population that is much higher than expected given its income levels and is even higher than that of some peers with very high levels of formal private employment, such as Chile (Figure A6, Panels A and B).

### 3.2. Is there a lack of adequate human capital?

3.2.1. *Some recent warning signs in some educational outcomes and a potential constraint in the access to higher education, despite the relatively high general levels of schooling*

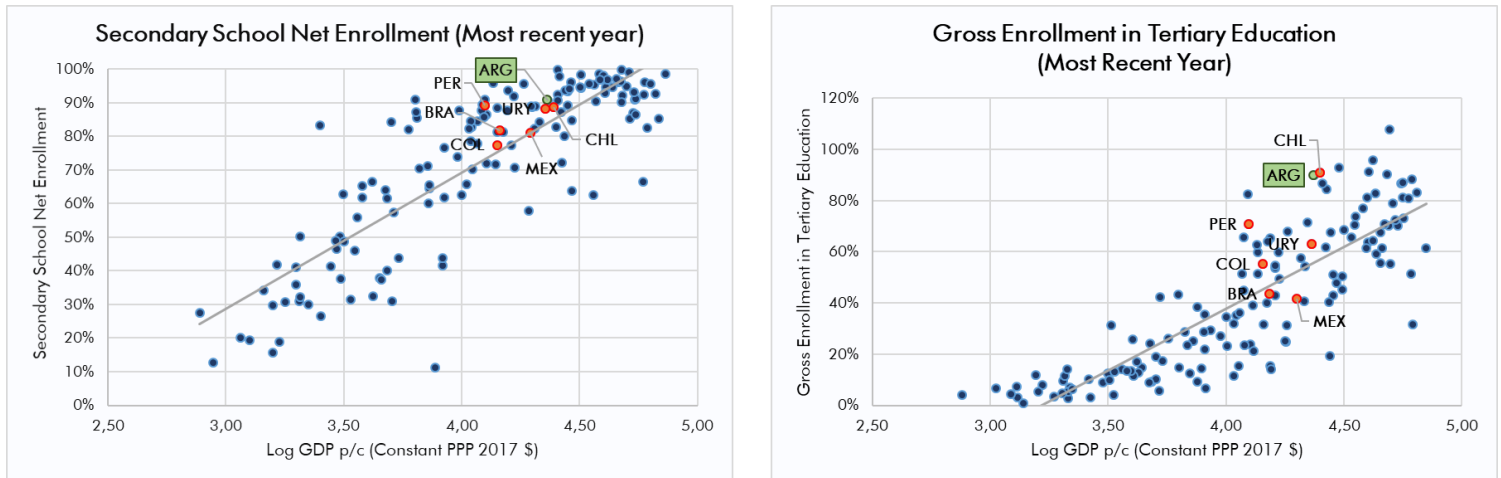
According to basic quantity tests, Argentina has general schooling levels that are relatively high and above most of its peers. When analyzing simple measures of educational attainment such as the mean or expected years of schooling, it is observed that the country has levels higher or in line with those expected for its income levels and, in general, higher than those of its regional benchmark (Figure 10, Panels A and B). This is also true when analyzing enrollment in relatively advanced phases of the educational trajectory, such as net enrollment in secondary school or gross enrollment in tertiary education (Figure 11, Panels A and B). Indeed, when comparing the composition of the working age population according to the educational level achieved with the regional peers, it is observed that Argentina has one of the best educational levels at a most general level (Figure A7).

**Figure 10: Panel A – Mean Years of Schooling (177 countries, 2017), Panel B – Expected Years of Schooling (179 countries, 2017)**



Sources: UNDP, Human Development Reports and World Bank.

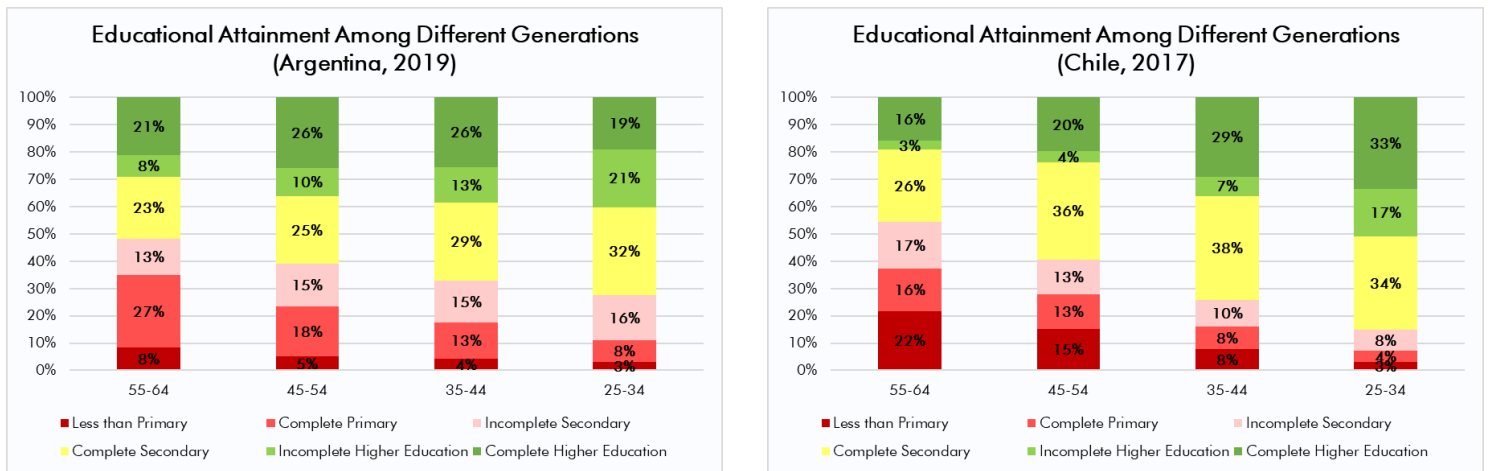
**Figure 11: Panel A – Net Enrollment in Secondary School (147 countries, most recent year), Panel B – Gross Enrollment in Tertiary Education (149 countries, most recent year)**



Sources: UIS-UNESCO and World Bank.

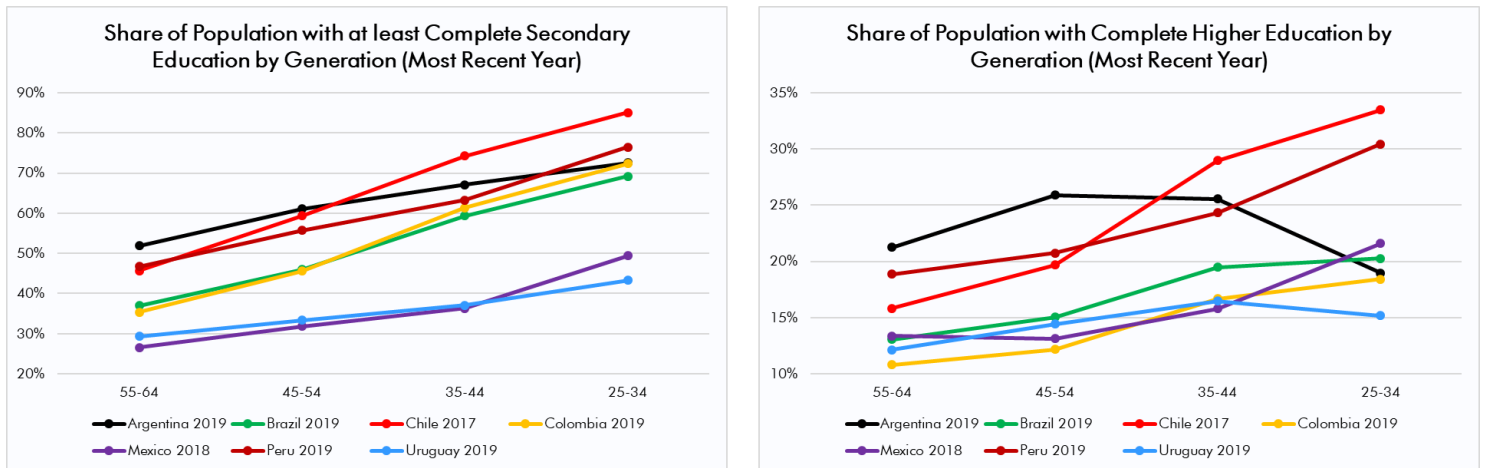
**However, the intergenerational evolution of the main educational attainment outcomes exhibits a worrying performance in recent decades with a recent evolution that was well below from its peers, fundamentally in access to higher education.** A quick comparison shows how the progress of educational attainment between the different generations was much faster in Chile than in Argentina (Figure 12, Panels A and B). In individuals between 55 and 64 years of age, who entered the educational system more than five or six decades ago, Argentina has a considerably higher number of entrants or graduates to higher education than Chile and much fewer people who did not even graduate of the primary level (8% vs. 22%). However, in the generation of individuals between 25 and 34 years old, Chile already has far fewer people without high school completion than Argentina (15% vs. 27%) and considerably more tertiary education graduates (33% vs. 19%). This relative underperformance is even more striking when compared with the peer countries in the region, fundamentally in the evolution of tertiary education (Figure 13, Panels A and B). For the generation of individuals aged between 54 and 64 years, Argentina is the regional leader in the share of the population with both secondary and tertiary education completed. Over time, a rapid catch-up from its peers took place, especially in tertiary education graduates where Argentina is already far behind the regional leadership of Chile and below countries with considerably less income per capita such as Brazil, Mexico and Peru.

**Figure 12: Educational Attainment Among Different Generations (Panel A – Argentina, 2019, Panel B – Chile, 2017)**



Source: SEDLAC.

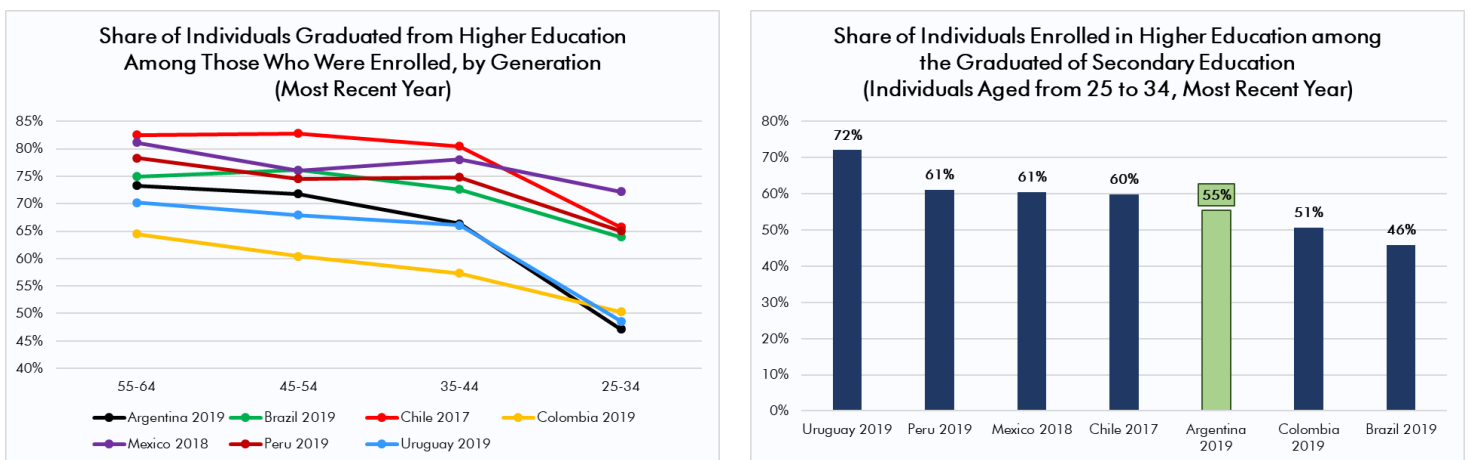
**Figure 13: Share of the Population with Complete Secondary (Panel A) and Tertiary Education (Panel B) Among Different Generations (Argentina and benchmark, most recent year)**



Source: SEDLAC.

The growing deficits in tertiary education in the young generations are explained both by the difficulties in accessing higher education for secondary graduates and by the low completion rates of those who actually accessed university or technical education. In individuals between 25 and 34 years old, Argentina has the worst ratio of graduates to enrolled in tertiary education compared to its peers, indicating a strong deficit in ensuring completion and high levels of dropout in higher education (Figure 14, Panel A). In addition, despite having a public and free university education system with a significant extension at the national level, the country does not have a relatively high proportion of entrants to higher education over the total number of graduates in secondary education, being below even Chile whose education system does not guarantee free access on a large scale (Figure 14, Panel B). This points to considerable challenges both in the need to work on access and completion of tertiary studies.

**Figure 14: Panel A – Share of Individuals Graduated from Higher Education Among Those Who Were Enrolled, by Generation, Panel B – Share of Individuals Enrolled in Higher Education among the Graduated of Secondary Education (Argentina and benchmark, most recent year)**



Source: SEDLAC.

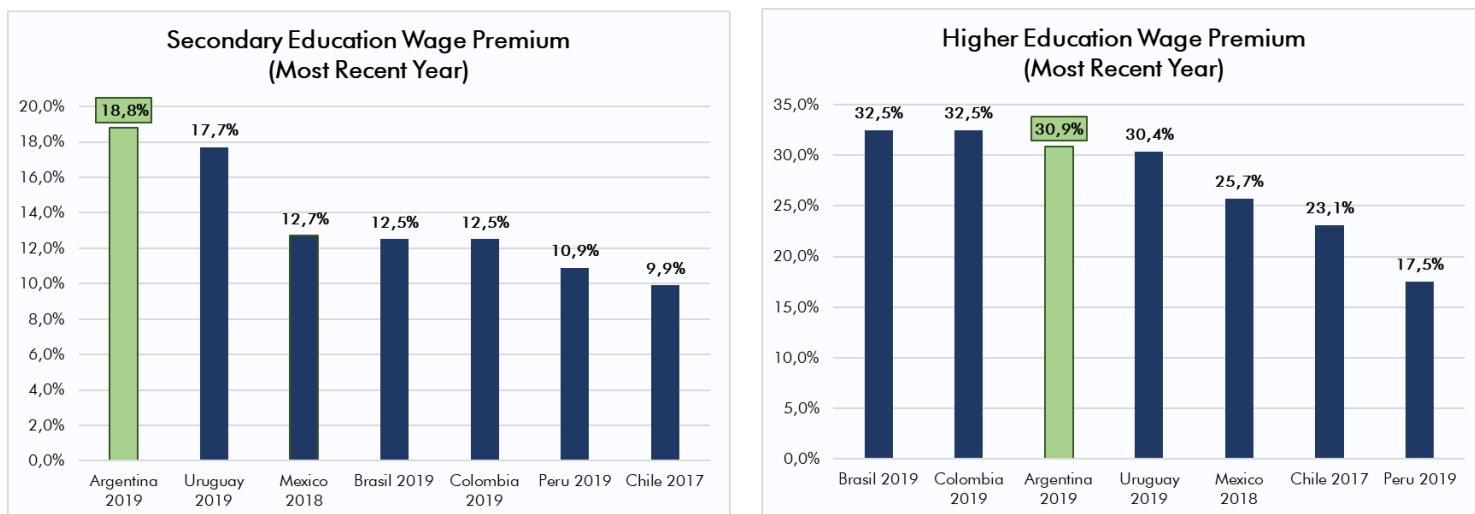
One of the main potential causes of this deterioration in access to and completion of higher education may be the striking underperformance of the country in standardized metrics of educational quality. Angrist, Djankov, Goldberg, and Patrinos (2021) had recently developed the Harmonized Learning Outcomes database, which enables comparisons of learning progress across the world merging several learning tests. Using this dataset, we can observe that Argentina had lower learning outcomes than expected by its income levels both in



math (Figure A8, Panel A), reading (Figure A8, Panel B) and science (Figure A8, Panel C). These learning outcomes are also generally lower than those of most regional peers, even those with considerably lower income per capita. Although more research is needed to identify which is the main cause of the declining performance in access and completion in higher education, these data indicate that poor performance in educational quality is, at least, a potential hypothesis to consider.

Several price tests indicate that the relative scarcity of qualified human capital is economically restricting the dynamism of the labor market. Argentina has relatively high levels of returns to secondary or tertiary diploma compared to peers (Figure 15, Panels A and B) and returns to schooling close to those of regional leaders (Figure A8), indicating the economic scarcity of qualified human capital through significant economic opportunities to increase educational completion fundamentally at advanced levels. Interestingly, the evolution of the returns to secondary education and, especially, higher education seems to have had a close relationship with the evolution of formal private employment, with a considerable and sustained downward trend during 2003-2011 (while formal private employment was expanding strongly) and a stagnation during 2011-2019 (the period of practically zero creation of formal private employment).

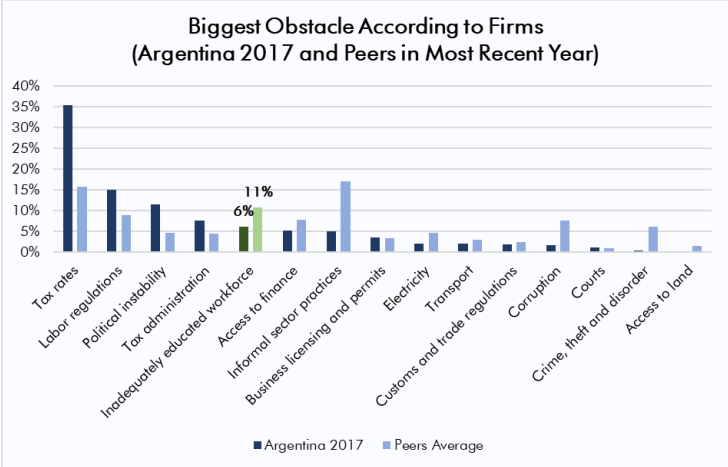
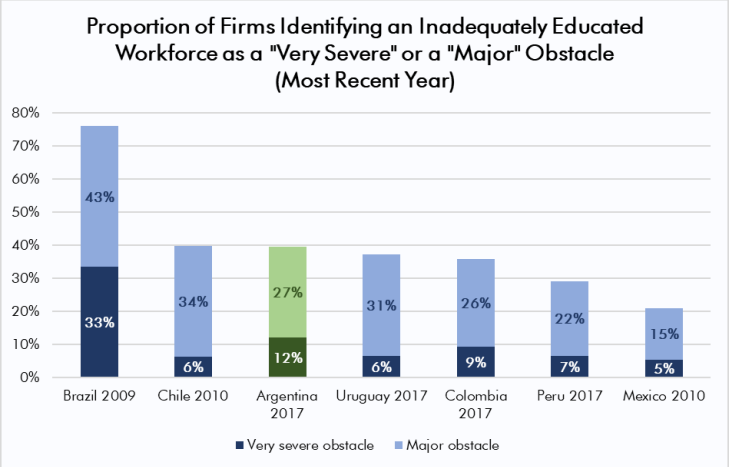
**Figure 15: Panel A – Returns to Secondary Education Diploma, Panel B – Returns to Tertiary Education Diploma (Argentina and benchmark, most recent year)**



Source: Own elaboration using SEDLAC.

However, while enterprise surveys confirm the relevance of the scarcity of human capital as a fundamental obstacle for Argentine firms, they also show that this hypothesis is not necessarily the only relevant potential driver of formal employment in the country. On the one hand, almost 4 of 10 Argentine companies indicate that the inadequately educated workforce is a “very severe” or a major obstacle, a proportion roughly equal than Chile higher than in Uruguay, Colombia, Peru and Mexico, while considerably lower than Brazil (Figure 16, Panel A). On the other hand, when asked about which is their main obstacle to growth, only 6% of firms identify the lack of an adequately educated workforce as their main constraint, almost half than the average proportion of firms in peer countries (Figure 16, Panel B). The lack of human capital, even if it is identified as a major obstacle for Argentine companies, is perceived by as a somewhat less relevant problem than the tax administration or political instability and considerably less relevant than labor regulations or tax rates. In addition, there is not much evidence of classic agent behaviors to bypass a human capital constraint, such as relatively high proportions of companies offering formal training programs to their employees or high wage premiums for migrant workers ([Figure A9, Panel A and B](#)).

**Figure 16: Panel A – Proportion of Firms Identifying an “Inadequately Educated Workforce” as a “Very Severe” or a “Major Obstacle” (Argentina and benchmark, most recent year), Panel B – Biggest Obstacle According to Firms (Argentina 2017 and benchmark average in the most recent year)**



Source: Enterprise Surveys, World Bank.

3.2.2. *The skills-mismatch between labor supply and demand, a promising line of research for further next steps*

**As stated in the diagnostic tree description, a poor match between the demand and supply of skills can be a relevant constraint in the labor market, for which, unfortunately, we face relevant data constraints to make conclusive statements about its relevance.** In order to quantify the mismatch between labor supply and demand, in the absence of direct surveys to students and employers, we can estimate the wage premiums of different tertiary education. Pascuariello et al (2021) offer an interesting example for the Argentine case, documenting the wage premiums of different university careers. These estimates were made from a very interesting dataset from the Center for Production Studies (CEP) that has just been made public that mixes demographic, employment and income administrative data of individuals with their tertiary and university degrees registered in the Araucano system of the Ministry of Education. This dataset allows us to see opportunities to improve the matching between supply and demand for skills, identifying careers with high wage premiums or high salaries. Unfortunately, this data does not document the evolution over time of these mincerian returns and it is not possible to compare these estimates with regional peers in order to compare the relevance of the mismatch between countries being this a promising agenda for further research.

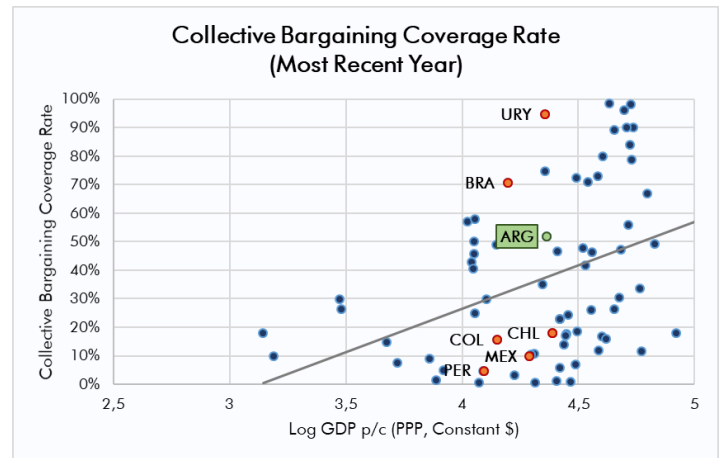
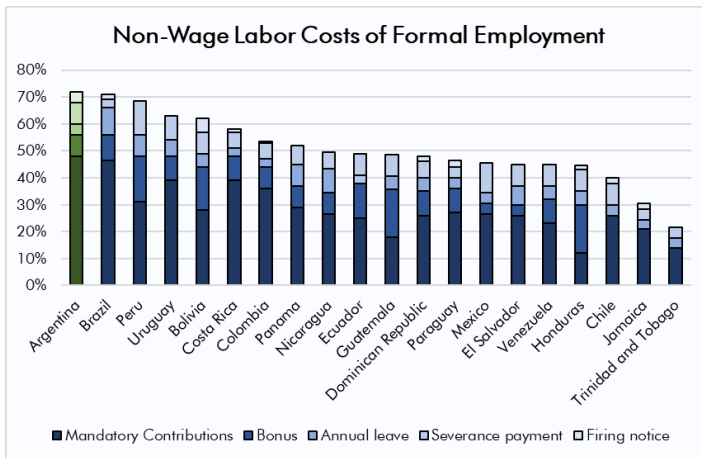
**4. Analyzing potential demand-side constrains to the dynamism of the formal private labor market**

**4.1. Labor institutions as a relevant constraint in the Argentine formal labor market**

**Some basic quantity tests show that Argentina is a country with disproportionately high non-wage labor costs and very stringent labor regulations.** Argentina has a relatively high coverage rate of collective agreements and according to estimates of Alaimo et al. (2017), the country has the higher non-wage labor costs in Latin America (Figure 17, Panels A and B). Moreover, according to the Global Competitiveness Indexes, Argentina has more stringent labor regulations than both the LATAM and the regional peers average, ranking consistently as one of the most inflexible labor markets among peers in dimensions like firing and hiring practices ([Figure A10, Panel A](#)), flexibility in wage determination ([Figure A10, Panel B](#)), internal labor mobility ([Figure A11, Panel A](#)), perceived relationship between pay and productivity ([Figure](#)

[A11, Panel B](#)) and cooperation in labor-employer relations ([Figure A12](#)). The only dimension in which Argentina appears as a particularly flexible country when compared with its peers is in the previously mentioned case of the ease of hiring foreign labor something that seems consistent with the very low mincerian wage premiums to migrant workers ([Figure A5, Panels A and B](#)).

**Figure 17: Panel A – Non-Wage Labor Costs of Formal Employment (Latin American countries, 2014), Panel B – Collective Bargaining Coverage Rate (74 countries, most recent year)**

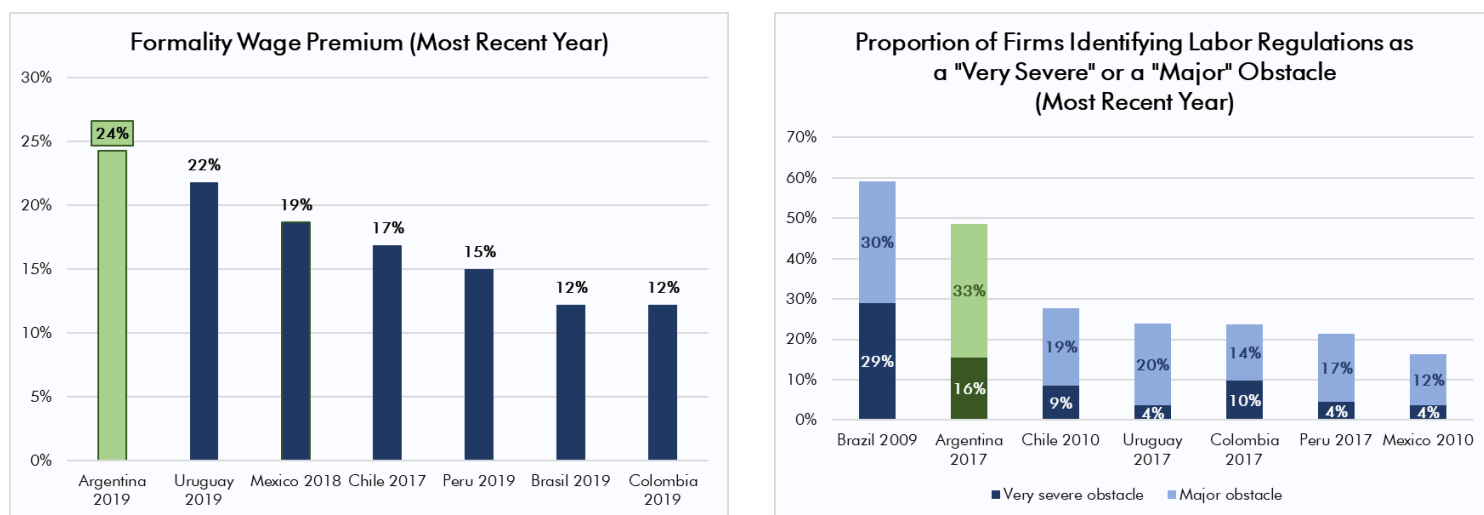


Sources: Alaimo et al. (Panel A) and ILO and World Bank (Panel B).

**There are several economic signals that suggest that labor regulations may be a significant constraint to formal job creation in Argentina.** First, Argentina has very high formality premiums, higher than those of all the peer countries (Figure 18, Panel A). These high returns to formality are price tests that suggest a wide wage gap between insiders and outsiders of the formal labor market accessed by a minority portion of the Argentine workforce. Furthermore, when compared to regional peers, Argentine firms in enterprise surveys tend to disproportionately identify labor regulations as a concerning obstacle, where almost 1 of 2 firms (49%) say that labor regulations are a “very severe” or a “major” obstacle, a proportion that is considerable higher than in Chile (28%), Uruguay (24%), Colombia (24%), Peru (21%) or Mexico (16%), and only slightly lower than Brazil (Figure 18, Panel B). Moreover, when consulting Argentine firms which is their main obstacle to growth is, labor regulations appear as the second most frequently mentioned cause ([Figure A13, Panel A](#)). The number of firms that say that labor regulations is their main obstacle to growth reaches 15%, a value higher both than the one reported for a previously documented supply-side constraint like the lack of adequately

educated workforce and in all the other regional peers with the exception of Chile (Figure A13, Panel B). This value also grows in domestic, exporting and large firms (Figure A14, Panel A). Finally, when hiring informal employment companies ultimately tend to try to bypass the constraint of stringent labor regulations, even exposing themselves to a growing risk of legal litigation that has been growing rapidly in the last decade (Figure A14, Panel B).

**Figure 18: Panel A - Formality Wage Premium, Panel B – Proportion of Firms Identifying Labor Regulations as a “Very Severe” or a “Major” Obstacle (Argentina and benchmark, most recent year)**



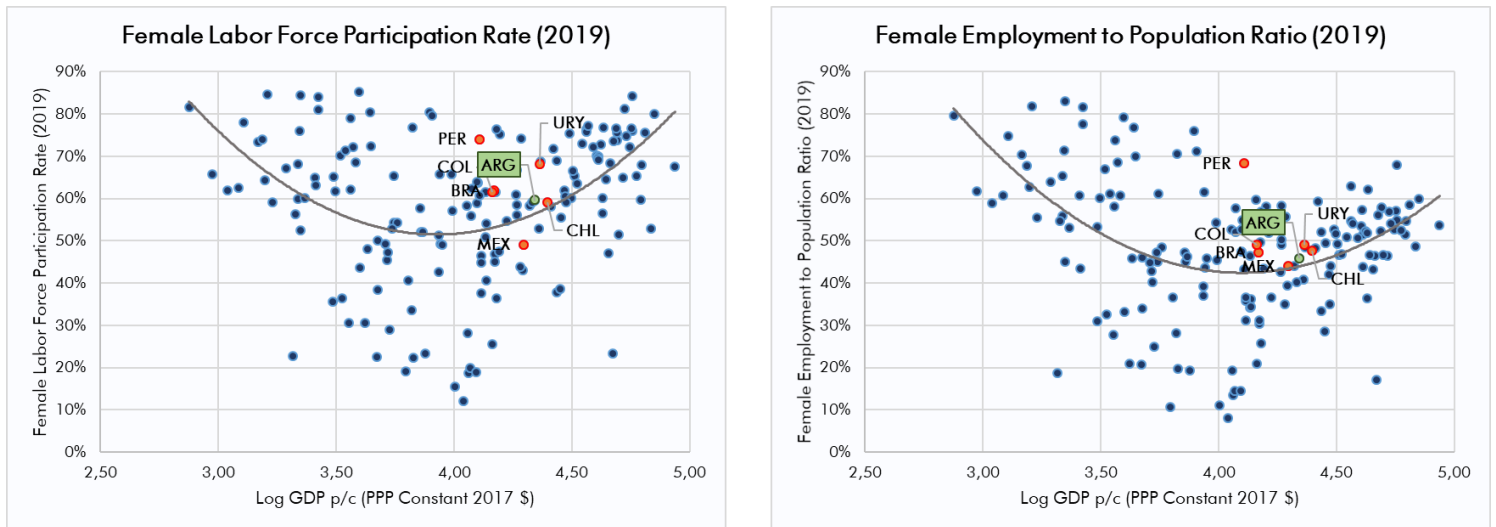
Sources: Own elaboration using SEDLAC (Panel A) and Enterprise Surveys, World Bank (Panel B).

#### 4.2. Can gender inequality and the differential access to the labor market explain the stagnation of private formal employment?

On the one hand, while some gaps to correct still persist, women seem to actively participate in the Argentine labor market. A first way in which gender inequality can affect the dynamism of formal private employment is due to cultural patterns that sharply restrict women's participation in the labor market. However, both the female labor force participation rate and the female employment to population ratio for Argentina are slightly above what is expected from its GDP (Figure 19, Panels A and B). In addition, the gaps between women and men in labor force participation, employment and unemployment rates observed in Argentina

are lower than the majority of the peer countries ([Figure A15, Panels A and B](#)). Although there is still a significant inequality that must be proactively addressed, it seems implausible to identify a relevant bottleneck for Argentine formal employment in these differences that seem in line with what is expected by the national income levels and by the comparison with benchmark countries.

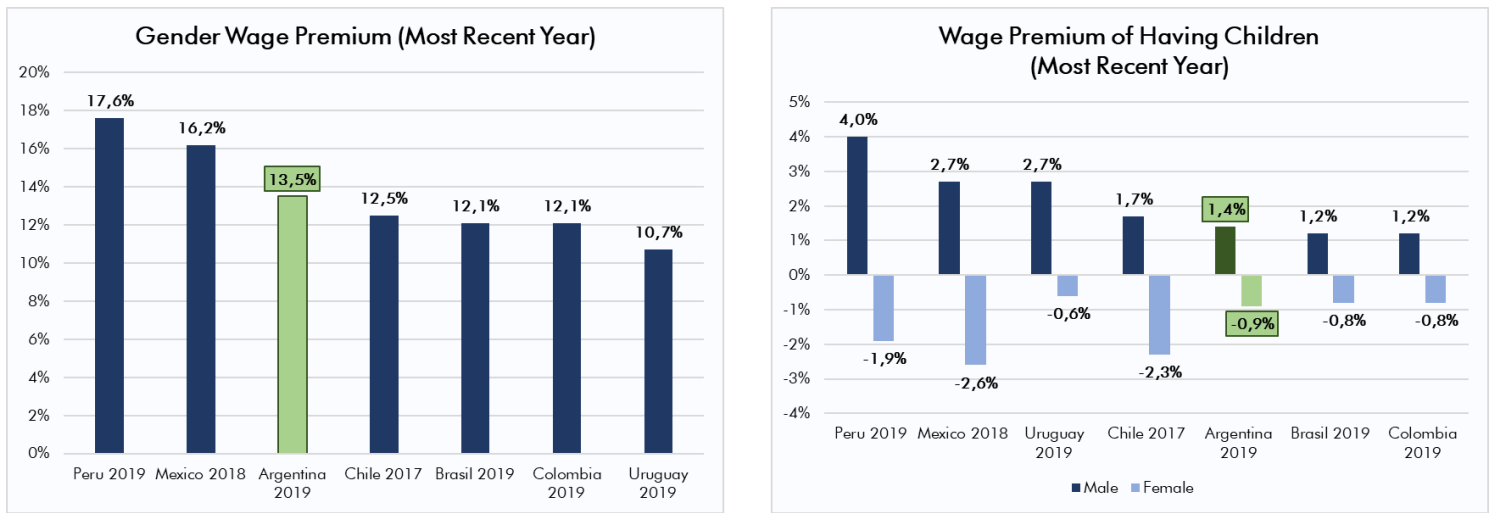
**Figure 19: Panel A – Female Labor Force Participation Rate, Panel B – Female Employment to Population Ratio (169 countries, most recent year)**



Source: World Bank.

On the other hand, although there are still significant wage gaps to be corrected, they do not seem to be significantly higher than in the rest of the region, while parental roles do not seem to disproportionately affect the income gap between men and women in **Argentina**. The mincerian wage gap for Argentina indicates that, other factors being equal, men earn 13.5% more than women, a gender gap that is average in the region (Figure 20, Panel A). In turn, the effect of having children generates a 1.4% increase in labor income for men and a 0.9% drop in labor income for women (Figure 20, Panel B). Even when a policy agenda is required to reverse these outcomes, they do not seem to indicate that Argentina stands out in the region for its gender inclusion gaps. While more research is still in process to establish cross-country comparisons between Argentina and its peers on women's access to managerial positions or the leadership of enterprises, we can hardly find an explanation for the stagnation of formal private employment in the country in these relatively average gaps.

**Figure 20: Panel A – Male Wage Premium, Panel B – Wage Premium of Having Children (Argentina and benchmark, most recent year)**



Source: Own elaboration using SEDLAC.

### 4.3. Is the recent productive specialization in Argentina a driver of labor informality?

Although the research is still ongoing in order to reach more definitive conclusions, some initial analyzes of the within and between sectors changes in employment and formality suggest that productive specialization does not seem to be able to explain either the growth of formal employment during the early 2000s, nor its recent stagnation. First, both in the period of economic growth and boom in formal private employment at the beginning of the 2000s, and in its subsequent stagnation since 2011, observed changes in the formality rates of the different economic sectors were quite homogeneous (Table 1 at one digit level and [Figure A16](#) at two-digit level). This suggests that there was no productive transformation that led the processes of boom and stagnation of formal employment, but rather that the changes were due to factors affecting the economy as a whole. In addition, if changes in formality were led by a productive transformation where employment migrates between informal to formal sectors, one would expect that employment tended to grow faster in the more formal sectors. Conversely, in a period of formal employment contraction, one would expect that the sectors with the highest informality gained a greater share of total employment. Nonetheless, both in the period of expansion and stagnation of formal employment, there is no clear relationship between the formality rate of each two-digit level sector and its employment



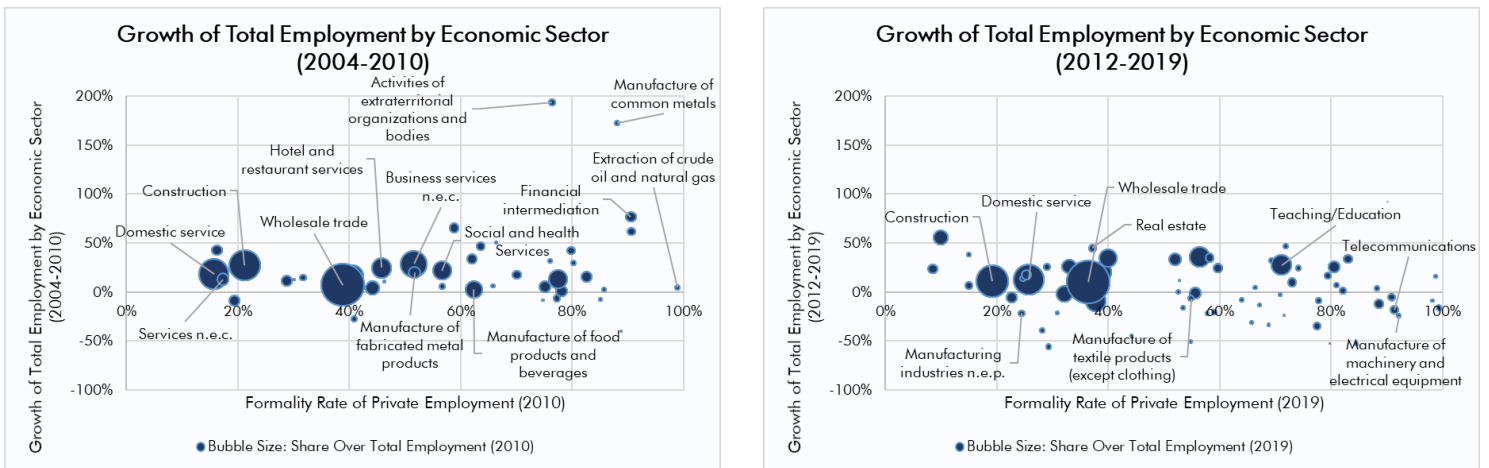
evolution during the period (Figure 21, Panel A and B). Finally, some very basic conflictual simulations of potential changes in the sectoral composition of employment show that hypothetical relatively ambitious productive transformations would not be enough to approach the shares of formal private employment over total employment of regional leaders such as Chile and Uruguay. This suggests that not only did structural change not lead the formalization process during the early 2000s, but even in ambitious scenarios of productive transformation whose viability is highly uncertain, important changes would still be required in the levels of formality within the sector, where there are a lot of room for progress.

**Table 1: Formality Rate of Private Employment (Argentina, 2019) and Changes in Formality Rates within Economic Sectors at One-Digit Level (Argentina, 2003-2011 and 2011-2019)**

Economic Sector	Formality Rate of Private Employment (2019)	Change in Formality Rates of Private Employment (2003-2011)	Change in Formality Rates of Private Employment (2011-2019)
Mining	98%	0.5%	2.8%
Utilities (Electricity, Gas and Water)	86%	-1.5%	-1.8%
Financial Services	82%	8.3%	-5.7%
Fishing	74%	3.9%	-13.8%
Education	69%	8.5%	-4.5%
Manufacturing	54%	17.3%	-7.0%
Transport, Warehousing and Communications	52%	14.4%	-4.4%
Healthcare and Social Services	52%	15.7%	-1.6%
Real Estate and Rental	50%	16.9%	-3.4%
Hotels and Restaurants	44%	11.0%	-2.9%
Retail	33%	14.4%	-7.5%
Community, Social and Personal Services	33%	8.6%	-13.1%
Domestic Service	26%	12.0%	8.7%
Agriculture	18%	4.4%	0.6%
Construction	17%	9.8%	-2.9%

Source: SEDLAC.

**Figure 21: Growth Rates in Employment by Economic Sector at Two-Digit Level (Panel A – Argentina, 2004-2011, Panel B – Argentina, 2012-2019)**



Source: Encuesta Permanente de Hogares.

**5. Policy Recommendations #1: Addressing institutional and political dysfunctionalities of labor regulations in Argentina transitioning towards a new Welfare State that facilitates a delinking formality from social protection**

*The labor institutions currently in force in Argentina generate a very excessive cost to formal private employment due to a combination of i) an unemployment protection based mainly in privately finance severance payments with low flexibility in hiring and firing practices, ii) very high payroll taxes and wage contributions to social security and iii) perverse incentives in litigation for labor lawsuits that discourage formal hiring. This creates a dual social insurance architecture with inequality between insiders and outsiders of the formal labor market. Moreover, it requires the highest non-wage labor costs in Latin America and a set of poorly designed very strict regulations that produce several economic signals that show that this is a relevant constraint for Argentina. The objective of the recommended policy alternatives is to seek to establish technically correct and administratively feasible mechanisms together with a political strategy to guarantee the same level of labor and social protection currently in force in Argentina but without incurring in an inequality in the access to income protection between formal and informal workers and generating a differentially excessive cost of formal employment that reduces incentives to formalize. This inevitably implies addressing the great dilemma of social security and labor protection in Argentina: the contributory essence of its benefits and the “corporatist” nature of its Welfare State.*

*However, as there are considerable political challenges that may block a broad and comprehensive labor, pension and health reform, it is recommended to separate between short-term and long-term reforms and objectives. Initially, it is suggested to implement four short-term initiatives such as i) transitioning from unemployment protection based on severance payments to one based on unemployment insurance, ii) launching a short-term employment promotion program, iii) reforming the fine system of non-compliance with formal contracting in order to subsequently guarantee a higher enforcement of labor regulations, and iv) implement targeted sectoral reductions of payroll taxes. However, a hypothetical long-term scenario with a structural transformation of the labor market will require an institutional reconfiguration towards a new Welfare State and a comprehensive transition towards a complete de-linking between formality and access to social protection.*

**5.1. Four short-term reforms seeking to create innovative institutional arrangements to increase incentives to formalize without losing the benefits of a robust social safety net**

*5.1.1. Providing economic security and unemployment protection without generating obstacles to private formal employment: transitioning from unemployment protection based on severance payments to one based on unemployment insurance*

*Technical rationale and design*

**A well-designed unemployment insurance (UI) can reduce the non-wage labor costs of formal employment without affecting income security for the unemployed, and even expanding the levels of unemployment coverage to self-employed workers.** Currently, unemployment protection for the formal wage earner depends almost entirely on the severance payments directly paid by the employer and not by a publicly financed UI. Severance payments are equivalent to one month's salary for each year of seniority (always considering the best remuneration of the last year worked). By having a system based on severance payments, dismissal costs rely entirely on the firm and then increasing the differential cost of formal employment for the private employers. It would be advisable to strongly reduce severance payments and dismissal costs for the employer, replacing them with a publicly funded UI that offers income coverage with similar characteristics. The degree of unemployment protection would not change providing the worker a strong income security in unemployment spells so it should not generate strong political resistance from the unions or the “insiders” of the formal labor market. Moreover, the reduction in firing costs to firms may give some political room with

the private sector to finance the UI through an increase in progressive and less economically distorting tax burdens such as the corporate or personal income tax. Furthermore, a properly designed UI would not only maintain the current levels of protection but would even expand the scope of coverage, including self-employed workers who today do not have access to severance payment protection, reducing the inequality between insiders and outsiders of the formal labor market. As pointed out in Rodrik (2008) the Danish “flexicurity” experience shows how a strong income protection with an extensive welfare state, strong trade unions and robust active labor market policies may provide economic security, good labor market outcomes and a considerably egalitarian income distribution without restrictions in hiring and firing that may be an obstacle to the creation of private formal employment.

**A well-designed UI must be based on high front-load benefits and decreasing payments over time to avoid moral hazard while adapting its design to be compatible with short-term part-time work and giving a differential support to young workers.** A first fundamental decision when designing an unemployment insurance is how to structure the insurance payments over time. If the payments are equally-weighted over time, a potential moral hazard can be generated where the worker reduces its job-search incentives. Conversely, an UI that provides only a lump-sum unemployment benefit immediately after job loss can create an incentive to capture the front-loaded benefit through short spells of unemployment. Following Nunn and Ratner (2019), an intermediate solution is recommended, implementing a time profile of benefits that slowly diminishes as the spell lengthens, reducing moral hazard concerns but without creating perverse incentives in employed workers. Moreover, since in periods of high unemployment, obtaining new employment is not a simple process and unemployed people often temporarily transition to part-time employment. Allowing for some partial unemployment insurance receipt during part-time employment may avoid the pervasive effect of long-term unemployment spells in professional careers avoiding the negative incentive of losing the insurance if the worker accepts a temporary part-time job. Finally, Michelacci and Ruffo (2015) argue that UI is most valuable to young workers. Young workers typically have little means to smooth consumption during a spell of unemployment while moral hazard considerations are minor because young workers want jobs anyway to improve life-time career prospects and build-up human capital. The authors show with US data that the elasticity of unemployment to benefits is small and statistically insignificant for workers in their mid-twenties and early thirties and it is positive and significant for workers in their mid-forties and fifties. They also document that

consumption losses upon unemployment are greater for younger than for older workers. These results suggest that there is some room to implement an age-dependent design where young cohorts may have more generous coverage than older ones improving the efficiency of the design.

### *Administrative and political challenges*

**Although a correct design should *a priori* avoid strong adverse political reactions, there are some legal challenges to consider that may affect the design of the program.** A well-designed UI should not only not reduce unemployment coverage for formal workers, but could even be expanded to self-employed workers, expanding the overall access to benefits. A good design would then avoid a trade-off between lower non-wage labor costs and a greater coverage of social protection, avoiding potential adverse political reactions from both public opinion and formal labor market insiders. What could eventually be a political concern is that the reduction in dismissal costs generates a sharp increase in dismissals as soon as the policy is implemented, given that firms would take advantage of it to fire high-tenure workers who were not previously fired solely for the cost of the severance payments. An alternative to deal with this challenge would be to maintain the severance payment regime for long-term workers who were hired before the implementation of the UI, where the reform only will reduce the costs of new formal hires. Regarding its administrative feasibility, it is important to take into account potential challenges to the constitutionality of the reforms. Article 14bis of the National Constitution, incorporated in the 1957 reform, guarantees “protection against arbitrary dismissal” to the worker. Some narrow and strict interpretations of the concept of “protection against dismissal” could eventually consider that UI may provide income security to the unemployed but does not necessarily “protect against dismissal” since it does not impose an additional cost of dismissal on the firm as severance payments do. In order to ensure the constitutionality of the reform, it is important to substantiate in legal grounds that the income security of the UI is a legitimate form of protection against dismissal. If this interpretation is not legally acceptable, an alternative option is to guarantee that the level of severance payments post-reform (after their reduction and the implementation of the UI) is above a threshold level that may be judicially interpreted as leaving the worker without the constitutionally stipulated “protection against dismissal”.

### 5.1.2. *Launching a short-term employment promotion program*

#### Technical rationale and design

**In order to generate an impact on short-term formality, the design of an employment promotion program of temporary payroll tax reduction programs to encourage formal private contracting is recommended.** These programs consist of granting an exemption period (typically one or two years) from non-wage labor costs to firms for all new formal contracts that increase the payroll of companies, where the National State took charge of the remaining financing. Estimates from the Ministry of Production and Labor of the previous national administration suggest that the promotion programs promoted the creation of two million registered jobs during 2008 and 2015 (a much higher impact than the programs that offered exemptions to companies to regularize workers who were previously hired as informal in the firm, which in the same period only generated the hiring of 32,000 formal workers). Similar initiatives have been successful in generating long-term formal hiring, once the exemption period has ended. Experimental evidence from Argentina suggests that these programs are especially successful in generating long-term employment impacts in young individuals. Based on a natural experiment (lottery assignment), Berniell and De la Mata (2017) evaluate the “Programa Primer Paso” (PPP) implemented by the provincial government of Córdoba in 2012. The PPP basically operates as an internship program for young people between 16 and 25 years old, which gives no formal training other than the on-the-job training to young job seekers, and which provides a wage subsidy in the form of a monthly payment to interns equal to 90% of the hourly legal minimum wage during one year. One year after the end of the subsidy, the authors documented an impact of 7 p.p. on the probability of having a job and 6 p.p. on the probability of having a formal job was documented, and that impacts are large and persistent in the long run, namely (at least) 4.5 years after the program started. Reducing the cost of new hires, especially in young populations, may affect the professional career of the beneficiaries in the long-term.

#### Administrative and political challenges

**This program does not face any significant political constraints, while administratively fiscal considerations do not appear to be of concern.** By focusing solely on contracts that increase the payroll, the regime should not imply a considerable fiscal impact, these relationships

are added to the existing ones (incorporating financing to the government through payroll taxes once the exemption period is end) and that while the exemptions are only for a short-term, the evidence is consistent with the expectation of a persistence of some of these additional hires in the long term, generating greater fiscal revenues and reducing social spending in income protection programs.

5.1.3. *Reforming the fines system in order to promote a subsequent higher enforcement of labor regulations*

Technical rationale and design

**In order to facilitate a *de facto* strong monitoring of non-compliance with regulations of the National State a reform to the system of fines is proposed.** The current system of fines for informal hiring (total or partial) regulated in the laws N° 24.013 and N° 25.323 generates high incentives to litigate and stipulates very excessive penalties. To give an example, a fine for hiring an informal worker with three years of seniority implies for the company to pay six salaries as compensation to the worker, 18 salaries as fines and another 16 additional salaries to the National State as debt and interests for unpaid payroll taxes and their corresponding penalties. In turn, the fines are received directly by the worker and his lawyer and not by the State. This creates high incentives to litigate for workers and law firms and partially explains the high level of labor lawsuits in the country. In a context of such high levels of informality combined with very strong fines and high incentives to labor litigation, a hypothetical strict enforcement of such *de jure* strong fines would lead to the bankruptcy of many small and medium-sized companies. Knowing these potential social costs, the national government has a *de facto* very little monitoring of non-compliance with labor regulations by the National State. A truly accessible system of fines for companies and where the fine is collected by the State (and not by the worker and their lawyers) may reduce the incentives to litigate while ensuring that the worker will have access to the social security benefits. Moreover, this *de jure* more accessible penalties, together with the reduction in dismissal costs (severance payments) and the employment promotion program, would then allow the State to implement a *de facto* much more intense monitoring and enforcement of labor relations as a counterpart, potentially reducing informality.



### Administrative and political challenges

The administrative difficulties do not seem to be a significant obstacle, while the potential reaction of the companies due to the increased monitoring should not be significant in the context of the different reforms implemented. Although greater monitoring and greater enforcement of formal hiring may represent a risk for companies, the reduction of fines, the total or partial substitution of severance payments with a publicly financed UI and the short-term employment promotion are benefits more than compensate that this potential cost. Therefore, given the complementarity of the reforms, it is difficult to foresee strong opposition from business chambers to this reform as an element of a comprehensive policy agenda.

5.1.4. *A call for a sequential and sectorally targeted reform strategy that seeks to reduce mandatory contributions in very specific segments of the economy*

### Technical rationale

Finally, the very high amount of mandatory contributions as a percentage of wages (the highest in Latin America) is due to the fact that in Argentina these finance both the contribution-based pension system and the health coverage provided by the “*Obras Sociales*”, a health coverage for formal workers managed directly by the unions of each occupational category. Health coverage in the country is divided into three subsystems, one public, one private and the one provided by the *Obras Sociales*, financed by payroll taxes and additional mandatory contributions that explain an 13% of gross salary<sup>2</sup>. In addition, the pension system has a contributory nature and is financed by payroll taxes and contributions that represent 27% of the gross salary. This contributory financing of health and pensions generates very high payroll taxes which are the main component of the non-wage cost of formal private employment. The quality of the health coverage provided by unions is remarkably heterogeneous, sometimes pushing some formal private workers to prefer to finance a “triple” coverage (the public health, the coverage from his *Obra Social* and an additional private insurance) but using only one of these, generating an excessive health spending per worker and inefficiencies in the system.

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<sup>2</sup> Including the contribution to the health coverage of retired individuals (PAMI).

*Administrative and political challenges*

**However, while the technical case for a comprehensive and national reform is very clear, the political supportability of a disruptive and wide reform is highly limited since the *Obras Sociales* will be fiercely defended by unions.** Labor representatives would oppose an aggressive resistance to any attempt to systemic reform that could eliminate the *Obras Sociales* and this explains the almost undisputed persistence for four decades of such a particular and inefficient system. This is why any attempt for a comprehensive labor reform that seeks to strongly affect the mandatory contributions through a uniform national law will face strong resistance and will unite all the strong unions in a single claim, limiting the political margin for a generalized reduction in payroll taxes.

**Then, it may be recommended to sequentially negotiate highly targeted sectoral agreements that seek to generate reductions in mandatory contributions in very specific sectors with high impact or low political cost.** It is recommended to establish a targeted and sequential agenda of sectoral negotiations focusing only on activities where i) labor costs are the determining binding constraint for investment decisions and/or ii) are activities with “systemic” economic impact. First, there are some very specific sectors of the economy in which job creation as a result of a possible drop in payroll taxes is so high that even unions can find incentives to support a drop in mandatory contributions. This was the case, for example, of a recent agreement for more flexible labor contracts with the oil unions (with a reduction of 30% in non-wage labor costs) that was the kick-start for foreign investments that opened new oil operations in the *Vaca Muerta* fields in the province of Neuquén in 2017. Identifying specific cases in which a cooperative and iterative public-private collaboration is evident and visible and a win-win agreement can allow some targeted sectoral agreements to lower mandatory contributions in specific sectors without incurring in a politically challenging national reform. Second, to avoid a cohesion of all the unions that block a comprehensive reform, the scope of political conflicts can also be limited by prioritizing only narrow agreements in activities with “systemic” economic impact (sectors that are strongly linked to the economy as a whole) like, for example, in logistical activities or the financial sector. Thus, a strategy of highly targeted and sequential reforms is proposed to avoid a generalized cohesion of all unions that blocks a more ambitious and virtually impossible reform by creating targeted reforms that maximize potential

impact. Although it can arouse adverse political reactions in labor unions, these would be limited to the target sectors of each sequential agreement.

*5.1.5. Final remarks on the complementarity of the short-term reforms and their political challenges*

The set of short-term reforms seeks to reduce the costs and risks of formal contracting without harming the extension of the labor and social protection network through an effective design that finds a delicate political balance that avoids the blocking of some of the main stakeholders. Table 2 summarizes the technical strength, administrative feasibility and political supportability of the four policy options based in the previous analysis. Moreover, Table 3 summarizes the potential political impact for each particular stakeholder in each particular reform documenting the costs and benefits for all the relevant parties involved. Although the design of the four instruments seeks to avoid any negative impact on the main stakeholders, there are some unavoidable problems such as the possible rejection of unions to sectoral agreements with payroll tax reductions or the possible rejection of companies to stricter monitoring. of formality. However, both the strategy of sectoral and sequential agreements to reduce payroll taxes and the set of benefits granted to companies that compensate for this greater monitoring (reform of severance payments, employment promotion program, reduction of fines) seek to avoid the formation of a political coalition that operates against change. Finally, the four reforms are being validated and discussed with a broad group of academics, specialists, labor lawyers, policy makers, business leaders and labor representatives, with the aim of understanding in detail the particular concerns of each stakeholder, incorporating in the design responses to potential reactions that may arise.

**Table 2: Technical, Administrative and Political Analysis of Short-Term Reforms**

Policy option	Technical Strength	Administrative Feasibility	Political Supportability
Transitioning from severance payments to unemployment insurance	High	Medium (need to address potential legal concerns)	High
Short-term employment promotion program	High	High	High
Removing specific legal inefficiencies in the hiring process	High	High	Medium (possible reaction from firms but compensated by the benefits of the additional reforms)
Targeted sectoral reforms of payroll taxes	High	High	Challenging (need to proceed through a targeted and sequential strategy)

**Table 3: Stakeholder Cost-Benefit Analysis**

Policy option	Implementation of Unemployment Insurance	Employment Promotion Program	Reform in the fines system	Sectoral reductions in payroll taxes
Private Firms	Beneficiaries (reduction in non-wage labor costs)	Beneficiaries (reduction in non-wage labor costs)	Affected Stakeholder (they will have a reduction in fines but a greater monitoring)	Beneficiaries (reduction in non-wage labor costs)
Unions and Labor Representatives of Formal Workers	No direct impact (they maintain the same level of income protection)	Beneficiaries (increase in potential affiliates)	No direct impact	Affected Stakeholder (reduction in pension and Obras Sociales financing)
Currently Self-Employed Workers	Beneficiaries (they access to unemployment protection)	Potential Beneficiaries (is easier to hire them as formal salaried workers)	No direct impact (indirectly, the lower non-wage labor costs may make easier to hire them as formal salaried workers)	No direct impact (indirectly, the lower non-wage labor costs may make easier to hire them as formal salaried workers)
Currently Informal Salaried Workers	No direct impact (indirectly, the lower non-wage labor costs may make easier to hire them as formal salaried workers)	Potential Beneficiaries (is easier to hire them as formal salaried workers)	No direct impact (indirectly, the lower non-wage labor costs may make easier to hire them as formal salaried workers)	No direct impact (indirectly, the lower non-wage labor costs may make easier to hire them as formal salaried workers)

**5.2. A call for a complete de-linking of the labor contract and social and labor protection in the long-term**

Although the objective of this work is not to present the specific guidelines of a comprehensive health and pension reform, it is important to highlight that in the long term it is difficult to think of a future of high formality without a reconfiguration of the rules and objectives of the Welfare State. Following Antón, Hernández and Levy (2012) and Cruces and Levy (2021), in the long term, it is important to promote a complete de-linking of the labor contract and social protection, the pension system, and health financing. Replacing severance payments with UI is a first step, as UI protects individuals regardless of their contract work. To this must be added a decoupling between the pension system and the labor contract, breaking the “contributory” and “corporatist nature” (following Esping Andersen categories) of the Argentine Welfare State to develop a new social contract based on universal access protection. Very briefly, following Levy and Cruces the simplest mechanism to achieve this is to i) incorporate the requirement to save for a pension as part of the requirement to pay personal income taxes (and consequently reduce the payroll taxes and the non-wage labor cost of formal employment, generating incentives to formalize) and ii) divide revenues from personal income taxes into two components, one devoted to general government expenditures as at present and

one earmarked for workers' own future pensions. A similar logic could be applied to the reform of the health system, considering the *Obras Sociales* as standard private providers and where the worker has to pay a certain amount of income taxes to finance the public health system but does not have the obligation to finance a *Obras Sociales* or a private health provider, something that can be financed with private funds and not with mandatory contributions or payroll taxes. The political economy of these reforms is remarkably challenging and will very likely require political conflicts, which is why it is hardly a policy alternative in the short and medium term. However, these guidelines should at least guide the horizon that subsequent reforms should pursue, seeking to reconfigure a Welfare State that seeks to protect individuals and not jobs, does not generate inequities in access to benefits between formal and informal workers by establishing a universal coverage, and minimizes non-wage labor costs of formal contracting (replacing them with progressive and efficient personal income taxes) to generate incentives for formalization.

## **6. Policy Recommendations #2: Looking for policy solutions tailored to different potential constraints to an improved access to tertiary education graduation**

*There are different potential constraints to access and completion of tertiary education studies that are becoming increasingly limited in Argentina and where there are considerable economic signs that this is a relevant problem for the formal labor market. In particular, a student may not start or finish higher education because i) they do not know or underestimate the returns and benefits of tertiary education, ii) they have high liquidity constraints or opportunity costs, or iii) the insufficient quality in the educational system when promoting learning to accompany their educational trajectory. These constraints may or not be relevant in different regions and educational paths so the objective of the following policy recommendations is to search for a comprehensive set of policy tools that explicitly and specifically address all these potential restrictions providing solutions that must be subsequently tailored to each particular context. In particular, it is recommended to analyze the implementation of digital tools and active campaigns to make visible the returns to tertiary education, a better design of conditional cash grants more compatible to overcome opportunity costs and some main guidelines to redesign national vocational training policies.*

### **6.1. Making returns to tertiary education visible through cheap and easy-to-implement interventions: information campaigns and digital tools**

**The underestimation of the returns to higher education or to particular academic careers can often be a significant driver of the higher education dropout.** Experimental data from

Hastings, Neilson and Zimmerman (2015) in Chile show that the low-income and low-achieving students who apply to low-earning college degree programs overestimate earnings for past graduates by over 100% (while beliefs for high-achieving students are correctly centered) and, conversely, students choosing high-earning programs underestimate earnings for past graduates. The authors also document that disclosing degree-specific earnings reduces demand for the lowest-earning programs, particularly among low-income students. This could be a plausible explanation in some contexts to explain the few incentives to complete higher education studies even in contexts of high economic returns to higher education as in the Argentine case.

**The generation of active information campaigns and the design of digital portals that make visible the economic returns of different academic paths of higher education can be a cheap, effective and easily implementable way to overcome this constraint.** This failure can be partially addressed through the design of information policies like the development of web platforms such as “Ponte en Carrera” (<https://www.ponteencarrera.pe/>), a web platform designed by the Ministries of Labor and Education of Peru that offers very detailed information to students about the economic returns of the different university careers or their most frequent jobs and was verified as a very cost-effective tool to align the academic preferences of students with the demands of the job market. [Figure A17](#) and [Figure A18](#) show different examples of the type of information provided in both portals. The Ministry of Productive Development and the Ministry of Education can generate a similar portal without major administrative challenges by matching data from the Araucano system that contains a detailed record of all technical and university education graduates with administrative data on income, employment, and demographic characteristics. There are qualitative studies that conducted surveys and focus groups with high school students to analyze these web portals, such as the one by Novella, Tocre and Vargas (2021) that can be useful to understand which indicators are more informative to affect students' beliefs, how to visually present the information and what type of additional information on scholarships, career costs, academic offer are considered useful by the students.

## **6.2. Adapting conditional cash grants programs to be more compatible with potential part-time jobs to address opportunity costs**

**Although it is difficult to argue that Argentina has differentially high liquidity constraints compared to its regional peers, opportunity costs could be relevant to explain higher**

**education desertion in some contexts.** By having a public and free system of technical and university education (unlike other countries in the region) and a nationally established system of conditional cash grants such as the PROGRESAR Program that seeks to provide modest monetary support to higher education students of relatively low family income, it is hard to believe that liquidity constraints can explain Argentina's recent underperformance relative to its peers. However, opportunity costs such as potential insertions in the labor market can be a challenge in some specific regions or demographic groups that threatens the completion of higher education studies.

**One way to encourage a part-time professional insertion that does not imply abandonment of higher education studies is to propose a significant increase in the amount of PROGRESAR scholarships for those students who have a verified part-time employment relationship.** This would generate incentives for students to consider only part-time opportunities, since these would allow them not only to access labor income, but also to ensure that this does not affect the time needed for their studies and, at the same time, providing them with a more relevant monetary incentive than the current scholarship amount. The fiscal amounts dedicated to this program are not significant enough to worry too much about its fiscal impact, while they can generate very long-term impacts on the income of the participants in a context in which the returns to higher education are very considerable. In turn, the administrative structure to implement it is already very solidly developed at the national level based on the existing capacities to develop the PROGRESAR program.

### **6.3. Main guidelines for a national reform of technical education and vocational training in Argentina<sup>3</sup>**

**Vocational Training policies are inherently complex and the Argentine government has significant informational challenges in implementing them.** First, decision making regarding vocational training policy in developing economies is characterized by the lack of quantitative and qualitative information. Which occupational profiles are most demanded by

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<sup>3</sup> Although this work does not intend to present the specific contents of a comprehensive reform of vocational training in Argentina, it does seek to establish some guidelines for the improvement of the current offer to improve the quality provision of technical education. The exclusive focus on technical education is due to the fact that, given the high autonomy of the universities, the margin of influence of the national government in university education is very limited and a comprehensive reform of the university system exceeds the aims of this work.



companies? In what skills and competencies do companies have difficulty filling vacancies? Currently, Argentina's vocational training operates without tools and institutions to identify the demand for skills that could reorient professional training so that it better matches labor demand. On the other hand, vocational training initiatives are complex policies that require strong state capabilities. Following Andrews, Pritchett & Woolcock (2017), launching a VTA requires coordinating a large number of teachers and suppliers distributed throughout the country ("transaction intensive") whose actions cannot be mechanically directed by rules nor by precisely defined procedures ("locally discretionary") and for which there are no laws, manuals, nor universally proven knowledge base to guarantee their success ("not based on a known technology"). Policies that meet these features require high state capabilities and are characterized by the absence of mechanically reproducible "best practices": we do not know "what works", and the success of the policy is highly contextual and dependent on good implementation. Indeed, experimental evidence on the effectiveness of these policies like the documented by Levy Yeyati, Montané and Sartorio (2019) documents a huge dispersion in their impact: improvements in the employability and income of beneficiaries vary strongly depending on the characteristics of the application context, their target population or variants in their design and implementation.

**Some main guidelines are recommended to structure a better provision of information to organize the content design, a bureaucratic consolidation to organize the curricular offer and the generation of an incentive scheme that promotes results-oriented iterative learning of the key empowered agents.** First, it is recommended to develop powerful inputs for informed policymaking. The VTA can take advantage of the development of preexisting projects in the Ministry of Productive Development such as the recently developed but never implemented National Skills Anticipation Survey detailed by Díaz de Astarloa et al (2019). This project would allow a very granular and precise identification of specific skills, knowledge and expertise that firms have difficulty finding, differentiating between the different regions and productive sectors of the country. This in conjunction with qualitative work with Sectoral Productivity Workshops, which bring together business chambers, unions, and sectoral specialists would allow aligning the vocational training curricular offer with the binding constraints of the labor demand. Second, centralizing the total supply of vocational training - that is currently dispersed and with significant overlaps between the Ministry of Labor, subnational governments and the National Institute of Technological Education (INET)- in a

single institution (a national and autonomous VTA) will allow the setting of financing criteria, monitoring procedures, and evaluation processes, as well as reduce current political conflict between public agencies, and establish basic requirements to structure educational paths that offer legal and legitimate certification of higher education. Finally, while there are not universally proven and mechanically reproducible “best practices” to develop vocational training policies, incentives can be developed so that agents are motivated to deliver an adequate performance. For example, through feedback surveys both students and their future employers can generate performance scores for each teacher or provider, whose continuity in the system is contingent on meeting minimum requirements. Bonus schemes linked to good performance in the established metrics is another possible incentive. The combination of the granting of total freedom and absolute empowerment to teachers and providers for the iterative experimentation of pedagogic methods and curricular contents and a structure with incentives based on results, would generate adequate incentives to carry out a results-oriented permanent iterative experimental learning process by providers. The combination of a more centralized and logical organization of the curricular offer, with a focus on knowledge and skills that are truly in demand and with a well-designed incentive and iterative learning scheme can help reduce dropout and improve the quality of provision in vocational training and technical education.

## **7. Final Conclusions**

There are few challenges as important to ensuring a genuine and continuous process of economic development as having a large and dynamic formal labor market. The present work sought to address the complexity of a problem as intrinsically multi-causal as the creation of formal employment in the Argentine context with a diagnostic strategy that is hopefully applicable to any other imaginable context. Although undoubtedly the need for fiscal and monetary reforms to recover economic growth are essential to recover the dynamism of the Argentine formal labor market, this work sought to highlight the need to accompany this process with complementary reforms that explicitly address two other major constraints to the dynamism of the Argentine labor market such as the recent underperformance in higher education and, fundamentally, the need to restructure labor market regulations to begin a transition towards a new social contract and a redesign of the Welfare State that enables a progressive de-linking of the employment contract and social security benefits and social protection.

# Appendix

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## Methodological Note: Mincer Regressions

### *i) Baseline specification*

In the present work, multiple wage premiums associated with different demographic, social and labor characteristics are documented. For all of them microdata were used at the individual level from household surveys for Argentina, Brazil, Chile, Colombia, Mexico and Peru, which were harmonized by the World Bank and the Center of Distributive, Labor and Social Studies (CEDLAS) to constitute the Socio- Economic Database for Latin America and the Caribbean (SEDLAC) that has a wide set of standardized variables between the different countries. Each regression was estimated separately for each country and each year, considering the employed population between 15 and 64 years. The baseline specification of the regressions is detailed in the following equation:

$$\ln labor\ income_i = \beta_0 + \beta_1 gender_i + \beta_2 age_i + \beta_3 age_i^2 + \beta_4 diploma_i + \beta_5 formality_i + \beta_6 public\ sector_i + \beta_7 hours\ worked_i + \beta_8 occupation_i + \beta_9 sector_i + \beta_{10} region_i + \mu_i$$

The mentioned variables as defined as follows:

- $\ln labor\ income_i$  is the natural logarithm of income from labor activities measured in PPP dollars in constant currency for the year 2011.
- $gender_i$  is a binary variable that takes the value of one when the individual is male and the value 0 when the individual is female.
- $age_i$  is a continuous variable that identifies the age of the individual.
- $diploma_i$  is a categorical variable that describes the highest educational diploma achieved by the individual (none, primary, secondary or higher education).
- $formality_i$  is a dummy variable that takes the value of one when the individual has a formal employment in the private sector. The formality proxy is identified if the individual has access to the pension system through its current job.
- $public\ sector_i$  is a dummy variable that takes the value of one when the individual is employed in the public sector (state-owned enterprises are included in this definition of public employment).
- $hours\ worked_i$  is a continuous variable that identifies the total number of hours worked by the individual.

- $occupation_i$  and  $sector_i$  are categorical variables that identifies the occupation and industry codes using the main categories at the first level of aggregation of the ISCO-08 and the ISIC structure (10 major occupational groups and 17 productive activities)
- $region_i$  is a categorical variable that identifies the district or region of the particular country where the individual is residing.

The baseline specification is used in Figures 1, 9, 16, 20, 24 (Panel A) and A1.

ii) *Alternative specification 1: estimating returns to schooling*

In order to estimate the economic returns to each year of formal education in Figure A7, a new specification was estimated replacing the variable  $diploma_i$  by the variable  $years\ of\ education_i$  that is a continuous variable which identifies the total number of years of formal education of the individual. The estimated equation can then be described as follows:

$$\ln labor\ income_i = \beta_0 + \beta_1 gender_i + \beta_2 age_i + \beta_3 age_i^2 + \beta_4 years\ of\ education_i + \beta_5 formality_i + \beta_6 public\ sector_i + \beta_7 hours\ worked_i + \beta_8 occupation_i + \beta_9 sector_i + \beta_{10} region_i + \mu_i$$

iii) *Alternative specification 2: estimating parental wage premium/penalty*

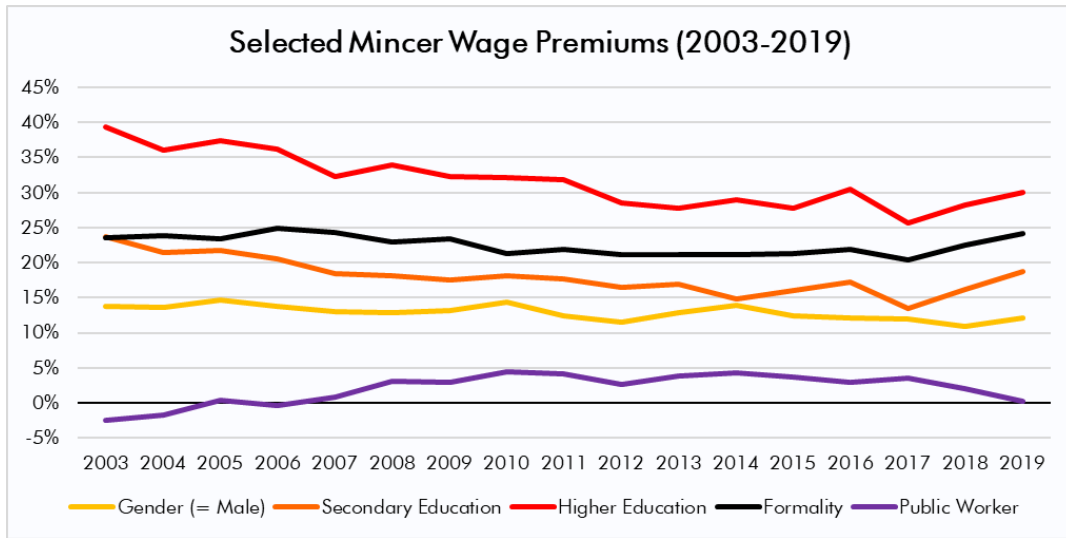
In order to estimate the effect of being a parent in the labor income in Panel B of Figure 24, the baseline specification is modified first by adding the variable  $parent_i$  that takes the value of one when the individual has at least one child and second by eliminating the variable  $gender_i$  since this regression was estimated separately for the male and female samples. The estimated equation can then be described as follows:

$$\ln labor\ income_i = \beta_0 + \beta_1 parent_i + \beta_2 age_i + \beta_3 age_i^2 + \beta_4 diploma_i + \beta_5 formality_i + \beta_6 public\ sector_i + \beta_7 hours\ worked_i + \beta_8 occupation_i + \beta_9 sector_i + \beta_{10} region_i + \mu_i$$

**Figures**

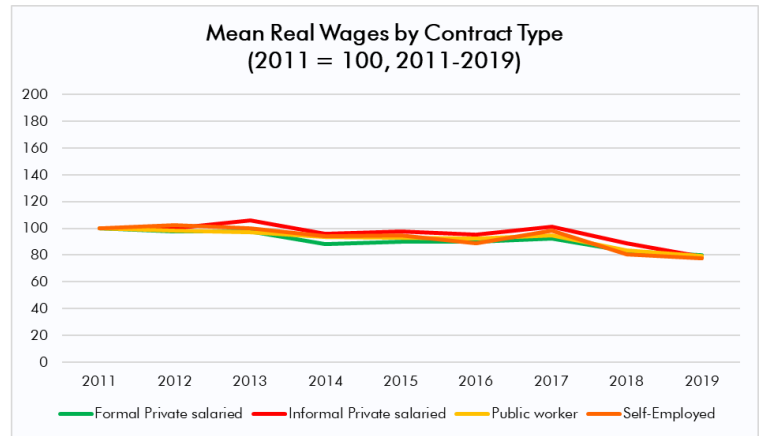
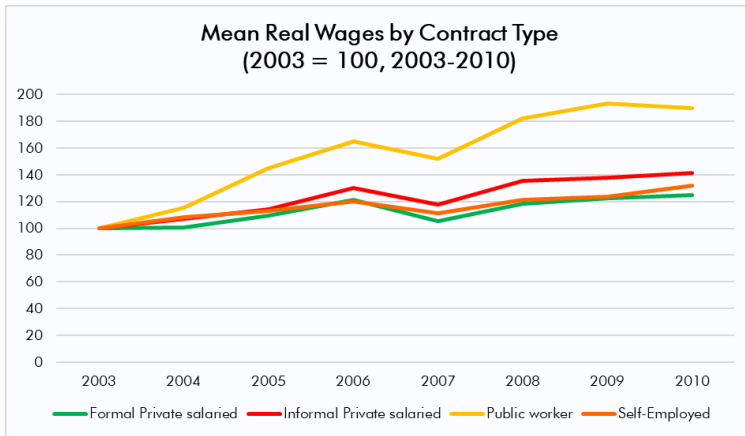


**Figure A1:** Selected Statistically Significant Mincer Wage Premiums (Argentina, 2004-2019)



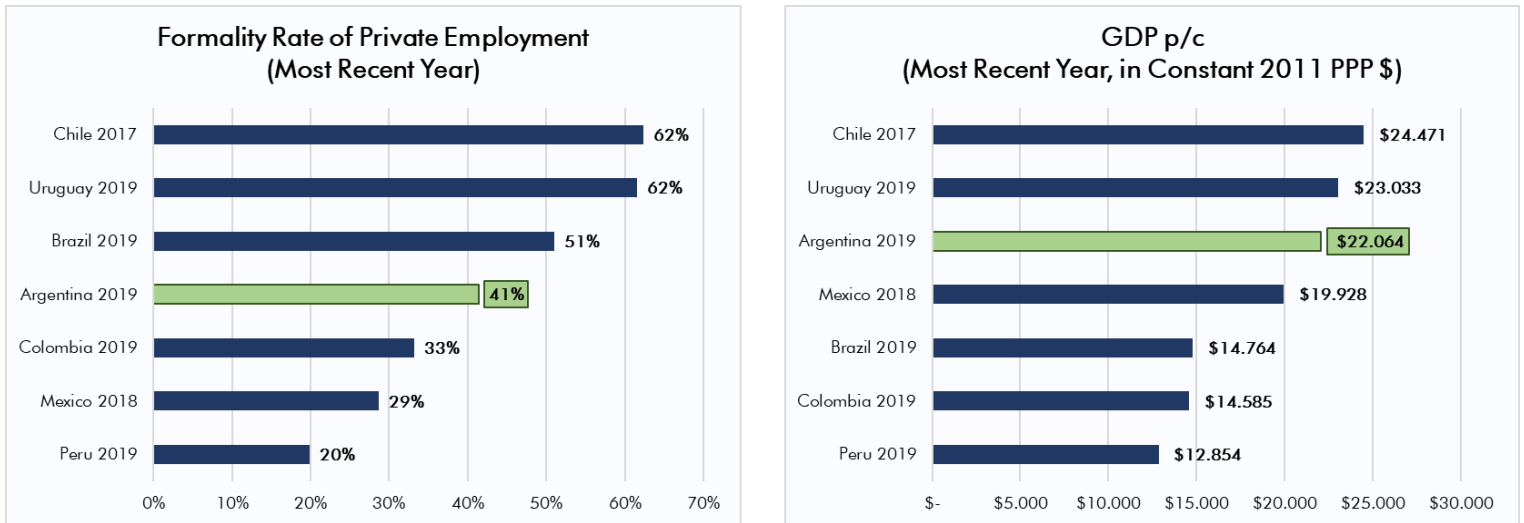
Source: Own elaboration using SEDLAC.

**Figure A2:** Evolution of Mean Real Wage by Contract Type (Argentina, Panel A: 2003-2010, Panel B: 2011-2019)



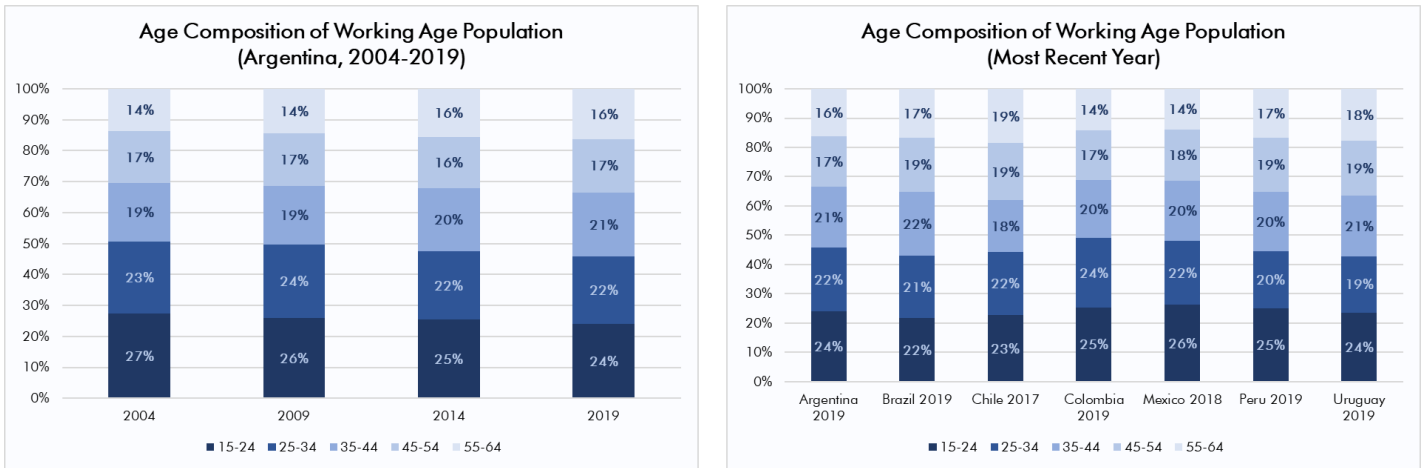
Source: SEDLAC.

**Figure A3:** Panel A – Formality Rate of Private Employment, Panel B - GDP p/c (Argentina and benchmark, most recent year)



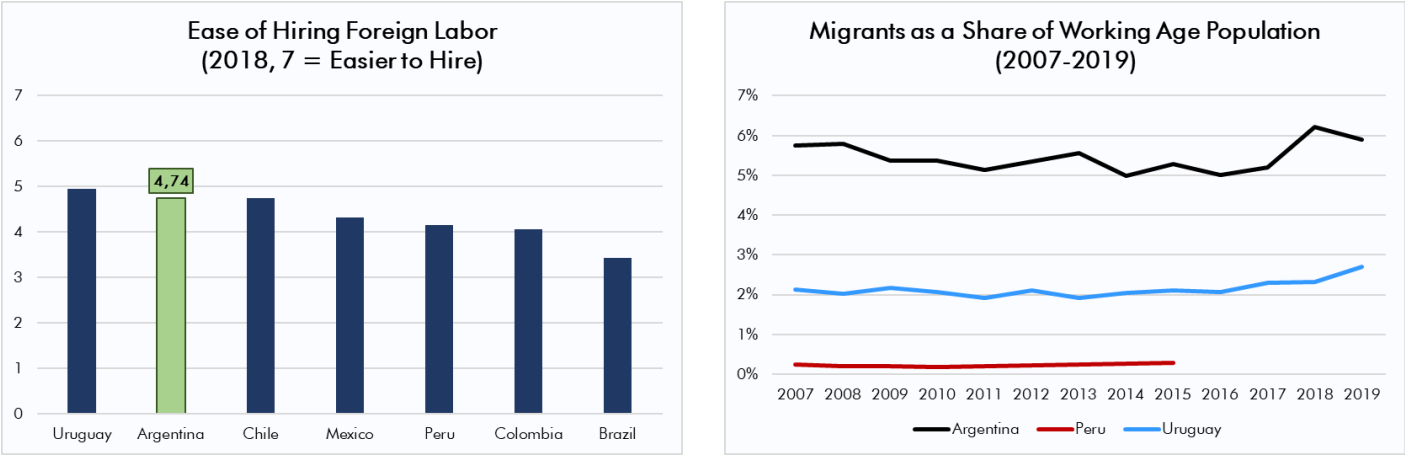
Sources: SEDLAC and World Bank.

**Figure A4:** Age Composition of Working Age Population (Panel A – Argentina, 2004-2019, Panel B – Argentina and benchmark, most recent year)



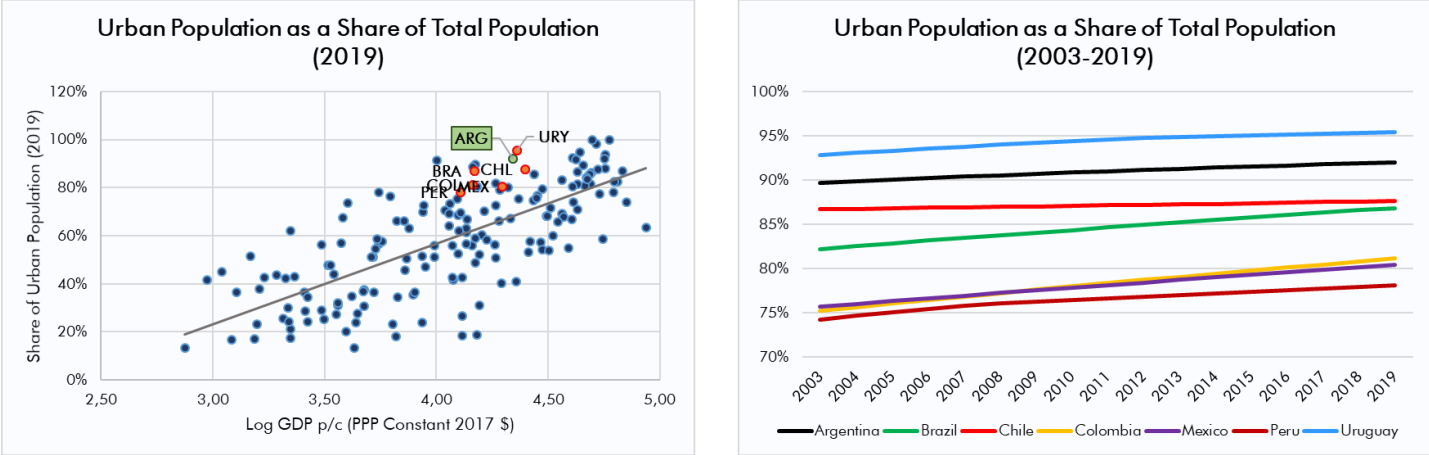
Source: SEDLAC.

**Figure A5:** Panel A – Ease of Hiring Foreign Labor (Argentina and benchmark, most recent year), Panel B – Migrants as a Share of Working Age Population (Argentina, Peru and Uruguay, 2007-2019)



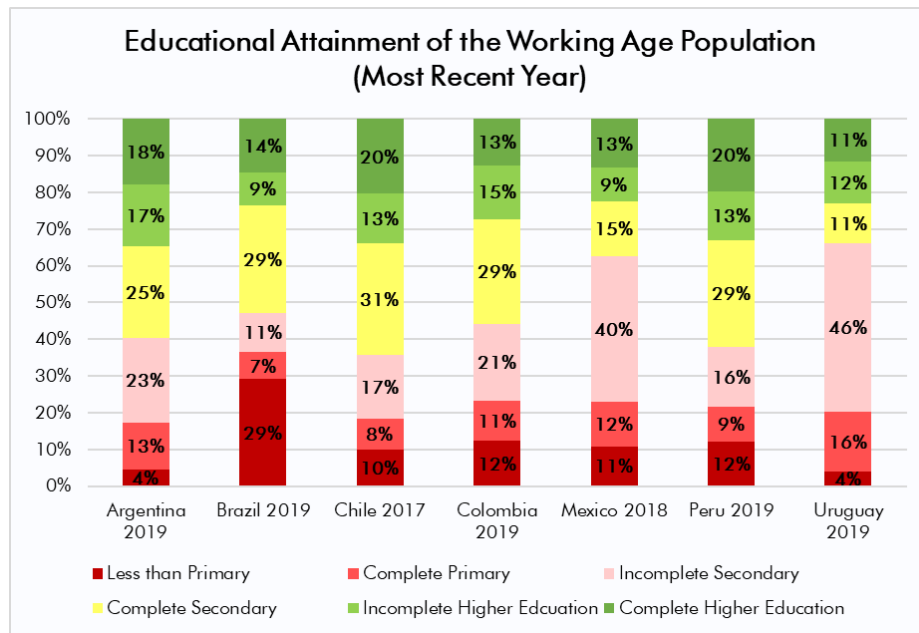
Sources: Global Competitiveness Indexes (World Economic Forum) and SEDLAC.

**Figure A6:** Panel A – Urban Population as a Share of Total Population (Panel A - 169 countries, 2019), Panel B – Argentina and benchmark, 2003-2019)



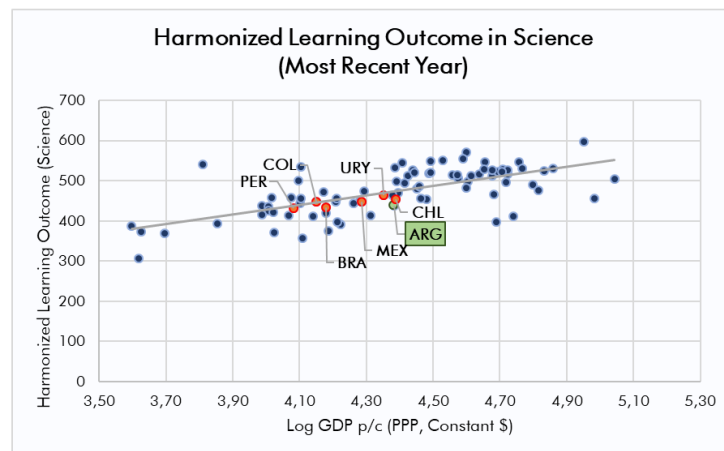
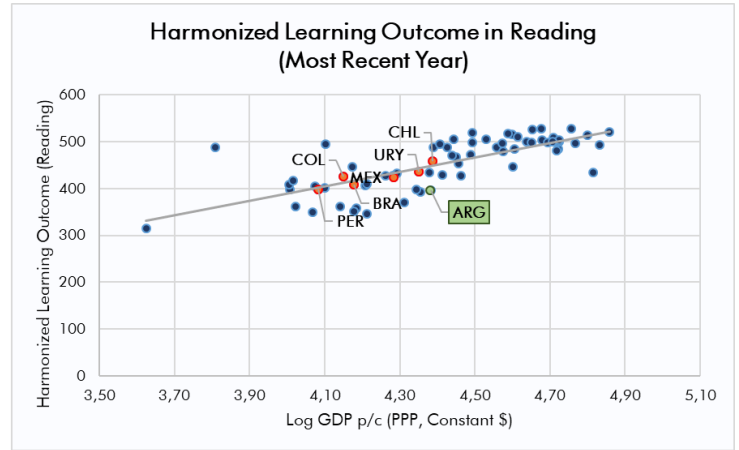
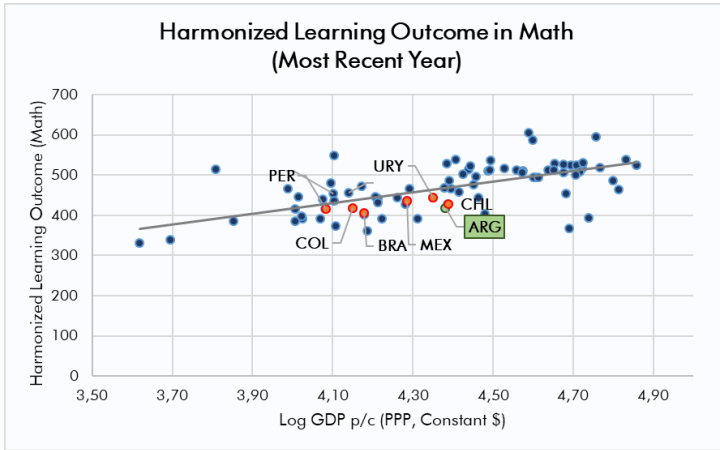
Source: World Bank.

**Figure A7: Educational Attainment of the Working Age Population (Argentina and benchmark, most recent year)**



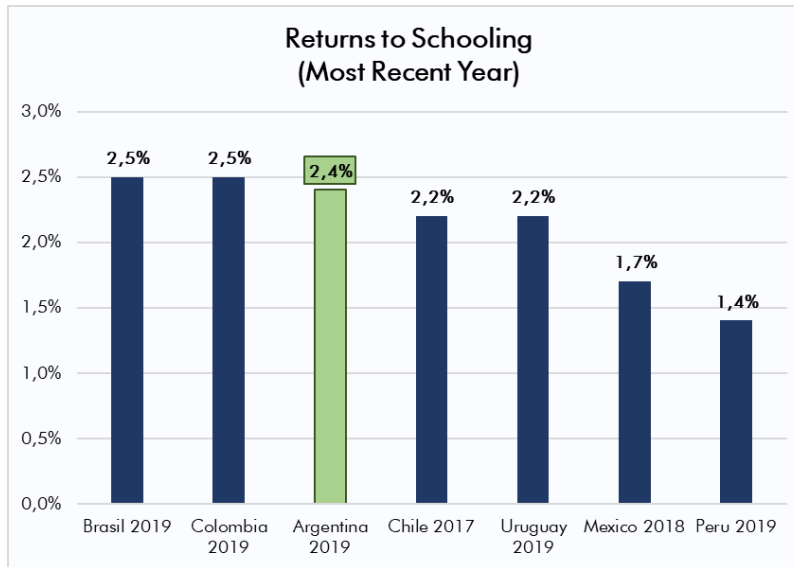
Source: SEDLAC.

**Figure A8: Harmonized Learning Outcomes (Panel A – Math, 82 countries, most recent year, Panel B – Reading, 70 countries, most recent year, Panel C – Science, 88 countries, most recent year)**



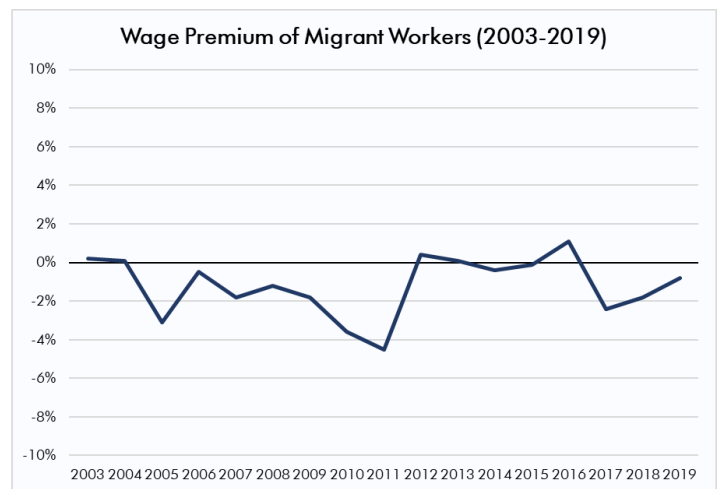
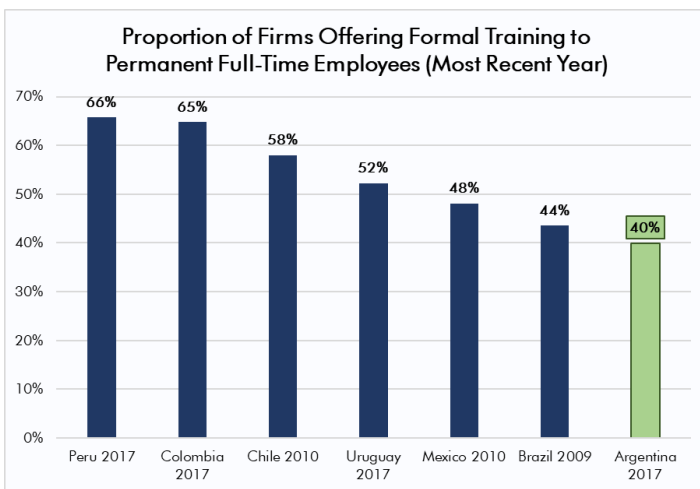
Sources: Angrist, Djankov, Goldberg, and Patrinos (2021) and World Bank.

**Figure A8: Returns to Schooling (Argentina and benchmark, most recent year)**



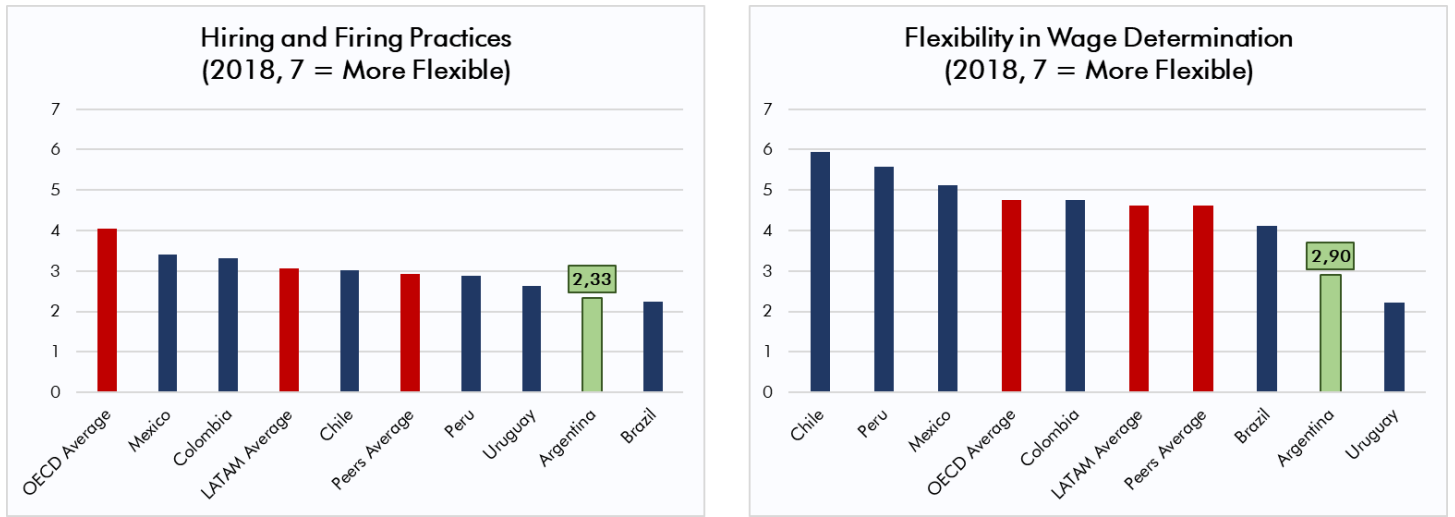
Source: Own elaboration using SEDLAC.

**Figure A9: Panel A – Proportion of Firms Offering Formal Training to Permanent Full-Time Employees (Argentina and benchmark, most recent year), Panel B – Wage Premium of Migrant Workers (Argentina 2003-2019)**



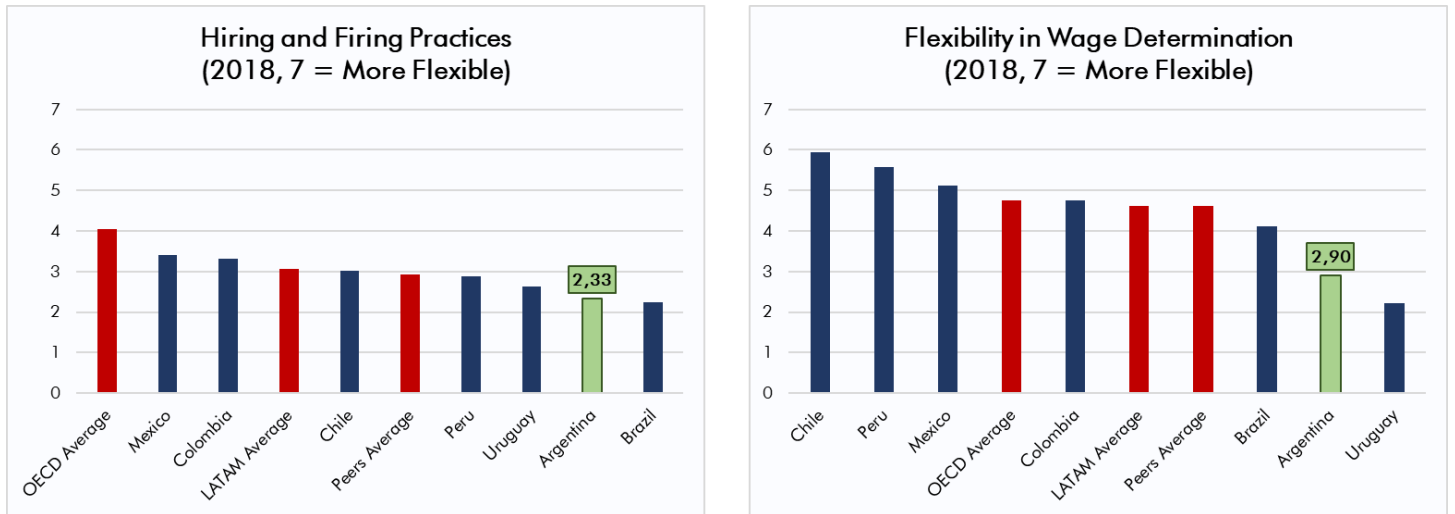
Sources: Enterprise Surveys, World Bank (Panel A) and own elaboration using SEDLAC (Panel B).

**Figure A10:** Panel A - Hiring and Firing Practices Index, Panel B - Flexibility in Wage Determination Index (Argentina and benchmark, 2018)



Source: Global Competitiveness Index (World Economic Forum).

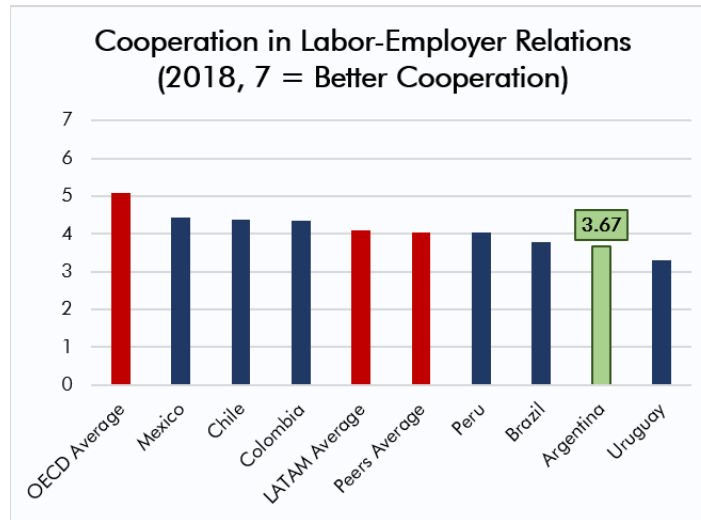
**Figure A11:** Panel A - Internal Labor Mobility Index, Panel B - Relationship Between Pay and Productivity Index (Argentina and benchmark, 2018)



Source: Global Competitiveness Index (World Economic Forum).

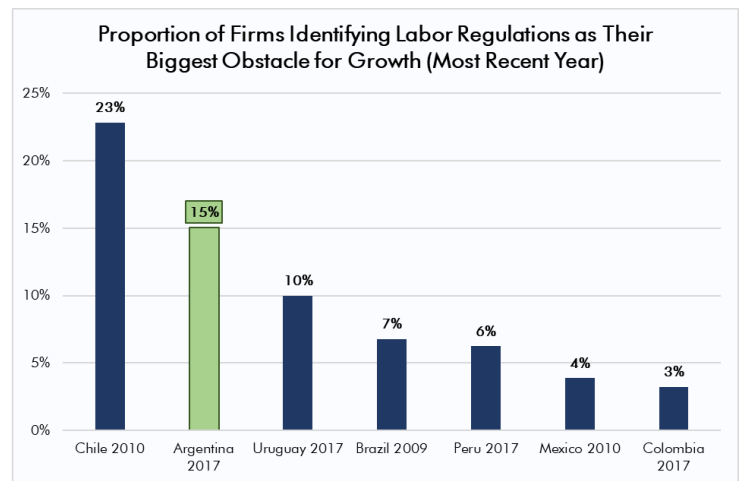
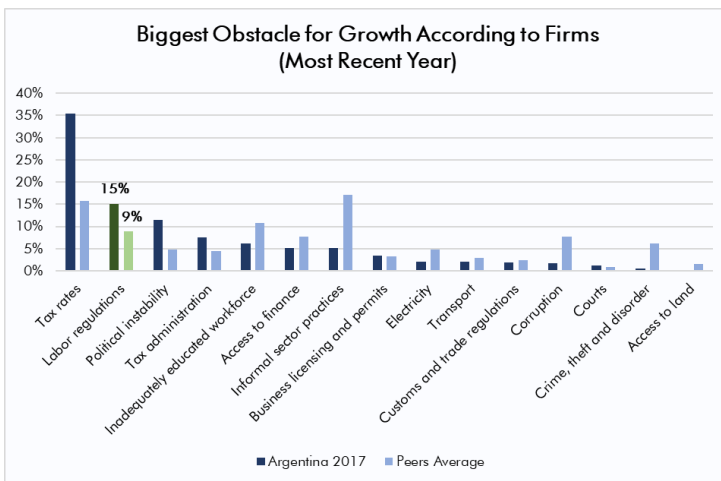


**Figure A12: Cooperation in Labor-Employer Relations (Argentina and peers, 2018)**



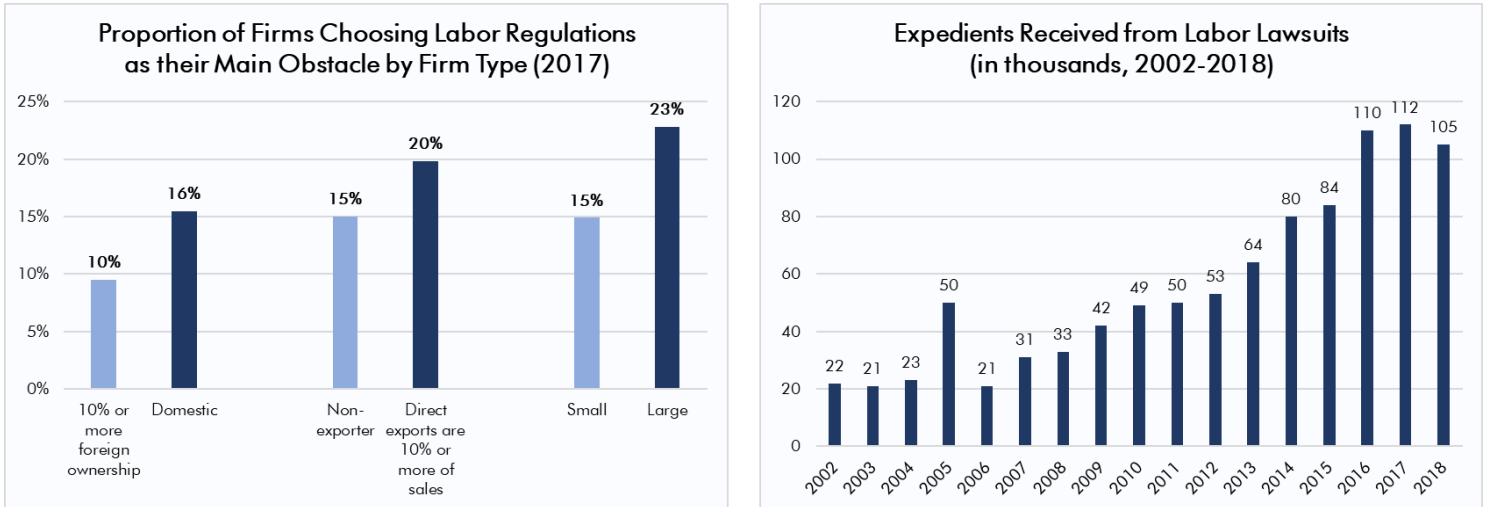
Source: Source: Global Competitiveness Index (World Economic Forum).

**Figure A13: Panel A – Biggest Obstacle According to Firms (Argentina 2017 and benchmark average in the most recent year), Panel B – Proportion of Firms Identifying Labor Regulations as their Biggest Obstacle for Growth (Argentina and benchmark, most recent year)**



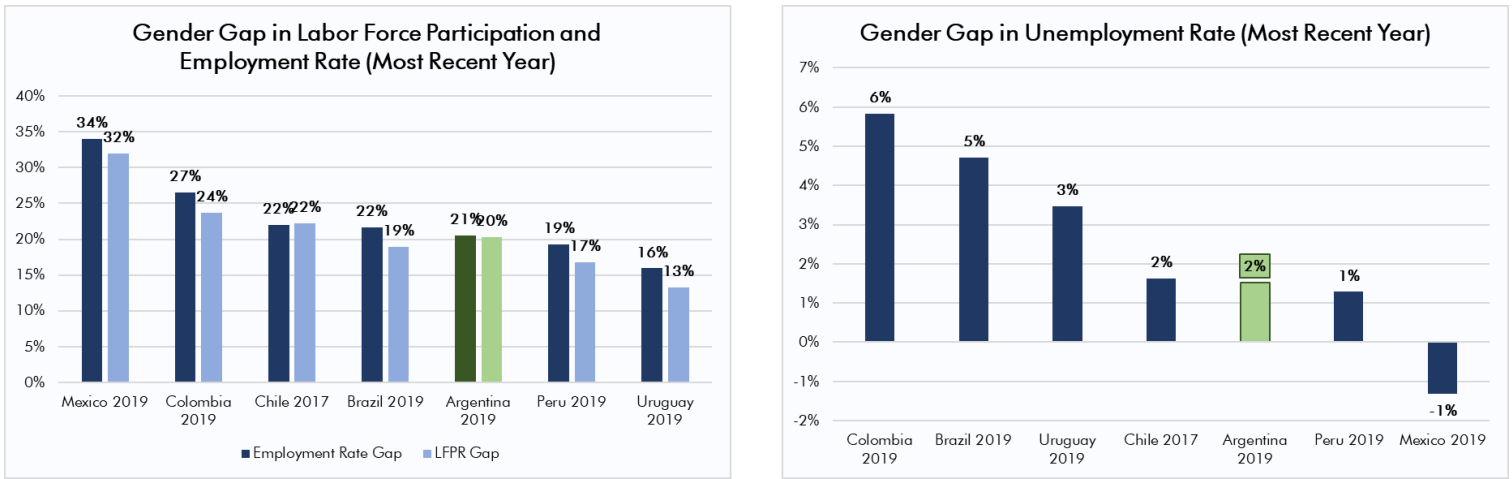
Source: Enterprise Surveys, World Bank.

**Figure A14:** Panel A – Proportion of Firms Identifying Labor Regulations as their Biggest Obstacle for Growth by Firm Type (Argentina 2017), Panel B – Expedients Received from Labor Lawsuits (Argentina, 2002-2018)



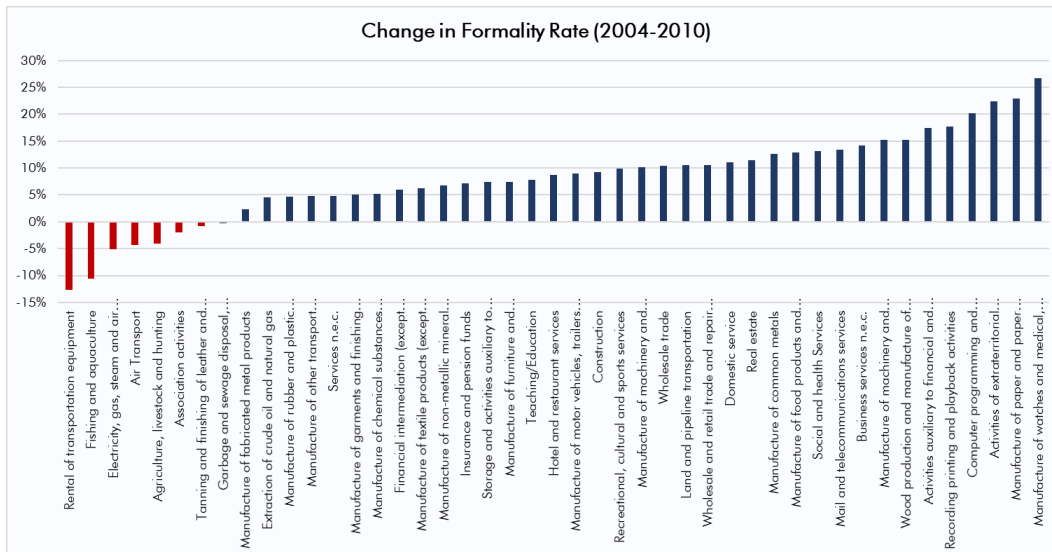
Sources: Enterprise Surveys, World Bank (Panel A) and National Judicial Branch (Panel B).

**Figure A15: Panel A – Gender Gap in Labor Force Participation and Employment Rate, Panel B – Gender Gap in Unemployment Rate (Argentina and peers, most recent year)**



Source: SEDLAC

**Figure A16: Changes in Formality Rates by Economic Sector at Two-Digit Level (Argentina, 2004-2010)**



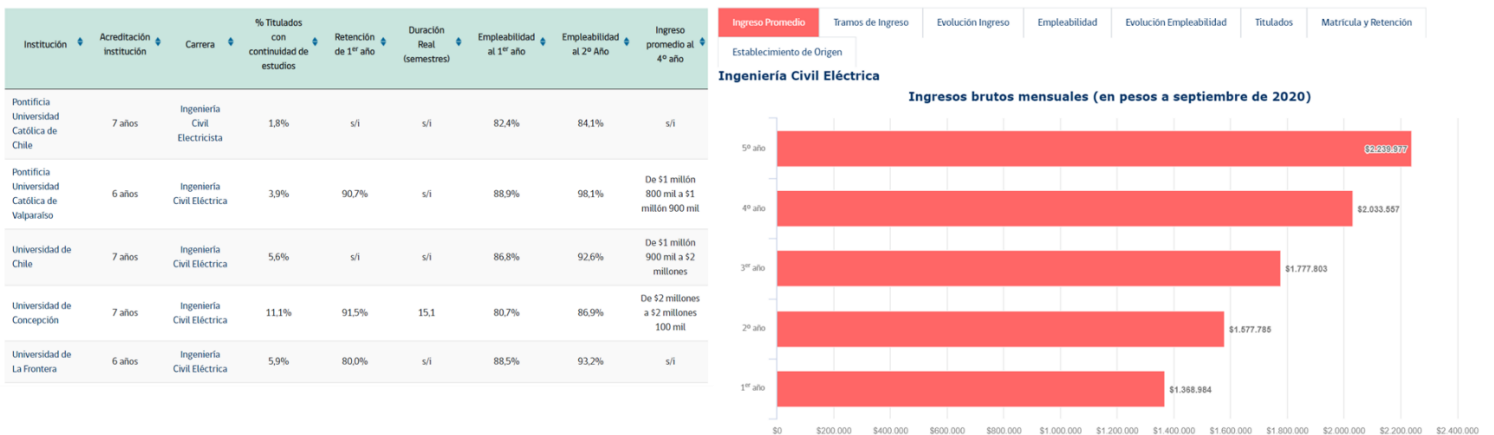
Source: Encuesta Permanente de Hogares

**Figure A17: Ponte en Carrera Web Portal**



Source: Ponte en Carrera ([www.ponteencarrera.pe](http://www.ponteencarrera.pe))

**Figure A18: Mi Futuro Web Portal**



Source: Mi Futuro (<https://www.mifuturo.cl/>)

**Table A1: Empirical Tests to Identify Bottlenecks in Labor Supply Growth (Part 1: High Opportunity Costs and Demographic Challenges)**

Problem: Bottlenecks in labor supply growth	Empirical tests	Data requirements
High-opportunity costs	<ol style="list-style-type: none"> <li>Quantity tests <ul style="list-style-type: none"> <li>Cross-country comparisons of share of public employment with benchmark</li> <li>Cross-country comparisons of income transfers, unemployment insurance or mean public wages with benchmark</li> </ul> </li> <li>Price tests <ul style="list-style-type: none"> <li>Estimating mincerian returns to public employment vs. benchmark</li> </ul> </li> </ol>	<p>Quantity tests:</p> <ul style="list-style-type: none"> <li>Labor/Household surveys</li> </ul> <p>Price tests:</p> <ul style="list-style-type: none"> <li>Labor/Household surveys</li> </ul>
Demographic challenges	<ol style="list-style-type: none"> <li>Quantity tests <ul style="list-style-type: none"> <li>Cross-country comparisons of recent evolution of young active population with benchmark</li> <li>Cross-country comparisons of demographic projections of the active population with benchmark</li> </ul> </li> </ol>	<p>Quantity tests:</p> <ul style="list-style-type: none"> <li>Labor/Household surveys</li> <li>Census data</li> </ul>

**Table A2: Empirical Tests to Identify Bottlenecks in Labor Supply Growth (Part 2: Low Urbanization or International Migration)**

Problem: Bottlenecks in labor supply growth	Empirical tests	Data requirements
Low urbanization or international migration	<ol style="list-style-type: none"> <li>Quantity tests <ul style="list-style-type: none"> <li>Cross-country comparisons of urban as a share of total population with benchmark</li> <li>Cross-country comparisons of “commuter pain” indexes with benchmark</li> <li>Cross-country comparisons of transportation infrastructure and/or length of average work travel with benchmark</li> <li>Cross-country comparisons of <i>de jure</i> restrictions to international migration and <i>de facto</i> international migration with benchmark</li> </ul> </li> <li>Price Tests <ul style="list-style-type: none"> <li>Estimating mincerian returns to migration vs. benchmark</li> <li>Cross-country comparison of commuting expenses as a share of average labor income</li> </ul> </li> <li>Camels and Hippos <ul style="list-style-type: none"> <li>Growth rates and evolution over time of industries/firms based on their in-person/on-site requirements</li> </ul> </li> </ol>	<p>Quantity tests:</p> <ul style="list-style-type: none"> <li>Census data</li> <li>IBM Global Commuter Pain Survey</li> <li>Labor/Household Surveys</li> </ul> <p>Price Tests:</p> <ul style="list-style-type: none"> <li>Labor/Household surveys</li> </ul> <p>Camels and Hippos:</p> <ul style="list-style-type: none"> <li>Measure of in-person/on-site requirements by industry and production/VA data by industry over time</li> </ul>

**Table A3: Empirical Tests to Identify a Lack of Adequate Human Capital (Part 1: Deficient Supply of Education)**

Problem: Lack of adequate human capital	Empirical tests	Data requirements
Deficient supply of education	<ol style="list-style-type: none"> <li>Quantity tests <ul style="list-style-type: none"> <li>Cross-country comparisons of educational attainment with benchmark both by schooling years and highest level attained</li> <li>Cross-country comparisons of harmonized learning outcomes with benchmark</li> </ul> </li> <li>Price tests <ul style="list-style-type: none"> <li>Estimating mincerian returns to schooling vs. benchmark</li> </ul> </li> <li>Camels and Hippos <ul style="list-style-type: none"> <li>Growth rates and evolution over time of industries comparing high-skilled vs less-skilled industries/firms</li> </ul> </li> <li>Hippos in the Desert <ul style="list-style-type: none"> <li>Comparison of proportion of firms that train workers against benchmark</li> <li>Migrant wage premiums against benchmark</li> </ul> </li> </ol>	<p>Quantity tests:</p> <ul style="list-style-type: none"> <li>Cross-country datasets with educational attainment by educational level (e.g. UIS-UNESCO)</li> <li>Cross-country datasets with learning outcomes (e.g. HLO datasets or assessments like PISA)</li> </ul> <p>Mincer Regressions:</p> <ul style="list-style-type: none"> <li>Labor/Household surveys</li> </ul> <p>Camels and Hippos:</p> <ul style="list-style-type: none"> <li>Measure of skill content by industry and production/VA data by industry over time</li> </ul> <p>Proportion of firms that train workers:</p> <ul style="list-style-type: none"> <li>WB Enterprise Surveys</li> </ul>

**Table A4: Empirical Tests to Identify a Lack of Adequate Human Capital (Part 2: Low Learning-by-Doing at Work)**

Problem: Lack of adequate human capital	Empirical tests	Data requirements
Low Learning-by-Doing at work	<ol style="list-style-type: none"> <li>Quantity tests <ul style="list-style-type: none"> <li>Cross-country comparisons of length of tenure with benchmark both in firm occupation and industry</li> <li>Cross-country comparisons of extension of training-related Active Labor Market Policies with benchmark</li> </ul> </li> <li>Price tests <ul style="list-style-type: none"> <li>Estimating mincerian returns to tenure in firm, occupation and industry vs. benchmark</li> </ul> </li> </ol>	<p>Quantity tests:</p> <ul style="list-style-type: none"> <li>Labor/Household surveys</li> <li>OECD cross-country data</li> </ul> <p>Mincer Regressions:</p> <ul style="list-style-type: none"> <li>Labor/Household surveys</li> </ul>

**Table A5: Empirical Tests to Identify a Deficient Matching with Skills-Demand**

Problem: Deficient matching with skills-demand	Empirical tests	Data requirements
Imperfect information about returns or “growth-inadequate” worker’s academic preferences	<ol style="list-style-type: none"> <li>Quantity tests <ul style="list-style-type: none"> <li>Cross-country comparisons of “skills-mismatch” reported in Enterprise surveys</li> <li>National comparison of most frequent university degrees and their wage premiums or list of most frequent occupations in dynamic economic sectors</li> </ul> </li> <li>Price tests <ul style="list-style-type: none"> <li>Estimating mincerian returns to different university careers</li> </ul> </li> </ol>	<p>Quantity tests:</p> <ul style="list-style-type: none"> <li>Manpower Talent Shortage Survey</li> <li>Administrative data and labor/household surveys</li> </ul> <p>Price tests:</p> <ul style="list-style-type: none"> <li>Administrative data</li> </ul>

**Table A6: Empirical Tests to Identify Dysfunctionalities in Labor Market Institutions or its Political Economy**

Problem: Dysfunctionalities in labor market institutions or its political economy	Empirical tests	Data requirements
Inadequate labor institutions or pervasive union conflicts	<ol style="list-style-type: none"> <li>Quantity tests <ul style="list-style-type: none"> <li>Cross-country comparisons of stringency of labor regulations with benchmark</li> <li>Cross-country comparisons of non-wage labor costs with benchmark</li> <li>Cross-country comparisons collective bargaining coverage rate with benchmark</li> </ul> </li> <li>Price Tests <ul style="list-style-type: none"> <li>Estimating mincerian returns to formality vs. benchmark</li> <li>Cross-country comparison of proportion of firms complaining about labor regulations</li> </ul> </li> <li>Hippos in the Desert <ul style="list-style-type: none"> <li>Growth rates and evolution over time of labor lawsuits</li> </ul> </li> </ol>	<p>Quantity tests:</p> <ul style="list-style-type: none"> <li>Global Competitiveness Indexes</li> <li>ILOSTAT</li> </ul> <p>Price Tests:</p> <ul style="list-style-type: none"> <li>Labor/Household surveys</li> <li>WB Enterprise Surveys</li> </ul> <p>Hippos in the Desert:</p> <ul style="list-style-type: none"> <li>National Judicial Branch</li> </ul>



**Table A7: Empirical Tests to Identify Discrimination and Differential Access to Formal Labor Market**

Problem: Discrimination and differential access to formal labor market	Empirical tests	Data requirements
Inclusion challenges linked to gender gaps	<ol style="list-style-type: none"> <li>Quantity tests <ul style="list-style-type: none"> <li>Cross-country comparisons of female labor force participation wage-gap with benchmark</li> <li>Cross-country comparisons of female unemployment with benchmark</li> <li>Cross-country comparisons of gender wage-gap with benchmark</li> <li>Cross-country comparisons of feminization rate in typically male-dominated economic sectors with benchmark</li> </ul> </li> <li>Price Tests <ul style="list-style-type: none"> <li>Estimating mincerian gender premiums vs. benchmark</li> </ul> </li> <li>Camels and Hippos <ul style="list-style-type: none"> <li>Growth rates and evolution over time of industries/firms based on their feminization rated</li> </ul> </li> </ol>	<p>Quantity tests:</p> <ul style="list-style-type: none"> <li>Labor/Household Surveys</li> </ul> <p>Price Tests:</p> <ul style="list-style-type: none"> <li>Labor/Household surveys</li> </ul> <p>Camels and Hippos:</p> <ul style="list-style-type: none"> <li>Measure of feminization rate by industry and production/VA data by industry over time</li> </ul>

**Table A8: Contractual Composition of Working Age Population in Selected Urban Agglomerates (Argentina, 2019)**

Composition of Working Age Population (2019)	Formal Private Salaried	Public Worker	Self-Employed	Informal Private Salaried	Unemployed	Inactive
Río Gallegos	14%	30%	8%	9%	5%	34%
Viedma - Carmen de Patagones	10%	25%	11%	10%	2%	38%
San Luis - El Chorrillo	15%	25%	12%	9%	2%	34%
La Rioja	10%	23%	10%	11%	3%	41%
Gran Catamarca	9%	23%	10%	15%	6%	35%
Rawson - Trelew	16%	22%	10%	10%	7%	31%
Gran La Plata	14%	22%	13%	13%	6%	31%
Jujuy - Palpalá	10%	21%	14%	14%	4%	35%
National Average	20%	11%	14%	14%	7%	32%

Source: SEDLAC.