



The minimum wage in formal and informal sectors: Evidence from an inflation shock

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ABSTRACT

I estimate the effect of the minimum wage on formal wages, informal wages, and employment in Colombia. I exploit an unexpected increase in the real minimum wage during 1999. My analysis combines unconditional quantile regressions with a differences-in-differences design. I find evidence of wage responses for wages close to the minimum wage. The increases are present in both the informal and formal sectors, and are larger in the formal one. Wages around the minimum increase by around 3 percent in the formal sector for a 10 percentage points larger minimum wage incidence, and by around 1 percent in the informal sector. These increases are smaller than those implied by full compliance to minimum wage policy, but positive for some unaffected workers. This suggests employers partially comply with the minimum wage and use it as a reference. I find slight negative employment effects on the informal sector, but not on the formal sector. The effects in the informal sector are not driven by cross-sectoral effects. The results suggest the minimum wage has a direct impact on the informal labor market, although they may not apply to minimum wage changes in other countries or contexts, or to larger minimum wage increases.

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The minimum wage is a common policy in developed and developing countries. Most of the literature about the impact of the minimum wage focuses on the effects on formal labor markets with regulatory compliance. A related literature studies the effects of the minimum wage on informal labor markets, where labor regulations are unlikely to be binding.

The labor economics literature for developing countries shows that the wage distribution of informal workers has a mode at the minimum wage. For formal markets in developing countries, the literature suggests the minimum wage affects the lower tail of the wage distribution. There is less evidence about how the minimum wage impacts the distribution of informal wages, beyond the mode of the wage distribution. It may have a direct impact on the informal market by influencing informal labor contracts. It may also have an indirect impact, through interactions with the formal sector. Formal and informal labor markets may be connected, giving rise to cross-sectoral effects. For example, formal workers may buy goods and services provided by informal workers.

In this paper, I estimate the effect of the minimum wage on the distribution of wages. I do this for formal and informal labor

markets in Colombia. Several characteristics of Colombia make it an interesting setting to seek an answer to this question. First, it has high minimum wages relative to similar countries in Latin America. Second, historically it has had a large informal sector. Defining informal workers as those that do not have access to employee health insurance, informal workers accounted for about half of employment in 2000 (Mondragón-Vélez et al., 2010). Third, during the 90s, the minimum wage was indexed to expected inflation. I exploit an inflation forecast error in 1999, which produced a large unexpected real minimum wage increase. Colombian authorities increased the national minimum wage by 16 percent by the end of 1998. This minimum wage increase was equal to expected inflation in 1999. However, because of a crisis, actual inflation was below expected, and the real minimum wage had a steep increase.

Fig. 1 shows the wage density for the formal and informal sectors before and after the minimum wage shock. Visual evidence suggests that both sectors react to the shock. The density shifts around the percentiles near the minimum wage. I estimate the effect of this unexpected shock on the marginal distributions of formal and informal wages. I also address direct and cross-sectoral effects on the informal sector. I do this in three steps. First, I measure the incidence of the minimum wage across different city-industry blocks in both sectors, using the fraction of workers

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