BanRep Blog: The effects of Part-Time Social Security Contributions on the Colombian Labor Market

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In 2014, Decree 2616 introduced a change in regulation that lowered payroll taxes for low-income, part-time workers in Colombia. The reform made the mandatory contributions to social security proportional to the time worked when the monthly wage was lower than the minimum wage.

Table 1 shows the scope of the reform as it compares the pre-reform and post-reform contributions to social security for a worker who earns the monthly minimum-wage and works full-time and a worker who works two weeks per month (part-time) and earns the proportional minimum-wage for the worked time. As it can be seen, the absolute values of the contributions were equal for both the full-time and part-time employee, but as a proportion of their monthly wage, the contributions on part-time employment were twice as large as the contributions on full-time employment before the reform. After the reform, the contributions to social security on part-time employment decreased substantially.

Tabla 1: Comparison of social security contributions from full-time and part-time minimum wage employees before and after 2014. Hiring costs (in 2014 pesos) 1 worker1 worker PT MW FT MWPre-2014Post-2014Monthly Salary$ 616.000$ 308.000$ 308.000Pension$ 73.920$ 73.920$ 36.960Health$ 52.360$ 52.360$ 0Compensation Fund$ 24.640$ 24.640$ 12.320ARL risk I$ 2.143$ 2.143$ 1.047Total Employer Contribution$ 153.063$ 153.063$ 50.327Employer Contribution Rate25%50%16%
Note: The values were calculated using the minimum wage in effect in 2014 as a benchmark and an ARL risk I classification. For the post-214 fiscal year, the worker is assumed to work for 2 weeks a month. FT means "full-time"; PT means "part-time" and MW means "minimum wage".

In a recent study, Andrea Otero and Leonardo Morales, researchers from *Banco de la República*, evaluated the impact of the Decree 2616 explained before, using household survey data and administrative records on social security contributions. The authors compare the changes in formal employment in firms with high and low estimated demand for part-time employment after the reform. The results suggest that the reform increased the probability that the target population—i.e., low-income, part-time workers—would enter the formal sector for the first time by 5.4 percentage points (pp).

In the main exercise shown in the study, firms within industries with a high demand for part-time workers before the reform were the ones that had the greatest potential to benefit compared to firms in industries with a low demand for this type of employment before the reform. After the reform, the firms that were potential beneficiaries showed a higher increase in formal employment, more hiring of formal employees, and no significant differences were identified in the average wages paid by the companies.

Table 2 illustrates these results. This exercise compares the change in the trend of some variables of interest for the labor market comparing firms that have the highest demand for part-time workers (located in the top quartile of the part-time demand distribution before the reform) versus those that employ part-time workers the least (located in bottom quartile of that demand) in order to measure the impact of the reform. The table shows that, after the reform, the number of new workers hired formally grew by an additional 5.6 pp in companies in

quartile 4 of the distribution of demand for part-time workers compared to companies in quartile 1. Likewise, positive differences are identified in total formal employment and full-time formal employment. This implies that the increase in part-time hires did not have a negative effect on full-time employment. Finally, the comparison between these two groups of firms does not show statistically significant differences in the average daily wage within firms.

Table 2: Percentage point difference in the increase in employment measurements per company between companies in quartile 4 and quartile 1 of demand for part-time labor.Difference Between QuartilesNew People Hired FormallyTotal Formal EmploymentFormal Full-Time EmploymentAverage Daily SalaryQuartile 4 - Quartile 15,6
(0,7)1,6
(0,9)1,8
(1,0)0,7
(0,5)

Notes: Standard errors in parentheses. In the case of the average daily wage, the standard error (0.5) is high relative to the estimated impact value (0.7), which indicates that this is not statistically different from zero. Excludes companies in city-industry categories with less than 40 employees surveyed in the GEIH survey. The sample estimate includes 240,301 companies with at least one active month in 2014 or thereafter located in one of Colombia's 23 main cities. Sectors include agriculture, mining, manufacturing, construction, and services. All specifications include company-level fixed effects, sector-year-month, and city-year fixed effects.

In conclusion, the comparison of firms with different demand schedules for part-time workers suggests that the reform carried out through Decree 2616/2014 significantly increased formal labor. An assessment of the impact on the welfare of society requires an analysis that weighs the welfare of all workers and firms and takes into account macroeconomic effects affecting all companies, all of which is beyond the scope of this study.

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