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Gap- Narrowing and reranking effects.*

Diego F. ANGEL-URDINOLA  
Quentin WODON

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# **The Impact on Inequality of Raising the Minimum Wage: Gap-Narrowing and Reranking Effects**

Diego F. Angel-Urdinola and Quentin Wodon<sup>1</sup>

World Bank

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## Abstract

Raising the minimum wage may reduce inequality by increasing the wages of low-skill workers, but it may also increase inequality due to negative impacts on employment that produce wage losses. Using estimates of the elasticities of wages and employment to changes in the minimum wage in Colombia and Brazil, we show that the net impact on inequality of increasing the minimum wage may depend on the distributional weights used for inequality measurement. The results are obtained by decomposing the Gini index into reranking and gap-narrowing Effects. Inequality increasing reranking effects, which are associated to job losses, may dominate inequality decreasing gap-narrowing effects, which are associated with wage gains, when high weights are placed on workers with low earnings. For standard distributional weights however, the net impact is a reduction in wage inequality.

JEL categories: D33, J38, J23

Keywords: minimum wage, inequality, horizontal equity

## Corresponding author:

Quentin Wodon  
World Bank  
1818 H Street  
Washington, DC 20433  
e-mail: [qwodon@worldbank.org](mailto:qwodon@worldbank.org)

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## **1. Introduction**

There is a tradeoff between the wage and employment effects of increasing the minimum wage. Earnings of low-skill workers may increase more than average earnings, thereby reducing wage inequality. But the risk of losing one's job, or not finding one, is also higher for low-skill workers, thereby increasing inequality, and also inducing negative impacts in terms of horizontal equity (Neumark et al. 1998, 2000; Maloney and Nuñez, 2001; Fajnzylber, 2001). In a country such as the United States where only a small share of workers are affected, the net impact on wage inequality may be small (see e.g., Addison and Blackburn, 1999; Burkhauser and Finegan, 1989; Card and Krueger, 1995; Horrigan and Mincy, 1993; Neumark et al., 1998; Neumark et al., 2000). But in a developing country, with a higher fraction of workers nearby the minimum wage, the impacts may be larger. And even if they are not, for those workers who are affected, especially those who may lose their job, the impacts are substantial, potentially posing a difficult trade-off for policy makers.

As pointed out by Addison and Blackburn (1999), many studies on the welfare implications of raising the minimum wage rely on assumptions about the impact on the wages of workers initially working below and above the current minimum. Some studies assume complete coverage (all workers earning less than the minimum are assumed to be raised to the new minimum), while other studies assume partial coverage. Instead of assuming full or partial coverage, an alternative is to proceed empirically by estimating wage and employment elasticities to the minimum wage across the whole distribution of wages. For the United States, Neumark et al. (2000) find ripple effects of changes in the minimum wage that have significant impact upon wages up to 200 percent above the minimum wage. This may occur among others

when the minimum wage serves as a benchmark for setting wages for workers who earn more than the legal minimum. That is, wage contracts may be indexed to minimum wages.

Similar qualitative results are obtained for Colombia by Maloney and Nuñez (2001) and for Brazil by Fajnzylber (2001). In both of these countries, workers at the bottom of the wage distribution have a large and positive wage elasticity with respect to the minimum wage, and the elasticity remains positive for wages that are much higher than the prevailing minimum wage. Note also that in Brazil, increases in the minimum wage lead to wage increases for both formal and informal workers.<sup>2</sup> This phenomenon is referred to as the *Efeito Faro* – or the numeraire effect of the minimum wage (see also Souza and Baltar, 1979; and Neri, et al., 1999).

Yet increases in the minimum wage may negatively affect employment. In Brazil and Colombia, these same authors estimate that an increase in the minimum wage does indeed reduce employment, again with larger effects for workers at the bottom of the wage distribution. The observed elasticities of employment to the minimum wages are, however, larger in Colombia than in Brazil. In Colombia, Maloney and Nuñez (2001) find minimum wage elasticities of employment ranging from -0.1 to -0.33. Bell (1997), however, finds larger negative employment elasticities (up to -0.9) using older data. In Brazil, the estimates by Fajnzylber (2001) are lower than those found in Colombia, ranging from zero to -0.17. In the United States, the employment elasticities are higher than in Brazil, and similar to those observed in Colombia by Maloney and Nuñez (2001), ranging from -0.15 to -0.3 (see for example Brown, et al., 1982, and Neumark et al., 2000). Clearly, smaller employment effects of increases in the minimum wage make it easier to reduce poverty and/or inequality by increasing the minimum wage.<sup>3</sup>

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<sup>2</sup> The formal sector is constituted by workers earning salaries and receiving full benefit packages.

<sup>3</sup> Controlling for the level of enforcement of the minimum wage, this is more likely to be true when the initial value of the minimum wage is low. In Brazil, as shown by Carneiro, et al. (1999), the value of the minimum wage is very

In this paper, we build on previous research to analyze in more detail the impact of the minimum wage on wage inequality in Brazil and Colombia. Using the extended Gini index (Yitzhaki, 1983) to measure inequality, we test whether the impact on inequality of a higher minimum wage is robust to the choice of distributional weights when estimating inequality. We also decompose the overall impact on inequality into gap-narrowing effects (higher wage gains for low-skilled workers) and reranking effects (loss of employment for some workers). While the gap-narrowing effects are inequality decreasing, the reranking effects are inequality increasing and can also be associated with the concept of horizontal inequity. This decomposition follows work on taxation by Plotnick (1981), Kakwani (1984), Aronson and Lambert (1994), and Lerman and Yitzhaki (1994).

Our main result is that estimates suggest that the immediate result of an increase in the minimum wage reduces inequality in Colombia and in Brazil for the period under review. However, in Colombia, a raise in the minimum wage increases inequality when a high enough weight is placed on lower-wage workers, because reranking effects dominate gap-narrowing effects with a high weight placed on the bottom part of the distribution where those who lose their jobs are most likely located. In Brazil by contrast, we find that reranking effects are mild. In both countries, we also find that the impact on inequality depends on the size of the increase in the minimum wage and on the assumptions made regarding the subsistence wage of workers who lose their job (e.g., a higher subsistence wage reduces the probability that the reranking effects will dominate the gap-narrowing effects).

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low, falling short of the amount necessary to enable workers to avoid poverty. Neri et al. (1999) suggest that a 43 percent increase in the minimum wage contributed to a six percent reduction in poverty.

The rest of paper is structured as follows. Section 2 provides a description of our data. Section 3 presents our method for analyzing the gap-narrowing and reranking effects on inequality of increasing in the minimum wage.

## **2. Data and descriptive statistics**

For Brazil, we use the household survey of the *Pesquisa Nacional por Amostra de Domicilios* (PNAD) for 1999 carried by the *Instituto Brasileiro de Geografia e Estatística*. For compatibility with previous work by Fajnzylber (2001), we restrict the sample to urban workers from the states of Rio de Janeiro, Sao Paulo, Pernambuco, Bahia, Minas Gerais, and Rio Grande do Sul. The sample is also restricted to so-called *registered* workers (i.e., salaried workers who receive full benefits) between 16 and 65 years of age with positive earnings. The sample includes 32,805 workers representing approximately 23 percent of the urban employment.

For Colombia, we use the September 1999 *Encuesta Nacional de Hogares* carried jointly by the *Departamento de Planeación Nacional* and the *Departamento Administrativo Nacional de Estadística*. For comparability with Maloney and Nuñez (2001), we restrict the sample to urban workers in the formal sector living in the seven principal metropolitan cities of Bogota, Medellín, Cali, Barranquilla, Manizales, Bucaramanga and Pasto. We further limit the sample to workers between 16 and 65 years of age who work between 30 and 50 hours a week, and have positive earnings. The sample includes 9,484 workers, accounting for 56 percent of the urban employment.

Brazil and Colombia have today very different minimum wage levels, in part because of differences in long-term trends in the value in real terms of the minimum wage. Figure 1 shows that the minimum wage in Colombia has appreciated over the past three decades. In Brazil by

contrast, the minimum wage has depreciated in real terms, except for a 5 year period that started after the adoption in 1994 of a stabilization plan (the *Plano Real*). In 1999, as shown in Table 1, the minimum wage was equal to 17.8 percent of the mean wage in our sample in Brazil, versus 36.7 percent in Colombia. The minimum wage also represented slightly less than one third of the median wage in Brazil, versus more than two thirds in Colombia.

In order to illustrate where the minimum wage lies in the distribution of wages in both countries, kernel estimates of the hourly wage densities are presented in Figure 2. To produce these estimates, we assume that the total wage distribution is bounded above and below such that  $\underline{W} \leq w \leq \overline{W}$ , where  $w$  represents a wage level of a continuum of wages of sample size  $m$ . Each observation in the sample has a particular probability mass (weight)  $\delta_i$  assigned to it, with  $\sum_i \delta_i = N$ , where  $N$  represents the total population. The kernel estimate  $\hat{f}(w)$  of the wage density is based on a set of point estimates  $\{W_i\}_{i=1}^N$  such that:

$$\hat{f}(w) = \sum_{i=1}^N \frac{\delta_i}{h} K\left(\frac{W_i - w}{h}\right), \text{ where } \sum_i \delta_i = N, \quad (1)$$

where  $W_i$ ,  $w > 0$ ,  $h$  is the bandwidth, and  $K(\cdot)$  is the kernel function. The selection of the bandwidth follows Silverman (1986). Denoting the standard deviation of the distribution of wages by  $std$ , and the 25<sup>th</sup> and 75<sup>th</sup> centiles by  $q25$  and  $q75$ , the bandwidth  $h$  is determined by:

$$h = 0.9 \times \min\left(std, \frac{q75 - q25}{1.349}\right) \times m^{-0.2}. \quad (2)$$

The resulting bandwidths for Brazil and Colombia are respectively 0.093 and 0.098. The kernel densities use Epanechnikov as kernel function and they are based on 100 point estimates ( $m = 100$ ). The Figure clearly shows a higher value of the minimum wage relative to the mean

or median in Colombia than in Brazil, with the minimum wage being close the mode in Colombia.

### 3. Gap-narrowing and reranking effects of increases in the minimum wage

In order to estimate the impact of changes in the minimum wage on wage inequality, we will use the extended Gini index of inequality. This index allows to a relatively straightforward decomposition of total changes into gap-narrowing and reranking effects.

Denote by  $\mu$  the mean wage, by  $s = w/\mu$  the normalized wage of any given individual, and by  $F$  the normalised rank of this worker in the distribution of wages (so that  $F$  takes a value between zero for the lowest-wage worker and one for the highest-wage worker). The standard Gini index can be defined as  $G = 2\text{cov}(s, F)$ . The extended Gini index (Yitzhaki, 1983), which can accommodate different weight structures, is defined as:

$$G(\nu) = -\nu \text{cov}(s, (1-F)^{\nu-1}) \quad (3)$$

A value of 2 for the parameter  $\nu$  in equation (3) corresponds to the standard Gini index. A higher (lower) value for  $\nu$  implies a higher (lower) weight placed on the bottom part of the distribution. For example, the rank with the highest weight when  $\nu=2$  is the median individual, while with  $\nu=6$ , the highest weight is placed on the individual at the 30<sup>th</sup> percentile of the distribution.

In order to analyze changes in inequality over time, the decomposition of the total change in the standard Gini index of inequality into gap-narrowing and reranking effects follows work on taxation by Plotnick (1981), Kakwani (1984), Aronson and Lambert (1994), and Lerman and Yitzhaki (1994). Following Lerman and Yitzhaki (1994), if subscripts B and A denote wages,



ranks, and Gini Indexes before and after an increase in the minimum wage, we can use the linearity of the covariance operator in order to decompose the change in the standard Gini index as follows:

$$G_B - G_A = 2 \text{cov}(s_B - s_A, F_A) + 2 \text{cov}(s_B, F_B - F_A) \quad (4)$$

The first term in Equation (4) is the gap-narrowing effect of the increase in the minimum wage, holding the rank constant. Since the increase in wages tends to be negatively correlated with the wage level of individuals, the gap-narrowing effect should be positive, thereby contributing to a decrease in inequality, as is typically observed when assessing the impact of progressive taxation systems. The second term is the reranking effect, which measures the impact of changes in ranks holding wages constant. It can be shown that the reranking effect will be negative, corresponding to an increase in inequality (the same is typically observed for taxes).<sup>4</sup> Reranking is often associated with horizontal inequity, whereby similar individuals are not treated in the same way by a policy (after the increase in the minimum wage, some workers loose their jobs, but others don't). It is straightforward to generalize Equation (4) for the extended Gini index as follows:

$$G_B - G_A = -\nu \text{cov}(s_B - s_A, (1-F_A)^{\nu-1}) - \nu \text{cov}(s_B, (1-F_B)^{\nu-1} - (1-F_A)^{\nu-1}) \quad (5)$$

While we do observe the current distribution of wages in the data (corresponding to the year 1999), we must simulate the distribution after an increase in the minimum wage in order to estimate the total change in inequality as well as the gap-narrowing and reranking effects. To do so, we rely on estimates of the wage and employment elasticities to the minimum wage provided

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<sup>4</sup> For the definition of the gap-narrowing and reranking effects, we follow Equation (3) of the paper by Lerman and Yitzhaki (1994). This means that we use the rank after the increase in the minimum wage for the gap-narrowing effect, and the wage before the increase in the minimum wage for the reranking effect in the decomposition.

by Fajnzylber (2001) for Brazil, and Maloney and Nuñez (2001) for Colombia. Specifically, using the rotating panel structure of Colombia's *Encuesta Nacional de Hogares*, Maloney and Nuñez (2001) estimated the impact on wages and employment of changes between 1997 and 1999, and the same analysis was carried by Fajnzylber (2001) with Brazilian data for 1982-1997.

The results are reproduced in Tables 2 and 3. Wage elasticities (for hourly earnings) are positive, so that an increase in the minimum wage increases wages for workers, but the elasticities are smaller for higher-wage workers, as expected. Employment elasticities are negative (an increase in the minimum wage reduces the probability of working), again with smaller impacts in absolute terms for higher-wage workers, at least in most cases. All elasticities reported in Tables 2 and 3 were estimated for urban men and women without accounting for potential lagged effects (these effects are small in both Maloney and Nuñez's, 2001; and Fajnzylber, 2001 estimations). As mentioned earlier, the samples in both studies consist of workers between 16 and 65 years of age, who work in the formal sector and whose salaries are positive. Maloney and Nuñez further restrict their sample to those working between 30 and 50 hours a week. In Colombia, the period used for the estimation saw an increase in real terms of the minimum wage of 7 percent.<sup>5</sup> In Brazil, over the (longer) period used for the estimation of the elasticities, the minimum wage devalued in real terms by 28 percent.

We use these elasticities to simulate the impact of an increase in the minimum wage on inequality, and to decompose this impact into gap-narrowing (inequality reducing) and reranking (inequality increasing) effects. Denoting the wages of a worker before and after a change in the minimum wage by  $w_A$  and by  $w_B$ , the  $J$  intervals in the distribution of wages in Tables 2 and 3 by  $I_j$   $\{j = 1 \dots J\}$ , the wage elasticities for the various intervals by  $\varepsilon_{w_j}$ , and the employment

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<sup>5</sup> This information was provided by Jairo Nuñez from the Universidad de los Andes. Bogotá, Colombia.

elasticities by  $\varepsilon_{Ej}$ , we simulate the distribution of wages after a change in the minimum wage  $\Delta MW$  as follows:

$$w_A = \begin{cases} w_B * (1 + \varepsilon_{wj} * \frac{\Delta MW}{MW}) & w.p. \quad 1 - \left| \varepsilon_{Ej} \right| \frac{\Delta MW}{MW} \quad \text{if } w_A \in I_j \quad ; j = 1, \dots, J \\ w_s & w.p. \quad \left| \varepsilon_{Ej} \right| \frac{\Delta MW}{MW} \quad \text{if } w_A \in I_j \quad ; j = 1, \dots, J \end{cases} \quad (6)$$

In Equation (6), for the workers who do not lose their jobs, we use the wage elasticities to increase wages upward. For the workers who do lose their jobs, we assign a subsistence wage  $w_s$ . For example, given the number of observations in the Colombian sample (9484) and the employment elasticities estimated by Maloney and Nuñez (2001), a total of 142 workers would become unemployed after an increase in the minimum wage of 10 percent. Because the subsistence-level wage matters for estimating the impact on inequality, we assess the robustness of our results with three different subsistence level wages: zero earnings, and the equivalent in local currency of, respectively, one and two U.S. dollars per day (these are daily poverty lines used by organizations such as the World Bank for international comparisons of welfare; we divided these values by eight in order to obtain hourly subsistence wages). In the sample, the individuals who lose their jobs are selected randomly in each wage interval according to the proportions defined by the employment elasticities in Tables 2 and 3. For this, a Monte Carlo simulation is performed. We report the mean results of the Monte Carlo simulations for the impact on inequality of increasing the minimum wage, and the decomposition of this impact.

The standard Gini index estimated with the Colombian data (before running the simulations for the impact of an increase in the minimum wage) is 0.4960. The extended Gini Indexes for  $\nu = 4$  and  $\nu = 6$  are respectively 0.6478 and 0.6907. In Brazil, the standard Gini is

0.5290 and the extended Ginis for  $\nu=4$  and  $\nu=6$  are, respectively, 0.7220 and 0.7539. Standard errors of these Gini index estimates are 0.009, 0.008, and 0.007 for Colombia; and 0.004, 0.003, and 0.002 for Brazil respectively.<sup>6</sup> We simulate the impact on inequality of increasing the minimum wage by 6 percent, 7 percent, and 8 percent. These values were chosen because the underlying elasticities were estimated by Maloney and Nuñez for a period in time during which the minimum wage was increased by approximately 7 percent in Colombia in real terms, and because in Brazil after 1996 the minimum wage has been increasing by approximately 5 percent per year in real terms.

The results are presented in Table 4. In Colombia, if the workers losing their jobs do not have any subsistence wage to rely upon, raising the minimum wage decreases the Gini index under the standard distributional weights ( $\nu=2$ ), but the impact is close to zero for higher weights placed on the lower part of the distribution ( $\nu=4$ ), and reversed for still higher weights ( $\nu=6$ ). This is because when high weights are placed on those with low wages when estimating inequality, the impact of job losses (i.e., the reranking component of the decomposition) dominates the wage gains brought about by the increase in the minimum wage. However, if workers losing their jobs manage to keep subsistence earnings (as we will specify below), the negative impact on inequality is reduced even for high weights placed on those with lower earnings. For example, for relatively high levels of subsistence wages (US\$ 2/day, which corresponds approximately to 46 percent of the minimum wage), even with high weights on the lowest wages ( $\nu=6$ ), the increase in the minimum wage remains inequality decreasing.

Larger increases in the minimum wage tend to magnify the impacts on inequality. This is not surprising. If an increase in the minimum wage of, say, 6 percent is inequality decreasing

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<sup>6</sup> Standard errors of the Gini indexes are calculated by bootstrapping on the wage data.

(increasing), a bigger increase should also be inequality decreasing (increasing) since the same forces are at work, but the impact is larger. This assumes that the wage and employment elasticities remain valid for larger increases in the minimum wages.

For Brazil, the results in Table 5 indicate that gap-narrowing effects dominate reranking effects in all experiments. As expected, reranking effects become larger when we assume lower subsistence wages for the workers losing their jobs, and when the hypothetical increase in the minimum wage gets larger. But the overall effect remains inequality decreasing. Consider, for example, the results of the experiment assuming no subsistence wage, an increase of 8 percent in the minimum wage, and value  $\nu = 6$  (this experiment yields the largest reranking effect in Table 5). Even in this case, the gap-narrowing component of the Gini decomposition shows a decrease in wage inequality of 0.61 percentage points due to gains in earnings, versus an increase in inequality of 0.17 percentage points due to the negative employment or reranking effects. Thus in Brazil, under all cases considered in Table 5, reranking effects, which are inequality increasing, are approximately equivalent to only one third of the inequality reducing gap-narrowing effects. Therefore, in Brazil, a policy increasing the minimum wage may be a useful tool for reducing wage inequality. In contrast, in Colombia, the inequality impact of increasing the minimum wage is more contingent on the specific choice of distributional weights used to measure inequality<sup>7</sup>.

#### **4. Conclusions**

Raising the minimum wage may increase the wages of low-skill workers, and thereby reduce inequality. But an increase in inequality may also be observed if many workers lose their

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<sup>7</sup> Part of the differences between the two countries may be due to differences in the definition of the samples, but there is little that we can do here to deal with this issue since we reproduced the samples used in previous studies precisely in order to be able to use the elasticities estimated in these studies.

job and are not able to rely on adequate subsistence wages. Using estimates of the elasticities of wages and employment to changes in the minimum wage for Brazil and Colombia, we have shown that the net impact on inequality may very well depend on the distributional weights used for inequality measurement (and of course on the assumptions made for the subsistence wages accessible to the workers who become unemployed). In Colombia, reranking effects due to job losses dominate gap-narrowing effects associated with wage gains when high weights are placed on poorer workers. This may pose a dilemma for policy makers.

In many cases however, the net impact remains a reduction in wage inequality. This is especially true in Brazil, where the employment elasticities to the minimum wages are lower, probably because the minimum wage is itself quite low relative to the mean or median wage. In Brazil, even with high distributional weights placed on the poor, reranking effects, which are inequality increasing, represent only a small share of the positive impacts on wage inequality of the gap-narrowing effects resulting from wage gains. This means that increasing the minimum wage in Brazil could perhaps alleviate some of the high inequality observed in that country.

While the results presented here may not be valid for other periods of time or other countries because the underlying wage and employment elasticities may not be structural, the method proposed for testing the robustness of the impact on inequality of changes in the minimum wage, and for decomposing this impact, can easily be applied in other circumstances.

## References

- Addison, John and Blackburn, McKinley (1999), Minimum Wages and Poverty, *Industrial and Labor Relations Review*, Vol. 53, n2: 393-409.
- Aronson, J. Richard, Lambert, Peter J. (1994). Decomposing the Gini Coefficient to Reveal the Vertical, Horizontal, and Reranking Effects of Income Taxation. *National Tax Journal*, Vol. 47, n2: 273-94.
- Bell, L. (1997). The Impact of Minimum Wages in Mexico and Colombia. *Journal of Labor Economics*, vol. 15, no.3, pt.2.
- Brown, C., Gilroy, C., and Kohen, A. (1982). The Effect of the Minimum Wage on Employment and Unemployment. *Journal of Economic Theory*, vol. 20: 487-528.
- Burkhauser, R., and Finegan A. (1989). The Minimum Wage and the Poor: The End of a Relationship. *Journal of Political Analysis and Management*, vol. 8, no.1: 53-71.
- Card, D., and Krueger, A. (1995). Myth and Measurement: The New Economics of the Minimum Wage. Princeton University Press. Princeton, N.J.
- Card, C. and Ashenfelter O. (1999). Minimum Wages, Employment and the Distribution of Income. *Handbook of Labor Economics*, vol. 3b, chapter 32.
- Carneiro, F., Foguel, M., and Ramos, L.(1999) The Impact of the Minimum Wage on the Labor Market, Poverty, and Fiscal Budget in Brazil. Working Paper. Instituto de Pesquisa Econômica Aplicada, Brazil.
- Dickens, R., Machin, S., Manning, A. (1999). The Effects of Minimum Wages on Employment: Theory and evidence from Britain. *Journal of Labor Economics*, vol. 17, no.1: 1-22.
- DiNardo, J, Fortin, N,, and Lemieux, T.(1996). Labor Market Institutions and the Distribution of wages, 1973-1992: A semi parametric Approach. *Econometrica*, vol. 64, no. 5
- Fajnzylber, P. (2001). Minimum Wage Effects Throughout the Wage Distribution: Evidence from Brazil's Formal and Informal Sectors. Working Paper. Department of Economics, Universidad Federal de Minas Gerais. Belo Horizonte, Brazil.
- Fajnzylber, P., and Maloney, W. (2001). Labor Demand and Trade Reform in Latin America. Working Paper. The World Bank, Washington D.C.
- Gramlich, E. (1976). The Impact of Minimum Wages on Other Wages, Employment and Family Incomes. *Brooking Papers on Economic Activity*, vol. 2, no. 76: 409-451.
- Horrigan, W. and Mincy, R. (1993). Uneven Ties. Book edited by Sheldon Danziger and Peter Gottschalk. Russell Sage Fundation. New York.

- Johnson, W., and Browning, E.(1983). The distributional and Efficiency Effects of increasing the Minimum Wage: A Simulation. *The American Economic Review*, vol. 73, no.1 :204-211
- Kakwani, N. (1984). The Relative Deprivation Curve and Its Applications. *Journal of Business and Economic Statistics*, vol. 2, no.4: 384-94.
- Lerman, R., and Yitzhaki S. (1994). Changing Ranks and the Inequality Impact of Taxes and Transfer. *National Tax Journal*, vol. 48, no. 1: 45-59.
- Machin, S., and Manning, A. (1994). The Effects of Minimum Wages on Wage Dispersion and Employment: Evidence from the U.K. Wage Councils. *Industrial and Labor Relations Review*, vol. 47, no.2: 319-329.
- Maloney W., and Nuñez, J.. (2001), Measuring the impact of minimum wages. Evidence from Latin America, in J. Heckman and Pagés, editors, *Law and Employment: Lessons from Latin America and the Caribbean*, NBER (forthcoming).
- Mincy, R.(1999). Raising the Minimum Wage: Effects on Family Poverty. *Monthly Labor Review*, vol. 113, no.7: 18-25.
- Neri, M., Gonzaga, G., and Camargo, J. (1996) Efeitos Informais do Salário Mínimo e Pobreza. *Série de Seminários sobre Estudos do Trabalho*, Vol. 6, Instituto de Pesquisa Economica Aplicada, Rio de Janeiro.
- Neumark, D., Schweitzer, M., and Washer, W. (1998). The Effects of Minimum Wages on the distribution of Family Income: A Non-Parametric Analysis. Working Paper 6536. National Bureau Of Economic Research. Cambridge, MA.
- Neumark, D., Schweitzer, M., and Washer, W. (2000). The Effects of Minimum Wages Throughout the Wage Distribution. Working Paper 7519. National Bureau Of Economic Research. Cambridge, MA.
- Plotnick, R. (1981). A Measure of Horizontal Inequity. *Review of Economics and Statistics*, vol. 63, no.2: 283-88.
- Silverman, B, (1986). Density Estimation for Statistics and Data Analysis. London, Chapman & Hall.
- Souza, P., and Baltar, P. (1979). Salário Mínimo e a Taxa de Salário do Brazil. *Pesquisa e Planejamento Economico*, vol. 9: 629-660.
- Yitzhaki, S. (1983). On an extension of Gini inequality index. *International Economic Review*, vol. 24, no.3: 617-28.



**Table 1. Summary statistics for Colombia and Brazil, 1999**

| MW=Min. Wage | MW/Mean  | MW/Median | MW/ Tenth decile | Skewness |
|--------------|----------|-----------|------------------|----------|
| Colombia     | 0.367309 | 0.692692  | 1.182194         | 1.885853 |
| Brazil       | 0.177552 | 0.328074  | 0.804102         | 1.847761 |

Source: Authors' estimates.

**Table 2. Impact of increasing the minimum wage on wages/employment, Colombia 1999**

| Wage/Minimum Wage Intervals | Observations in the sample | Percent of observations | Hourly Wage Elasticity | Employment Elasticity |
|-----------------------------|----------------------------|-------------------------|------------------------|-----------------------|
| 0.0 – 0.5                   | 262                        | 2.76                    | 1.3230                 | -0.2719               |
| 0.5 – 0.7                   | 485                        | 5.11                    | 1.1612                 | -0.2499               |
| 0.7 – 0.9                   | 798                        | 8.41                    | 1.0189                 | -0.1970               |
| 0.9 – 1.1                   | 1658                       | 17.48                   | 0.6869                 | -0.1680               |
| 1.1 – 1.3                   | 1349                       | 14.22                   | 0.5688                 | -0.1517               |
| 1.3 – 1.5                   | 682                        | 7.19                    | 0.2635                 | -0.1661               |
| 1.5 – 2.0                   | 1075                       | 11.33                   | 0.4645                 | -0.0907               |
| 2.0 – 3.0                   | 1289                       | 13.59                   | 0.3874                 | -0.1114               |
| 3.0 – 4.0                   | 536                        | 5.65                    | 0.1778                 | -0.1099               |
| > 4.0                       | 1350                       | 14.23                   | 0.1249                 | -0.1293               |

Source: Maloney and Nuñez (2001) for the elasticities; authors' estimates for observations and cumulative density.

**Table 3. Impact of increasing the minimum wage on wages/employment, Brazil 1999**

| Wage/Minimum Wage Intervals | Observations in the sample | Percent of observations | Hourly Wage Elasticity | Employment Elasticity |
|-----------------------------|----------------------------|-------------------------|------------------------|-----------------------|
| 0.5 - 0.9                   | 961                        | 2.93                    | 1.4300                 | -0.167                |
| 0.9 - 1.1                   | 1113                       | 3.39                    | 1.0800                 | -0.090                |
| 1.1 - 1.5                   | 3124                       | 9.52                    | 0.8900                 | -0.073                |
| 1.5 - 2.0                   | 3906                       | 11.91                   | 0.8300                 | -0.074                |
| 2.0 - 2.5                   | 3597                       | 10.96                   | 0.7100                 | -0.037                |
| 2.5 - 3.0                   | 3138                       | 9.57                    | 0.6300                 | -0.028                |
| 3.0 - 3.5                   | 2351                       | 7.17                    | 0.6200                 | 0.000                 |
| 3.5 - 4.0                   | 1917                       | 5.84                    | 0.5600                 | 0.009                 |
| 4.0 - 5.0                   | 2664                       | 8.12                    | 0.5200                 | 0.000                 |
| 5.0 - 6.0                   | 1886                       | 5.75                    | 0.4600                 | 0.029                 |
| 6.0 - 9.0                   | 3052                       | 9.30                    | 0.4900                 | 0.029                 |
| 9.0 - 12                    | 1847                       | 5.63                    | 0.4200                 | 0.029                 |
| 12>                         | 3249                       | 9.90                    | 0.3900                 | 0.048                 |

Source: Fajnzylber (2001) for the elasticities; authors' estimates for observations and cumulative density.

**Table 4. Changes in Gini ( $G_B - G_A$ ) after an increase in minimum wage, Colombia 1999**

[All impacts multiplied by 100: A value of 1.00 means an increase in the Gini of 1 percentage point].

|                                     | 6 percent increase | 7 percent increase | 8 percent increase |
|-------------------------------------|--------------------|--------------------|--------------------|
| <b>Subsistence wage: 0 US\$/day</b> |                    |                    |                    |
| $\nu=2$ Overall impact              | 0.25               | 0.28               | 0.35               |
| Standard error                      | [0.13]             | [0.13]             | [0.13]             |
| Gap-narrowing                       | 0.65               | 0.93               | 0.90               |
| Reranking                           | -0.40              | -0.65              | -0.56              |
| $\nu=4$ Overall impact              | 0.00               | -0.02              | -0.02              |
| Standard error                      | [0.11]             | [0.11]             | [0.11]             |
| Gap-narrowing                       | 0.86               | 1.18               | 1.15               |
| Reranking                           | -0.87              | -1.21              | -1.18              |
| $\nu=6$ Overall impact              | -0.35              | -0.47              | -0.51              |
| Standard error                      | [0.10]             | [0.10]             | [0.10]             |
| Gap-narrowing                       | 0.92               | 1.24               | 1.23               |
| Reranking                           | -1.29              | -1.72              | -1.76              |
| <b>Subsistence wage: 1 US\$/day</b> |                    |                    |                    |
| $\nu=2$ Overall impact              | 0.34               | 0.40               | -0.48              |
| Standard error                      | [0.13]             | [0.13]             | [0.13]             |
| Gap-narrowing                       | 0.68               | 0.96               | 0.95               |
| Reranking                           | -0.35              | -0.56              | -0.48              |
| $\nu=4$ Overall impact              | 0.22               | 0.26               | 0.28               |
| Standard error                      | [0.11]             | [0.11]             | [0.11]             |
| Gap-narrowing                       | 0.91               | 1.23               | 1.22               |
| Reranking                           | -0.69              | -0.97              | -0.95              |
| $\nu=6$ Overall impact              | -0.01              | -0.04              | -0.04              |
| Standard error                      | [0.10]             | [0.10]             | [0.10]             |
| Gap-narrowing                       | 0.98               | 1.30               | 1.31               |
| Reranking                           | -1.00              | -1.34              | -1.37              |
| <b>Subsistence wage: 2 US\$/day</b> |                    |                    |                    |
| $\nu=2$ Overall impact              | 0.43               | 0.52               | 0.60               |
| Standard error                      | [0.13]             | [0.13]             | [0.13]             |
| Gap-narrowing                       | 0.72               | 0.99               | 1.00               |
| Reranking                           | -0.29              | -0.48              | -0.41              |
| $\nu=4$ Overall impact              | 0.44               | 0.54               | 0.58               |
| Standard error                      | [0.11]             | [0.11]             | [0.11]             |
| Gap-narrowing                       | 0.96               | 1.28               | 1.29               |
| Reranking                           | -0.52              | -0.74              | -0.72              |
| $\nu=6$ Overall impact              | 0.33               | 0.39               | 0.42               |
| Standard error                      | [0.10]             | [0.10]             | [0.10]             |
| Gap-narrowing                       | 1.04               | 1.35               | 1.39               |
| Reranking                           | -0.71              | -0.97              | -0.98              |

Source: Authors' estimates. Standard errors estimated by bootstrapping on wages. The mean standard error of the Monte Carlo experiments is reported.

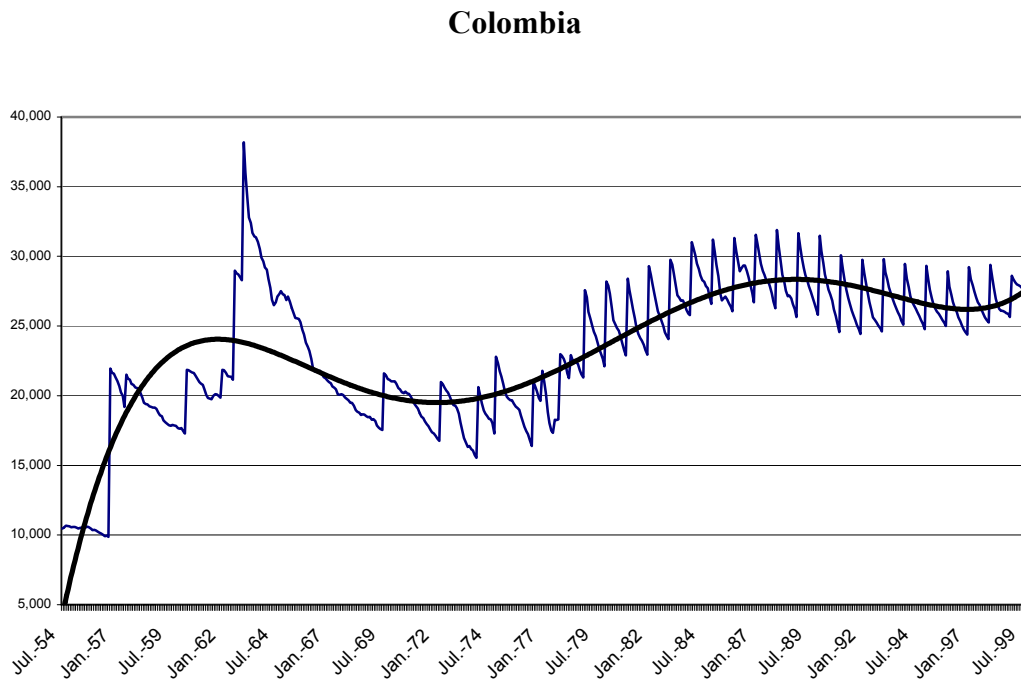
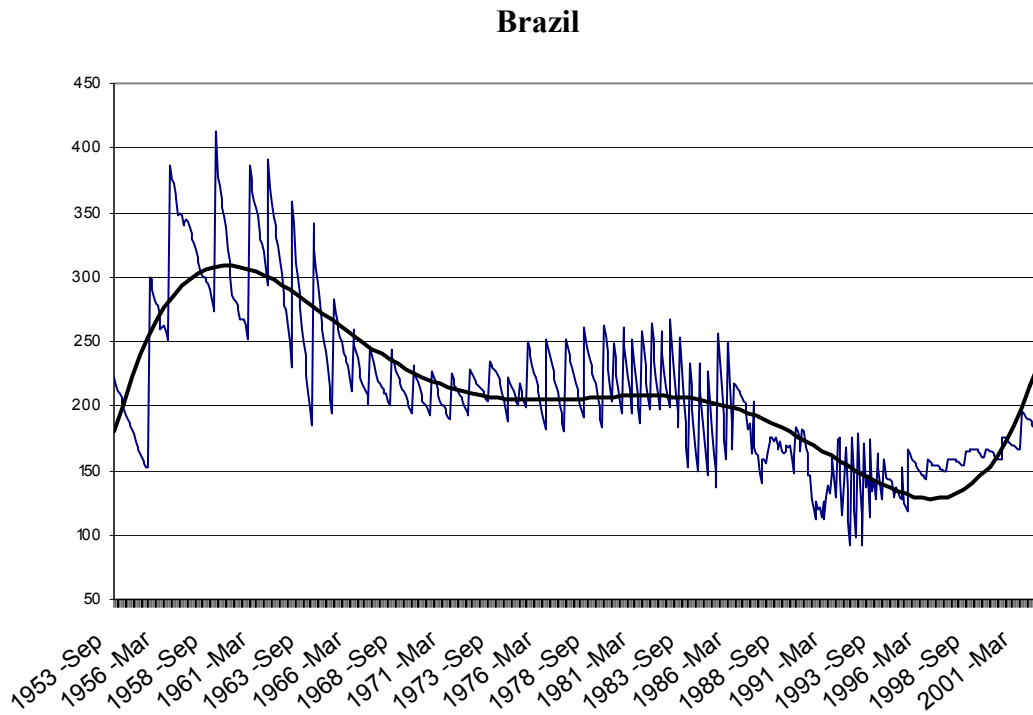
**Table 4. Changes in Gini after an increase in minimum wage, Brazil 1999**

[All impacts multiplied by 100: A value of 1.00 means an increase in the Gini of 1 percentage point].

|                                     | 6 percent increase | 7 percent increase | 8 percent increase |
|-------------------------------------|--------------------|--------------------|--------------------|
| <b>Subsistence wage: 0 US\$/day</b> |                    |                    |                    |
| $\nu=2$ Overall impact              | 0.33               | 0.39               | 0.44               |
| Standard error                      | [0.06]             | [0.05]             | [0.05]             |
| Gap-narrowing                       | 0.35               | 0.41               | 0.46               |
| Reranking                           | -0.02              | -0.02              | -0.02              |
| $\nu=4$ Overall impact              | 0.37               | 0.44               | 0.50               |
| Standard error                      | [0.04]             | [0.04]             | [0.04]             |
| Gap-narrowing                       | 0.44               | 0.52               | 0.58               |
| Reranking                           | -0.07              | -0.08              | -0.09              |
| $\nu=6$ Overall impact              | 0.33               | 0.39               | 0.44               |
| Standard error                      | [0.03]             | [0.03]             | [0.03]             |
| Gap-narrowing                       | 0.46               | 0.54               | 0.61               |
| Reranking                           | -0.13              | -0.15              | -0.17              |
| <b>Subsistence wage: 1 US\$/day</b> |                    |                    |                    |
| $\nu=2$ Overall impact              | 0.35               | 0.41               | 0.46               |
| Standard error                      | [0.06]             | [0.05]             | [0.05]             |
| Gap-narrowing                       | 0.36               | 0.42               | 0.48               |
| Reranking                           | -0.02              | -0.01              | -0.02              |
| $\nu=4$ Overall impact              | 0.42               | 0.49               | 0.55               |
| Standard error                      | [0.04]             | [0.04]             | [0.04]             |
| Gap-narrowing                       | 0.47               | 0.54               | 0.62               |
| Reranking                           | -0.05              | -0.06              | -0.07              |
| $\nu=6$ Overall impact              | 0.40               | 0.47               | 0.53               |
| Standard error                      | [0.03]             | [0.03]             | [0.03]             |
| Gap-narrowing                       | 0.49               | 0.57               | 0.64               |
| Reranking                           | -0.09              | -0.10              | -0.12              |
| <b>Subsistence wage: 2 US\$/day</b> |                    |                    |                    |
| $\nu=2$ Overall impact              | 0.37               | 0.43               | 0.49               |
| Standard error                      | [0.05]             | [0.05]             | [0.06]             |
| Gap-narrowing                       | 0.38               | 0.44               | 0.50               |
| Reranking                           | -0.01              | -0.01              | -0.01              |
| $\nu=4$ Overall impact              | 0.46               | 0.54               | 0.61               |
| Standard error                      | [0.04]             | [0.04]             | [0.04]             |
| Gap-narrowing                       | 0.49               | 0.57               | 0.65               |
| Reranking                           | -0.03              | -0.04              | -0.04              |
| $\nu=6$ Overall impact              | 0.47               | 0.54               | 0.61               |
| Standard error                      | [0.03]             | [0.03]             | [0.04]             |
| Gap-narrowing                       | 0.52               | 0.60               | 0.68               |
| Reranking                           | -0.05              | -0.06              | -0.07              |

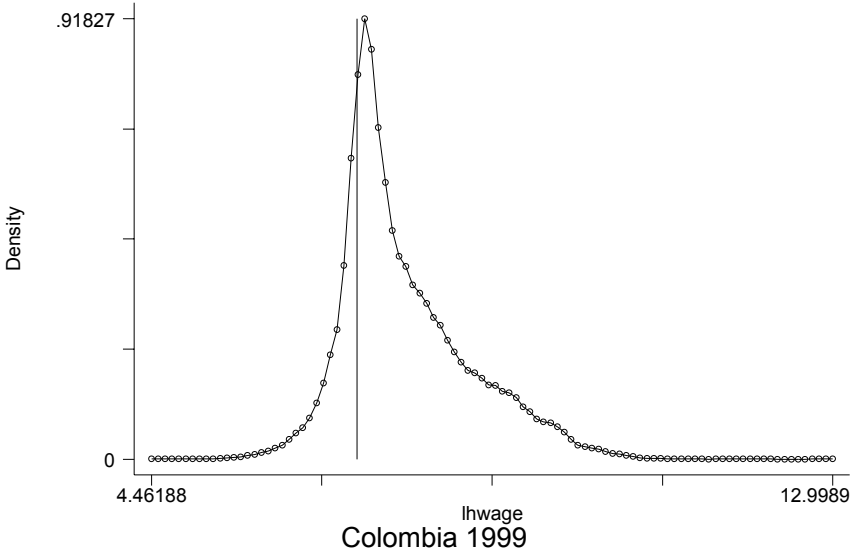
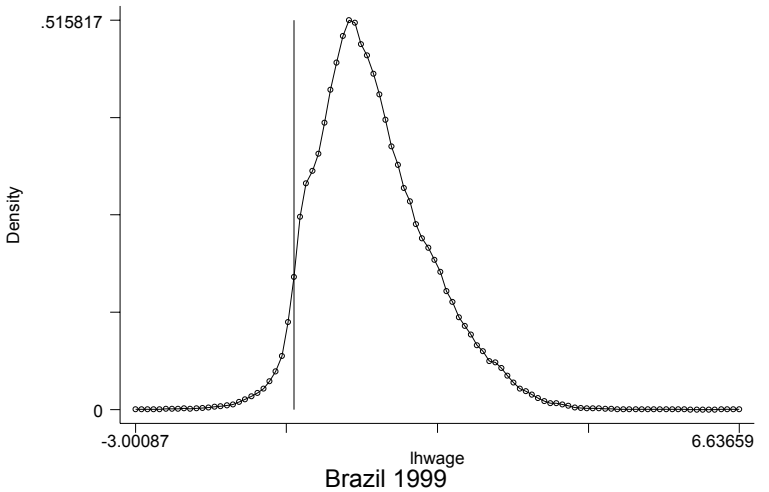
Source: Authors' estimates. Standard errors estimated by bootstrapping on wages. The mean standard error of the Monte Carlo experiments is reported.

**Figure 1. Trends in the real value of the minimum wage in Brazil and Colombia**



Source: Data provided by Jairo Nuñez for Colombia, and IBGE (2002) for Brazil. The actual trend in the real value of the minimum wage is smoothed by fitting a polynomial of degree 4.

**Figure 2. Kernel Density Estimates of Hourly Wage Distributions in Brazil and Colombia.**



Source: Authors' estimates. Point estimates, N=100, using Epanechnikov function and a bandwidth of 0.093 for Brazil and 0.098 for Colombia according to Silverman's (1995) rule.

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