

Job Quality and Poverty in Latin America

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Abstract

Labor market dynamics have played a significant role in the remarkable social gains experienced across Latin America over the recent past. Assessing the quality of employment, beyond the perspective of income, to include other fundamental aspects of jobs—such as whether jobs are secure, provide benefits, or allow human capital accumulation—can shed light on the sustainability of these achievements. This is particularly pertinent given the region's current economic slowdown. Using harmonized data for 17 countries in Latin America, this paper connects the role of job quality with the recent process of inclusive growth across the region, and particularly with how individuals worked their way

out of poverty. The paper first proposes a multi-dimensional measure for job quality, and then uses this measure to compare job quality across countries and over time. The paper also studies some of the correlates of job quality and the relationship between job quality and poverty. The main finding is that job quality across the region began to increase since 2004, coupled with the favorable terms of trade brought to the region by the commodities super cycle of the 2000s. The best predictors of job quality are age, gender, education, formal employment, and union membership. Both health and retirement benefits are the dimensions of job quality that are best correlated with not living in poverty.

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Job Quality and Poverty in Latin America*

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1 Introduction

Latin American countries achieved important social progress in the 2000s. Poverty fell by over 16 percentage points, from 39.5 to 23.3 percent of the population between 2004-14; while extreme poverty was more than halved (declining from 24.5 to 10.8 percent) over the same period¹. The middle class in the region expanded². And income inequality, a persistent malady in Latin America, fell substantially during the 2000s (the regional Gini coefficient for per capita income declined from 0.57 to 0.51 in 2000-14) (World Bank, 2016). The role of rising labor income stands out, among other factors contributing to these achievements, as a key channel of transmission between growth and social gains. Indeed, income from labor has been a central element in the reduction of poverty. For instance, Rodriguez-Castelan et al. (2016) establish labor income as the leading driver behind the reduction in poverty between 2003 and 2013 in the region. What happens in terms of labor market dynamics is thus fundamental to understanding wellbeing in Latin America and the Caribbean, particularly if the interest is on the poorest segment of the population. As documented by Cord et al. (2014), data from household surveys across the region show that incomes from labor make up 60 to 80 percent of total household income.

The study of job quality – including characteristics such as whether jobs are stable and pay, at the very least, a living wage – is useful to shed further light on

¹Based on poverty lines of \$4 a day and \$2.50 for poverty and extreme poverty, respectively (World Bank, 2016).

²Growing from 23 percent of the population in 2003 to 35 percent of the population in 2014 (World Bank, 2016). Following Lopez-Calva and Ortiz-Juarez (2011), and Ferreira et al. (2013), the middle class is defined as the population with a consumption per capita of US\$10-US\$50 per day in PPP 2005 (which distinguishes this group from the vulnerable, i.e. those with a consumption per capita between \$4 and \$10 per day).

labor market dynamics, and the sustainability of these achievements. For more than a decade, job growth within Latin America and the Caribbean was overall strong, reflecting substantial economic growth and being relatively unaffected by the 2008-09 financial crisis – with the exception of Mexico and countries in Central America with significant levels of trade with the United States. Informality rates, however, remain high, suggesting that new jobs may not be ‘high’ quality. High quality jobs can constitute a pathway out of poverty – contributing to the sustainability of the gains in welfare (while individuals with low quality jobs could be at risk of falling back into poverty). This paper thus looks at job quality across Latin America, investigating the relationship between job quality and poverty.

This topic is particularly relevant, considering the lower-growth juncture that the Latin America region is traversing. After a decade or so of a robust economic performance – fueled by the windfall from the global commodity boom – growth in the region began to slow down in 2011, reaching full-on stagnation in 2015³. The regional deceleration is framed within the economic slowdown taking place world-wide, particularly in China (led by a decline in investment), and the falling prices of commodities.

While the region as a whole is slowing down, there is heterogeneity within. De la Torre et al.(2015) look at how countries in South America, which did well during the period of economic expansion of the 2000s, have been more affected by the deceleration in China, facing worsening terms of trade than Mexico and those

³Gross Domestic Product in the region contracted by 0.7 percent in 2015 and is expected to contract 1.3 percent in 2016, establishing the first consecutive years of recession in more than 30 years.

in Central America and the Caribbean, which are more influenced by the United States' economic cycle (and which fared less positively in the 2000s). In the group of South American countries experiencing high growth during the boom (and to a lesser extent, in those experiencing low growth), employment grew, attracting previously inactive workers into the market, both low- and high-skilled, accompanied by wage increases between 2005 and 2011 (while in Mexico, employment and wages declined). Overall, during the expansion, the composition of employment shifted away from self-employment into salaried work, and from small firms to employment in medium and larger firms – i.e., on average, there was a shift towards more formal, higher productivity, better paid work. With the economic slowdown, however, this trend appears to be undergoing a reversal for some countries. The analysis suggests that the contraction in domestic demand, as a result of the adverse terms of trade, is leading, among others, to adjustments in quantity in the labor market that have particularly affected young and less educated workers. Moreover, the rate of progress in inequality reduction is also slowing down. After a solid decade of performance, recent research suggests signs of stagnation in the decline in income inequality in the region between 2010 and 2013 (Cord et al., 2014). As in the case of growth, there is much heterogeneity within: many countries still display substantial declines, while the pace of reduction has become negligible in some, and even increased in others.

The rise of labor market income and poverty reduction has not progressed in the same way across countries. Overall, labor income explained 58 percent of poverty reduction in Latin America and the Caribbean during 2003-08, and 49 percent over 2008-13 (World Bank, 2014). Yet, this trend was not uniform: income from labor

rose in the Andean region, Brazil, and others in the Southern Cone, while it in fact fell in Mexico and Central America – the countries hardest hit by the 2008-09 global crisis; leading to an increase in poverty. World Bank (2014) reports additional trends obtained from the Labor Income Poverty Index (LIPI), which examines whether the per capita labor income of households is lower than the regional poverty line, i.e. the share of households who are incapable of satisfying basic needs based only on their income from labor. Based on quarterly and monthly labor surveys, these indices have the advantage of constituting very regular sources of information. As measured by the LIPI coefficient, poverty has declined in nearly all countries considered in the study since 2010 (except for Mexico, where it has increased since 2013). The rate of reduction, however, has flattened recently and the most up-to-date data suggest signs of a reversal, with increasing labor income poverty in Argentina, Brazil and Peru.

Despite the value of labor income indices, a multidimensional approach can add valuable information to assess job growth, and the sustainability of labor market trends. Multidimensional measures provide a new depth of information about the variable of interest. Notably, in terms of poverty, these estimations consider how individuals are deprived, not only by their absence of income, but by their lacking in other dimensions related to wellbeing, such as in terms of living standards, access to services, or housing. Indeed, poverty measurement efforts in Latin America are moving in the direction of complementary measurements of welfare as part of the shift worldwide towards a multiple dimension perspective over the past two decades. Within the region, Chile (2015), Colombia (2013), and Mexico (2010) have been

pioneers in establishing official national multidimensional poverty measures. At the regional level, World Bank (2012) and later Santos et al (2015) have recently proposed a new multidimensional poverty index for Latin America, estimating it for 17 countries. These studies document significant progress on non-monetary dimensions of poverty across the region.

Analogous to these recent efforts to measure recent progress on non-monetary dimensions of poverty across Latin America, this paper looks to analyze the recent progress in the quality of labor markets in the region in terms of both monetary and non-monetary dimensions of jobs. That is, while income from labor is unquestionably important, we want to explore other aspects of jobs that are important components of job quality. The underlying notion is that the quality of jobs is related to the sustainability of the social gains achieved so far in the region. Job quality can be viewed as a proxy for social progress – it has improved but it is heterogeneous across countries and there are concerns about how sustainable the gains are, particularly in the context of the global economic slowdown. This paper thus proposes multiple dimensions to measure quality of employment in the region.

What exactly is meant by job quality? The literature on job quality is very thin, and the definition of a “good job” varies considerably across articles (Huneus, Landerretche and Puentes, 2012). A high quality job must pay at least the living wage, but other considerations are important as well. Four other dimensions of job quality can be consistently identified in the literature: stability and security (Stewart, 2007; Dewan and Peek, 2007; Perry et al., 2007; Gunther and Launov, 2012; Clarke and Borisov, 1999; Ruiz-Tagle and Sehnbruch, 2011; Wagner, 1997),

job satisfaction and psychological health (Freeman, 1978; Clark, 2005; Jones et al., 2009), job benefits (Farber, 1997; Kalleberg, Reskin and Hudson, 2000), and human capital accumulation (Huneus, Landerretche and Puentes, 2012). A worker who receives a large income but faces a high probability of becoming unemployed can hardly be said to have a good job. Likewise, a middle income worker who receives health insurance and retirement benefits may have a better job than a high income worker who hates what he does.

Perhaps the most important job characteristic to many workers across the LAC region is stability. Without job security, many individuals who are newly out of poverty may become impoverished in the near future. Furthermore, job security improves the psychological condition of the worker and affects his or her consumption choices and welfare. Likewise, a job that places intense psychological pressure on the worker or generates an unpleasant environment or fails to fulfill the needs of the worker is not high quality. These conditions reduce the productivity of the worker. One way to potentially increase job satisfaction and improve welfare is through job benefits. Job benefits provide an extra-pecuniary form of income and include, but are not limited to, health insurance and social security.

Human capital accumulation is important for improving the income security of the worker, which is usually measured by on-the-job training. However, it is also important for the development of the country. The World Bank World Development Report (2012) argues that a good job must be good for the worker and good for society. While this is an unquestionably crucial aspect of job quality, our primary focus in this report is on individual job quality and its relationship with poverty.

The multidimensional nature of job quality makes it difficult to measure and standardize across countries. We use the ordinal framework developed by Sen (1976) and Alkire and Foster (2011) for measuring poverty to estimate job quality within Latin America. We find that job quality began to significantly increase around 2004. We all find that the best predictors of job quality are age, gender, education, formal employment, and union membership; while job benefits are the job quality dimensions that are best correlated with living “out” of poverty.

The paper is organized as follows. The next two sections discuss the data used in the study and the measurement of job quality across countries, employment sectors, and time. Section 4 investigates which job and personal characteristics are associated with higher job quality. Section 5 looks at the relationship between job quality and family poverty. Finally, sections 6 and 7 offer robustness checks and concludes the discussion.

2 Data

The data in this study were taken from the *Socio-Economic Database for Latin America and the Caribbean* (SEDLAC). The SEDLAC is a harmonized dataset compiled from over 300 household surveys across 24 countries. More details about the database can be found on their website, <http://sedlac.econo.unlp.edu.ar>, and from CEDLAS and the World Bank (2012). The data in this report were taken from a subset of 17 countries between 1995 and 2012, with available years varying by coun-

Table 1: Summary of Countries and Years with Microdata Available

Country	Label	Total Observations	Obs./Year	Years
Argentina	<i>Arg</i>	582,592	64,732	2004-2012
Bolivia	<i>Bol</i>	130,054	14,450	2001-2002, 2005-2009, 2011-2012
Brazil	<i>Bra</i>	2,932,482	183,280	1995-1999, 2001-2009, 2011-2012
Chile	<i>Chl</i>	875,430	125,061	1996, 1998, 2000, 2003, 2006, 2009, 2011
Colombia	<i>Col</i>	676,177	135,235	2008-2012
Costa Rica	<i>Cri</i>	76,318	25,439	2010-2012
Dominican Republic	<i>Dom</i>	185,374	16,852	2002-2012
Ecuador	<i>Ecu</i>	369,451	36,945	2003-2012
Guatemala	<i>Gtm</i>	100,989	33,663	2000, 2006, 2011
Honduras	<i>Hnd</i>	269,539	44,923	2006-2011
Mexico	<i>Mex</i>	492,068	70,295	1996, 1998, 2000, 2002, 2008, 2010, 2012
Nicaragua	<i>Nic</i>	19,603	19,603	2005
Panama	<i>Pan</i>	182,524	30,420	2007-2012
Peru	<i>Per</i>	669,352	74,372	2004-2012
Paraguay	<i>Pry</i>	145,748	12,145	1995, 1997, 1999, 2001, 2003-2005, 2007-2011
El Salvador	<i>Slv</i>	350,962	38,995	2004-2012
Uruguay	<i>Ury</i>	429,685	61,383	2006-2012
Total Obs.		8,488,348		

Notes: Information is based on SEDLAC (World Bank and CEDLAS). Only individuals in the labor force are counted as observations.

try.⁴ A summary of the countries along with the years used in this study are shown in Table 1.

All observations in this study represent an individual who is in the labor force, *i.e.* either employed or looking for employment. If an individual is not in the labor force, then we cannot make an inference about their welfare as that may be their preferred state. If a worker is in the labor force, but unemployed, then we can infer that a job would positively influence their welfare. Therefore, we keep unemployed individuals in the sample when we are looking at job quality. Brazil dominates the sample with just under 35% of the observations, whereas Nicaragua represents less than 0.25% of the sample.

The summary statistics are shown in Table 2. Unless otherwise noted, the vari-

⁴As discussed later, only years that reported at least 5 dimensions of job quality were used in this study. This resulted in 9.88% of the observations being trimmed from the sample, equal to 34 country-years and 930,591 observations.

Table 2: Summary Statistics

	Mean	Std. Dev	Min	Max
ln(GDP/capita)	8.56	0.53	6.80	9.60
Inc-Ind (2005 ppp)	502	915	0	393,155
Inc-Fam (2005 ppp)	331	645	0	691,599
Members	4.47	2.15	1.00	43.00
Age	31.5	17.9	0.0	117.0
Male	0.57	0.49	0.00	1.00
Educ - High School	0.30	0.46	0.00	1.00
Educ - College	0.08	0.27	0.00	1.00
Migrant	0.29	0.45	0.00	1.00
Public Firm	0.09	0.28	0.00	1.00
Large Firm	0.23	0.42	0.00	1.00
Formal	0.35	0.48	0.00	1.00
Union	0.05	0.22	0.00	1.00
Urban	0.75	0.43	0.00	1.00
Self-Employed	0.20	0.40	0.00	1.00
Employer	0.03	0.18	0.00	1.00
Number of Obs.	8,475,013			

Notes: Authors' calculations using SEDLAC data. Summary statistics include all observations, covering different years for different countries as described in Table 1.

ables listed in the summary statistics are used as controls in the later regressions. It is also important to mention that 75% of the sample is located within urban areas. This is particularly the case since data for Argentina and most of the data for Uruguay are taken from surveys representative only for urban areas. Over a third of the workers have formal jobs, but over two-thirds of the workers are in small firms. The SEDLAC data defines a small firm as having less than five employees for most countries. For Bolivia (2001-2002), Chile (1996), the Dominican Republic, Panama, and Uruguay, the cutoff for a small firm is less than four employees. Note that formal jobs are highly correlated with large or public firms. While many workers with a formal job also have a job contract, and vice versa, the two concepts are not perfectly correlated. Also, *Edu – High*, the indicator for completing high school, includes individuals that have completed college as well.

Our analysis proposes the use of seven different dimensions for measuring job quality, though other dimensions are considered in the robustness section. The seven variables were chosen in accordance with the previously discussed literature. The first dimension of job quality is income (*Pov*). A high quality job pays a large enough wage to keep the worker above the poverty line. In our measure of job quality, this is a necessary condition to have a quality job. The other six dimensions capture whether or not the job provides benefits, security, satisfaction, or opportunities to build human capital.

We include in the analysis two dimensions to capture job benefits: health insurance (*Ins*), and retirement benefits (*Ret*). Argentina, Brazil, Chile, Colombia, Mexico, and Peru provide some level of universal health care coverage for their citizens. However, coverage may be inadequate and many jobs in these countries provide additional insurance on top of that provided by the government. We control for these countries in the relevant specifications.

Another dimension of job quality that we analyze is tenure (*Ten*). This variable has also been used in similar studies by Ruiz-Tagle and Sehnbruch (2011) and Huneus, Landerretche and Puentes (2012). Tenure denotes that the employee has a relatively stable job. Also, an individual that has worked for a significant period of time has developed the experience and skills necessary to ensure a better future. While tenure is important, we also include whether or not an individual has signed a job contract (*Cont*), and whether or not the job is permanent instead of temporary (*Perm*), as complementary proxies for job security. It is important to include multiple dimensions that capture the same effect since many countries do not report

one or more of the job quality dimensions.

The final dimension of job quality that we utilize is the psychological benefits from job satisfaction and leisure. While job satisfaction is inherently difficult to measure, we proxy this aspect of job quality with an indicator for whether or not the individual works at only one job (*Sing*). Workers who have multiple jobs are revealing that their primary job is not meeting all of their needs, and thus their primary job can be considered to be not of high quality. They also reduce their leisure time and ability to improve the interpersonal relationships with their colleagues, a key aspect of job quality identified by Clark (2005).

The Alkire and Foster (2011) framework (AF) for creating a multi-dimensional index requires that each dimension for every observation is treated as either a success or a failure. Failures are treated as a 0, while successes are given a 1. For the health insurance, retirement benefits, having a job contract, and having a permanent job dimensions, success is achieved whenever the job provides the benefit or is associated with the particular quality. The other variables are continuous and must be given a cutoff point that defines success. For poverty, we use the \$2.50/day extreme poverty line, the common measure of poverty for Latin American countries. In the robustness section, we show that the principal findings in this paper hold for the \$1.25/day and \$4.00/day poverty lines, though the magnitudes of the effects differ slightly. To determine whether or not the worker was paid above the poverty line, individual income from the principal job was adjusted to 2005 dollars by PPP.

The cutoff point for tenure was chosen to be 3 years. If the worker has been employed in the principal job for at least three consecutive years, then a success is

Table 3: Dimensions of Job Quality

Variable	Description
<i>Pov</i>	The job pays above the poverty line (\$2.50/day PPP)
<i>Ins</i>	The job provides health insurance
<i>Ret</i>	The job provides retirement benefits
<i>Ten</i>	The worker has tenure, defined here as working more than 3 years at the job
<i>Cont</i>	A job contract was signed
<i>Perm</i>	The job is not temporary
<i>Sing</i>	This is only job the worker has

reported in this dimension. To determine whether or not a worker only has one job, we looked at the total number of labor hours per month. If the total number of labor hours were greater than the number of labor hours in the principal job, then the dimension was recorded as a failure.

A summary of the job quality dimensions is found in Table 3. Whenever a variable is missing for an observation, it is treated as a failure and given a zero.⁵ For example, if a person in Mexico has a missing value for whether or not their job is permanent, we are assuming their job is not permanent.

Table 4 lists the percentage of the job observations for each country that report a success in each of the job quality dimensions. The percentage of workers who earn less than the poverty line is lower than the percentage of people living in poverty for each country. This is due to two reasons. The first reason is that all individuals within the sample are in the labor force, thus we are not including people who are likely living below the poverty line. Also, we are not taking into consideration total family income and the number of household members. Household poverty will be

⁵We have also performed the analysis in this report by dropping all observations where at least one dimension was missing, but the results are largely the same.

Table 4: Percentage of Labor Force Which Satisfies Each Job Quality Dimension by Country

	Pov	Ins	Ret	Ten	Cont	Perm	Sing
Argentina	61.1	31.8	31.5	0.0	0.0	35.7	59.1
Bolivia	44.9	5.7	9.4	44.0	10.7	0.0	64.6
Brazil	75.7	0.0	43.9	52.8	0.0	36.7	87.0
Chile	58.0	58.6	36.8	29.3	33.7	40.4	58.3
Colombia	51.5	17.2	19.2	31.8	18.4	12.1	56.8
Costa Rica	58.6	32.8	32.8	33.3	0.0	56.4	58.6
Dominican Rep.	58.5	14.1	13.3	14.4	12.9	10.9	59.3
Ecuador	70.3	3.6	15.8	68.4	25.4	21.1	87.7
Guatemala	44.3	10.1	10.1	21.1	9.6	7.3	53.3
Honduras	43.6	0.0	1.7	31.6	14.8	19.7	51.0
Mexico	51.0	21.0	15.2	1.0	20.8	15.4	35.6
Nicaragua	52.5	7.9	8.7	50.7	0.0	0.0	68.0
Panama	54.9	0.0	0.0	38.4	24.2	8.6	58.7
Peru	40.0	2.3	13.2	32.2	9.8	0.0	44.5
Paraguay	68.3	9.5	11.2	51.1	4.6	2.1	80.9
El Salvador	59.9	6.7	17.1	0.0	11.9	29.0	70.0
Uruguay	81.2	59.5	62.5	56.4	0.0	0.0	80.3
Overall Avg.	63.1	15.4	30.3	36.6	10.2	25.0	68.9
Num. Missing	0.0	3.0	1.0	2.0	5.0	4.0	0.0

Notes: Sample size and years covered differs by country as described in Table 1. Definitions of job quality dimensions are provided in Table 3.

taken into consideration in a later section.

Most individuals who work only have one job and receive income above the poverty line. However, many countries, particularly those least developed and with higher incidence of extreme poverty, tend to be deficient in many of the other dimensions of job quality. Though, some of the numbers may be downwardly biased since the dimension may only be reported in a few of the years. This is most obviously seen in the number of workers with tenure for Mexico. Only one of the seven years of data for Mexico includes tenure estimates. We correct for this bias in the next

section. Also as noted previously, several countries provide some level of universal health care. We control for these countries when necessary.

3 Measuring Job Quality

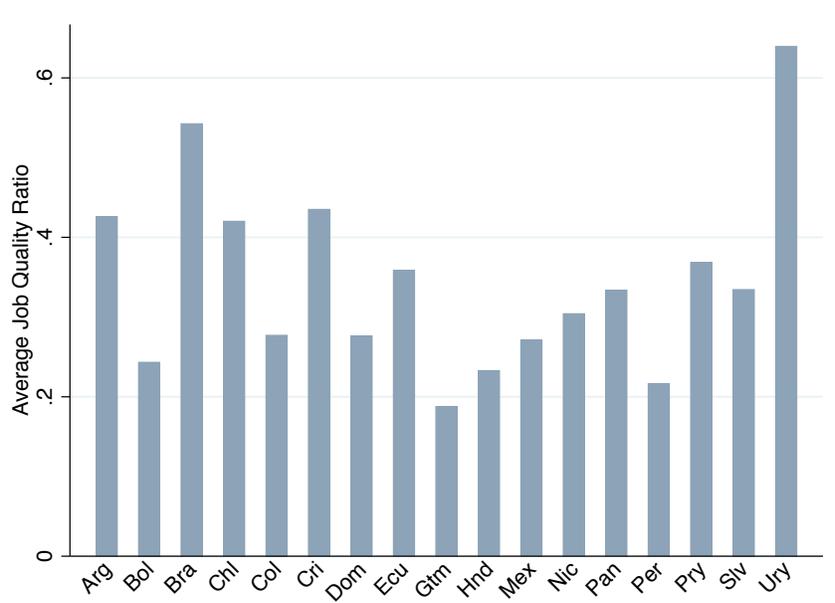
The aim of this report is to determine what factors are correlated with job quality and how job quality is linked to poverty. Job quality must be aggregated into a single dimension to compare it across countries and time. We do this by adapting the AF framework mentioned previously. An index is created that indicates the number of dimensions in which the worker is successful. If a worker is unemployed, all dimensions are censored and the worker has a job quality rating of 0. Likewise, we make it a necessary condition that the worker receives a living wage, otherwise job quality is 0. For example, we do not consider a contract to be meaningful if the job does not provide enough income to meet the basic needs of the worker. We use two different measures given by

$$Job\ Quality\ Sum = \begin{cases} \sum_{i=1}^7 JQ_i & \text{if } Pov = 1 \\ 0 & \text{if } Pov = 0 \end{cases} \quad (1)$$

$$Job\ Quality\ Ratio = \begin{cases} \sum_{i=1}^7 \frac{JQ_i}{n} & \text{if } Pov = 1 \\ 0 & \text{if } Pov = 0 \end{cases} \quad (2)$$

where JQ_i is the i^{th} dimension of job quality, such as having retirement benefits, health insurance, etc., and n is the total number of possible job quality dimensions

Figure 1: Average Job Quality Ratio by Country

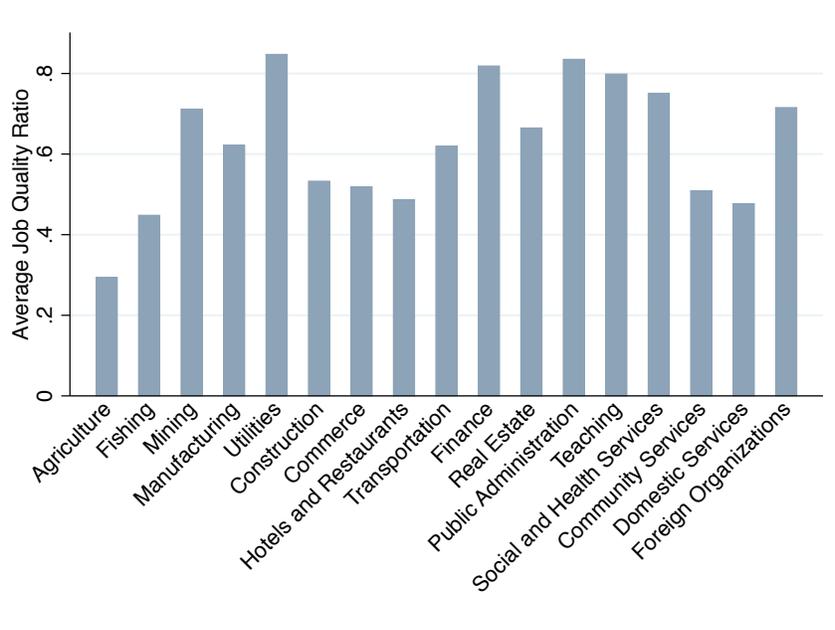


Notes: Authors' calculations using SEDLAC data. Sample size and years covered differs by country as described in Table 1.

for the particular country-year combination. Job quality sum will be referred to as JQ^S while job quality ratio will be referred to as JQ^R . Job quality sum is found by adding all of the job quality successes for an observation, where each success is counted as 1 and each failure is 0. Therefore, it is a number between 0 and 7 for each observation where a higher number denotes a higher level of job quality. The job quality ratio normalizes job quality to take into account that some countries do not report some quality dimensions. The ratio is found by dividing JQ^S by the total number of quality dimensions available for each country and year. Thus, job quality ratio is a number between 0 and 1 and is our preferred method of measuring job quality.

The average job quality ratio in each country is shown in Figure 1. The standout

Figure 2: Average Job Quality Ratio by Employment Sector



Notes: Authors' calculations using SEDLAC data.

countries are Argentina, Brazil, Chile, Costa Rica, and Uruguay with over 40% of the quality dimensions satisfied on average. One way in which these countries stand out is that they employ a much smaller share of their labor force in the agricultural sector. For instance, only 4.7% of the workers in our sample of Uruguay are employed in the agricultural sector (which is partly due to the urban bias of the survey), compared to the over 40% employed in Guatemala. Agricultural jobs tend to have much lower job quality than other sectors of employment. This can be seen more clearly in Figure 2.

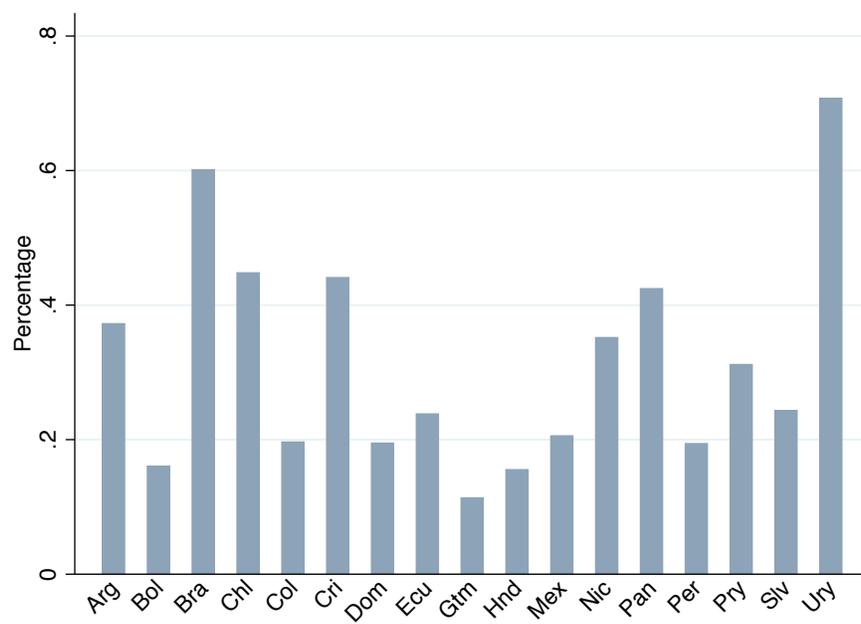
Figure 2 also shows that better quality jobs tend to be located in the public, utility, and finance sectors. Also, jobs in education and health services have high levels of job quality. Though we do not show how all dimensions of job quality

are distributed across sectors of economic activity, these jobs have relatively more successes across all job quality dimensions, except for having tenure and having only a single job. Workers in the relatively low quality sectors of agriculture and fishing are much more likely to have tenure and stay on the job for many years. Also, most workers report having only one job regardless of what sector they are employed in. The highest quality sectors, *i.e.* utilities, public administration, and education, are primarily separated from the next highest group by only one variable. These workers are much more likely to receive retirement benefits from employment.

The average job quality ratio shown in Figure 1 can possibly mask how job quality is distributed throughout the countries. Some countries could have a lot of workers with all quality dimensions filled and many workers with extremely low job quality, yet have a very large average. We analyze the distribution of job quality by looking at the number of individuals with a “good” job. A good job is a job that has successes in k quality dimensions. For the job quality ratio, k is between 0 and 1 and represents the percentage of quality dimensions that must be filled before the worker can be considered to have a good job. Two examples are shown in Figures 3 and 4.

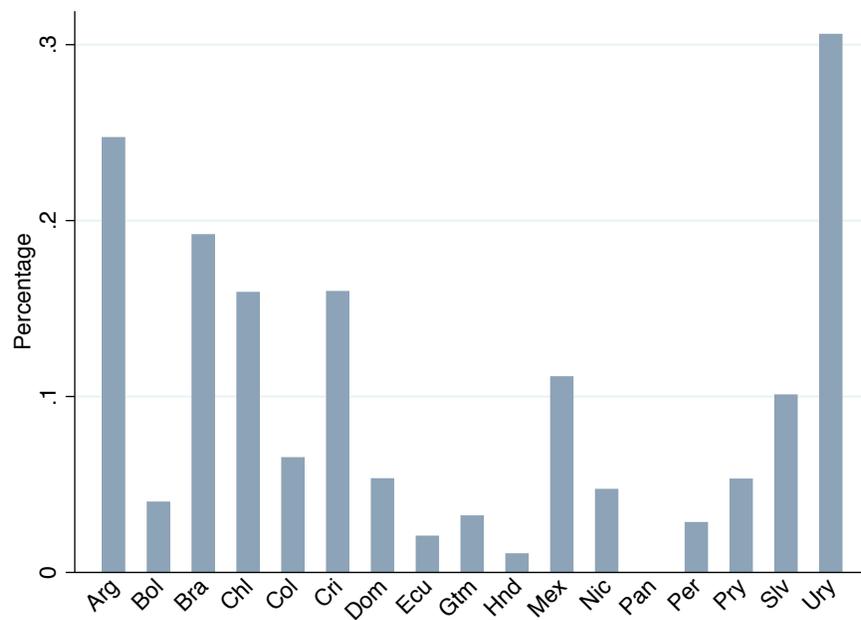
In Figure 3, the cutoff of $k \geq 1/2$ is used, meaning that at least half of the possible quality dimensions are satisfied, with income above the poverty line being the first dimension. We see that more than 60% of workers in Brazil and Uruguay would be considered to have a good job, while Bolivia, Guatemala, and Honduras have very few workers with good jobs. Similar results show up in Figure 4 where all quality dimensions must be satisfied to have a good job. Using this definition, Argentina is one of the best places to work in Latin America with almost 25% of the workers

Figure 3: Percentage of Labor Force in Each Country with Good Job, $k \geq 1/2$



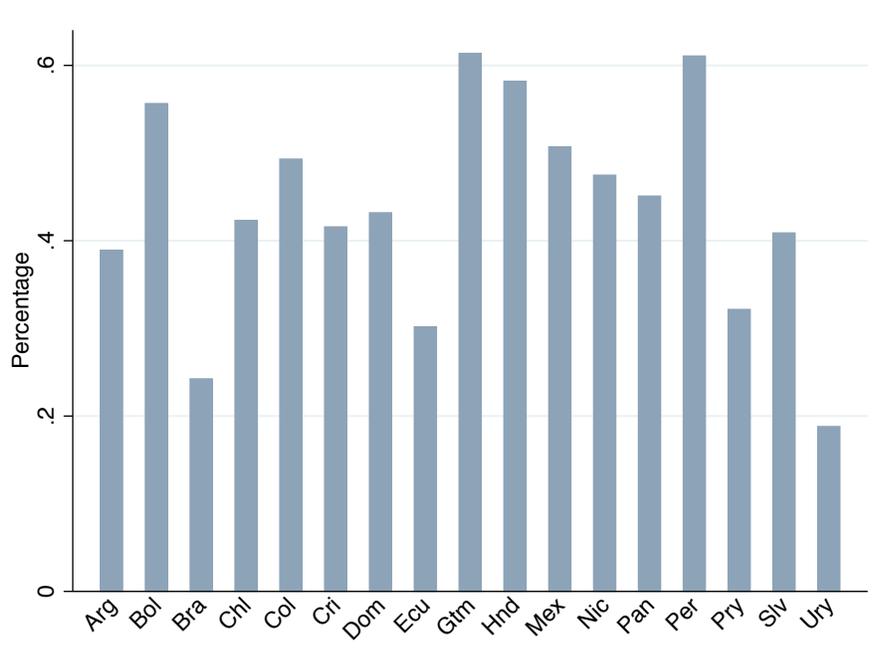
Notes: Authors' calculations using SEDLAC data. Sample size and years covered differs by country as described in Table 1.

Figure 4: Percentage of Labor Force in Each Country with Great Job, $k = 1$



Notes: Authors' calculations using SEDLAC data. Sample size and years covered differs by country as described in Table 1.

Figure 5: Percentage of Labor Force in Each Country with a Low Quality Job, $k \leq 0.2$

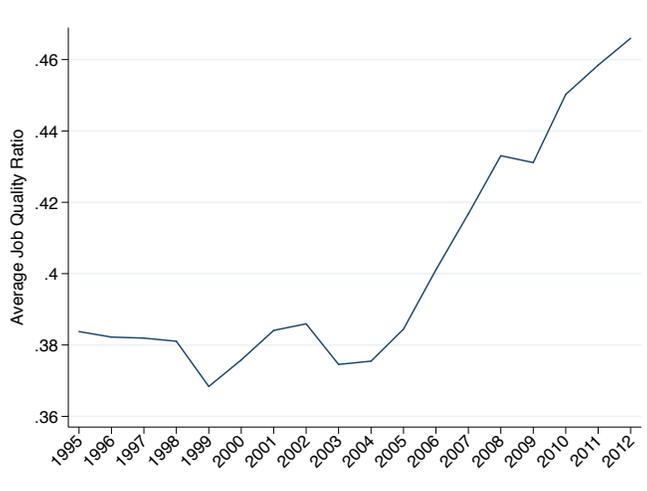


Notes: Authors' calculations using SEDLAC data. Sample size and years covered differs by country as described in Table 1.

receiving successes in all dimensions of job quality. This implies that the distribution of job quality in Argentina is split between workers with very high levels of job quality and those with moderately low levels. A similar observation holds for Mexico as well.

To detect the presence of bimodality, Figure 5 shows the percentage of workers in each country with a “low quality job”. A low quality job is defined here as having less than 20% of the quality dimensions satisfied. If countries have a large number of low quality jobs and a large number of good jobs as shown in Figures 3 and 4, then there is a large disparity of job quality throughout the country. Low quality jobs are distributed as expected, but there is evidence of bimodality, and thus inequality, in job quality in Argentina, Chile, Costa Rica, and Mexico. Bolivia, Guatemala,

Figure 6: Average Job Quality Ratio Over Time

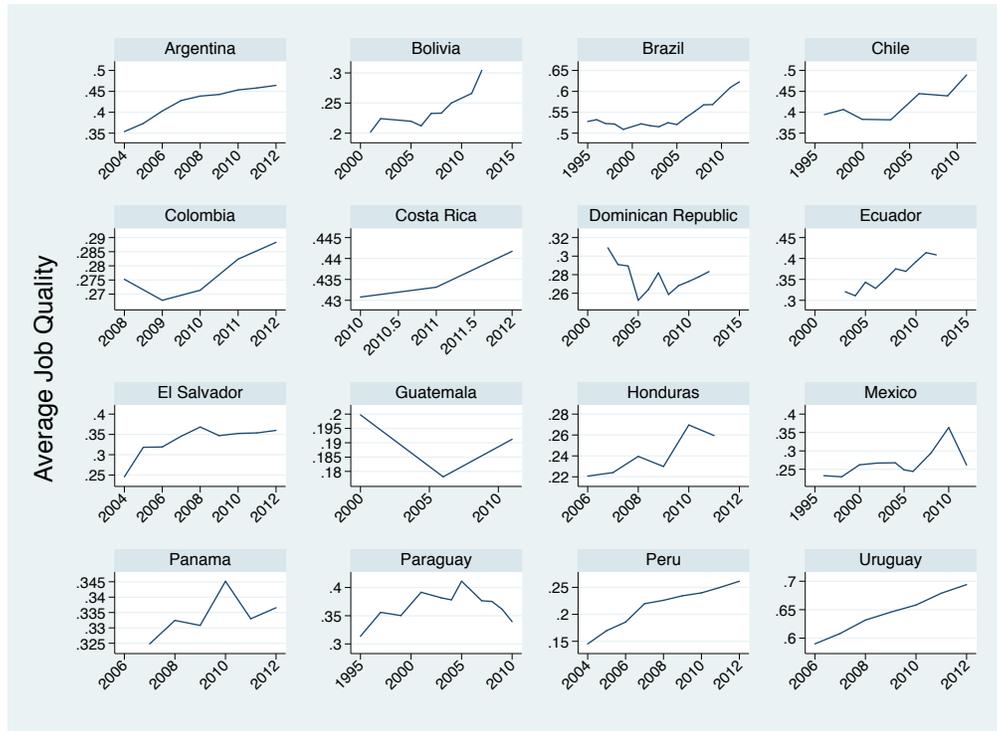


Notes: Authors' calculations using SEDLAC data. Countries included in each year differ based on availability, but country fixed effects are controlled for. Individuals are counted equally across countries.

Honduras, and Peru have a high concentration of workers with “low quality” jobs, but that do not have “good” jobs either.

We next look at the change in job quality over time and find the average level of job quality in Latin America rose over the sample period. The graph is shown in Figure 6. This graph was constructed by controlling for country specific fixed effects. After a period of stagnation observed during the decade of 1995-2004, job quality steadily rose increasing by roughly 25% between 2004 and 2012. The growth might have a number of explanations. The first is that unemployment rates fell for many countries in Latin America, resulting in more workers with a non-zero level of job quality. In addition, the number of successes in each of the job quality dimensions also grew. The largest growth came from having both retirement and health insurance benefits, and receiving an income above the poverty line. Though we do

Figure 7: Average Job Quality Ratio over Time, by Country



Notes: Authors' calculations using SEDLAC data.

not show the change in average job quality across time for the different employment sectors, the change in job quality does not seem to be associated with a substantial structural change in the type of work. With the exception of the mining industry which witnessed a small decline in job quality in all years, the rise in job quality was uniformly distributed across the different job sectors.

The growth of good jobs across the different countries reveals similar patterns. Figure 7 displays the job quality trends across each of the Latin American countries in the sample. Nicaragua is omitted since there is only one year of data. For most of these countries, the overall trend is unambiguously positive. There is a slight decline

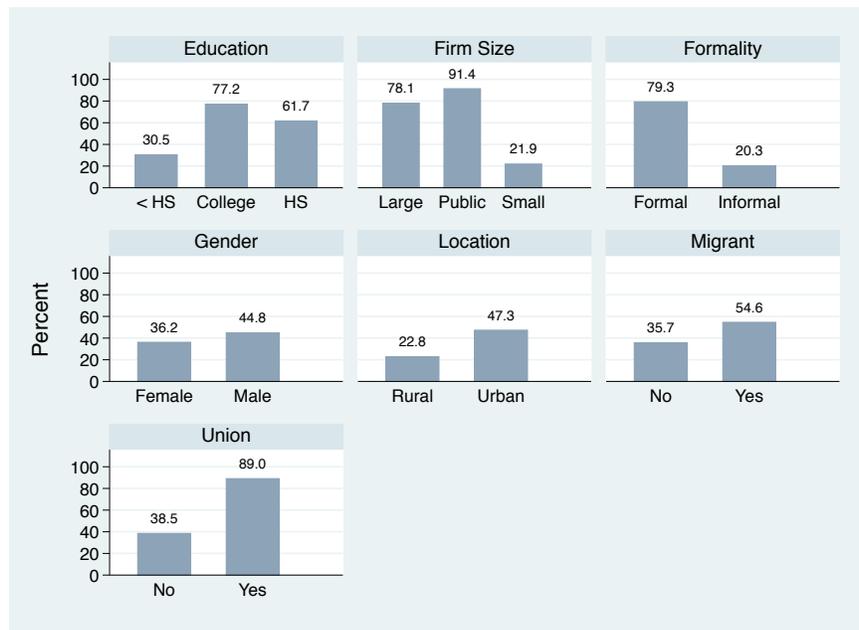
around 2010-2012 for a few of the countries; possibly due to the Great Recession. The Dominican Republic and Guatemala are the only countries that have seen a decline in job quality. Though for the Dominican Republic, this is partially due to the change in the number of job quality dimensions, with new dimensions available in the data, but with lower likelihood of success. To understand why job quality is changing in these countries, we look at which factors are correlated with quality.

4 Determinants of Job Quality

While it is useful to note the level of job quality in each country, it is more important to understand what factors may be influencing quality. Some of the variation in job quality might be associated with the institutional arrangements within each country and their level of development. Likewise, many employment sectors, such as education, tend to provide more benefits compared to other sectors. However, personal characteristics such as gender or education can influence quality as well. In order to enact useful policies to improve job quality, we need to know which attributes have the strongest relationship with job quality. A first glance of the relationships between job quality and personal characteristics are shown in Figure 8.

In the chart, a job is “good” if over half of the dimensions are satisfied. Gender appears to not influence job quality that much, though men do have higher quality jobs on average. The biggest differences arise from the size of the firm, the formality of the job, and the education level of the worker. While less than 22% of the individuals who work in a small firm have a good job, a vast majority of the workers in a large or

Figure 8: Percentage of Workers with “Good” Quality Jobs, by Characteristics



Notes: Authors' calculations using SEDLAC data. Countries included in each sub-figure differ based on availability. Individuals are counted equally across countries.

public firm have a good job. Similar results arise when comparing workers without a high school diploma with those that do have one. Note that workers with a high level of education are far more likely to work in a formal job for a large firm. However, less educated individuals are just as likely to be affiliated with a union, which also results in a large increase in the probability of having a good job. However, only a small percentage of workers in general are unionized.

While the chart provides a good visual interpretation of the correlation between job quality and the different personal and job characteristics, we run the following regression to determine the effect that each variable has on quality of employment.

$$JQ_j = \alpha + \beta X_j + \gamma_1 Time_j + \gamma_2 Country_j + \gamma_3 Sector_j + \epsilon_j \quad (3)$$

In the equation above, JQ_j is the level of job quality for observation j using different measures of job quality and X is a vector of variables that include those shown in Figure 8. We include dummy variables for each year, country, and sector of employment. We also control for being self-employed or an employer. Those characteristics often result in much lower levels of job quality as workers are much less likely to provide themselves with benefits. This regression is performed using four different methods to test the robustness of the results. The results are shown in Table 5.

The first column in the table uses job quality sum (JQ^S) as the dependent variable and is performed with an ordered logit regression. The coefficients represent the change in the log-odds ratio of satisfying an additional dimension of job quality that results from a marginal increase in the variable. Working for a public firm results

in the largest per-unit change to the log-odds ratio. Working for a large firm and having a formal job provide a similarly large increase in the probability of having success in another job quality dimension. Being a migrant worker or living in an urban area does not greatly impact the odds, but being in a union or being educated does. An interesting result is that the marginal impact of a college education on job quality is small compared to a high school education. Education is one of the best predictors of job quality and varies greatly across Latin America.

The job quality ratio (JQ^R) is used as the dependent variable in column (2), which is performed with a standard linear regression. Columns (3) and (4) offer further robustness checks by performing logit regressions where the dependent variable is equal to 1 when the worker has a good job, defined as $k \geq 1/2$ and $k = 1$ respectively. All four specifications provide similar results, though our preferred model is column (2) because JQ^R normalizes job quality across the countries and the regression results are easy to interpret. Furthermore, the variables explain a larger percentage of the variation of job quality. A high school education is expected to result in 7% more job quality successes. Similar to the first model, a college degree also improves job quality, though not by as much. Likewise, working in a large firm is expected to lead to 12.5% more job quality dimensions being satisfied compared to working for a small firm.

The variable associated with the largest impact on job quality can be found by looking at the squared semi-partial correlation coefficients listed in Table 6. The squared semi-partial correlation coefficient measures how much variation in job quality is explained by each control variable. This is found by measuring the correlation

Table 5: Predictors of Job Quality

	(1)	(2)	(3)	(4)
	JQ^S	JQ^R	$k > 1/2$	$k = 1$
	b/se	b/se	b/se	b/se
Age	0.024*** (0.001)	0.003*** (0.000)	0.027*** (0.001)	0.041*** (0.004)
Male	0.620*** (0.054)	0.088*** (0.009)	0.612*** (0.115)	0.217*** (0.039)
Educ - High School	0.504*** (0.018)	0.070*** (0.003)	0.633*** (0.042)	0.453*** (0.065)
Educ - College	-0.025 (0.054)	-0.010 (0.006)	0.176*** (0.060)	0.006 (0.090)
Migrant	0.136*** (0.018)	0.022*** (0.003)	0.162*** (0.020)	0.045*** (0.016)
Public Firm	1.360*** (0.191)	0.158*** (0.021)	1.649*** (0.123)	0.564*** (0.204)
Large Firm	1.042*** (0.208)	0.125*** (0.025)	1.264*** (0.188)	0.168 (0.138)
Formal	1.159*** (0.183)	0.165*** (0.021)	0.681*** (0.156)	1.084*** (0.144)
Self-Employed	-0.091 (0.226)	-0.004 (0.032)	-0.091 (0.509)	-3.353*** (1.040)
Employer	-0.805*** (0.267)	-0.096** (0.044)	-0.432 (0.641)	-3.486*** (1.139)
Union	0.591*** (0.125)	0.103*** (0.010)	1.128*** (0.135)	0.844*** (0.054)
Urban	0.322*** (0.053)	0.043*** (0.008)	0.294*** (0.050)	0.265*** (0.075)
ln(GDP/capita)	0.033 (0.204)	0.016 (0.011)	0.037 (0.263)	0.105 (0.177)
Adj. R^2		0.487		
Pseudo- R^2	0.185		0.343	0.345
Number	6,375,826	6,375,826	6,375,826	6,256,021

Notes: Authors' calculations using SEDLAC data. Robust standard errors clustered at the country level are in parentheses. All specifications include year, country, and sector fixed effects. Significance: *** 1%, ** 5%, * 10%.

Table 6: Squared Semi-Partial Correlation Coefficients of Job Quality Ratio from Table 5

Variable	Correlation Coeff.
Age	0.0125
Male	0.0130
Educ - High School	0.0063
Educ - College	0.0001
Migrant	0.0007
Public Firm	0.0035
Large Firm	0.0036
Formal	0.0059
Self-Employed	0.0000
Employer	0.0016
Union	0.0053
Urban	0.0016
ln(GDP/capita)	0.0000

Notes: Authors' calculations using SEDLAC data.

Each value represents the proportion in variance of JQ^R explained by that control variable.

between job quality and each control variable, after removing the effects of the other control variables. Age and gender have the largest impact on job quality. This is to be expected since older workers are more likely to have tenure than younger workers and have accumulated more human capital. Also, men are likely to be paid more, and thus more likely to have a higher quality job.

These characteristics may have different effects across the job quality dimensions. Therefore, we run the same regression as above, except we replace job quality with an indicator for each particular dimension of job quality. Since the dependent variables take on values of 0 or 1, we run logit regressions. These results are shown in Table 7.

In the regression with health insurance as the dependent variable, an indicator

Table 7: Regression Across Job Quality Dimensions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Pov	Ins	Ret	Ten	Cont	Perm	Sing
	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Age	0.013*** (0.001)	0.022*** (0.002)	0.021*** (0.003)	0.054*** (0.003)	0.012*** (0.002)	0.020*** (0.002)	-0.003* (0.002)
Male	1.351*** (0.122)	0.173*** (0.039)	0.332*** (0.046)	0.181*** (0.026)	0.216*** (0.060)	0.296*** (0.045)	-0.182*** (0.059)
Educ - HS	0.640*** (0.121)	0.699*** (0.070)	0.786*** (0.039)	0.172*** (0.033)	0.696*** (0.086)	0.553*** (0.035)	-0.059 (0.065)
Educ - College	-0.157 (0.128)	0.123 (0.096)	0.285*** (0.059)	0.326*** (0.043)	0.521*** (0.141)	0.123 (0.108)	-0.520*** (0.132)
Migrant	0.316*** (0.043)	0.145*** (0.045)	0.164*** (0.026)	-0.109*** (0.033)	0.085* (0.046)	0.130*** (0.040)	0.012 (0.039)
Public Firm	-0.248 (0.426)	1.279*** (0.241)	1.437*** (0.184)	1.012*** (0.155)	1.385 (0.924)	1.294*** (0.353)	-0.071 (0.182)
Large Firm	-0.093 (0.234)	0.942*** (0.218)	1.044*** (0.201)	0.194** (0.095)	1.674* (0.939)	1.102*** (0.358)	-0.007 (0.107)
Formal	2.686*** (0.298)	0.828*** (0.241)	1.001*** (0.145)	-0.336*** (0.110)	0.553 (0.717)	0.489 (0.408)	-0.009 (0.130)
Self-Employed	0.891*** (0.160)	-1.975*** (0.407)	-1.395*** (0.269)	0.524*** (0.133)	-3.552*** (0.919)	-2.398*** (0.792)	-0.539*** (0.146)
Employer	-0.695 (0.440)	-2.454*** (0.535)	-1.075** (0.461)	1.283*** (0.162)	-6.400*** (0.829)	-2.850*** (1.003)	-0.529** (0.211)
Union	0.789*** (0.059)	1.169*** (0.395)	1.394*** (0.103)	0.556*** (0.031)	1.590*** (0.472)	1.527*** (0.077)	-0.434*** (0.040)
Urban	0.310*** (0.073)	0.290*** (0.093)	0.403*** (0.069)	-0.209** (0.099)	0.217*** (0.071)	0.293** (0.133)	0.519*** (0.092)
ln(GDP/capita)	0.439*** (0.121)	2.062 (1.324)	0.457 (0.389)	-0.222 (0.380)	1.254*** (0.478)	0.353 (0.335)	-2.591 (1.840)
Health		-1.003*** (0.238)					
Pseudo- R^2	0.326	0.498	0.442	0.205	0.554	0.436	0.177
Number	6,375,804	3,424,264	6,256,558	5,727,564	2,835,920	5,481,545	6,375,814

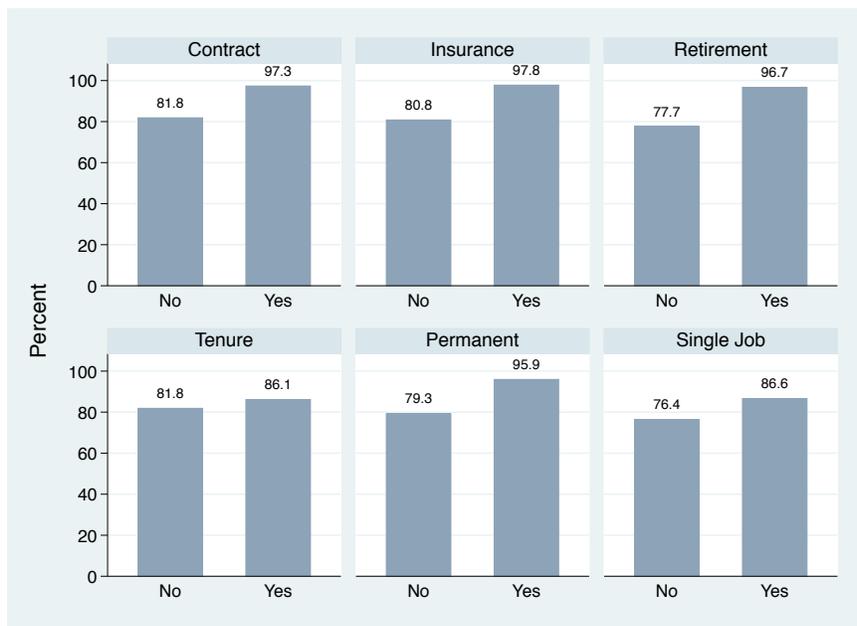
Notes: Authors' calculations using SEDLAC data. Robust standard errors clustered at the country level are in parentheses. All specifications include year, country, and sector fixed effects.. Significance: *** 1%, ** 5%, * 10%.

variable was included to control for whether or not the worker is in a country that provides some form of universal health insurance. We can see that the probability that the job provides health insurance is much lower in these countries. The regressions on having health insurance (*Ins*), retirement benefits (*Ret*), and a permanent job (*Perm*) are all similar to the previous results. However, the coefficient on being male is considerably higher for receiving an income above the poverty line than for all of the other regressions, indicating that being male primarily improves job quality through its impact on income.

The effect of going to college on the log-odds ratio of obtaining tenure is actually greater than the effect of graduating high school. Recall that the variable for completing high school (*Edu – High*) includes those individuals that go to college as well. The having tenure dimension also stands out because it is the only variable negatively correlated with job formality. This is due to the agriculture sector, where many workers have long tenures but low levels of formality. Also, while living in an urban area is correlated with higher job quality across almost all dimensions, it lowers the probability of obtaining tenure. This could indicate that those living in urban locations have better labor mobility.

Many of the variables affect the dimension of having a single job in a way that is opposite to how the other dimensions are affected. Higher education or working in a public firm tends to increase the probability of earning extra income outside of the main job. This result could make sense if these variables signify that the worker has a larger degree of human capital they can utilize in other occupations.

Figure 9: Percentage of Workers Not Living in Poverty Across Job Quality Dimension



Notes: Authors' calculations using SEDLAC data.

5 Relationship between Job Quality and Poverty

Which dimensions of job quality are associated with less poverty? This question is essential to understanding how poverty in Latin America has been and has the potential to be reduced. In this section, the variable of interest is whether or not the worker and his or her family is not living in poverty, *PovFam*. This is found by adjusting the total family income using 2005 PPPs and dividing by the total number of family members in the household.

The bar chart in Figure 9 displays the proportion of the population with access to certain job quality dimensions that are not living in poverty. For example, over 97% of workers that have signed an employment contract belong to non-poor families, compared to less than 82% of workers with no contract that belong to non-poor

families. While success in all the dimensions results in more people living out of poverty, the largest difference is in those workers who receive retirement benefits. Over 22% of workers who do not receive retirement live in families which are poor, compared to approximately 3% of workers who do receive retirement benefits from their job.

To better understand these correlations, we run a logit regression where the dependent variable is an indicator that the worker's family is not living in poverty. The independent variables of interest are the six non-income job quality variables defined above: health insurance, retirement benefits, tenure, having a contract, having a permanent job, and having a single job. The variable for receiving an income above the poverty line (*Pov*) is dropped due to endogeneity; both *Pov* and *PovFam* (whether the family is living above the poverty line) are calculated from the individuals' monthly income. The independent control variables are the same variables that are shown in Table 5 and include age, gender, education, firm size, union and migration status, location, time, and employment sector. The results are listed in Table 8.

The first column in the table lists the results from the regression with no control variables other than the quality dimensions, while the second column adds in all of the other control variables. The coefficients on the other control variables are consistent with the earlier results and therefore not shown. Almost all dimensions of job quality are positively correlated with living out of poverty. Health insurance has the largest coefficient in all of the regressions. The coefficient for retirement benefits is almost as large, but it also has the largest impact on poverty of all the dimensions,

Table 8: Analysis of Relationship Between Job Quality Dimensions and Poverty

	Dep. Var = Poverty Indicator		
	(1)	(2)	(3)
	b/se	b/se	b/se
Ins	1.489*** (0.126)	0.614*** (0.153)	0.610*** (0.191)
Ret	1.242*** (0.216)	0.590*** (0.140)	0.378* (0.219)
Ten	-0.062 (0.094)	0.078** (0.031)	0.200*** (0.049)
Cont	0.940*** (0.318)	0.442** (0.195)	0.337*** (0.061)
Perm	0.628*** (0.224)	0.322** (0.141)	0.351*** (0.075)
Sing	0.320*** (0.052)	-0.078* (0.044)	0.095 (0.150)
Controls	No	Yes	Yes
Year Effects	No	Yes	Yes
Country Effects	No	Yes	Yes
Sector Effects	No	Yes	Yes
Pseudo- R^2	0.101	0.239	0.203
Number	8,475,013	6,375,804	790,361

Notes: Authors' calculations using SEDLAC data. Robust standard errors in parentheses. Significance: *** 1%, ** 5%, * 10%.

Table 9: Squared Semi-Partial Correlation Coefficients of Poverty from Table 8

Variable	Correlation Coeff.
Insurance	0.0001
Retirement	0.0013
Tenure	0.0000
Contract	0.0003
Permanent	0.0006
Single	0.0000

Notes: Authors' calculations using SEDLAC data. Each value represents the proportion in variance of poverty explained by that control variable.

as shown by the partial correlation coefficients in Table 9. Having a contract or a permanent job are also large and significant predictors of living above the poverty line. Tenure and having only one job appear to have very little impact on poverty.

As a robustness check, column 3 lists the results from the regression where missing values are dropped from the sample instead of being coded as zeroes. All of the coefficients on the job quality dimensions are similar to the main results in column 2 except for having a single job, which is no longer negatively correlated with not being poor.

The relationship between job quality and poverty is explored on a country-by-country basis in Table 10. Both tenure and having a single job are the weakest predictors of poverty in many of the countries. The coefficient on having only one job is actually negative for most countries. The two variables with the strongest and most consistently positive coefficients are having health insurance and retirement benefits, which is what we would expect from previously reported results. It is a toss-up as to which is a stronger predictor as it varies across the countries. Similarly,

Table 10: Regression of Poverty on Job Quality Across Countries

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Arg	Bol	Bra	Chl	Col	Cri	Dom	Ecu	Gtm
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Ins	1.239*** (0.068)	0.087 (0.111)	-	0.916*** (0.021)	0.514*** (0.045)	0.815*** (0.106)	0.147** (0.072)	0.096* (0.057)	0.744*** (0.054)
Ret	0.545*** (0.068)	0.637*** (0.087)	0.929*** (0.010)	0.165*** (0.026)	0.980*** (0.042)	-	0.070 (0.073)	0.671*** (0.036)	-
Ten	-	-0.189*** (0.025)	0.016*** (0.004)	0.200*** (0.020)	0.156*** (0.013)	0.272*** (0.078)	0.163*** (0.035)	-0.054*** (0.012)	0.149*** (0.026)
Cont	-	0.581*** (0.082)	-	0.202*** (0.026)	0.375*** (0.049)	-	0.142** (0.069)	0.461*** (0.021)	0.457*** (0.086)
Perm	0.819*** (0.026)	-	0.024** (0.011)	0.458*** (0.020)	0.424*** (0.065)	1.102*** (0.072)	0.130* (0.073)	0.465*** (0.019)	0.303*** (0.103)
Sing	-0.183*** (0.027)	-0.384*** (0.038)	-0.121*** (0.010)	-0.097** (0.040)	-0.209*** (0.024)	-0.588*** (0.149)	-0.349*** (0.044)	-0.232*** (0.019)	0.014 (0.023)
Pseudo- R^2	0.210	0.327	0.217	0.173	0.184	0.187	0.091	0.164	0.185
Number	387,029	80,598	2,663,951	463,797	408,274	47,249	117,980	346,462	68,610

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Hnd	Mex	Nic	Pan	Per	Pry	Slv	Ury
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Ins	-	0.688*** (0.034)	0.868*** (0.249)	-	0.715*** (0.069)	1.014*** (0.081)	0.083 (0.053)	0.804*** (0.038)
Ret	0.750*** (0.123)	0.591*** (0.045)	-0.169 (0.243)	-	0.785*** (0.026)	0.803*** (0.097)	0.566*** (0.047)	0.686*** (0.040)
Ten	0.089*** (0.018)	0.010 (0.064)	0.048 (0.047)	-0.224*** (0.027)	-0.019* (0.011)	0.146*** (0.020)	-	0.315*** (0.026)
Cont	0.506*** (0.038)	0.176*** (0.033)	-	0.722*** (0.053)	0.558*** (0.044)	0.968*** (0.156)	0.063 (0.052)	-
Perm	0.425*** (0.026)	0.452*** (0.045)	-	2.169*** (0.235)	-	0.206 (0.310)	0.549*** (0.022)	-
Sing	0.055*** (0.016)	-0.044* (0.022)	-0.536*** (0.069)	-0.384*** (0.034)	-0.133*** (0.011)	-0.206*** (0.029)	0.012 (0.024)	-0.143*** (0.043)
Pseudo- R^2	0.262	0.258	0.167	0.326	0.300	0.195	0.197	0.187
Number	168,343	307,061	14,690	119,268	405,860	120,369	261,154	393,086

Notes: Authors' calculations using SEDLAC data. Robust standard errors in parentheses. Significance: *** 1%, ** 5%, * 10%.

having a contract and having a permanent job are strong predictors for almost all countries, though weaker than either health insurance or retirement benefits. Overall, job benefits are the strongest job quality predictors that a family is not living in poverty in Latin America.

6 Robustness

In this section we show that our results are not sensitive to changes in model specification or estimation strategies. Table 11 shows variations of column 2 from Table 5, using JQ_R as the dependent variable. Table 12 shows variations of column 2 from Table 8, regressing the likelihood of a family being in poverty on the dimensions of job quality along with individual controls. Each of the five columns in Tables 11 and 12 represent a different test of robustness. The regression in column 1 of the tables weights the observations using the specific weights for each household from SEDLAC. Columns 2 and 3 use a different income cutoff point for determining whether or not the individual either earns a wage or lives above the poverty line. The \$1.25/day poverty line is used in column 2, while the \$4.00/day poverty line is used in column 3, both in 2005 PPPs.

Columns 4 and 5 use alternative job quality dimensions. The variable *Ftim* measures whether or not the worker is employed full time at his principal job. That is, this variable measures underemployment, a relatively recent concept in the job quality literature (Bescond, Chataignier and Mheran, 2003). A success in the *Ftim* dimension is recorded if the observation works at least 30 hours a week on average

Table 11: Robustness Checks for Job Quality Ratio Regressions

Model	SEDLAC weights (1) b/se	\$1.25/day poverty line (2) b/se	\$4.00/day poverty line (3) b/se	Full-time (4) b/se	Satisfied with job (5) b/se
Age	0.002*** (0.000)	0.003*** (0.000)	0.003*** (0.000)	0.003*** (0.000)	0.003*** (0.000)
Male	0.091*** (0.012)	0.079*** (0.009)	0.092*** (0.008)	0.114*** (0.013)	0.085*** (0.011)
Educ - High School	0.071*** (0.003)	0.060*** (0.003)	0.081*** (0.004)	0.065*** (0.003)	0.071*** (0.003)
Educ - College	-0.007 (0.006)	-0.013** (0.006)	-0.006 (0.007)	-0.011** (0.005)	0.004 (0.006)
Migrant	0.024*** (0.002)	0.016*** (0.002)	0.027*** (0.003)	0.026*** (0.003)	0.021*** (0.003)
Public Firm	0.157*** (0.028)	0.158*** (0.024)	0.160*** (0.018)	0.117*** (0.020)	0.174*** (0.020)
Large Firm	0.141*** (0.026)	0.125*** (0.028)	0.128*** (0.023)	0.109*** (0.021)	0.133*** (0.025)
Formal	0.159*** (0.026)	0.162*** (0.025)	0.169*** (0.018)	0.170*** (0.024)	0.158*** (0.020)
Self-Employed	0.004 (0.036)	0.025 (0.035)	-0.029 (0.030)	0.033 (0.040)	-0.010 (0.036)
Employer	-0.105 (0.077)	-0.090* (0.046)	-0.097** (0.043)	-0.032 (0.067)	-0.083 (0.048)
Union	0.118*** (0.023)	0.101*** (0.010)	0.109*** (0.010)	0.070*** (0.009)	0.109*** (0.011)
Urban	0.062*** (0.005)	0.041*** (0.008)	0.043*** (0.008)	0.046*** (0.009)	0.033*** (0.007)
ln(GDP/capita)	0.008** (0.004)	0.005 (0.011)	0.025* (0.013)	-0.004 (0.012)	0.031 (0.021)
Adj. R^2	0.492	0.488	0.488	0.426	0.489
Number	6,375,668	6,375,826	6,375,826	6,375,826	6,375,826

Notes: Authors' calculations using SEDLAC data. Robust standard errors in parentheses. Significance: *** 1%, ** 5%, * 10%.

in his principal job. In column 4, underemployment ($Ftim$) replaces tenure (Ten) as a dimension of job quality. Likewise, having a single job is replaced in column 5 with an alternative measure of satisfaction, (Sat). A success is recorded under this satisfaction variable if the worker responded that they did not want to work more hours or find another job. In addition to the regressions shown in the tables, other combinations of the nine possible job quality dimensions were investigated and were found to have similar results.

The results in Table 11 are consistent with the earlier results. Even though the magnitudes of the effects may differ slightly, the ordering stays the same. Interesting results arise from Table 12. A success in either health insurance or retirement benefits still leads to the highest probability that the worker is not living in poverty. However, the gap between the coefficients closes and retirement benefits actually surpasses health insurance in all columns. The coefficient on having a single job is still negatively correlated with not being poor. The underemployment and satisfaction dimensions appear to be strongly correlated with living above the poverty line, though less so than having health insurance and retirement benefits. This is unsurprising since working more hours leads to higher income and a lower probability that an individual is impoverished. Likewise, if one is impoverished it is unlikely that one would be satisfied with one's job.

7 Conclusion

Notwithstanding the substantial social gains observed across Latin America over the past decade, progress has been uneven and the recent economic slowdown poses a question mark on the sustainability of these achievements. Given the importance of labor income dynamics on lifting people above a minimum standard of living in a sustainable way, this paper has focused on understanding the dynamics of the quality of jobs across the region over the recent past. It proposes to look beyond labor incomes, considering several dimensions that may constitute job quality.

After developing a multi-dimensional measure of job quality, following the Alkire-

Table 12: Robustness Checks for Poverty Regressions

Model	SEDLAC weights (1) b/se	\$1.25/day poverty line (2) b/se	\$4.00/day poverty line (3) b/se	Full-time (4) b/se	Satisfied with job (5) b/se
Ins	0.620*** (0.106)	0.713*** (0.128)	0.412*** (0.119)	0.706*** (0.130)	0.687*** (0.126)
Ret	0.801*** (0.128)	1.041*** (0.152)	0.445*** (0.126)	1.012*** (0.146)	1.032*** (0.146)
Ten	0.091 (0.056)	0.012 (0.042)	0.110*** (0.025)		0.003 (0.044)
Cont	0.554*** (0.108)	0.545*** (0.182)	0.205 (0.183)	0.509*** (0.177)	0.535*** (0.181)
Perm	0.164* (0.099)	0.719*** (0.095)	0.203 (0.133)	0.667*** (0.098)	0.706*** (0.097)
Sing	-0.075*** (0.021)	-0.214*** (0.062)	-0.089** (0.044)	-0.282*** (0.060)	
Ftim				0.302*** (0.046)	
Sat					0.324*** (0.092)
Pseudo- R^2	0.243	0.247	0.225	0.249	0.248
Number	6,375,646	6,375,804	6,375,826	6,375,804	6,375,804

Notes: Authors' calculations using SEDLAC data. Robust standard errors in parentheses. Significance: *** 1%, ** 5%, * 10%.

Foster methodology, this paper has offered a benchmark analysis of quality of jobs across Latin American and over time (1995-2012) by taking advantage of harmonized microdata for 17 countries. In addition to labor income – approximated with labor earnings that are high enough to keep a worker above the poverty line – the measure considers six dimensions that denote whether the job provides benefits, security, satisfaction, and opportunities to build human capital. Overall, we find that job quality has been growing in Latin America since 2004. This is primarily due to increasing wages. To better understand what factors may be influencing quality we investigate some of the correlates of job quality. The results suggest that the best predictors of job quality are age, gender, education, and whether the job is formal. We also examine the relationship between job quality and poverty, and we conclude

that health and retirement benefits are the dimensions of job quality that are best correlated with not living in poverty, as suggested by the results. All these findings are robust to changes in model specification, poverty lines and estimation strategies.

The results from this study can help shed some light on the policy areas regarding job quality that have more potential for helping individuals work their way out of poverty. In assessing labor policies it is useful to differentiate between those categories of actions pertaining to ‘easy fixes’ and those related to a long-run agenda geared toward higher productivity; as it is distinguishing between policy areas related to labor supply and labor demand factors.

Social investments in human capital, as notably experienced in the region in terms of education, play a critical role in terms of labor supply. The amply documented fall in labor inequality in Latin America over the last two decades has been associated with an expansion of education in the region, which lowered the skill premium (and to a lesser degree, by more progressive government transfers) (Basu and Stiglitz, 2015). Rodriguez-Castelan et al. (2016) offer a long-term perspective of how education levels have improved throughout countries in the region, increasing the relative supply of labor but reducing wage dispersion driven by a fall in the college/elementary education premium coupled with an acceleration in the decline of the high school/elementary education premium.

Despite the recent process of education upgrading across the region, improved labor outcomes are the result from the interaction of demand, supply and institutional factors in each country. Market distortions may be preventing the creation of productive investment leading to quality jobs. For instance, Levy and Lopez-Calva

(2016) indicate that substantial and persistent distortions in Mexico have led to a suboptimal allocation of resources toward less productive firms employing low-skill workers – even as the relative supply of higher skilled workers has increased. This has resulted in a mismatch between the demand and supply of more educated workers, and constrained the opportunity to fully leverage the country’s investment in human capital. Nevertheless, although access to markets is critical – allowing individuals to realize the returns of social investments – in order to attract certain types of investment, not only are the characteristics of individuals important, but also the business environment. A business environment that promotes technical improvements and spurs innovation is likely to lead to a more sustainable source of high productivity jobs.

Previous studies have already noted key policy areas that can facilitate the role of labor markets in allocating resources across workers and firms (see IDB, 2004). In addition to fostering a macroeconomic environment favorable to growth, these include improving the incentives for training to increase the skills of workers, which in turn can enhance their opportunities. Improving the efficiency of the matching process between workers and firms can help close gaps and lags between the supply of labor and the demand from employers. Adequately insuring workers against risks involved in job churning could help prevent vulnerable households from falling into poverty – though as the report is quick to point out, the design of insurance (or any other labor policy) should minimize distortions in the labor market. Finally, enforcing regulations is assessed as critical to ensure compliance, while monitoring labor policies can help to assess the benefits and costs of labor policies.

A central aspect in the functioning of these policies refers to their ability to elicit voluntary compliance (World Bank, 2017). This is illustrated, for instance, regarding individuals' willingness to cooperate fiscally, towards insurance schemes and the provision of public goods. Individuals may choose to 'exit' the social contract if the quality of public goods and services received is poor or if coverage is too low (choosing instead to pay for private services or network-based protection). Under this scenario, workers could view informality more favorably, obtaining flexibility – and perhaps higher earnings – without the burden of paying for social insurance that they will not take advantage of. Perry et al. (2007) discuss evidence of informality driven by a voluntary decision to 'opt out' of formal work, as a result of a cost-benefit analysis evaluating non-contributory protection programs or informal mechanisms vis-à-vis formal – often costly – security benefits⁶. Universal coverage schemes based on consumption taxes have been proposed to address high informality, low productivity scenarios, where individuals work without any formal protection. Levy (2008), for instance, suggests converting Mexico's social security system into one of universal social entitlements, eliminating social security contributions based on wage, and raising value added taxes.

Finally, an important issue to keep in mind as the region moves forward would be to start thinking on how to mitigate the potential effects on job quality of skill-biased technical change. Such a phenomenon of quick technological upgrading (including robotization, digital technologies, etc.) has been impacting parameters of traditional production functions for sectors comprising occupations with high degree of routine

⁶The other line discussed by these authors refers to the case of exclusion, whereby workers are not opting out of formal contracts and would in fact prefer a job in the formal sector.

tasks, such as middle-skilled manufacturing, and clerical occupations (Autor, Levy and Murnane, 2003). This process of skill-biased technical change may pose another question mark on the sustainability of the recent progress towards enhanced quality of jobs across the region.

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