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Child Labor and the Role of the School[1]

Trabajo infantil y el rol de la escuela

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Abstract

Covid-19 will aggravate the problem of child labor. The traditional policy to fight this problem has relied heavily on the role of the school. Empirical evidence shows that the benefits of basic education for poor families are very high. Yet, these high returns may be a statistical illusion when social and economic inequality prevail. In this case, while fighting inequality and enhancing social mobility, the emphasis should be put on the role of the school as provider of goods and services: on maintaining Conditional Cash Transfer programs. This is the more urgent when episodes like the Covid-19 pandemic force temporary school closures.

Key words: Human capital, inequality, Conditional Cash Transfers, bridging social capital.

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Resumen

EL Covid-19 agravará el problema del trabajo infantil. La política tradicional para luchar contra este problema ha puesto énfasis en la escuela. La evidencia empírica muestra que los beneficios de la educación en el caso de las familias pobres es elevado. Sin embargo, este retorno puede ser una ilusión estadística cuando prevalece la desigualdad social y económica. Mientras se lucha por mejorar la desigualdad y la movilidad social el punto debería focalizarse en el rol de la escuela como proveedor de bienes y servicios: manteniendo los programas de transferencias condicionadas, lo cual se hace más urgente en contextos como el de la pandemia Covid-19 en los que algunas escuelas pueden verse abocadas a un cierre temporal.

Palabras claves: capital humano, desigualdad, programas de transferencias condicionadas, distribución del capital social.

JEL classification / Clasificación JEL: O15, O57, I24, I25, I28.

1. Introduction

Child labor is a serious social problem and the present Covid-19 pandemic will only aggravate it for several reasons. On the one hand, because it is increasing unemployment and poverty among the segments of population who can least afford them. Second, due to the fall in international remittances associated to the overall economic downturn. Finally, and most important, because temporary school closures and the promotion of home learning implies that in many cases the school losses its main benefit for poor families, the access to a basket of goods and services, while trying to maintain something perceived as no so relevant: the acquisition of human capital. In a context of severe public deficits, the transfers associated to schooling, even if temporarily at home, should be considered of crucial importance and thus preserved.

To fight child labor, different kinds of measures have been tried and implemented. On the one hand, policies directed towards increasing the cost of hiring children to the employer by making it illegal, or through a boycott to its products. On the other, improving the benefits of attending school in terms of the acquisition of *human capital*. Education may thus play a crucial role in this sense, supported by the empirical evidence: the benefits of basic education in poor countries for poor families appear to be very high, Yet, social and economic inequality may explain why this is not always so. The acquired human capital needs to be realized, and social inequality plays a crucial role here. The empirical evidence regarding the high benefits of education may end up being a statistical illusion. If this is the case, focusing on other benefits of attending school, namely the provision of goods and services, will be more efficient in reducing child labor while also providing children with human capital. Many Latin American countries have adopted this kind of Conditional Cash Transfer programs that should be preserved as a social priority of paramount importance in times of crisis like the one associated to the Covid-19 pandemic. Furthermore, human capital will be more easily realized if the school also provides a *bridging* social capital that will reduce the barriers associated to social segmentation.

The main purpose of this paper is to present a theoretical model that shows that to focus on the role of the school as provider of goods and services to poor families, rather than human capital, is more efficient in terms of achieving social and economic development. This will be illustrated with reference to the Latin American situation.

It is structured as follows. Section 2 offers some data and definitions regarding child labor. Section 3 presents the classical economic model that allows understanding the phenomenon within the context of family rationality. Section 4 focuses on the efficiency of those measures that reduce the incentives to hire children for the employer, whereas Section 5 analyzes those that focus on improving the quality of education. Section 6 analyzes the role of Conditional Cash Transfer Programs. Finally, Section 7 concludes.

2. Child labor in Latin America

A recent survey from *The International Labour Organization and United Nations Children's Fund* (2020) warns that "The number of people in extreme poverty could skyrocket by 40million to 60 million this year alone compared to before the crisis." This will aggravate the problem of child labour as "households use every available means to survive." The same prospect appears in a published technical note of the *Alliance for Child Protection in Humanitarian Action*: because of the health crisis, the deteriorating economic situation of poor families will push millions of children into child labour.[3] The fact that the ILO *World Day Against Child Labour 2020* focused on the impact of the crisis on this problem, is probably the best indicator of its relevance.

Before looking at the extent of the problem in Latin America, it is perhaps convenient to clarify the concept of child labor and its different categories.

In the words of the International Labour Organization (ILO, 2017)[4]:

> "The term "child labour" is often defined as work that deprives children of their childhood, their potential and their dignity, and that is harmful to physical and mental development."

The ILO distinguishes between different categories in this respect (Ibid., pp. 20-21):

Children in employment are those working in any form of market production and certain types of non-market production (principally, the production of goods such as agricultural produce for own use).

Children in child labor is a narrower category than children in employment. It excludes children in employment who are in permitted light work and those above the minimum age whose work is not classified as a worst form of child labor, or as hazardous work.

Children in the worst forms of child labor are those in the categories of child labor set out in Article 3 of ILO Convention No. 182: all forms of slavery, debt bondage and serfdom, and forced or compulsory labor, prostitution, pornography, etc.

[3] https://alliancecpha.org/en/covid19childlabour, visited August the 12th 2020.
[4] This is the fifth edition of the ILO's quadrennial report series on global estimates of child labour.

Children in hazardous work are those involved in any activity or occupation that, by its nature or the circumstances in which it is carried out, is likely to harm their health, safety, or morals.

For the World as a whole, the figures given by this same organization read as follows:

> "A total of 152 million children – 64 million girls and 88 million boys – are in child labour globally, accounting for almost one in ten of all children worldwide. Nearly half of all those in child labour (...) are in hazardous work (...). Children in employment (...) number 218 million." (p. 11).

Certainly, there has been some progress in recent years, although a worrying slowdown was experienced even before the economic crisis associated to the Covid-19 pandemic: whereas there was a 47 million reduction in the number of children working during the 2008 to 2012 period, in 2012-2016 that figure fall to only 16 million (p. 25).

In the case of Latin America, the report offers the following figures for 2016[5]: 10.7 million children are in child labor, a prevalence rate of 5.3%, and 6.5 of them in hazardous work. By sector, 51.5% work in agriculture, 13.2% in industry and 35.3% in services.

Save the Children, on the other hand, computes a *Complete End of Childhood Index* that offers a more detailed picture of the problem in which child labor plays an important role together with children out of school. The index is composed of eight indicators, each one having the same weight: Under-5 mortality rate (deaths per 1,000 live births); Child stunting (% children aged 0-59 months who are below minus two standard deviations from median height-for-age of the WHO Child Growth Standards); Out-of-school children of primary and secondary school age (%); Children engaged in child labor (% ages 5-14); Adolescents currently married or in union (% girls aged 15-19); Adolescent birth rate (births per 1,000 girls aged 15-19); Population forcibly displaced by conflict (% of total) and Child homicide rate (deaths per 100,000 population aged 0-19).Table 1 summarizes some of these indicators for several Latin American countries. We have selected those indicators more closely related with the socioeconomic environment surrounding child labor: schooling, premature marriage, adolescent childbearing and violence.

Although better than the one characterizing other parts of the underdeveloped world, the situation in Latin America is far from acceptable, although with wide differences. On the one hand, we find countries like Chile, Cuba, Costa Rica and Argentina in the second quintile, ranking between 53 and 67 out of 172 countries. On the other, however, Guatemala (147), Honduras (142) and other Central American countries are among the worst 50 of the sample.

[5] These figures also include child labour in the whole of North America, i.e. including Canada and the United States.

Table 1. End of Childhood Index 2017, some components

Indicator	Out of school children of primary and secondary school age (%) 2011-2016	Children engaged in child labor (% ages 5-14) 2011-2016	Adolescents currently married (girls 15-19) 2011-2016	Adolescents birth rate (births per 1,000 girls 15-19) 2015	Child homicide rate (deaths per 100,000 aged 0-19) 2015
Argentina	3.1	4.4	12.7	63.8	2.0
Bolivia	12.1	26.4	11.6	70.4	6.4
Brazil	7.3	8.1	3.9	66.7	18.2
Chile	5.6	6.6	5.7	47.5	2.6
Colombia	7.3	9.7	13.7	48.7	22.1
Costa Rica	6.7	4.1	9.0		3.4
Cuba	9.5	...	15.8	45.1	1.4
Dominican Republic	14.8	12.8	27.5	97.3	11.8
Ecuador	6.2	3.0	20.0	75.6	3.3
El Salvador	10.1	19.0	21.0	64.9	22.4
Guatemala	22.5	25.8	19.8	80.1	16.0
Haiti	9.9	24.4	12.1	38.9	10.7
Honduras	19.0	15.3	22.6	64.3	32.8
Mexico	15.2	10.4	15.4	62.2	5.5
Nicaragua	10.4	...	24.2	88.1	6.3
Panama	7.7	5.6	14.1	73.7	11.1
Paraguay	15.4	27.6	...	56.9	2.3
Peru	7.6	33.5	11.3	48.4	6.2
Uruguay	9.5	7.9	7.4	55.8	3.7
Venezuela	12.0	...	...	79.1	27.0
Latin America and the Caribbean	10.1	8.5	10.6	74.3	12.6
World	17.8	12.6	14.4	50.4	3.0

Source: Adapted from Geoghegan (2017).

It is in this context that the role of education as a powerful instrument to eliminate child labor has been emphasized by different authors and international institutions alike. But before assessing this recommendation, we should analyze the reasons why parents send their children to work.

3. Child labor within the family economy

Basu and Tzannatos (2003) provide a very simple economic model to analyze the decision-making process within the household regarding the work of children. This model starts making two simplifying assumptions:

a) Children and adult work are homogeneous: i.e., there is no difference in productivity between adult and child workers.[6]

[6] It is worth mentioning, in any case, that according to some authors," children are preferred to adults because they are cheap, submissive, uneducated and nimble (Tuttle, 2006, p. 143).

b) Parents' preferences include their children not working. Therefore, they will be sent to work only if the benefits are higher than its costs, including this reluctance.

The model works as follows.

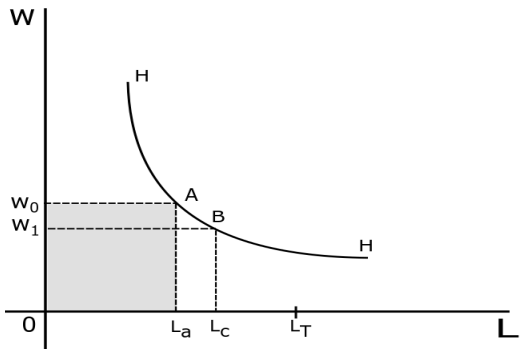
It begins by distinguishing two cases:

First, a scenario of extreme poverty. Suppose the family' basic requirements for survival (food, energy, water, shelter) can be expressed in monetary units as a quantity X^{sup}. Suppose further that the number of people fit to work in this family is OL_T, being OL_a adults and L_aL_T children.[7] It is now easy to determine what would have to be the wage level for the adult workers to be able to cover the basic needs of the whole family:

$$w = X^{sup} / L_a \tag{1}$$

Figure 1 describes this situation. The number of workers is represented in the horizontal axis, whereas the wage rate is plotted in the vertical axis.

Figure 1



The basic needs of the family (X^{sup}) are measured as the shadowed area in the figure. If this is the case, a wage equal to w_0, would allow the adult workers (OL_a) to cover it.

The problem appears when the ruling wage is below this level. Suppose the average wage is w_1. In this case, some children would also be required. The number of children needed in this situation can easily be shown in the figure with the help of a rectangular hyperbola (*HH*) draw through point *A*. This curve crosses the wage level w_1 at point *B* indicating therefore the number of children required: L_aL_c because of the mathematical property of the rectangular hyperbola:

$$OL_aAw0 = OL_cBw1 \tag{2}$$

[7] Fitted to work in a physical sense, not in a legal one.

Analytically, if:

$$w1L_a < X^{sup} \tag{3}$$

the number of children workers required will be:

$$L_aL_c = \left(X^{sup} - w1L_a\right) / w1 \tag{4}$$

In case of extreme poverty, therefore, the work of children is simply a necessity: "Children's wages often make the difference between starvation and survival" (Tuttle, 2006, p. 143).

We can now move to a less extreme situation characterized by poverty but allowing some degrees of freedom: i.e., the head of the family can decide whether to put the children to work or sending them to school. If this is the case, the decision to send children to work will depend on whether the benefits of doing so are higher than the costs.

The benefits depend on the net income the child earns while working.

Regarding the costs, two are worth mentioning:

a) First, the opportunity cost of the child not attending school. This loss of human capital will translate itself into a lower income stream in the future. The same happens if the child works while at school: "... in Latin America, child labor has a negative and significant effect on educational enrollment. However, it has an even greater adverse effect on progression through school and the quality of attainment through attendance. These results are stronger for the poor" (Sedlacek et al., 2009, pp. 33-34). For a detailed analysis of the detrimental effects of working on the acquisition of human capital see, for instance, Ray and Lancaster (2005).
b) Second, the already mentioned moral cost. It has two components: the reluctance of the family to deprive their children of some basic rights, and the social penalty that falls upon the family that allows their children to work. This penalty will depend on the kind of work performed, the prevalence of child labor in the area, whether the child works in the family business or land, or for somebody else, etc. (Basu et al., 2010).[8]

It is worthwhile, therefore, to analyze the implications of this model in assessing the different measures aiming at eradicating child labor.

4. Fighting child labor: sanctioning

These are measures that try to reduce the profitability of hiring children. The simplest one is to forbid child labor and to penalize the employer if

[8] Some authors have also mentioned the important role of cultural factors that work in favor of child work within por families: see, for instance Ávila (2007) which contains also a detailed analysis of the phenomenon in Mexico and Latin America as a whole.

discovered doing so.[9] However, this measure, in cases of extreme deprivation, might worsen the problem. The reason is straightforward. If the work of children is penalized, then the employer will subtract the expected value of the sanction from the wage of the child. The result is that now more children need to work, or they need to work longer hours, in order to cover the subsistence needs (Basu, 2005). If the expected value of the penalty is sufficiently high the employer will, of course, no longer employ children, pushing them out of this market and to self-employment or to non-regulated markets like prostitution and petty delinquency. The relationship between sanctions and child labour will show, therefore, an inverted U shape (Basu, 2005). How high the expected value of the penalty should be will depend also on the probability of being discovered and punished.

An alternative measure in this same line is the boycott to those products that are made involving child labor. As in the previous case, the threat of a boycott reduces the profitability for the employer of hiring children, causing a lowering of their wage.

In both cases, a *displacement effect* should also be expected: children forced to work will move to sectors where the possibility of a boycott is nonexistent and or where the probability of an inspection is very low: the informal sector, rural areas, working at night, prostitution etc. (Tuttle, 2006).

It is no surprise then that the emphasis in the fight against child labor has moved to more *positive* measures: those that increase the benefits of not working, i.e., of attending school.

5. Making education work: school and child labor

By increasing the benefits of attending school, the cost of child labor increases, and, if there is any degree of freedom left and the benefits are high enough, the child will leave work.

The main benefit of attending school is the acquisition of *human capital* that will translate later into higher wages and higher probabilities of getting a job. Therefore, the head of the family will consider the present value of these benefits and compare them with the wage received if working.

The way this benefit is calculated is to estimate the Internal Rate of Return (IRR) of investing in education: the rate of discount that equals the present value of the costs of education with the present value of its benefits.

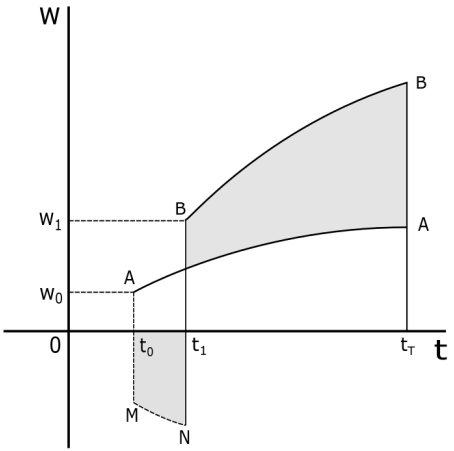
The costs of education are well known: the cost of fees, books, and any other material, plus any extra cost of living, and the opportunity cost of labor.

[9] This is, however, a heated issue: see, for instance, the several associations of child and young workers in Latin America that reaffirm their right to work under proper conditions (<www.molacnats>) and the incidences regarding the law that extended the right to work to children aged between 10 and 14 in Bolivia, in August 2014, and its partial abrogation in 2018.

The benefits are simply the net present value of the extra revenues associated to higher wages and lower unemployment rates.

All this is depicted in Figure 2, where annual earnings (w) are measured in the vertical axis (in constant terms), and time (t) in the horizontal axis.

Figure 2



It is possible now to compare the earning profile of a person with, for instance, primary education, with a second one having secondary education. The first one will enter the labor force at t_0, earning a wage w_0 that will increase all over his/her life along the line AA, until the person retires at t_T. If instead of entering the labor market at time t_0 the person invests in secondary education, he/she will join the labor force at time t_1 with a higher wage, w_1, and a higher rate of increase (line BB). Between t_0 and t_1, this person will have incurred in a cost given by the shaded area t_0MNt_1: the sum of the above-mentioned costs. The IRR of the investment in secondary education is then the rate that the financial system (a bank) would have to offer to this person if she opens a deposit equal to this shaded area in the period t_0t_1, to obtain a return equal to the shaded area between the two earning profiles, for the rest of her life.

Education seems to be a profitable investment: returns to schooling are the highest of the World in the Latin America and Caribbean region (Montenegro and Patrinos, (2014). Table 2 offers this data.

Unfortunately, this picture may be, in some cases, just an illusion.

a. Learning at the school: acquiring capacities

Whether children acquire any human capital at the school depends on different factors. Among them, the quality of the education received. Attending school will be perceived as too high a cost if the parents observe that all too

Table 2. Returns to schooling in Latin American and Caribbean countries: Internal Rate of Return of investing in education (IRR)

Country	Year	Return to another year of schooling	Returns total primary	Returns total secondary	Returns total tertiary
Argentina	2012	8.8	3.7	4.7	12.0
Bolivia	2012	7.3	8.6	3.1	13.6
Brazil	2012	10.5	7.9	6.3	17.3
Chile	2011	12.3	3.0	5.6	17.6
Colombia	2012	11.0	6.0	5.3	19.6
Costa Rica	2009	10.7	4.3	4.8	19.5
Dominican Republic	2011	9.4	8.3	4.9	15.8
Ecuador	2012	7.2	4.6	4.5	12.3
El Salvador	2009	9.3	8.6	4.0	18.8
Guatemala	2011	10.0	3.4	4.1	19.5
Haiti	2001	8.3	23.8	14.0	18.4
Honduras	2011	12.4	12.1	10.7	19.8
Mexico	2012	10.1	7.8	4.8	20.7
Nicaragua	2009	6.0	4.8	2.3	14.5
Panama	2012	10.0	10.9	6.4	16.2
Paraguay	2010	8.7	2.3	5.3	15.8
Peru	2012	8.1	14.6	4.9	10.4
Uruguay	2012	9.8	4.0	4.8	15.7
Venezuela RB	2006	7.3	8.1	4.3	12.6

Source: Adapted from Montenegro and Patrinos (2014).

frequently teachers do not show at the classroom, or that pupils do not learn very much.

The situation of Latin American countries in this respect is contradictory. On the one hand, they have increased substantially their investment in education: "Since 2000, public expenditure per student has increased in real terms by almost 80 percent at the primary level, and almost 45 percent at the secondary level" (Izquierdo, Pessino and Vuletin, 2018, p. 167). Furthermore, learning at school seems also to have improved: According to the PISA study, "Overall, between 2000 and 2015 math, reading, and science scores for the region increased almost 10 percent,6 percent, and 5 percent, respectively" (p. 169).

However, a recent *Interamerican Development Bank* study on the education exclusion in Mesoamerica, casts some shadows into this bright picture. The study shows that few children and young people acquire at school the levels of learning that would benefit them and society as a whole: "regardless of whether they go to school or not, the vast majority of young people (86%),

do not acquire the minimum skills necessary to contribute to their own well-being and enhance the development of the region. Roughly this is equivalent to saying that of the nearly 21 million young people between the ages of 20-24 living in Mesoamerica, about 3 million learn the minimum, 8 million finish high school without achieving the minimum learning floor, and nearly 10 million do not finish high school" ((Ramírez and Viteri, 2019, p. 6).[10]

This is surely a deterrent when deciding whether to send the child to school or to the labor market. Improving the quality of schools would be a way to tip the balance in favor of education. For this to be true, however, the child needs to be able to realize the human capital acquired. And achieving this requires something else.

b. Capitalizing human capital

As mentioned, the child needs to be able to capitalize the human capital acquired. In other words: he or she needs to be sure of walking along the line *BB* in Figure 2.

Unfortunately, this cannot be taken for granted, and the empirical evidence behind Figure 2 may well be misleading.

The way the returns from investing in education have been calculated was shown above. Figure 2 depicts the earning profile of two representative persons with different levels of education. Ideally, the two different profiles should be the result of a statistical exercise based on observing the evolution of two different segments of population (with and without education) *along time*. However, due to data restrictions, this is not usually done with the help of *time series* (observations along roughly a 50 year time period would be required), but rather based on *cross-section* data: i.e., looking at people at a given point in time and taking note of their earnings, their age, and their level of education. What we have in Figure 2 is the best statistical fit to a set of points each one of them reflecting the age, the educational level, and the earnings of different persons *at a given point in time*. The assumption behind this procedure is that the person with secondary education that now is 35 years old, and earning w_1, fully represents the future, 20 years from now, of the 15 years old that just enters the labor force today, earning w_0. And that in 15 years' time, when he or she will be 50, he or she will be earning w_2, the wage today of a worker 50 years old that entered the labor force 35 years ago having completed basic secondary education. This is what line *BB* in the figure apparently shows.

The problem appears when society is highly segmented and social mobility is severely constrained as a result of inequality.

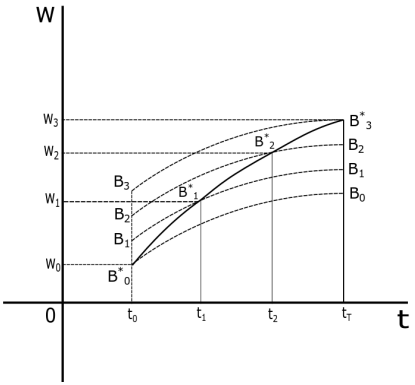
Under these circumstances, different people may travel along different paths, depending on their age.

This is illustrated in Figure 3, where instead of the original earnings profile *BB* of Figure 2 there are now four new ones, $B_0^*B_0$, B_1B_1, B_2B_2 and $B_3B_3^*$

[10] The countries analysed are: Belice, Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, and the Dominican Republic.

each one belonging to a different social class. The curve $B_0^*B_3^*$ is the original curve *BB* of Figure 2 and contains the four empirical observations that helped to estimate it: a person entering the labor market now, at t_0, after having finished secondary education, and earning w_0. A different person that is 20 years older, also having completed secondary education, and earning now w_1 (point B_1^*). Point B_2^* represents a person with secondary education that entered the labor market 35 years ago and is now earning w_2. Finally, B_3^* depicts the person that entered the labor market 50 years ago, also having completed secondary education, and is earning w_3. These four points (B_0^*, B_1^*, B_2^* *and* B_3^*) are the observations from which the $B_0^*B_3^*$ curve was estimated.

Figure 3



The problem may be that the person earning now w_3 did not enter the labor market at B_0^* but at B_3, earning a salary (not shown) higher than w_0, and moved along $B_3B_3^*$. And the same could be said of the other two persons: they travel along $B_2B_2^*$ and $B_1B_1^*$. If this is the case, the young person that enters now at B_0^*will not travel along $B_0^*B_3^*$, but along $B_0^*B_0$: a path associated with a lower return of the investment in education.

Why these different paths?

Fifty years ago, secondary education was not as universally extended as today and, therefore, only the relatively most privileged were able to afford it. But earnings do not only depend only on human capital, but also on family background and income, parent's education, etc. This means that these youngsters were to have a greater income anyway than those belonging to lower social classes. Thirty-five years ago, this fact was less marked and, because of the arrival to secondary education of people from low middle classes the average earning profile of those finishing secondary education was to be below the one corresponding to the previous cohort. The same can be said of those who entered the labor force having completed secondary

education 20 years ago. Finally, a 15 years old young entering now the labor force after having completed secondary school will get a salary equal to w_0, and he/she will move along line $B_0^*B_0$ because now the coverage of secondary education has greatly increased and people from lower strata are attending it. The four income profiles are different because social mobility is restricted and class structure, besides education, explains earnings. Thus, empirical observations are compatible with the estimated line $B_0^*B_3^*$, which is *BB* in Figure 2, but this line could well be just an illusion regarding the profitability of attending school. The fact that, as Montenegro and Patrinos have pointed out: "returns to schooling have declined significantly since the 1980s, when they were above 13 percent, to just over 9 percent in recent years (...). This is due, at least partly, to the unprecedented expansion in schooling since the 1980s and, especially, since the late 1990s" (Montenegro and Patrinos, 2014, p. 15) seem to also confirm this point.

Now, when the head of the family is intuitively aware of this fact, the perceived benefits of investing in education are no longer those that the empirical evidence seems to show and sending the child to work instead of attending school may not be after all an inefficient alternative.

This inequality will be perceived as even worse when parents realize that the schools allocated to them lag far behind those of richer people. They will foresee their children entering a path that diverges increasingly from the one taken by more privileged children. The attraction of the school as an alternative to work will be further diminished. Pasquier-Doumer and Risso Brandon (2015) raise an interesting possibility in this respect. Racial discrimination may reduce poorer parent´s demand for schooling because of an ´aspiration failure´: "...indigenous children may not aspire to be a doctor because they think that a doctor has to be ´white´" (p. 210). Although their research regarding Peruvian indigenous children is not conclusive, this possibility is worth considering.

The situation of schools in Latin America is, in any case, far from equitable, both in terms of *horizontal* (funds should be allocated equally among schools that share certain characteristics) and *vertical* equity (if students have different educational needs, an equitable funding system should provide different levels of resources to meet these needs) (Izquierdo, Pessino and Vuletin, 2018, p. 177).

Table 3 shows the situation of Latin America in comparison with other parts of the world.

As Table 3 shows, the Latin American school system is unequal in relative terms. There are many reasons to explain this unpleasant record: the role of private schools, financial issues (central versus local financing), etc. But the problem remains that when the schools attending the poor are poor themselves, they lack attraction appeal.

Table 3. Equity Indicators of the School System by Region, 2015

Equity indicator	Latin America and the Caribbean	OECD	Other regions
Horizontal equity			
GINI index ↓	0.40	0.31	0.34
McLoone index ↑	0.59	0.73	0.70
Vertical equity			
Concentration index ↓	0.02	–0.03	–0.01
McLoone reformulated index ↑	1.23	1.16	1.22
Number of countries	9	35	22

Source: Izquierdo, Pessino and Vuletin (2018 p. 179). Authors' calculation based on PISA (2015). Note: The different arrows indicate whether the equity levels increase (↑) or decrease (↓) when the value of the index increases. The McLoone index measures equity only for the lower half of the distribution of educational resources, in the range 0 to 1; higher values are associated with greater horizontal equity. The GINI indicates how far the distribution of educational resources is from providing each proportion of schools with an equal proportion of resources. It ranges between 0 and 1, higher values are associated with lower horizontal equity. The Concentration index is employed to capture the extent to which educational resources differ across schools ranked by a socioeconomic indicator. Its range is between –1 and 1; negative values indicate that educational resources are higher for poorer schools and positive values indicate the opposite. The reformulated McLoone index is a variation of the original but the ordering variable for identifying the half of schools to examine is the socioeconomic index. Its range is between 0 and infinity, and values greater than 1 represent systems that target disadvantaged students (Izquierdo, Pessino and Vuletin, 2018, pp. 177-178).

6. The school as a provider of goods and services

If the school does not provide any useful human capital or if this human capital will not be realized because of social segmentation, then something different must be tried.

a. Conditional Cash Transfer Programs (CCT)

An obvious possibility is the one implied in the Conditional Cash Transfers (CCT) programs implemented in many Latin American countries. Under these programs, the head of a poor family receives a monetary transfer subject to some conditions regarding schooling and health controls. This is the case of *Progresa/Oportunidades* in Mexico, *Bolsa Família* in Brazil, *Familias en Acción* in Colombia, *Chile Solidario* in Chile, *Jefes de Hogar* in Argentina, *Juntos* in Peru, *Red de Protección Social* in Nicaragua, *Programa de Asignación Familiar* (PRAF) in Honduras, or *Bono de Desarrollo Humano* in Ecuador, among others.

Despite some differences, all these programs share some common characteristics: the transfer is conditioned to children attending school (at least 85% of school days) and this attendance is usually monitored. It also requires the compliance with some health requirements both for children and parents. Looking at these programs from a theoretical point of view, their main impact is to provide the family with an income that will help attain the subsistence

minimum and thus reduce the need for the work of children and increase the opportunity cost of child labor.

Does the empirical evidence sustain this presumption? To what extent have these programs been successful in reducing the incidence of child labor? What have been their major effects?

b. Conditional Cash Transfers: main impacts

This is not the place to fully assess these policies, something that has been already done: see for example the excellent assessment of Parker and Todd (2017) regarding *Progresa/Oportunidades*, as well as Hall (2008), Attanasio, Meghir and Santiago (2012), Neri and Osorio (2019), Soares, Ribas and Osório(2010), Maluccio (2009), and many others. Nevertheless, it may be worthwhile to point out some of their more relevant impacts.

In terms of educational achievement, the programs seem to have been successful reducing dropout ratios and increasing time at the school (Yap, Sedlacek and Orazem, 2009; Parker and Todd, 2017; Neri and Osorio, 2019).

These programs have also had a beneficial impact on the local economy for two reasons. On the one hand, due to the multiplier effect of the income transfer received (Hall, 2008). On the other, because having a new and secure source of income allows the family not only to save and invest, but also to take some investment risks that improves productivity:

They also may reduce crime rates by taking youngsters out of the streets (Chioda et al., 2016), something that helps making the programs popular: "... programs which are apparently effective in attacking urban poverty, especially those which help keep poor children in school, are likely to gain the approval of wealthier citizens concerned with personal and public security" (Hall, 2008, p. 817).

They have been successful not only in alleviating poverty, their main goal, but also in lowering inequality:

> "...the Gini index for Brazil fell by 4.7 percent from 1995 to 2004 and *Bolsa Família* was responsible for 21 percent of that fall (...) *Oportunidades* had a similar impact on Mexican inequality, responsible for 21 percent of the overall 5 percent fall of the Gini index for Mexico between 1996 (before *Progresa* was implemented) and 2004" (Soares, Ribas and Osório,2010, p.179).

However, they have also had some negative impacts worth mentioning:

First, the fostering of a dependency culture associated to any cash transfer in regimes with a poor institutional basis (Hall, 2008, Soares, Ribas and Osório,2010). Yet, as some authors have also noted, the conditionality attached to the transfer helps the recipient family to regard it as a right rather than charity (Parker and Todd, 2017).

Second, in many cases these programs are financed reducing other valuable subsidies and longer-term social investments in key areas such as education, health and sanitation, looking for short term electoral gains (Hall, 2008). Trying to avoid these negative effects, *Progresa/Oportunidades* "(determines that)

new households cannot become beneficiaries during election years" (Parker and Todd, 2017, p. 899).

Third, these programs may represent an incentive to move from the formal to the informal sector of the economy, to be eligible (Hall, 2008).

Four, these programs have increased the number of lagging students, putting thus an extra burden on schools: "Children benefiting from *Bolsa Família* are almost four percentage points more likely than non-treated children of failing to advance in school ... In Mexico grade promotion improved but achievement scores were negatively affected." (Soares, Ribas and Osório,2010, p. 182).

Regarding the impact of these programs on child labor, the empirical evidence seems to be positive: for instance, *Progresa/Oportunidades* meant a "significant reductions in children's labor-force participation for both boys and girls, in both salaried and non-salaried activities. Labor-force participation for boys shows reductions as large as 15 to 25 percent" (Todd and Parker, 2017, p. 885). In the case of Nicaragua, the program lowered the percentage of children working and the impact was three times larger for girls (Maluccio, 2009). Attanasio, Meghir and Santiago (2012), for their part, found not only a positive impact on school attendance, but also its superiority over a reduction on wages received by children.

c. CCT programs and social capital

Being at the school, children enter a new social group and acquire a *social capital* different from the one found at work or at home. The value of this capital depends on its composition. The more heterogeneous the group, the more valuable the social capital provided. More heterogeneity in terms of income and wealth will mean that children will be acquiring not only *bonding* social capital but also, and much more important, *bridging* social capital:

> "Bonding social capital is formed among individuals in close social proximity, such as in families, churches, or neighborhoods, and relies on solidarity, reciprocity, familiarity, and trust (...).Bridging social capital is created when individuals build ties across social distance, ... making it easier for diverse groups to understand and account for one another's interests and needs" (Murray et al., 2020, p.p. 4-6).

In order to be able to provide bridging social capital, however, the school needs to be *inclusive* and working at the same time towards a more inclusive society.[11] Otherwise, the social capital acquired by children while at school will be socially disruptive. A segregated school system will generate a negative social capital that perpetuates this segregation and, in the worst scenario, aggravate serious social problems: for instance, consolidating youngster gangs.

Inclusive schools are a necessary, even if not a sufficient condition to overcome social inequality and reinforce social mobility. The difficulties

[11] "...neither bridging nor bonding social capital alone is enough to generate equity. Both strong and weak relationships are necessary for equity building. But building both types of capital takes intentionality" (Murray et al., 2020, p. 30). Although the work of Brittany Murray is related to the United States experience, we believe that it is also relevant to Latin American schools.

encountered by young students' beneficiaries of the *Bolsa Família* when entering the university thanks to the PROUNI (*Programa Universidade para Todos*, University for All Program) in terms, precisely, of the rejection of the rest of the students, is a good example: they describe themselves as a "fish out of water" (Pires, Romao and Varollo, 2019).

Trying to facilitate finding a suitable employment when finishing studies, some of these programs are complemented with other ones that help their beneficiaries to enter the labor market (Chile's *Programa Puente* for example). Without denying the usefulness of this approach, however, a great deal would have been gained had these students acquired a bridging social capital while at the school, in terms of a heterogeneous and inclusive social network including more privileged mates.

7. Summary and conclusions

Child labor is a serious social problem. To fight it, two kind of measures have been recommended. On the one hand, those that penalize the employer by making it illegal, or by boycotting their products. In some occasions the final impact of these measures is to increase the amount of child labor and worsen its conditions. Alternatively, there are measures that tend to increase the opportunity cost of child work by improving the benefits of attending school. The first problem appears when the quality of schools is very poor, and children do not learn very much. Improving their quality is a priority. However, even if the school finally provides a valuable learning, this may not be enough. This human capital needs to be realized. If social mobility is heavily restricted, the chances of realizing it will be very low. Despite empirical evidence to the contrary, the returns to education investment will also be low. The reason behind this apparent inconsistency is the fact that these rates were estimated relying in a *cross-section* analysis, in a context characterized by heavy social stratification and where education was progressively generalized. As less privileged classes were entering the education system, education begun to loss the high returns associated, not to education itself, but to the class structure of the students. If this is the case, schools need to be made attractive in some other way: Conditional Cash Transfer (CCT) are a solution. By conditioning the transfer to children attending school, this policy helps the family to alleviate sheer poverty while facilitating the acquisition of human capital. This needs to be coupled with an *inclusive* school system that will facilitate the acquisition of a *bridging social capital* that will greatly improve the possibilities of realizing in the future the human capital of poorer children. The closure of schools due to the Covid-19 *pandemia* should not mean the end of these transfers, even in the presence of further stress on public budgets, if the goal of the United Nations for 2021 is to be achieved: the UN International Year for the Elimination of Child Labour.

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