

# Children's Labor Market Involvement, Household Work, and Welfare: A Brazilian Case Study

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**ABSTRACT.** The large numbers of children working in developing countries continue to provoke calls for an end to such employment. However, many reformers argue that efforts should focus on ending the exploitation of children rather than depriving them of all opportunities to work. This posture reflects recognition of the multiplicity of needs children have and the diversity of situations in which they work. Unfortunately, research typically neglects these complexities and fails to distinguish between types of labor market jobs, dismisses household chores as irrelevant, and conceptualizes children's needs largely in terms of the education they require for successful careers. Based on data collected in schools in Franca, Brazil, where children often combine school with work in the shoe industry, this study first examined the implications of labor market jobs and household work for their health, life satisfaction, and education. Analyses suggested that both forms of work negatively affected children's welfare, but the effects of household work were more extensive, especially for girls. The second part focused on children with labor market jobs and examined how facets of their jobs as well as their after-work household duties affected their welfare. A lack of discretion on the job undermined the health of both boys and girls, higher pay adversely affected boys' education, and housework had detrimental effects on all indicators of girls' welfare. This paper discusses the implications of these findings for further research and suggests the needs for attention to different forms of work activities within families. It concludes with suggestions for multinationals sourcing in developing areas that go beyond the usual calls for ridding their facilities and supply networks of child workers.

**KEY WORDS:** adolescents, Brazil, children, gender, labor market, household, work

## **Introduction**

Globalization raises thorny issues regarding the foreign labor practices of multinationals. Low wages, weak unions, and supportive governments have led many U.S. and European manufacturing firms to source their products in developing regions of Asia and Latin America. These corporations often defend the transfer of operations abroad by arguing that the savings protect jobs in the home country and that the new jobs created abroad, although poorly paid by the standards of developed nations, provide desperately needed income in struggling economies. Critics challenge this view, accusing multinationals of violating well-established international labor standards and exploiting highly vulnerable populations, either directly or indirectly, in unregulated and clandestine sweatshops. Securing products for export through sweatshop labor encourages a "race to the bottom" that undermines the hard-won gains of U.S. and European workers.

Revelations of large numbers of child workers in labor-intensive export industries (USDOL, 1994) pose a particularly troublesome problem for all parties. Critics of multinationals condemn what they refer to as "child labor" alleging that the employment of children not only confers unfair trade advantages on foreign exporters and their multinational buyers, but also exposes them to exploitation by employers, which threatens their health, safety, welfare, and development (Nieuwenhuys, 1994, 1996; Post, 2001). Based on this critique, a host of public officials, union leaders, social reformers, and child advocates have sought to persuade governments and

businesses in Latin America, Africa, and Asia to take aggressive action to eliminate the employment of children within their jurisdictions, facilities, and supply networks.

However, this abolitionist position is problematic for at least two reasons (Satz, 2003). First, it ignores the benefits that sometimes result from work by children to both their families and themselves. Many note that children are often placed in the labor force to help families cope with poverty (Brown et al., 2003). Others emphasize the gains in psycho-social development that child workers sometimes experience (Boyden et al., 1998). Second, extensive efforts to eliminate child work in developing areas have met with only modest success and have sometimes had the perverse effect of pushing children to seek work in the less regulated, less visible, and far more hazardous informal and illegal sectors of the economy.

Given these problems, some child advocates, public officials, and social scientists have called for a change in strategy from the abolition of all work by children to more targeted efforts to eliminate working conditions that harm them (Becquele and Myers, 1995; French and Wokutch, 2005; Myers, 1999, 2001). The ability to implement such a change will depend, first, on greater attention to the diverse kinds of involvements that children have with the diverse worlds of work. Notions of work need to expand to include not only work hours but also job content, not only employment but also unemployment, not only labor market involvement but also unpaid household labors. Second, more attention is also needed to the multiplicity of needs that children have, the outcomes they experience when “at work,” and, more generally, what constitutes their “best interests” and defines their welfare. At the minimum, traditional concerns with work’s implications for children’s human capital attainments through formal education need to be supplemented by an examination of how work affects their health and psycho-social development. Third, the implications of gender for the allocation of work to children and its consequences for their welfare need more systematic study. Research needs to move beyond commonplace observations of a sexual division of labor to recognize that many children, typically girls, shoulder an onerous, double burden of employment and household labor. Fourth, the voices of the children themselves need to be heard.

Many facets of work are obscure to observers, but are salient elements of the young workers’ experience. Equally important, the implications of work for children’s welfare often depend on how they understand and interpret their experience.

The present research examines how different kinds of work involvements affect the health, education, and life satisfaction of child workers. Three issues are addressed through an analysis of data obtained directly from children. The first has to do with the implications for children’s welfare of unpaid domestic labor and unemployment as well as jobs in the labor market. The second concerns the implications of the content of labor market jobs as well as the hours devoted to them for children’s welfare. The third deals with the welfare implications for those children, typically girls, who not only hold jobs in the labor market, but also perform significant amounts of domestic work in the home.

The study was conducted among the type of young workers at the center of current child labor controversies, namely, those located in exporting industries of developing nations. The research site is the Brazilian city of Franca, a major center for the production of men’s leather shoes for export to the U.S. In the early 1990s, the city gained notoriety after revelations of extensive employment of children in its shoe industry. Observers claimed that such employment was hazardous because of the child workers’ vulnerability to the toxic glues used in production processes. Despite pressure by the U.S. government on Brazilian officials and industry leaders to end this practice, all evidence suggests that work by children and adolescents remains common.

### **Research on work by children in developing areas**

Much of the research on children’s work in developing countries has been undertaken by economists who explain such work as a strategy by families to cope with poverty by finding jobs for their children (Brown et al., 2003; Grootaert and Patrinos, 1999). Employment is believed to reduce children’s time for education and often leads to their withdrawal from school, but families find such outcomes acceptable because of their immediate financial needs. Most economists consider such decisions

shortsighted and have explored how changes in the educational systems and markets for capital and labor might encourage families to cope with poverty through other means less damaging to children's educational attainment. To these ends they have supported policies that seek to increase the quality and payoffs to education and to provide families with financial incentives to keep their children in school and out of the labor force.

Economists' perspective on the family economy has provided a valuable framework and given rise to a growing body of empirical work. However, these benefits have come at the price of a narrowness of scope in the treatment of children's work activities and their consequences (Basu and Van, 1998). For economists, work is taken to mean paid employment in the labor market and jobs are seen to differ only in terms of the time children devote to them. These assumptions have enabled them to take advantage of many large household surveys, typically conducted by governments, that contain little information about the nature of the work performed and undertake empirical analyses that treat all work as equivalent (Edmonds and Pavcnik, 2005).

This narrow conceptualization of work is challenged by three alternative perspectives. The first, which could be labeled the sweatshop perspective, argues the need to distinguish between jobs not only in terms of hours of activity but also in terms of the nature of the tasks performed, characteristics of the working conditions, type of employment relationships, and levels of pay (Mortimer and Finch, 1996). For example, efforts to define and measure sweatshop labor typically employ multiple indicators that include not only excessive hours but also hazardous working conditions, exploitative control practices, and wage levels that violate minimum standards (Ross, 2004). In recent years, the need to recognize different types of work by children has led the International Labor Organization to modify its traditional posture advocating the elimination of all work by children and, instead, focus their resources on the elimination of the so-called worst forms of child "labor" that clearly threaten children's welfare and cannot be changed. At the same time, other forms of work are recognized: hazardous forms of child "labor" that may, nonetheless, be modified to permit some work by children, "work" that is not harmful to children in limited amounts, and "work" that is

beneficial to children's development (Edmonds and Pavcnik, 2005; White, 1994, 1999).

A second and macro-sociological perspective argues that it is essential that notions of labor market involvement on the part of children and adolescents be broadened to include the phenomenon of unemployment. In developing economies, poverty often forces children to seek work and many in agricultural areas find ways of contributing to family income. However, in urban wage economies, young job seekers often encounter difficulties in finding work, especially in highly visible export industries. Importing nations discourage work by children and often pressure host governments to eliminate employment opportunities for them. Intense labor market competition for export jobs that typically pay more than those in domestic firms ensures that many applicants will be turned away. A burgeoning literature on the consequences of unemployment suggests that the inability of children and adolescents to find jobs may well be more detrimental to their welfare and development than their employment in at least some jobs. Moreover, because of differences between unemployed youngsters and those not interested in working, combining these two categories and comparing them with employed youngsters is apt to produce misleading findings that understate the harm that jobs may inflict.

A third, "liberationist" perspective, often associated with feminist works, argues that notions of work need to be expanded to include domestic work by children for their parents (Levison, 2000). The incidence of boys in labor market employment is commonly found to be far higher than that of girls. However, the latter perform the greater part of household chores which, despite their obvious economic value to households, typically are not considered to be "work" and therefore go uncounted in statistics regarding work by children. The conventional view has it that domestic work for parents not only contributes to the collective welfare, but also teaches useful skills, fosters self-discipline, and is more generally benign. As such, many analysts of child "labor" essentially dismiss these household activities as irrelevant to their inquiry (see, e.g., Lavalette, 1999). However, others argue that adults in traditional families organized around age hierarchies often exploit the free, but invisible, labor of their younger members to such an extent that their welfare is

threatened and their development slowed. Young girls, in particular, are sometimes required to spend so much time caring for younger siblings that they have little time for leisure or schoolwork or earning wages to acquire coveted consumer items (Boyden et al., 1998; Nieuwenhuys, 1996). Thus, some argue that many young people yearn for opportunities for labor market employment and should be allowed to exercise their rights to social inclusion through paid jobs in formal labor markets where workers enjoy protections of the law and union representation.

Differences in the nature of children's work activities and employment contexts matter because they carry different implications for their welfare and development. Unfortunately, the available empirical literature treats children's welfare in as narrow terms as it does their work. The vast majority of studies, undertaken by economists, tend to equate the welfare of individuals with educational attainment and that of societies with rates of human capital formation. Research often reveals negative effects of work in the labor market on school attendance and various indicators of attainment (Amin et al., 2006; Beegle et al., 2005; Psacharopoulos, 1997). However, some studies have found no relationship between such work and educational performance (Binder and Scrogin, 1998; Patrinos and Psacharopoulos, 1997) and some researchers have suggested that paid work may enable some children to attend school (Basu, 1999). Further complications are introduced by considerations of household work and gender. Amin et al. (2006) found that, among girls, housework but not market work was negatively related to educational performance. This finding was consistent with that of Levison and Moe (1998) but not with that of Binder and Scrogin (1998).

A host of public officials and reformers have expressed concerns about the implications of early work for children's health, but little empirical research has been undertaken and the results are mixed. Kassouf et al. (2001), O'Donnell et al. (2005), and Facchini et al. (2003) find evidence of an association between early labor market work and health, but Beegle et al.'s (2005) very rigorous, longitudinal study found no relationship. Even less in evidence are studies of the consequences of work for children's acquisition of helpful work attitudes and the development of marketable skills. Attention to a broad range of outcomes is needed to assess accurately the

implications of work for children's interests and welfare.

In addition to its failure to recognize diverse types of work and to examine the full range of their consequences for child workers, the literature is deficient in its failure to consult child workers about the work they are doing, the consequences they experience, and the trade-offs they consider reasonable (Woodhead, 1998). The need for subjects to participate in the research stems, in part, from the lack of information, personal biases, and conscious agendas of adult informants. Evidence suggests that male heads of households often underreport work by their children for a host of legal, social, and cultural reasons. Moreover, information gleaned about children's work is limited to its most objective features such as hours of activity. However, the need to directly involve child workers in the research rests more fundamentally on the fact that the consequences of complex work situations for children depend in part on how they interpret and react to them. Anthropologists have long noted that children regard many forms of work with their families less favorably than do many adults (White, 1994). Consequently, some forms of family work may prove more stressful and harmful for them than neutral observers might expect. By contrast, many children regard paid work in the labor market more favorably than do adult policymakers (French, 2002; Levison, 2000).

### Present study

Increasing efforts to abolish work that harms children require greater attention to the diverse ways in which they are involved in the worlds of work and the multiplicity of ways in which such involvements may hurt or help them. To date, researchers have focused largely on the implications of hours devoted to jobs in the labor market for children's attendance and performance in school. The present research expands conceptualizations of children's welfare to include their health and life satisfaction as well as their education and explores the implications of broader conceptualizations of children's work involvements for their welfare. Several issues are examined. The first concerns the implications of unemployment as well as employment in the labor market for children's welfare. While economists focus on the potentially

damaging effects of employment, sociologists point out the inequalities in opportunities for employment and suggest that the failure to find work may cause children greater hardship than the jobs they seek. The second has to do with the implications of domestic work for children. The liberationist approach argues that domestic labor often causes more harm to children than labor market employment. The third issue concerns features of labor market jobs that help and harm children. Social psychologists argue the need to go beyond hours of work to examine the implications of job content, especially job autonomy, and employment context, including pay levels, supervisory relations, and health/safety conditions. The fourth issue deals with the implications of the double burden that girls often bear of both jobs and domestic work. Studies suggest that children "specialize" in labor market or domestic work as a consequence of gender but such notions obscure the fact that many girls continue to do much of the domestic work even after entering the labor market.

These issues are explored through analyses of data collected from children in Brazil who often combine work with school. Their labor market employment has long been commonplace. ILO data (1996) report a higher incidence of 10–14-year-olds working in Brazil than in other South American nations. Brazilian census data (PNAD, 1999) indicate that 2.55 million 10–14-year-olds or 15% of the cohort held jobs. They were joined by 3.7 million 15–17-year-olds and about 375,000 5–9-year-olds (Dieese, 2000). Since the minimum age for work was raised to 16 years in 1999, at least half of these young workers were employed illegally and a much higher percentage were not registered and therefore not protected by labor laws. About two-thirds of the 5–14-year-olds work in agriculture (Dieese, 2000) with most of the rest found in commerce and services (Faust and Cervini, 1991). Smaller numbers are employed in industry. Of these, some are found in Brazil's export sector (USDOL, 1994), most notably in shoes, textiles, and garments. Charges of work by children in the shoe industry have been particularly well documented (Licursi, 1994) and of great concern to U.S. officials since this industry exports well over \$1.5 billion annually to the U.S.

The data in this paper were gathered in Franca, a city of 350,000 and center of the export-oriented shoe industry in Brazil. In the early 1990s, the city

gained international notoriety after revelations of extensive employment of children. Since then, the industry has been pressured by the U.S. government to end such practices. In these efforts, U.S. officials characterize these child workers as victims of poverty and exploitation by employers. However, reality appears more complex. First, the families of most children employed in the shoe industry are not impoverished. Most young shoe workers in Franca live with both parents who typically work, often in the shoe industry where union wages enable them to own houses, cars, telephones, and other consumer durables. Second, most young workers in Brazil also attend school (Cervini and Burger, 1991) because of increased access to public schools, stronger enforcement of compulsory attendance laws, employer preferences for educational credentials, and the short school day of 4–5 hours. Officials in Franca estimate that over 90% of those in the 7–14-year range attend school. Third, much of the work by children in Brazil's shoe industry takes place under the supervision of parents. Subcontracting by manufacturers to home-based, family firms expanded in the 1990s in response to competitive pressures. In Franca, an estimated 1200–1500 of these shops provide labor services to about 400 manufacturers and employ untold numbers of family members, including children (Machado Neto, 2006).

The survey data used in the present study were gathered in 2002 in the two public schools. One serves an older working class neighborhood containing a mix of residences and shoe manufacturers. A second is located in a poor neighborhood on the town's periphery. In both, classes in the 7th and 8th grades were sampled and all the students, whether working or not, completed questionnaires during class time. Some were then interviewed to clarify their responses and have them elaborate upon them.

The research questions to be examined empirically are the following:

- A. Among all the respondents, employed in labor market jobs or not, what is the relationship of child welfare (health, life satisfaction, school grades, and attendance) with labor market employment (in the shoe industry and in commerce/services), unemployment, and domestic work (household chores and child care)?

- B. Among those with labor market jobs, what is the relationship of child welfare with selected job characteristics (job autonomy, hazardous processes, pay levels, and work hours) as well as domestic work (household chores and child care)?

Operationalizing dimensions of children's welfare is no less challenging than the conceptualization of this construct. The first indicator, *health*, is based on responses to six items asking for the extent of agreement with statements indicating that they frequently experienced the following: headaches, stomach aches, feelings of dizziness, unusual fatigue, feelings of sadness, and nervousness (4 = agree completely, 3 = agree in part, 2 = disagree in part, 1 = disagree completely). Similar questions had been used in earlier studies of the health of shoe workers in Brazil (Licursi, 1994). Responses to these ordinal scales were grouped by quintiles. The alpha coefficient, indicative of reliability based on internal consistency, is 0.735. Several problems attend this measure. First, good health is defined in terms of the absence of problems rather than the presence of high energy, positive spirits, and the like. Second, the list of problems is limited to six and those not experiencing these but with others such as back pains would be classified as healthy. Third, determinations of the health of individuals ideally would go beyond self-reports of symptoms to include examinations by trained medical personnel.

A second welfare indicator, *life satisfaction*, is based on the extent of children's satisfaction with: the support of their family, time for leisure, the space and comfort of their house, their health, their friends, opportunities in Franca, and the quality of their clothing (4 = very satisfied, 3 = satisfied, 2 = dissatisfied, 1 = very dissatisfied). The responses to these ordinal scales were grouped by quintiles; the alpha equals 0.736. This measure has limitations as well. The researcher's control over the domains of subjects' lives considered relevant (e.g., friends) means that, for some subjects, problematic domains such as the availability of public transportation may have been excluded. More open-ended questions, perhaps raised in an interview format (see, e.g., Woodhead, 1998), might have enriched and improved the measure.

Two indicators of educational attainment were constructed from school records. The first, *final*

*grades*, represents the average of the children's final grades in Portuguese and mathematics (5 = A, 4 = B, 3 = C, 2 = D, 1 = F). School personnel view these as the most fundamental courses that they rely on to develop students' literacy and numeracy. The second, *absences*, is the average number of absences in their Portuguese and mathematics classes during the four yearly marking periods. At least two issues are raised by these measures. The first is whether they discriminate between students' educational attainment within the context of these schools. The issue is of particular concern regarding grades since cheating on tests is commonplace. However, grades are normally distributed with a mean of about C+ and they are negatively correlated with absences ( $r = -0.593$ ). The second issue has to do with the quality of the schools and the correspondence between grades received and the students' literacy and numeracy as measured by externally validated standards. Because of concerns in Brazil over grade repetition, changes have been made recently to increase promotion rates. One suspects that grading has become less rigorous and the distribution shifted upward so that higher grades at present signify less literacy and numeracy than they did in the past. As in the case with health, it would be desirable to obtain objective measures of literacy and numeracy through tests administered by personnel outside the school system.

The respondents were asked to provide extensive information about any current jobs they held in the labor market. Nearly all the jobs indicated were in the shoe industry, in commerce, or in services. Workers were defined as those working more than three hours per week. In the analyses, commerce and service workers were grouped into one category. Those reporting no jobs were asked if they were looking for jobs and those answering affirmatively were coded "1" on the unemployment variable with all others coded "0." Information was also collected about work hours per week, monthly pay, job autonomy (4 = much freedom, 3 = freedom to do some things, 2 = a little freedom, 1 = no freedom), and exposure to hazardous materials (asked only of shoe workers regarding exposure to toxic glue: 1 = daily exposure, 0 = occasional or no exposure).

As to household work, respondents were asked if they did any of the following: prepared meals, washed clothes, washed dishes, cleaned house,

shopped in the market, cleaned the yard, took care of animals or the garden, and took care of younger siblings. The number of times they performed each of these activities per week was multiplied by average amount of time per "performance" to yield the hours per week spent on each. The hours per week spent on the first seven chores were added to operationalize the extent of *housework*. The hours spent on the last item operationalized *child care*, which, due to its skewness, was grouped into quartiles.

A variety of control variables are also used. The economic resources and needs of families, apt to affect children's welfare, were tapped by three variables. *Household possessions* is based on responses to questions about the family's possession of: a TV, their own house, a computer, a car, a telephone, a maid, video game system, sound system, camera, microwave oven. The binary responses were added. *Single mother* as household head, taken as indicative of low income, is based on the survey as is the number of *children under nine*, indicative of income needs. A fourth resource variable, *community wealth*, is based on whether the subject lived and attended school in the working class neighborhood or the impoverished one.

Father's and mother's *literacy* may also affect children's welfare. Each was assessed through responses to questions about the reading ability of

each (4 = reads very well, 3 = reads well, 2 = reads some, 1 = reads only a little or not at all). The *employment of mothers* is often linked to children's welfare and a binary variable tapping this status is included in the analyses. The involvement of children in school is widely regarded as both essential to their welfare and a deterrent to work. *School involvement* is operationalized on the basis of responses of twelve items asking about how much they liked their school, how interested they were in school activities, how much time they spent on homework, and how satisfied they were with the teachers, other students, and their own progress. The responses are averaged, range is 1 (low) to 3 (high involvement), and the alpha coefficient is 0.74. Finally, controls are also made in the analyses for respondents' *age* and *sex* (1 = female, 0 = male). Descriptive statistics are shown in Table I.

## Results

Before addressing the specific research questions, it is useful to note that work in the labor market by students in these schools is very common (see Table II). Despite legal prohibitions on employment prior to 16 years of age, about 32.9% of the 11–13-year-olds work regularly and another 17.6% would work if they could find a job. These percentages are higher

TABLE I  
Descriptive statistics

Dependent variables ( $n = 461$ )					
Health	3.12	1.37	School absences	3.40	2.52
Life satisfaction	3.08	1.33	School grades	3.42	0.866
Independent variables: total sample ( $n = 461$ )					
Shoe worker	0.221	0.416	Commercial or service worker	0.102	0.303
Housework	9.31	8.76	Child care	0.375	0.640
Unemployed	0.230	0.421	Household possessions	0.581	0.494
Single mother	0.185	0.389	Children under 9	0.475	0.735
Community wealth	0.345	0.476	Mother's employment	0.718	0.450
Father's literacy	0.557	0.497	Mother's literacy	0.619	0.486
School involvement	2.23	0.352	Age	13.1	0.977
Sex	0.492	0.500			
Independent variables: labor market workers ( $n = 133$ )					
Pay	64.5	48.0	Work hours	20.5	10.8
Job autonomy	2.49	1.01	Hazardous shoe work	0.151	0.359

TABLE II  
Respondents' relationships to the labor market

	Shoe worker	Commerce or service worker	Worker in other sectors	Looking for work	Out of labor market	<i>n</i>
11–13 years	21.6%	9.0%	2.3%	17.6%	49.5%	301 (100%)
14–16 years	23.1%	12.4%	3.0%	32.5%	29.0%	169 (100%)
<i>n</i>	104	48	12	108	198	470

Note: work defined as more than 3 h of activity per week.

for the 14–16-year-olds. Whether holding jobs in the labor market or not, most respondents reported substantial domestic work: about 73.6% spend 3 hours or more per week on household chores and 18.9% spend 3 hours or more on caring for siblings. Nonetheless, as Table III suggests, there is some specialization between forms of work by gender. Boys hold most of the jobs in the shoe industry (63.5% as compared to 36.5% by girls) and a higher percentage of boys (29.1%) have jobs in this industry than girls (16.5%). By contrast, girls are far more involved in both housework and child care than boys. However, symptomatic of the double burden on many girls, they outnumber the boys in jobs in commerce and services.

The next part of the analysis focuses on the implications for children's welfare of labor market employment, unemployment, and domestic work activities. The four welfare indicators were regressed on five indicators of market and domestic work involvements as well as controls for economic resources, parent's literacy, mother's employment,

school involvement, age, and sex. The educational indicators were analyzed using ordinary least squares procedures while ordered probit procedures were used to analyze the ordinal measures of health and life satisfaction (Daykin and Moffatt, 2002).

These findings in Table IV reveal that jobs in both the shoe industry and the commercial/services sector appear to be related negatively to the health of these young workers as suggested by the significant coefficients of  $-0.383$  and  $-0.306$ . At the same time, unemployment also appears to be related negatively to health as well as to satisfaction with life. In short, reported health is lower for those with any form of labor market involvement. However, neither shoe work nor other forms of involvement in the labor market appear to affect school grades or attendance. By contrast, domestic work activities are negatively associated with a broader range of welfare indicators. The hours spent on housework are negatively related to both health and school grades while hours devoted to child care are negatively related to health and life satisfaction.

TABLE III

Labor market employment and domestic work by gender: number, percent of job by gender ( ), percent of gender by job [ ]

	Girls	Boys	%
Shoe jobs	38 (36.5%) [16.5%]	66 (63.5%) [29.1%]	100
Commercial and service jobs	26 (54.2%) [11.3%]	22 (45.8%) [9.7%]	100
Housework	216 (62.4%) [93.5%]	130 (37.6%) [54.4%]	100
Child care	57 (64.0%) [24.7%]	32 (36.0%) [13.4%]	100

TABLE IV

Regression of welfare indicators on labor market involvement and domestic work roles: total sample ( $n = 465$ )

	Health Ordered probits	Life satisfaction	School grades Ordinary least squares	Absences
Shoe worker	-0.383 (0.134)***	-0.035 (0.135)	-0.027 (0.107)	0.045 (0.307)
Commerce or service worker	-0.306 (0.174)*	-0.032 (0.174)	0.138 (0.144)	-0.136 (0.401)
Unemployed	-0.245 (0.135)*	-0.276 (0.136)**	-0.160 (0.109)	0.255 (0.311)
Housework	-0.018 (0.007)***	-0.004 (0.007)	-0.011 (0.005)**	0.015 (0.015)
Child care	-0.248 (0.094)***	-0.225 (0.095)**	0.045 (0.076)	-0.021 (0.216)
Possessions	0.058 (0.104)	0.150 (0.105)	0.259 (0.084)***	-0.806 (0.240)***
Single mother	-0.092 (0.130)	-0.171 (0.131)	0.013 (0.107)	0.468 (0.299)
Young children	0.201 (0.082)***	-0.039 (0.082)	-0.062 (0.066)	0.021 (0.186)
Community wealth	0.065 (0.107)	0.079 (0.108)	-0.184 (0.087)**	0.343 (0.247)
Father's literacy	-0.131 (0.113)	0.130 (0.113)	0.206 (0.091)**	-0.136 (0.260)
Mother's literacy	0.225 (0.117)**	0.243 (0.117)**	-0.123 (0.094)	0.133 (0.269)
Mother employed	-0.038 (0.115)	0.207 (0.116)*	-0.015 (0.093)	-0.164 (0.266)
School involvement	0.471 (0.152)***	1.56 (0.162)***	0.136 (0.120)	-0.781 (0.349)**
Age	0.008 (0.055)	-0.050 (0.055)	-0.072 (0.045)	0.284 (0.127)**
Sex	-0.200 (0.113)*	-0.048 (0.114)	0.301 (0.091)***	-0.618 (0.261)**
	Pseudo $R = 0.044$	Pseudo $R = 0.112$	$R^2 = 0.071$	$R^2 = 0.059$

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.10$ .

As indicated, participation in domestic and labor market work is influenced by gender. The results above suggest the importance of gender for welfare as well; girls report less health, but miss fewer classes and receive better grades. Because of the pervasiveness of gender influences, separate analyses were performed for girls and boys. The same control variables were used in these analyses but the resulting coefficients are not shown. The results, displayed in Table V, indicate that shoe employment is negatively related to health for both girls and boys, but again has no implications for their education. The results also suggest that the implications of domestic work activities for welfare tend to be somewhat larger for girls than boys. For girls, both housework and child care appear to be related negatively to health; housework is also negatively related to grades. Among boys, by contrast, child care appears unrelated to their welfare and housework is related only to their life satisfaction, negatively.

The last part of the analysis is restricted to those children with jobs in the labor market and focuses on both characteristics of their jobs and their hours of domestic work. The four welfare indicators were

regressed on four dimensions of labor market jobs (i.e., monthly pay, weekly work hours, job autonomy, and hazardous work) as well as the two domestic work activities: housework and child care. In addition to the independent variables displayed in the table, controls were also used for those variables which had emerged as significant predictors in Tables IV and V. The results of the regression analyses are shown in Table VI. The upper third of the table displays the results pertaining to all those with jobs while the lower portions report the results for girls and boys.

The results of the analyses among all those employed suggest that, contrary to the conventional wisdom, the number of hours worked per week appears to have few, if any, implications for children's welfare. By contrast, pay rates appear to have significant relationships with several welfare indicators although not in ways anticipated by the sweatshop perspective. On one hand, higher pay is negatively associated with grades and positively related to absences. These findings may indicate that those with higher pay would face greater opportunity costs if they devoted more efforts to education and fewer to their jobs so they favor their jobs over school. On the

TABLE V  
Regression of welfare indicators on labor market involvement and domestic work roles: girls and boys

	Health Ordered probits	Life satisfaction	School grades Ordinary least squares	Absences
Girls (N = 231)				
Shoe worker	-0.435 (0.209)**	0.065 (0.209)	0.190 (0.153)	-0.492 (0.432)
Commercial or service worker	-0.262 (0.242)	0.315 (0.243)	0.124 (0.184)	-0.275 (0.506)
Unemployed	-0.116 (0.188)	-0.235 (0.191)	-0.059 (0.138)	-0.139 (0.393)
Housework	-0.023 (0.008)***	0.006 (0.008)	-0.016 (0.006)***	0.015 (0.017)
Child care	-0.337 (0.131)***	-0.174 (0.130)	0.067 (0.095)	-0.152 (0.268)
	Pseudo R = 0.061	Pseudo R = 0.133	R <sup>2</sup> = 0.074	R <sup>2</sup> = 0.074
Boys (N = 239)				
Shoe worker	-0.353 (0.181)**	-0.143 (0.181)	-0.207 (0.152)	0.497 (0.447)
Commerce or service worker	-0.410 (0.255)	-0.357 (0.257)	0.097 (0.224)	0.006 (0.636)
Unemployed	-0.347 (0.199)*	-0.277 (0.199)	-0.281 (0.173)	0.674 (0.498)
Housework	-0.008 (0.012)	-0.026 (0.013)**	0.003 (0.011)	-0.004 (0.031)
Child care	-0.180 (0.147)	-0.163 (0.150)	-0.018 (0.126)	0.139 (0.368)
	Pseudo R = 0.031	Pseudo R = 0.109	R <sup>2</sup> = 0.070	R <sup>2</sup> = 0.040

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.10$ .

other, surprisingly, higher pay is not associated positively with health and life satisfaction; in fact, life satisfaction appears to be related to lower pay. Two other job characteristics also appear to be related to welfare. Job autonomy is positively related to health and hazardous shoe work appears to be negatively related to health. In addition, housework on top of labor market work is associated negatively with health and positively with absences from school.

The analyses done separately on girls and boys reveal more differences than similarities in the implications of job characteristics and domestic work for welfare. For both, job autonomy appears to be positively related to health, but for girls, it is negatively related to their life satisfaction. For both girls and boys, hazardous shoe work is negatively related to their welfare; however, such work is related negatively to health for boys and negatively to life satisfaction for girls. Even more striking differences concern pay and domestic work. Boys appear far more affected by pay levels than do girls with higher pay associated with lower grades and more absences as well as lower life satisfaction for them. Among girls, by contrast, the implications of continuing to perform domestic work while holding jobs appears highly significant with housework and child care

negatively related to their health, life satisfaction, and grades while positively related to their absences.

## Discussion

The first part of the analyses compared the implications of market work and domestic work on children's welfare across the entire sample that included non-workers as well as workers. Consistent with claims by U.S. and Brazilian officials, work in the shoe industry was associated with reports of poorer health across the total sample and for both boys and girls. This finding stems at least in part from the exposure of young workers to toxic glues used in production processes. Other forms of involvement in the labor market, including unemployment, also appeared detrimental to the health and life satisfaction of the young.

However, there was no evidence of relationships of labor market involvement with school attendance or performance. This finding is particularly noteworthy in view of widespread belief that early entrance into the labor force reduces the time and effort devoted to studies. Typically underlying this notion are assumptions that both schools and

TABLE VI

Regressions of welfare indicators on job characteristics and domestic work roles among shoe and commerce/service workers

	Health Ordered probits	Life satisfaction	School grades Ordinary least squares	Absences
Total ( <i>n</i> = 133)				
Pay	0.002 (0.002)	-0.005 (0.002)***	-0.003 (0.002)*	0.014 (0.004)***
Work hours	0.002 (0.009)	0.007(0.009)	-0.012 (0.008)	-0.007 (0.021)
Job autonomy	0.290 (0.095)***	-0.013 (0.094)	0.083 (0.076)	0.012 (0.209)
Hazardous shoe work	-0.461 (0.254)*	-0.278 (0.252)	0.012 (0.206)	-0.529 (0.555)
Housework	-0.028 (0.012)**	-0.001 (0.012)	-0.015 (0.011)	0.064 (0.029)**
Child care	-0.126 (0.221)	-0.297 (0.188)	-0.053 (0.149)	0.159 (0.407)
	Pseudo <i>R</i> = 0.068	Pseudo <i>R</i> = 0.139	<i>R</i> <sup>2</sup> = 0.165	<i>R</i> <sup>2</sup> = 0.112
Girls ( <i>n</i> = 54)				
Pay	0.002 (0.004)	-0.006 (0.004)	-0.002 (0.003)	0.004 (0.007)
Work hours	-0.002 (0.017)	0.007 (0.017)	-0.023 (0.010)**	-0.004 (0.028)
Job autonomy	0.310 (0.159)**	-0.409 (0.161)***	-0.019 (0.096)	-0.170 (0.257)
Hazardous shoe work	-0.238 (0.417)	-0.727 (0.422)*	0.101 (0.262)	0.078 (0.681)
Housework	-0.032 (0.019)*	-0.001 (0.017)	-0.027 (0.011)**	0.080 (0.029)***
Child care	-0.313 (0.483)	-0.576 (0.281)**	-0.137 (0.171)	-0.450 (0.461)
	Pseudo <i>R</i> = 0.086	Pseudo <i>R</i> = 0.184	<i>R</i> <sup>2</sup> = 0.195	<i>R</i> <sup>2</sup> = 0.154
Boys ( <i>n</i> = 79)				
Pay	0.003 (0.002)	-0.005 (0.002)**	-0.004 (0.002)*	0.016 (0.005)***
Work hours	-0.002 (0.013)	0.003 (0.012)	-0.005 (0.011)	-0.005 (0.029)
Job autonomy	0.324 (0.125)**	0.158 (0.128)	0.144 (0.109)	0.075 (0.298)
Hazardous shoe work	-0.714 (0.333)**	-0.288 (0.348)	0.063 (0.290)	-0.910 (0.805)
Housework	0.006 (0.023)	-0.008 (0.024)	0.011 (0.020)	-0.021 (0.055)
Child care	-0.129 (0.275)	-0.088 (0.272)	-0.139 (0.238)	0.774 (0.648)
	Pseudo <i>R</i> = 0.070	Pseudo <i>R</i> = 0.154	<i>R</i> <sup>2</sup> = 0.063	<i>R</i> <sup>2</sup> = 0.107

\*\*\**p* < 0.01, \*\**p* < 0.05, \**p* < 0.10.

employers place strong, conflicting pressures on young student-workers which the latter resolve in favor of the job rather than the school. Both assumptions are questionable in the present case. As indicated, public school students in Brazil attend classes 4–5 h per day, on morning, afternoon, or evening shifts thus providing ample time for considerable work. Moreover, the quality of public schools is typically very poor with large numbers of students crowded into very unattractive classrooms to face teachers who lack the training and motivation to cope with the myriad discipline problems. Homework is infrequently assigned, cheating on tests is rampant, and social promotions are becoming the norm (Griesse, 2007). In short, the time and performance pressures placed on public school stu-

dents are exceedingly modest and thus unlikely to interfere with work activities. By the same token, most children and adolescents work for parents or relatives in their businesses. Typically, they have regular schedules for working and receive set wages for their hours. However, many report that their family employers are flexible in their demands and usually anxious to help their child employees comply with the demands of school. Thus, it is not surprising that young people find it relatively easy to combine employment and school. Interestingly, many adolescents in the U.S. and Western Europe also find it feasible to combine work with school (Mortimer, 2003).

Consistent with the arguments of many “liberation” theorists, domestic work appears to constitute

a more pervasive threat to children's welfare than market work as it was associated with lower school grades and less life satisfaction as well as poorer health. Domestic work is largely the responsibility of girls in Brazil, and the data suggest that the health and education of girls are affected more adversely than those of boys. The detrimental consequences of domestic work presumably stem in part from the nature of the tasks. Most involve responsibilities for certain services that may be required throughout the day by other family members. By contrast, labor market jobs typically are more delimited, structured, and supervised by single bosses. Domestic work is also invisible, occurring behind closed doors, and undertaken by young people often working alone and therefore more vulnerable than employees in stores, factories, or fields. Finally, despite its essential nature, household activities are devalued in Brazil, and thus, they are usually unpaid. That they are devalued and unpaid is associated with the allocation of most of these tasks to girls who, in Brazil, rank well below boys on virtually all institutional hierarchies. Reflecting their subservient position within Brazilian families, over 90% of the girls in the sample do more than 3 h of household work per week with an average of 16.6 h; boys, by contrast, average 7.2 h.

The first part of the analyses focused on comparisons of the implications for children's welfare of diverse types of domestic as well as market work. It suggests that the former may have more pervasive and negative effects than the latter, especially for young girls. These findings raise, in turn, the question of whether prohibitions against market work may thus have the perverse effect of driving some children to perform more domestic work. For this reason, it is important to ask whether market jobs can be reformed or redesigned to eliminate harmful elements. The second part of the analyses examined characteristics of jobs and employment contexts in the shoe industry and commercial/service sector in an attempt to identify facets of work that threatened and, alternatively, contributed to child workers' welfare. Among young workers, those employed in the shoe industry who used glue regularly reported more health problems and lower life satisfaction than non-users as many industry critics have alleged. The availability of water-based glues offers hope that shoe jobs will be redesigned to incorporate these safer

materials in production processes. Such a change would clearly make shoe jobs safer for those children who cannot be removed from work in this industry as well as the employed adults.

Two other features of jobs also appear to have relevance for children's welfare. Job autonomy or discretion over their immediate work situation appears to contribute positively to health. This finding is consistent with both the literature on sweatshops and social-psychological research on adult workers in the U.S. Public policies designed to encourage more discretion among workers and reduce their capricious and arbitrary treatment would certainly include efforts to eliminate informal and unregulated workplaces, support unionization, and increase governmental monitoring for violations of employment laws. However, it is interesting to note that job autonomy is not a panacea for workplace ills (Mortimer, 2003); among girls, autonomy is associated with less life satisfaction. This finding may stem from associations for some between job autonomy and (a) pressures for accountability, (b) a lack of help from supervisors, and/or (c) working alone.

Wage levels also have implications for young workers' welfare but in ways quite at variance with the notions of sweatshop critics regarding the beneficial effects of higher pay. Whatever the benefits, the present research suggests that, especially among boys, higher pay undermines young workers' educational performance and increases their absences presumably because they increase the opportunity costs of education. Among the policy alternatives are programs that provide families with financial incentives to end their children's work activities and therefore their needs for income from this source. Brazil has been a leader in the development of such programs and two operate in Franca. Interestingly enough, high wage levels also reduce the welfare of boys by lowering their life satisfaction. This finding may stem from the stress often associated with jobs that command higher pay (Mortimer, 2003) or heightened expectations on young workers with higher wages for greater financial contributions to family resources.

The final results of note pertain to the implications of domestic work for the welfare of children with labor market jobs. These depend mightily on gender. Among employed girls, the additional burdens of domestic work appear to undermine their

welfare across the board, reducing their health and life satisfaction and threatening their education. By contrast, among employed boys, what domestic work they do carries no implications for their welfare. These differences stem at least in part from the heavier burden that domestic work poses for employed girls. Most employed children also work within the household, but unsurprisingly, employed girls do more domestic work than boys (14.6 vs. 6.9). Among younger employed children (11–13 years), girls' greater domestic work is nearly offset by fewer hours of employment so the total work hours for each group are similar (30.0 for girls and 29.2 for boys). However, as they age, older employed boys (14–16 years) reduce their domestic work still further and their total work load declines to about 28.4 h per week. By contrast, older employed girls increase not only their employment hours but also their domestic work hours (to 16.1) so their total work hours increase to 37.4 per week or 9 h more than that of the boys. These disparities help account for the findings that the welfare of employed girls is undermined by domestic work but not that of boys.

## Conclusion

This paper has examined the implications of work by children in developing areas for their welfare through research in Franca, Brazil, an export-oriented manufacturing center for leather shoes and a site of extensive child employment. It departed from the previous literature by adopting multiple indicators of welfare including educational attainment, health, and life satisfaction. Moreover, the conceptualization of work has been broader than the conventional focus on hours of labor market activity. Unpaid household chores have been taken as "work" as well and labor market jobs have been examined in terms of job content, employment context, and pay as well as work hours.

Several broad conclusions follow from this research.

- (1) The high incidence of child employment in Franca, despite strenuous efforts by many parties, testifies to the difficulty of eradicating it.
- (2) Labor market jobs appear to have different consequences for different dimensions of children's welfare. In the present case, such jobs and especially those in the shoe industry appear to threaten the health of young workers, but not affect their school attendance or performance. Moreover, most employed children believe that they benefit from their jobs. Most are quite satisfied with their work and feel that their jobs contribute to their independence from parents and their own personal development as well as their acquisition of skills and capabilities useful in school and the labor market.
- (3) The adverse consequences of some jobs for children can be reduced, if not eliminated, through changes in the jobs themselves. The data suggest that shoe jobs undermine health in part because many of the young workers are exposed to toxic glues used to hold leather pieces together prior to sewing. Non-toxic glues are available but have not been used extensively because they take longer to dry. Policy changes that banned the use of toxic glues would benefit all workers. The results also suggest that health is compromised by autocratic employers, typically parents, who permit their working children little discretion in the family workplace. A variety of interventions might be designed to address this issue ranging from courses on effective management practices for parent-employers to changes in government policies that currently permit parents enormous latitude in the hiring and treatment of their children.
- (4) Domestic work activities within the home appear to be more harmful to children than labor market jobs as they affect their education and life satisfaction as well as their health. Girls bear the brunt of household work and appear to suffer more extensive, adverse consequences than boys. When they enter the labor force, their familial obligations continue in force and the adverse effects of chores and child care are especially evident. Efforts to eradicate labor market work by the young may have the perverse effects of forcing families to impose more domestic

work on them and, as a result, hurt them more than had they remained in the market.

The results, interpretations, and conclusions of this paper must remain tentative and subject to confirmation and/or revision in subsequent studies. First, due to the cross-sectional nature of the data, inferences regarding the direction of causality must remain open to question. Although the concern has been on the consequences of work for welfare, confirmation of assumed causality from work to welfare will require longitudinal designs that address the possibility of causal influences from welfare to work. Second, the measures of children's welfare can be challenged on several grounds. Clearly, examinations of the students' health, functional literacy, and numeracy by trained personnel from outside the school system would have been desirable. However desirable, these changes in design and measurement would have required far more time and resources than were available for this project as well as much more flexibility and investment on the part of the cooperating institutions, namely, Franca's public schools.

The present research suggests several related areas for further investigation. First, much greater attention to the family context of work by children and adolescents is needed. Domestic work by children is typically regarded as an important part of their socialization but the findings of this study suggest that such work often threatens their welfare, especially that of girls. Greater understanding of the family context may lead to the identification of family characteristics that affect the nature of domestic work, how it is allocated, and its implications for those who undertake it. More attention is also needed to the employment of children by their parents in family businesses. Parent-employers often enjoy great latitude in their treatment of child employees, but they must respond to market pressures and aspects of work they assign to their children may harm them. Because most employed children work for their parents, knowledge of how parent-employers cope with the conflicting demands of these roles is an essential step in efforts to abolish working conditions harmful to children.

Second, an examination of the relationships between domestic and market work is needed. Of particular interest is the extent to which one serves as an alternative for the other. Under some

circumstances, restrictions on market work may lead neither to more studying nor to more leisure time, but rather to more domestic duties and, for some, drudgery within the home. At the same time, those with many household duties may well seek relief through paid jobs in the labor market.

Third, more attention to the interplay between schools and work is needed. Excessive work may undermine educational attainment, and conversely, poor quality schools may lead some young people to abandon their studies in favor of jobs. However, in the present case, most young people believe that education is critical to their future and many from poor families take jobs to meet educational expenses. Although public schools are free, students incur expenses for school clothing, materials, transportation, and food. Moreover, many aspire to a university education but admission to the free, public universities is by examination and most successful applicants come from affluent families whose children have graduated from private schools. Children from poor families, who received poor instruction in public schools, are faced with the dilemma of finding jobs that pay enough for them to enroll in private, for-profit universities and yet are not so demanding that they have no time to study.

Fourth, in the present research, different forms of work were taken as givens with attention to their presumed consequences for young workers. An equally important issue has to do with the processes through which young people came to occupy these work roles. Economists suggest that poverty triggers family survival strategies that often include placing their children in jobs. However, field researchers are often struck by the agency of young people who appear to take jobs as steps to goals they have set for themselves. In the present case, virtually all indicated that they were working because they wanted to. As Mortimer (2003) suggests, children who struggle academically often look to jobs for skills and experience needed to embark upon careers. Thus, poor grades may result in greater work intensity instead of the other way around. As suggested earlier, longitudinal research designs are needed to distinguish between these causal paths.

A final issue has to do with the implications of this research for multinationals sourcing products from developing areas. In recent years, many firms have developed programs to end child work in their own

facilities and supply networks. Single-minded efforts to abolish all such work ignore (a) the benefits that children derive from good jobs, (b) the likelihood that terminated child employees will be forced to do more hazardous work, and (c) the impossibility of succeeding completely given cultural and political resistance by local elements. Instead, firms should, first, examine their own facilities to ensure that working conditions do not harm any employee, including underage ones who have slipped through the cracks. Second, firms need to see their employees not simply as individuals but rather as members of families and take into account this family context within which individual employees operate. Terminations of underage employees may result in their assignment of more harmful, domestic work by parents. Third, firms need to see themselves as part of a community and take advantage of possibilities for collective action to address child employment (Bird and Smucker, 2007). Fruitful actions would include collective efforts to enhance local schools, to develop vocational training opportunities in local firms, and to initiate community conversations as to appropriate norms for domestic and labor market work by children for their parents.

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