

Alternative View Paper on

“Labor Market Reforms in Latin America: Consequences and Costs”*
(by Alejandra Cox Edwards)

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1. The Challenge and its Solutions

This solution paper provides policy proposals to “the challenge [of] seizing the benefits from globalization, cognizant of the difficulties imposed by the need to adjust.” While this challenge is very general, the paper then narrows it down and explains that the challenge is one of “[creating] employment...and [providing] social security in Latin America.” The paper proposes to re-regulate labor markets and provides three different solutions to this challenge. The solutions provided are very diverse and range from replacing social security taxes and dismissal costs with individual accounts to replacing the minimum wage with an income tax credit. All these solutions have in common that they respond to the challenge of keeping income security for workers but reducing inefficiencies in the labor market and, in particular, reducing employers’ disincentives to hire. This challenge should be stated more clearly in the paper.

The paper proposes three specific responses to the challenge of keeping income security while reducing inefficiencies in the labor market. First, the paper proposes to replace the current pay-as-you-go (PAYG) social security system, which exists in most Latin American countries and around the world, with a fully-funded social security system. Second, the paper proposes to replace severance payments, which are paid to workers upon dismissal, with a system of severance payments savings accounts (SPSA). Finally, the paper proposes to eliminate minimum wages and replace them with a tax return for the poor or “devolucion de impuestos para los pobres” (DIP) modeled after the earned income tax credit in the U.S. and other developed countries.

2. Replacing a PAYG System for a Fully-funded Social Security System

The first proposal of replacing a PAYG system with a fully-funded social security system has been implemented in a number of countries in the region, including Chile. The idea behind this reform is that it transfers the cost of social security from the firm to the worker, thus reducing disincentives to hire in the formal sector. At the same time, workers are not left without a retirement during their old age. The paper presents a model showing the benefits assuming that half of the cost of social security contributions is transferred from employers to workers after the reform. The benefit comes from the reduced deadweight loss due to inefficiently low demand for labor and the subsequent increase in employment and GDP as a result of the elimination of a PAYG system. On the other hand, the paper assumes zero costs as a result of this re-regulation.

From the benefits side, the paper may be under-estimating or over-estimating the gains of reform depending on what assumptions are made about how much of the cost of the social security contributions is passed on to workers before and after the reform. On the one hand, the paper assumes that under the PAYG system, before the reform, all the social security contributions are paid by employers. That is, the model in the paper assumes that prior to the reform there is no pass-through of the tax to workers. However, the theoretical literature on payroll taxes generally allows for the possibility that part of

the payroll tax may be passed on to the worker as a lower wage if the worker values at least some of the benefits from the contributions and as long as labor demand is not perfectly elastic. The empirical literature has found various degrees of pass-through. For example, the studies by Gruber (1994) and Gruber and Kruger (1994) find that 100% of maternity leave costs and workers' compensation costs are passed on to workers. By contrast, in my own work for Colombia with Maurice Kugler (Kugler and Kugler (2003)), we find instead find that around a fifth of payroll taxes paid in this country are passed on to workers. The extreme assumption of zero pass-through in this paper would maximize the gains from reform. On the other hand, the other extreme assumption of complete pass-through would imply no gain at all from replacing a PAYG for a fully-funded system. Moreover, while this paper assumes that after the introduction of individual accounts with the fully-funded system workers only value 50% of these contributions, Gruber (1997) finds 100% pass-through after the privatization of the social security system in 1980. The assumption of 50% pass-through instead of full pass-through under-estimates the extent of the gains from reform.

Table 1 presents results of the cost-benefit calculations under different assumptions about the extent of pass-through before and after the reform. The first row presents the results under the same assumptions made in the solution paper, i.e., no pass-through before the reform and 50% pass-through after the reform. The benefit, holding capital constant, as in the solution paper is of \$4,456,000 million or about 4% of the present discounted value of GDP.¹ The second row reports similarly the gain from reform when there is no initial pass-through but allowing the pass-through to be 100% after the introduction of individual accounts as found by Gruber (1997). In this case, the gains from the reform more than double and these reach about 10% of the PDV of GDP. This means that not allowing for complete pass-through after the reform under-estimates the benefits from the replacement of PAYG for a fully-funded system. The third row now also allows for full-shifting of taxes to workers even prior to reform, as has been found in some studies for the U.S. If taxes are fully shifted to workers to begin with, then the taxes do not generate any disincentives in terms of hiring and there are no gains from replacing the taxes for individual accounts. Consequently, the gains are zero under this scenario and this implies that the solution paper would be over-estimating the gains from reform. The final two rows, examine the gains when a fifth of the taxes are passed on to workers and the pass-through with individual accounts is either 50% or 100%. Comparing the 20% pass-through with the zero pass-through before the reform assumed in the solution paper, shows that the gains from reform are substantially reduced even in this case of partial shifting. In the first case when only 50% is passed on with individual accounts the gains disappear altogether, while in the second case of full shifting with individual accounts the gains exactly halve.

¹ These results are different from those in the solution paper, because the solution paper does not report the values of the parameters for the elasticity of labor supply, the elasticity of informal price with respect to the wage, and weights given to informal and formal goods in the CPI. I assume that the elasticity of labor supply is 0.3, the elasticity of the informal price with respect to its wage is 0.5 and the weights given to formal and informal goods are equal.

Another factor that could affect the calculation of benefits is the potential substitution away from capital and towards labor if the PAYG system is replaced by a fully-funded system. The reason is that the social security contributions under a PAYG system increased the costs of labor relative to capital and could distort the capital/labor ratio. When a fully-funded system is introduced, the cost of labor relative to capital falls and subsequently the stock of capital should fall while employment should increase. The solution paper captures the latter effect of an increase in employment, but fails to account for the fall in the capital stock. This is because the model allows for capital stocks to differ in the formal and informal sectors, but the total capital stock is held fixed and the model imposes the Ricardo-Viner assumption that capital is fixed in its sector of origin (i.e., the informal sector) also implying that the capital stock in the modern sector also remains fixed. Endogenizing the capital stocks in the formal and informal sectors in the model would show precisely the decrease in the capital stock in the formal sector as a result of the reform that I just described. In particular, replacing a PAYG system for a fully-funded system would increase the probability of formal employment because of the reduction in the tax and an increase the informal wage. This increase in the informal wage would then get passed on to prices in the informal sector also increasing the return to capital in the informal relative to the formal sector, thus reducing the capital stock in the formal sector. Then, the effect of the reform on GDP would be over-estimated since the reduction in capital would have to be accounted for.

Table 1 reports results which allow the capital stock to remain fixed as in the solution paper, and also results which allow the capital to respond to changes in the relative price of labor. In particular, I estimate the changes in capital implied by a change in employment. I allow for capital and labor are substitutes and take a midpoint of the estimates reported by Hamermesh (1990) of the elasticity of employment with respect to capital, $\sigma_{EK} = -1.2$. Thus, I estimate the change in capital as:

$$d\ln K = d\ln L / \sigma_{EK},$$

where the change in output then becomes:

$$d\ln Y = d\ln L / \sigma_{EK} + \alpha(1 - \sigma_{EK})d\ln L / \sigma_{EK}.$$

Then, the change in GDP is adjusted for the loss in the capital stock, thus moderating the output gains from reform. For example, under the solution papers preferred scenario the gain from reform is \$2,692,111 million instead of \$4,456,000 million or about 40% less when labor substitutes capital. Similarly, under my preferred scenario of a 20% pass-through before the reform and full pass-through after the reform, the gain is \$3,022,778 million instead of \$4,005,867 million or about 25% less when capital is allowed to vary.

On the other hand, from the cost side, the solution paper is likely to overestimate the gains from the reform. The costs of introducing this program are assumed to be zero. The paper explains the “transitional costs” involved in moving from one system to the other for the first generation transitioning to the new system and thus without their own individual accounts. However, the paper argues that these are costs that the government

would have had to pay for even without a reform. This is not clear since the payroll taxes paid by the current generation under a PAYG system may be sufficient to cover for the retiring generation (this all depends on the size of the cohort contributing and the size of the retiring cohort), even if there is an inefficiency being generated in the labor market in this case. By contrast, if the system gets replaced with individual accounts, the pensions for the generation retiring at that point in time will have to be covered by the government through another source of revenue. Table 1 includes an additional column with the costs of transition. The calculation of these transitional costs assumes that 3% of workers employed in the formal sector retire every year or about 5 million people and that each of these employees is paid a pension of \$1,200, which is the average per capita income in Latin America. The total transitional costs in this case are \$306,000, which is still a modest amount under any of the scenarios presented above. Consequently, introducing transitional costs into our cost-benefit calculation does not affect the conclusion that the net benefit from the reform is still highly positive.

The cost side also ignores the potential effect of payroll taxes on labor supply. Since the PAYG system pays pensions based on the last three years of contributions, individuals have little incentive to contribute to the system and pay taxes in the formal sector except for the three years prior to retirement. By contrast, under a fully-funded system benefits are directly linked to contributions so that individuals would have greater incentives to participate in the labor force. This means that even though employment would increase once moving to a fully-funded system, unemployment may not necessarily fall and it may even increase. This should be an additional cost to consider in the calculations.

3. Replacing Severance Payments with Individual Accounts

The second solution to the challenge of keeping income security while reducing inefficiencies in the labor market proposes to replace severance payments at the time of dismissal with severance payments savings accounts (SPSA). This is a novel solution which has only been introduced in a handful of countries around the world, including in Colombia within the Latin American region (see Kugler (2005) for an analysis of SPSA in Colombia). The solution paper suggests that the benefits of this reform would be very similar to those of replacing a PAYG by a fully-funded social security system, in the sense of increasing employment and reducing the deadweight loss and increasing GDP. The costs, on the other hand, are quantified as those involved in managing the individual accounts.

While this solution is clever, the model used to quantify the impact of this proposal is not the most appropriate. As well known models of dismissal costs show, dismissal costs not only reduce dismissals but also hiring, with a resulting ambiguous effect on net employment (see Bentolila and Bertola (1990); Hopenhayn and Rogerson (1993); Lazear (1990)). However, this paper assumes that the reduction in dismissal costs as a result of the introduction of dismissal accounts will be to increase employment. Part of the problem is that the model in the solution paper does not introduce costs of

adjustment. In addition, jobs end exogenously after each period in this model, so that there is really no role for dismissal costs to affect turnover. However, the effect of a reduction in dismissal costs is ambiguous in terms of its effect on employment but clear in term of an increase in turnover. In fact, the data reported in the paper as well as other studies do suggest lower turnover in Latin America than in developed countries, potentially due to restricting regulations (Eslava, Haltiwanger, Kugler and Kugler (2004); Haltiwanger, Kugler, Kugler, Micco and Pages (2004)). The elimination of dismissal costs may indeed be beneficial in the sense that it may generate efficiency-enhancing reallocation. In my work with M. Eslava, J. Haltiwanger and M. Kugler (Eslava, Haltiwanger, Kugler and Kugler (2005)), we find that the reduction of adjustment costs on labor increases total factor productivity by increasing the share of production of the most productive and shrinking the share of the least productive plants in Colombia. This would be captured in the model from the solution paper by an increase in A and a subsequent increase in GDP. This is a much fruitful avenue to take in trying to quantify the benefits of this reform.

Table 2 presents the gains from a reform that replaces dismissal costs by individual accounts and thus increases turnover or churning in the labor market. The effect is captured by quantifying the gains in GDP implied by an increase in efficiency due to increased churning. I do this in two ways. First, I take the increase in TFP attributed to the labor reform estimated in Eslava, Haltiwanger, Kugler and Kugler (2005), to estimate:

$$d\ln Y = d\ln A.$$

I turn this into a present discounted value by using the values of initial GDP and the discount and growth rate used in the solution paper. Next, I estimate the increase in efficiency due to churning by estimating the change in output as:

$$d\ln Y = \phi d\ln C,$$

where ϕ is the increase in productivity due to increased churning, and C indicates the churning or turnover rate. I get the increase in churning of a 6 log point increase from my analysis of the Colombian reform (Kugler (2004)) and the increase in productivity due to increased churning of 2% comes from Autor et al. (2007).

As in the solution paper, the cost of this reform is estimated as the 0.5% commission paid over the deposits made into the accounts. Since the deposits are 8.3% of salaries for formal sector workers, we use the average wage/year reported in the solution paper as well as the 170 million workers in the formal sector to estimate the costs of managing the accounts.

In my previous analysis of the introduction of severance payments savings accounts in Colombia (Kugler(2005)), I find that the introduction of SPSA reduces costs to employers by between 60% and 80% by passing the severance to the workers as lower wages. This implies that this still leaves between 40% and 20% of the severance cost to

the employers, thus not eliminating totally the dismissal costs. The solution paper takes the upper bound of the pass-through I find in my paper or the lower of the remaining cost of 20%. The cost-benefit analysis in this alternative view paper investigates the sensitivity of the results to this assumption.

Table 2 reports the benefits and costs of replacing severance payments for SPSA. The first and second columns report the gains in terms of efficiency enhancing reallocation using two alternative methods. The results are similar and suggest gains of between \$60,000 and \$96,000 million, depending on the pass-through assumed. The costs range between 10% and 15% of the benefits, so that there are positive net benefits regardless of the assumptions about shifting. Under the best scenario, the gains from this reform are substantially lower than under proposal 1 and are around 0.1% of the PDV of GDP.

4. Replacing Minimum Wages for EITC

The third solution to the challenge proposes to eliminate minimum wages altogether and instead introduce a tax return to the poor conditional on working. While minimum wages are often introduced with the idea of helping the poor reach a minimum income level, minimum wages also generate wage rigidities that reduce the demand for labor and end up hurting precisely those that the policy is supposed to help. The proposal in the solution paper is rather to introduce a tax return to the poor modeled after the Earned Income Tax Credit in the U.S., which provides a tax return to those at the lower end of the distribution for every dollar earned at work. The EITC and similar tax returns in other countries have the advantage of generating income transfers to those who need them most, without generating disincentives to work.

The solution paper calculates the benefits to this proposal as the fall in the deadweight loss and gain in GDP due to increased employment. The paper assumes that half of the unemployment can be accounted for by the minimum wage. This may be a reasonable assumption for some countries, where the minimum wage appears to bind (e.g., see evidence by Maloney and Nunez (2004) on Colombia). However, the assumption that the minimum wage will reduce half of the unemployment may not hold for all countries. For example, the study by Bell (1997) finds evidence that the minimum wage reduces employment in Colombia but not in Mexico. To the extent that the minimum wage does not bind in all countries, then the benefits from eliminating this wage floor will be over-estimated. In particular, Figure 1 in Maloney and Nunez (2004) shows 6 Latin American countries having minimum wage to mean wage ratios above Colombia and 5 countries having ratios below Mexico, with Peru in between the two countries. Thus, in the cost-benefit analysis below I explore the alternative assumption that the minimum wage binds in half the countries but not in the other half.

The cost is then calculated on the basis that 10% of the population in Latin America qualifies for the transfer and that there is an annual transfer of \$600 per poor worker. It would be good to know more about where the 10% and \$600 came from. In

addition, as for the first proposal, I allow for capital-employment substitution and include the additional cost due to reduced GDP as a result of the fall in the capital stock.

Table 3 reports the benefits from eliminating minimum wages both in terms of the fall in deadweight loss and also in terms of increased output due to increased employment. The fall in the deadweight loss is close to a billion assuming the minimum wage binds in all countries and half a billion assuming the minimum only binds in half the countries in the region. This fall in the deadweight loss is about 10% larger than the fall seen under the preferred scenario in Table 1 for the benefit calculation of the replacement of a PAYG for a fully-funded system.² By contrast, the gain in GDP is 10% lower under the elimination of minimum wages than under the replacement of a PAYG for a fully-funded system. Similarly, the reduction in GDP due the fall in the capital stock is also slightly smaller in this case than under the first proposal. However, the costs of introducing EITC are a lot higher than the transitional costs from introducing a fully-funded system. This means that once all costs and benefits are taken into account, the net benefits of this proposal are somewhat smaller than the net benefits under the replacement of the social security system. In particular, the net gain from this reform is \$2,081,250 or 2% of the present discounted value of GDP compared to about 3% in the case of the introduction of a fully-funded system. This results contrasts with the conclusion in the solution paper which shows the elimination of the minimum wage as the dominant solution.

5. Conclusion

The solution paper provides three possible alternatives to the challenge of maintaining income security while reducing labor market inefficiencies. The solutions propose to: (1) replace the current PAYG system existent in most countries by a fully-funded system, (2) replace severance payments for severance payments savings accounts, and (3) eliminate minimum wages and introduce an EITC type transfer for the poor. All these proposals are right on target as payroll taxes, dismissal costs and minimum wages have been found to be the most restrictive regulations in the Latin American context. For instance, unions are not very strong in Latin America and collective bargaining agreements do not exist at the country or even sectoral level in most countries. Similarly, disincentives generated by unemployment insurance are not an important in the Latin American context as they are in Europe, because most countries have limited or no unemployment insurance system.

Since the solution paper was fairly comprehensive, in terms of the solutions proposed, this paper has focused on re-calculating the costs and benefits of the various solutions based on alternative assumptions, which are more in line with other evidence. In particular, the cost-benefit calculations of replacing the PAYG for a fully funded system and of eliminating minimum wages in the solution paper ignored important costs

² The calculation of this deadweight loss assumes that the reduction in the wage following the elimination of the minimum wage will be of 10%. It is not clear from the solution paper, what the magnitude of the reduction in the wage is assumed to be under this proposal.

due to the substitution of capital for labor and due to transitional costs. More importantly, the calculation of dismissal costs in the solution paper was misleading as it was made under the assumption that the reduction in dismissal costs would increase employment levels as opposed to turnover. The alternative view paper offers an alternative way of calculating the benefits from a reform that introduces severance payments savings accounts. The re-examination shows that these assumptions matter in terms of the ranking of the solutions. While the replacement of severance payments for SPSA continues to rank last, the cost-benefit calculation of the other two solutions suggests a re-ranking of these two alternatives. In particular, while the elimination of minimum wages continues to show large gains of about 2% of the PDV of GDP, the replacement of a redesign of the social security system now shows an even larger gain of 3% of GDP. These results suggest that the introduction of fully-funded systems should remain a priority in those countries that still have not undertaken reforms of their social security systems, the elimination of minimum wages and of dismissal costs would also generate non-trivial gains.

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Table 1: Cost-Benefit Calculations for Proposal 1 under Alternative Assumptions

Pre/Post Reform Pass-through	Fall in DWL [PDV] (1)	dlnT (2)	dlnL (3)	dlnY, Fixed K [PDV] (4)	dlnK (5)	dlnY Variable K [PDV] (6)	Net Benefit, Fixed K ((1)+(4)) (7)	Net Benefit, Variable K ((1)+(6)) (8)	Trans. Costs (9)	Net Ben. Trans. Costs ((8)-(9)) (10)
0 / 50%	0.0026 [256,250]	-0.041	0.0635	0.042 [4,200,000]	-0.0529	0.0244 [2,436,111]	4,456,000	2,692,111	306,000	2,386,111
0 / 100%	0.0107 [1,087,500]	-0.087	0.1358	0.0906 [9,055,000]	-0.1132	0.0528 [5,282,778]	10,142,500	4,195,278	306,000	3,889,278
100% / 100%	0	0	0	0	0	0	0	0	306,000	-306,000
20% / 50%	0	0	0	0	0	0	0	0	306,000	-306,000
20% / 100%	0.0043 [430,000]	-0.043	0.0665	0.0444 [4,435,867]	-0.0554	0.0259 [2,592,778]	4,005,867	3,022,778	306,000	2,716,778

Notes: The first column reports the fall in the deadweight loss (DWL) after the reform. The numbers in square brackets transform the values in each column to their present discounted value (PDV). The net benefits and transitional costs are all reported as PDVs and are reported in millions of dollars.

Table 2: Cost-Benefit Calculations for Proposal 2 under Alternative Assumptions

Pass-through	dlnY = dlnA [PDV] (1)	dlnY = φdlnC [PDV] (2)	PDV of Costs (3)	Net Benefit ((1)-(3)) (4)	Net Benefit Costs ((2)-(3)) (5)
80%	0.0008 [80,000]	0.00096 [96,000]	15,239	64,761	80,761
60%	0.0006 [60,000]	0.00072 [72,000]	11,429	48,571	60,571

Notes: The numbers in square brackets transform the values in each column to their present discounted value (PDV). The net benefits and costs of managing the individual accounts are all reported as PDVs and are reported in millions of dollars.

Table 3: Cost-Benefit Calculations for Proposal 3 under Alternative Assumptions

Share of Countries with Binding MW	Fall in DWL			dlnY, Fixed K		dlnY Variable K	Costs of DIP	Net Benefit, Fixed K ((1)+(4)-(7))	Net Benefit, Variable K ((1)+(6)-(7))
	[PDV]	dlnT	dlnL	[PDV]	dlnK	[PDV]			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
100%	0.0096 [962,500]	-0.077	0.1224	0.0816 [8,160,000]	-0.102	0.0476 [4,760,000]	780,000	9,305,000	4,942,500
50%	0.0048 [481,250]	-0.077	0.0612	0.0408 [4,079,167]	-0.051	0.0238 [2,380,000]	780,000	3,780,417	2,081,250

Notes: The first column reports the fall in the deadweight loss (DWL) after the reform. The numbers in square brackets transform the values in each column to their present discounted value (PDV). The net benefits and transitional costs are all reported as PDVs and are reported in millions of dollars.