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CHILD LABOR: A REVIEW*

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Contents:

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1. Introduction

Child labor is upsetting. The popular images in the developed world are drawn from Dickens and the "dark, satanic mills" of the industrial revolution on the one hand, and the sweatshops and street children of the cities of the developing world on the other. A common, and natural enough, reaction in developing countries has been legislation to ban child labor, following the historical lead of the developed world as it emerged from its period of industrialization. In fact, trade sanctions are being recommended in some developed countries, against the exports of developing countries that use child labor. Many, including developing country governments, see this as a thinly disguised protectionist device. Many others, economists among them, have argued that child labor legislation, even if it could be enforced, is not the only way, or necessarily the best way, of tackling the issue.

Against this background, this paper presents on overview of the recent literature on child labor. Section 2 considers the problems of defining child labor - conceptual and empirical, and discusses some recent estimates of the magnitude of the problem. Section 3 moves to a discussion of the determinants of child labor, focussing first on supply and then on demand. Section 4 sets out the welfare economics framework within which policy interventions can be analyzed. In light of this, Section 5 assesses a range of policy interventions, including legislation. Section 6 concludes.

The basic message of this paper is that there seems to us to be an emerging consensus in the literature. The policy response to child labor will have to vary depending upon which types of child labor and child labor arrangements are prevalent, and depending upon the institutional and administrative capacity of the country in question. While child labor legislation is an important component of the policy package, this by itself is neither necessary nor sufficient for making a rapid and significant dent in the problem. It will have to be accompanied by a range of incentives, for schooling, for example, and a range of targeted interventions. This, together with equitable economic growth, is what will eventually reduce child labor to levels that can be addressed by legislation.

2. The Nature and Magnitude of Child Labor

How much child labor is there in the world" The answer to this question depends, of course, on what one means by child labor. At one extreme, all non-educational, non-leisure time of

individuals below a certain age can be counted as child labor. At the other extreme, only full-time employment in economic activity would be counted. The former includes light work after school or in school holidays, which helps in skill acquisition, while the latter excludes part-time engagement in such horrendous activities as child prostitution. Part of the definitional problem arises because when most people talk of child labor they mean "bad" child labor such as prostitution, or scavenging, or backbreaking work on a construction site, or long hours in a carpet factory, etc. Such "bad" child labor can be part-time or full-time, and a child can both engage in schooling and in "bad" child labor. Getting comparable estimates for such child labor is impossible, not least because what constitutes "bad" child labor is itself in dispute.

The term child labor covers a wide range of situations, to which the ethical, economic and legal response could be very different (see Box 1: Four child workers). To begin with, it is not clear how to define "child". In the West, it is customary to do so by chronological age, but in many societies cultural and social factors enter as well (Rodgers and Standing, 1981). The evolution of a child to adulthood passes through socially and biologically defined life phases, over which the degree of dependence and the need for protection of the child gradually declines, e.g., in many societies an apprentice even if only eight or nine years old is often not considered a child - a determination based on social status rather than age (Morice, 1981). In that sense too, many societies, especially poor rural ones, do not view child work as "bad". Rather, it is part of the socialization process which gradually introduces the child into work activities and teaches the child survival skills. This view is present in many African countries (Bekombo, 1981; Agiobu-Kemmer, 1992).

Box 1. Four child workers

Deepa, school girl in rural Maharashtra

Deepa is ten years old and attends primary school. She is lucky because many girls at her age must stay home to take care of their younger siblings. Yet, every day after school, she must help her father on the farm, together with her two older brothers. After they finish the farm work they return home to do their homework and to study. Deepa and her brothers are among millions of school children in India, and the developing world at large, who combine going to school with work at the household farm or other enterprise. The work probably harms their study effort to some degree, but their work is also essential to make it possible for the household to afford the children's schooling. Child labor legislation usually exempts this type of home production activities from regulation.

Ade, street trader in Lagos

Ade is in the last class of primary school, and like more than one third of his class mates he hawks goods on the streets after school hours. Like most of the children, he started trading on the street before his ninth birthday. Some children have fixed spots on street corners, fuel stations or entrances of large buildings, others peddle their wares from place to place along the streets, and others go from door to door in residential areas. The work is not without risk. The children are exposed to air pollution, vehicle accidents, abduction and sexual exploitation and assault. Most street hawkers originate from lower socio-economic status homes, and their parents rarely received more than primary education. While a majority of their fathers have wage employment, most mothers are traders too. Street trading by children is a profitable business: many children replenish the stock of merchandise they carry several times during a selling period, and manage to sell more than an adult trader. Their income is hence a significant contribution to household income. For most children their earnings also go towards purchase of school books and other supplies. And while street trading children tend to perform poor academically, they often excel in various social and leadership qualities.

Juan, quarry worker in Bogotá

Most of the quarries in Bogotá operate without a permit from the city authorities. They use low technology extraction methods. After large rocks have been extracted with bulldozers and explosives, they are pulverized in mechanical crushers. Workers then separate the material according to size. Children use shovels and sieves in this task. Juan, at age 13, is among the older children workers in the quarries. One fifth of them are less than 10 years old and some started at age five. Two thirds of the children have worked at the quarries between one and five years. In spite of the hard work, 50 percent of them attend school, often in the evening at a community center. Surprisingly, only one third said that they disliked the work, the others saw it as learning a trade or were proud that their earnings helped support their families. Most of the children live in squatter settlements at the outskirts of Bogotá. Their parents have little or no education, and most have no stable employment. They justify their children's work by saying that leisure leads to crime and by pointing at the high unemployment in Colombia, even among well-educated adults.

Taeng, masseuse in Bangkok

Taeng left her native village in N. Thailand when she was 17 to come to Bangkok. Most girls who go South are 17-18, or sometimes younger, with only a few years of primary education. Often they have an older sister, or aunt, who already works at the coffee shop. Sometimes an agent, who lent their parents money to build a house, arranges the placement of the girls. They often come from the least-endowed villages where there are few opportunities for local employment outside agriculture, and where there is a long agricultural off-season. If they're lucky, the girls wind up working in an upscale parlor, which provides them with accommodation and regular medical checks. But if a bond is involved, the agent locks up the girls and they have no personal freedom. Most girls see themselves as family breadwinners - they do not like what they do, but they know they must remit money to help pay for daily living expenses of their families, for the school fees of their brothers and sisters, to dig a well or build a house. Many return home after a number of years, to a mix of sympathy and derision from their fellow villagers.

Note: These cases are authors' composite constructions based on case studies in Jejeebhoy, 1993, Oloko, 1991, Salazar, 1988, Phongpaichit, 1982, Weiner, 1991, and Myers, 1991.

The concept of “work” is equally problematic to apply to the range of activities, which children do. They can range from help with domestic work, to work in the household enterprise or farm, to wage work. It can be light artisan work, trading, or heavy physical work (see Rodgers and Standing, 1981, for a useful typology of children's activities). For the purpose of defining a policy towards child labor, both the nature of the work and the nature of the relationship between the child and the employer must be considered. A key element is whether the arrangement is “exploitative”. In the extreme, this can take the form of bonded labor, quasi-slavery, or feudal relationships. In many cases a debt incurred by the parents is the “bond”, which forces the child to work towards repayment of the debt. It is estimated that in South Asia there are several million child bonded laborers (ILO, 1992). However, other aspects of child labor can also be considered exploitative, such as when the child starts full-time work at too early an age, or works too many hours, or when the work puts excessive physical, social and psychological strains on the child and hampers the child's development in these areas (UNICEF, 1986; ILO, 1992).

The ILO (1993) has recently attempted to produce statistics on child labor based on a uniform definition - economically active population under the age of 15. The discussion in ILO (1993) highlights the difficulties that arise in terms of data availability - eventually, a number of sources had to be used, including a set of specially designed questionnaires sent to 200 countries and territories (the response rate was uneven across regions). In any event, on the basis of returns from 124 countries, the ILO estimates that there are about 78.5 million economically active children under 15 years in 1990. The figure for children 10-14 years old is 70.9 million, with a participation rate of 13.7 percent. Table 1 presents the figures by region. It will be seen that participation rates are highest in Africa, and particularly high in Eastern Africa. The lower figure in Southern Asia may relate to country coverage.

Table 1. Labor force participation (PR) of children 10-14 years old by major geographical areas, 1990.

Major geographical areas	Economically active ('000)	PR (%)
World	70,929	13.7
Africa	16,681	22.0
Eastern Africa	7,965	32.9
Middle Africa	1,848	21.6
Northern Africa	982	5.8
Southern Africa	100	4.6
Western Africa	5,785	24.2
Americas	4,723	7.9
Caribbean	216	6.8
Central America	1,022	10.3
North America	0	0.0
South America	3,485	12.8
Asia	49,287	15.3
Eastern Asia	22,448	20.0
South-Eastern Asia	5,587	11.1
Southern Asia	20,143	14.0
Western Asia	1,109	6.7
Europe	90	0.3
Eastern Europe	4	0.1
Northern Europe	1	0.0
Southern Europe	84	0.8
Western Europe	0	0.0
Oceania	148	6.9
Australia-New Zealand	0	0.0
Melanesia	147	23.9
Micronesia	0	0.0
Polynesia	1	4.8

* Due to rounding, totals may not be equal to their constituent components.

Source: ILO (1993). This table is based on: (i) return of a special ILO questionnaire sent to more than 200 countries and territories in April 1992, (ii) LABORSTA (STAT database), (iii) preliminary ILO estimates and projections of economically active population, and (iv) United Nations Population Division, Sex and Age Distribution of the World's Populations: The 1992 revision (1950-2025)(New York, 1992).

By contrast to the ILO total, UNICEF (1991) estimated that there were 80 million children aged 10-14 who undertook work so long or onerous that it interferes with their normal development. Such widely differing estimates for the same age group (10-14) show well the implications of different definitions and methodologies. This is further illustrated by figures for one country - India - from the work of Weiner (1991):

> How many of India's 82 million children not in school are in the work force" Given the uncertainties of definition and the complexities of remuneration, it is no wonder that estimates of child labor vary so greatly in India. India's 1981 census reports only 13.6 million in the work force ... other studies put the number of child workers higher. The official National Sample Survey of 1983 reports 17.4 million child laborers, while a study by the Operations Research Group of Baroda, sponsored by the Labor Ministry, concluded that the child labor force was 44 million, including children paid in kind as well as in cash."

Thus estimates vary widely depending upon who makes the estimates. The basic difficulty of course is that there is no systematic data collection on child labor. Labor force surveys typically exclude respondents below 15 years or below the upper mandatory schooling age, hence missing the child labor phenomenon entirely. Yet, as the aggregate estimates indicate, there can be little doubt that in many parts of the world, child labor is pervasive. Table 2 shows some selected estimates for Africa and Asia, based on micro-data collection, often of an anthropological nature, which was undertaken to study a variety of household behaviors. While such estimates can make no claim of representativeness, they show that participation rates for children are often in the 20-60 percent range depending upon age and type of work. Rates increase with age and tend to be higher for boys in the case of wage-work or work in the household enterprise or farm. Girls participate more in domestic activities. Such figures suggest that the incidence of child labor varies greatly from country to country, and possibly within countries as well, but they confirm that the numbers of children working are high enough so that the issue of child labor deserves to be a matter of priority concern in many countries.

Table 2. The incidence of child labor in selected countries.

	Labor force participation rate of children (%)	
Rural Egypt, 1975 (Levy, 1985)	Ages 6-11 Ages 12-14	17% 43%
Two villages in rural Nigeria, 1992 (Okojie, 1993)	Work on farm Work at home Trading Craftwork Food processing	42-50% 52-61% 24-27% 16-21% 26-30%
100 Villages in Senegal River Valley, 1989 (Guèye et al., 1993)	Apprentice: Boys Girls Family aide: Boys Girls Farm work: Boys Girls	15% 4% 22% 53% 32% 20%
Bicol region in Philippines, 1983 (DeGraff et al., 1993)	Market work: Age 7-12 Age 13-17 Home production: Age 7-12 Age 13-17	 22% 44% 49% 68%
Five villages in rural Pakistan, 1990 (Sathar, 1993)	Boys Girls	19-25% 22-32%
One district in rural Maharashtra, India (Jejeebhoy, 1993)	Household work: Boys Girls Family farm or business: Boys Girls Wage work: Boys Girls	 34% 65% 24% 16% 9% 6%
Malaysia, 1980 (Jomo, 1992)	Ages 10-14: Boys Girls Malays Chinese Indians	6% 7% 4% 5% 7% 7%
Pakistan, 1985 (Cochrane et al., 1990)	Ages 10-14: Boys Girls	31% 7%
Côte d'Ivoire, 1986 (Cochrane et al., 1990)	Ages 10-14 Urban: Boys Girls Rural: Boys Girls	 5% 6% 55% 54%
Peru, 1986 (Cochrane et al., 1990)	Ages 10-14: Boys Girls	41% 38%

3. Determinants of Child Labor

The absence of systematic data collection on the incidence of child labor obviously affects the amount of research done on the determinants of child labor. Almost all work done is based on case studies covering a sub-national area, often one or a few villages, at best a province or region. Much of the analysis dates back to the period 1978-85, perhaps motivated by the United Nations' declaration of 1979 as the Year of the Child.[1] More recent case studies are reported by Bequele and Boyden (1988), Myers (1991), Jomo (1992), and Goonesekere (1993).

The dearth of direct data on child labor has led many researchers to focus on the determinants of school attendance. As argued earlier, one cannot consider this as the "inverse" of child labor, but nevertheless this literature is important because one can certainly make the argument that whatever promotes school attendance is likely to deter child labor. Moreover, empirically there is a negative correlation between child labor and hours dedicated to schooling (Rivera-Batiz, 1985). Our discussion of the determinants of child labor therefore starts at the literature on time allocation within the household. This literature usually treats the determination of fertility and time allocation of household members, especially labor supply, as a joint decision (see e.g. Nakamura and Nakamura, 1992; Hotz and Miller, 1988; and Rivera-Batiz, 1985). Obviously, the number of children in the household determines the potential supply of child labor, and hence fertility behavior is a determinant of the supply of child labor. Still on the supply side, we shall discuss next the role of risk management in the household as a factor influencing the amount of child labor. On the demand side, the two main determinants of child labor are the structure of the labor market and the prevailing production technology.

Fertility, household size, and time allocation

In a utility maximizing household, regardless of the intra-household decision making process used to reach the maximization, there exist competing demands on members' time. A child's non-leisure time is available for schooling, home production, or income-earning work in the market. The way the household will allocate the child's time depends inter alia on the household size and structure, the productive potential of the child and its

[1]. The ILO has put together a very useful bibliography which covers the literature during this period (ILO, 1986).

parents (mainly its mother) in home and market work, and the degree of substitution possible between the child and its parents (again, mainly the mother). The time allocation decision is usually seen as a joint decision with the decision on the number of children, because the latter determines the income potential from child labor, but this potential in turn determines the desired household size. Children's income potential stems both from their work as children and their income transfers to the parents when they are old.[2]

A recent review of the evidence on this relationship from developing countries suggests that larger household size reduces children's educational participation and progress in school, and reduces parents' investment in schooling (Lloyd, 1994). Both factors make it likely that larger household size increases the probability that a child will work.[3] Lloyd's review finds that the magnitude of this effect is determined by at least four factors:

- the level of socio-economic development: the effect of household size is larger in urban or more developed areas;
- the level of social expenditure by the state: the effect of household size is smaller if state expenditures are high;
- family culture: the effect of household size is weaker where extended family systems exist (e.g. through the practice of child fostering);
- the phase of demographic transition: the effect of household size is larger in later phases.

One implication is that the empirically observed magnitude of the effect of household size on child labor varies enormously from place to place, depending upon the combination of factors which exists (Cochrane et al., 1990). The evidence also suggests that children with more siblings are likely to work longer hours on average, especially when they are older and when they are girls (Lloyd, 1993; Jomo, 1992).

A detailed econometric study for the Philippines found that the relationship between household size and child work is not the same for market and domestic work, and depends on the sex and the birth order of the child

[2]. Formal presentations of the model of the household economy which explicitly takes into account the economic contributions of children can be found e.g. in Levy (1985), Rivera-Batiz (1985), and Sharif (1994). Much of this work is based on Rosenzweig and Evenson (1977).

[3]. Education and child work are only one dimension of child welfare. There exists a vast literature which has demonstrated that large family size adversely affects child welfare along many dimensions: health, intelligence, physical development, etc. (see the review by King, 1987).

(DeGraff et al., 1993). For example, the presence of older siblings decreases the likelihood of market work by a child, especially if it is of the same sex, suggesting substitution of older for younger siblings (because older children are likely to earn more). However, such substitution effect was found to be absent for domestic work. The results of this study also imply that the effects of high fertility on child labor are more likely to be experienced by first born children. This study as well as others (see Lloyd, 1993) document gender roles in child labor: in many settings boys are more likely to be engaged in market work and girls are more likely to be engaged in domestic or farm work.

The degrees to which boys or girls, or all children equally, are affected by household size is very much a cultural factor. In Malaysia, e.g., Chinese girls appear disadvantaged in larger households but their brothers are not (Shreeniwas, 1993). In India, families from urban slums in Tamil Nadu discriminate in order to provide a few children, mainly boys, with "quality" private education; where mothers enter the labor force, it is girls who must stay at home. Families from Uttar Pradesh try to provide all children equally with less expensive public education (Basu, 1993). In rural Maharashtra, if there are fewer younger siblings, boys benefit with more schooling and less work, and girls must assume tasks traditionally assigned to boys (Jejeebhoy, 1993). In Pakistan, the presence of children under five in the household significantly reduces the educational participation of girls, but not boys (Cochrane et al., 1990).

In rural areas, the relationship between fertility, household size, and child labor depends also on the amount of land holdings. The evidence has indicated that children in landless and marginal farm households generally engage in wage labor while those in households with larger farms engage in agricultural work. The tendency to engage in child labor increases with farm size, because the marginal contribution of children increases (they are a complementary input to land). This tendency reverses though where larger farm households cease to operate their own lands but rather rent them out (Sharif, 1994). In other words, both the size of the farm and the mode of operation will influence the effect of fertility and household size on child labor.

The literature on the determinants of school enrollment has clearly established two effects. First, there is a substitution effect between schooling of girls and labor force participation of mothers. When mothers go to work in the market, girls stay at home - in this sense, the opportunity cost of girls' schooling is not their foregone wages,

but those of their mothers. Second, the most important determinants of school enrollment are parents' education (especially mothers' education) and household income level. There is an income effect from mothers' earnings which will at some point establish a preference for “quality” children.

While reiterating our earlier caveat that child labor is not the inverse of school enrollment, one could nevertheless argue that similar substitution and income effects, but with opposite signs, operate with respect to child labor. What this means is that in poor households, when mothers need to enter the labor force, child labor will increase because especially girls will be pulled out of school to take over domestic work or their entry into school will be delayed. As income increases, the income effect of the mother's work will outweigh the substitution effect and child labor will decrease. This process will likely be affected by the same societal factors identified above, namely the level of development, the level of social expenditure, cultural factors, and the phase of demographic transition. Most case studies of child labor do indeed identify poverty of the household and a low level of parental education as important factors in determining child labor (ILO, 1992). The nature of parents' employment also matters - if the parents have irregular employment, it creates the need for additional or more stable income sources to be provided by children. Often too the parents work in the same occupation as the children (see e.g. the case studies in Bequele and Boyden, 1988, and Jomo, 1992).

Apart from the factors discussed so far, which relate directly to the household's behavior, the supply of child labor is also determined by the characteristics of the community in which the household lives, especially the social infrastructure available. It has been observed in Philippine and Sri Lankan villages that the presence of a day care center decreases the likelihood that children engage in work at home (DeGraff et al., 1993; Goonesekere, 1993).

It would stand to reason that the overall condition of the education system can be a powerful factor on the supply of child labor. Bonnet (1993) argues that the failure of the education system in Africa has led many parents to view child labor as the preferred option for their children. Education is no longer a road towards obtaining a diploma which in turn leads to a modern sector job. In an economic environment where survival depends on work in the informal sector, many parents conclude that taking children out of school and putting them to work is the most sensible solution for survival and the education method which offers the best prospects for the future. As one

African commentator put it “Education broadens your mind but it does not teach you how to survive” (Agiobu-Kemmer, 1992).

This brings us to the role of the state. Several of the factors listed so far as influencing household's behavior with respect to child labor are affected by government policies, especially the level of social expenditure, the social infrastructure, even the overall level of economic development. Where economic development is low, and society is characterized by poverty and inequity, the incidence of child labor is likely to increase as does the risk that it is exploitative (UNICEF, 1986).

The extent to which the state can influence household's child labor behavior, in particular the effect of fertility and large household size, is highlighted in a study for Malaysia (Shreeniwas, 1993). As part of its policy to reduce ethnic inequalities, the Government of Malaysia systematically favors education of Malay households through scholarships and other subsidies. As a result no negative effects from household size emerged for these households in contrast to Chinese and Indian households, who did not benefit from government subsidies and among whom a strong negative effect of household size on schooling was observed.

Among general government policies that can affect child labor, two should be highlighted: structural adjustment and population policies. Economic adjustment may include a reduction and restructuring of government expenditure. The effect of this on the level and allocation of social expenditure can, as the Malaysia example illustrates, have profound effects on child labor. The general argument for favoring primary education and for imparting a pro-poor orientation of subsidies and service provision applies here as well. Such policy orientations are likely to reduce the supply of child labor in addition to their other intended benefits. Regarding population policy, the role of fertility and household size as a determinant of child labor indicates that rapid population growth and a situation where a large and growing share of the population is less than 15 years old are detrimental to school enrollment and are likely to increase child labor. Among their many other benefits, family planning and other population policies will include reduced child labor.

The final supply determinant of child labor relates to the labor market itself. The supply of child labor is determined by the wage level in the market - both the wages of children and those of adults. Evidence from Egypt and India suggests that the own-wage elasticity of child labor is positive and higher for younger children. For rural

India, the own-wage elasticity was estimated at about 0.8. In the case of Egypt own-wage elasticity was estimated at .965 for children aged 6-11 and .379 for children aged 12-14. The cross-wage elasticity with the labor supply of the mother was found to be negative, i.e. an increase in wages for females is likely to reduce the supply of child labor, especially of female children. The effect is strongest for younger children. In Egypt, a 10 percent increase in women's market wages would lead to a 15 percent decline in the labor of children aged 12-14 and a 27 percent decline in the labor of children aged 6-11. In India, a 10 percent increase in women's wage rates would decrease girls' labor force participation by 9-10 percent, but have no effect on boys' participation. The opposite is true for men's wage rates which have a cross-wage elasticity of about -1 with respect to boys' labor supply, but close to zero for girls' labor supply (Levy, 1985, Rosenzweig, 1981). The question which remains unanswered is at which income level the income effect from parents' labor force participation, especially that of the mother, will outweigh the substitution effect (which suggests that mothers' labor force participation will result in increased child labor, especially of girls).

Household Attitudes Towards Risk

Households send children to work in order to augment household income but also to manage better the income risk they face. Child labor is part of a strategy to minimize the risk of interruption of the income stream, and hence to reduce the potential impact of job loss, failed harvest, etc. (Cain and Mozumder, 1980). This impact is more severe for poor households, whose level of income is so low that any interruption can be life threatening, particularly since they usually have no savings or liquid assets and are not able to borrow (Mendelievich, 1979). Therefore the risk argument also explains why child labor is more prevalent among poor households. For poor households, child labor is rational behavior as part of a diversification strategy of their portfolio of income sources. This remains so even if, in the current time period, the income of the child is not needed to reach the household's subsistence income level.

This line of reasoning is similar to why poor some farmers have been found reluctant to adopt certain new hybrid seeds, even though such seeds hold the promise of greater harvests (Lipton, 1989). The problem arises when new seeds increase average harvests but at the same time increase variability and risk. Farmers who live close to the subsistence level cannot afford ***any*** downward variability and hence it is rational for them to reject the

new seeds even if it means foregoing higher average revenues in the future. In the case of children, the contribution of children to the immediate reduction of income risk is preferred to the future higher income stream which could be earned by educated children.[4]

Evidence from rural India confirms that child labor plays a significant role in the self-insurance strategy of poor households. It was observed that when the variability of household income increased (measured by the decline in income from peak season to low season), children's school attendance declined. This was especially the case when a "shock" occurred which was external to the village, in other words there is evidence of some risk sharing within the village. Small households suffer more from such shocks because their lower number of children makes them less able to insure themselves (Jacoby and Skoufias, 1994).

The policy implication is that in settings where household risk management is an important reason behind child labor, attempts at forced abolition of child labor (whether through child labor legislation or compulsory schooling laws) are likely to fail, since this would threaten the household's survival, and need to be accompanied by mechanisms which can provide households with insurance against income fluctuations in other ways, e.g. by short-term credit which does not require collateral.

The Structure of the Labor Market

Cain and Mozumder (1980) have argued that the economic value of children, and the implications for reproductive behavior, cannot properly be assessed without reference to the structure of the labor market. The latter determines the level of wages, which in turn determines the contribution of children to household income. A key factor is the flexibility of wages. In competitive markets, where wages are flexible, children can substitute for adults in the market place. Where wages are at a floor, whether due to legislation, collective action or because they have reached an (adult) subsistence minimum, the employer will prefer adult workers (assuming their productivity is higher than that of children). Effective minimum wages can thus in principle deter child labor, although in practice one must ask whether minimum wage legislation is more likely to be effectively enforced than legislation banning child labor.

[4]. Notice that this income-insurance argument is not the same as the old-age insurance argument: parents want to have children so that they will take care of them in their old age. This argument explains a high demand for children, but not child labor. In fact, it should induce parents to send children to school since that would increase their earnings and hence the potential transfers they can provide for their parents in their old age.

Various forms of market segmentation, ironically, may reduce child labor. Exploitation and wage discrimination against children will reduce the returns to child labor, and hence the supply. There is little hard evidence on the extent of wage discrimination against children. Cain and Mozumder (1980) present evidence that in rural Bangladesh, where children's work is paid by the piece, there is no evidence of wage discrimination relative to what adults receive for the same work. In a review of case studies, Bequele and Boyden (1988) observed that it was extremely difficult to obtain precise data on levels of remuneration of child laborers, in part because the information is very sensitive, but also because children's wages tend to be paid in a combination of cash and kind. Sometimes payment is made by the task and is subject to deductions for defects in the product, late delivery, time lost through ill health, etc. However, in spite of these difficulties in observing remuneration levels, Bequele and Boyden conclude that children's earnings are consistently lower than those of adults, even where the two groups are engaged in the same tasks. Jomo (1992) reaches the same conclusion based on several case studies on Malaysia. If wage discrimination against children is indeed the norm, one would have to surmise that the wage elasticity of child labor supply is quite low, since none of the case studies reported any difficulties on the part of the employers to recruit children. This is the opposite of what the two econometric analyses cited earlier found.

Monopsonistic demand conditions in the market will also depress children's wages. Monopsonistic conditions occur often in developing country labor markets and can be due to concentrated ownership of land, credit and product monopolies, share cropping arrangements, imposed or natural restrictions on labor mobility, or, simply because of lack of alternative employment possibilities (Cain and Mozumder, 1980). Possibilities of mobility or finding alternative employment are often lower for children than adults. In such conditions, the children's wage is determined mainly by the elasticity of supply. As said earlier, evidence from Egypt and India suggests that children's labor supply is elastic with respect to their wages (Levy, 1985, Rosenzweig, 1981) but other case studies cast doubt on it.

The relative importance of the formal sector in the economy and the degree of segmentation with the informal sector also determines the demand for child labor. In general, the evidence suggests that the amount of child labor in the formal economy is small, with the possible exception of plantations (see e.g. Bonnet, 1993, for

Africa; Goonesekere, 1993, for Sri Lanka). However, in many countries there is a tendency towards "informalization" of production methods. Formal enterprises either break up in smaller units or engage in sub-contracting with households or informal enterprises (mainly to try to escape social legislation which adds to the cost of labor). In such conditions the demand for child labor may well increase.

An important aspect of this is the apprenticeship system, which ties a child to a small enterprise usually for many years, in principle to learn a trade. In practice, especially in the early years of the apprenticeship, the child often serves "the master", and only later will there be any actual learning (Mendelievich, 1979). Nevertheless, the apprenticeship can be seen as a process of socialization together with a transfer of know-know, and some have argued that it would therefore be a mistake to view it as exploitation of child labor (Bonnet, 1993).

The role of technology

The second major factor determining the demand for child labor is the technology of production. This factor becomes more relevant the less children are perfect substitutes for adults. Many of the cases where this factor plays an extreme role are those that incite reports in the press and by civic societies. Examples are the use of boys in mines, because the tunnels are too small for adults to crawl through; the use of boys as chimney sweeps; the use of girls to weed and pick cotton; the use of children to weave carpets because children have more nimble fingers and can tie smaller knots than adults.

By implication, changes in technology can have a profound impact on the incidence of child labor. The green revolution in India led to reduced child labor and increased school attendance (Rosenzweig, 1981). The mechanization of Egyptian agriculture, especially the growing use of tractors and irrigation pumps, reduced the demand for child labor in tasks such as driving animals to power waterwheels, picking cotton, and hauling freight borne by donkeys (Levy, 1985). In some cases, the technological change in question can be fairly elementary. DeGraff et al. (1993) document that in the Philippines, the introduction of electricity in the community reduces the amount of market labor for children, and, similarly, having electricity in the home reduces the amount of home production by children. In the quarries of Bogotá, the introduction of wheelbarrows displaced children who previously carried rocks piece by piece (Salazar, 1988).

Technological change has also been credited in part with the elimination of child labor in Europe following

the industrial revolution. In the textile industry e.g. the mechanization of spinning and weaving wiped out the family mode of textile production and increased the specialization of work in the factories. This reduced the demand for child labor and increased the demand for skilled labor. It is important to note that the reduction of the share of children in the workforce in Europe's eighteenth-century textile industry occurred prior to the introduction of legislative restrictions on child labor (Galbi, 1994).

Today's technology can have ambivalent effects on the demand for child work. The miniaturization and assembly-line production in the electronics and electrical appliance industries has again led to some demand for "nimble fingers". Not everywhere are robots the ultimate suppliers of this skill. In garment production, the advent of fairly cheap multi-function sewing machines has once again made possible home production, and much manufacturing relies on sub-contracting arrangements, often leading to girls' work at home. Empirical assessments of the implications of technological change are lacking and would be needed before the importance of technology relative to other demand factors can be assessed.

Lastly, we should point at the possibility that the causal relation between child labor and technological change also works the other way around: effective enforcement of child labor laws could force entrepreneurs to adopt technologies which no longer rely on the use of children. There seem to be no documented cases of this effect though, and we expect that it would only come into play in situations where other factors had already reduced the demand for child labor and\or initiated a process of technological change.

4. The Welfare Economics of Child Labor

Having discussed some of the key determinants of child labor, in the next section we will discuss policy interventions to reduce child labor. But to seek to reduce or even ban child labor must be based on a conviction that there is "too much" of it relative to the social optimum. Whether or not there is too much or too little of an activity can be examined systematically using the framework of conventional welfare economics -- such an analysis may also provide insights into appropriate interventions. This section outlines a discussion of the issues.

The basic analytical framework is that of household decision making in the allocation of children's time between labor and non-labor activities, together with an assessment of private and social returns to each activity. Each household will allocate the time of its children to wherever the perceived private return is highest, until the marginal return is equalized across all uses of child time. The crucial question is whether the marginal social return, suitably defined, is also equalized.

Conceptually, there are three sets of issues. First there are those to do with pure efficiency, where no distributional questions are raised. Secondly, there are issues involving intrahousehold distributional considerations. Third, there are the issues involving interhousehold distribution. We consider each of these in isolation.

Let us start with a state of affairs where all household are identical, so that there are no interhousehold distributional issues at all. Let us also assume that there are no intrahousehold allocation issues -- households give the same weight to the welfare of children as the social welfare function. In such a situation, the only remaining issue for welfare economics is that of ***efficiency of the allocation of children's time***, emerging out of some sort of market failure either in the market for child labor, or in other markets.

Thus, suppose there is a failure in the market for education. The social returns to primary education are higher than the private returns, for whatever reason (which may be quite indirect e.g. primary education for girls leads to lower fertility and this is desirable from the social point of view). Thus in the social optimum more children would be at school than at work (in the family or outside). What should be the nature of the intervention" Basic

welfare economics teaches us that it is best to attack market failures in the very markets in which they occur -- it is always second best to intervene in related markets. The lesson here would be that it is second best to attack the problem by taxing or banning child labor (thereby inducing the household to use that time in alternative ways). Rather, policy should focus on raising the private rate of returns to education to bring it closer to the social returns, because child labor is merely the symptom of a market failure elsewhere. The same applies in cases where incomplete markets for risk spreading lead to the use of child labor as a diversification device. The first best solution is to encourage the development of credit and risk markets. There is no presumption that banning of child labor, for example, is the appropriate response to this market failure.

Now take the case where the market for child labor is monopsonistic, so that the wages for child labor are depressed below the efficient competitive level. Minimum wages in such a market will of course raise wages and increase the employment of children. Note that in this case the efficient direction of movement is to increase child labor -- this also increases the wages of children, which raises distributional issues, and it is to these that we now turn.

Let us start with a case where all households are identical, but within each household there is discrimination against children -- meaning by this that the household objective function gives a lower weight to the utility of children than the social welfare function (the argument is perhaps most persuasive in the case of female children). Then, even if there is no market failure of the conventional type, and there are no interhousehold distributional issues, there may nevertheless be "too much" child labor. It is, however, important to model the ***intrahousehold allocation process*** accurately, since the policy interventions will differ accordingly. Suppose we have the "unitary" model of the household where the head of the household gives greater weight to the cash income generated, and less weight to the loss of leisure and schooling by the child, than the social welfare function does. In this case the issue is how to rearrange incentives for the head of household so that he does "the right thing". This can be done either by "taxing" (perhaps even banning) child labor or by subsidizing education. There is no longer a natural ranking between these two alternatives. However, now consider the case where household allocations are better described through a bargaining model (perhaps between the father and the mother-child nexus). Then directly altering the bargaining power of the mother is a relevant instrument. Increasing wages, even

to the child, can then be seen as strengthening the fall-back option of the mother-child nexus.

We now focus on the situation where there are no market failures and there are no intrahousehold issues, but ***households differ in their wealth and capabilities***, thereby leading to a distribution of outcomes in welfare. In what sense might there now be "too much" child labor" The answer is that it may be the case that child labor is correlated with low income households, and a reduction in household poverty leads to a reduction in child labor. Notice that child labor is not here an independent object of concern -- rather, it is simply a manifestation of low household income. Child labor, therefore, far from being banned, should be used as a targeting device. Interventions should be planned which transfer resources (nutrition, for example) to child laborers, since this is the way to transfer resources to poor households. Of course such intervention may well lead to an increase in child labor, but that should not necessarily worry us from this perspective -- so much the better, if the object is to help poor households and if the poverty alleviation effects dominate the incentive effects.

With this framework, let us now work through and pull together the consequences of a particularly popular policy intervention -- ***the banning of child labor***. There are two cases to consider: one where the ban is enforced, and one where is not.

If the ban is enforced, this means that children will no longer be found in the labor market, but will be shifted to family labor or to schooling. If there was previously inefficiency in the education market, so that there were too few children in school from the point of view of the social optimum, then this will move us closer to that optimum but, as discussed above, it would definitely have been better to have intervened in the education market.

But what if there was no inefficiency in the education market" From the perspective of pure intrahousehold distribution, suppose it was the case that putting children into the labor market gave them a lower level of welfare than putting them in school, but this was done because the household head preferred to put them there to get the cash incomes. Then forcing the ban on child labor is good if the social welfare function gives a higher weight to the child's welfare than the head of household does. But what if child welfare depends on the cash income of the child because this is what strengthens the bargaining power of the mother-child nexus" Then, of course, banning of child labor may make the child worse off after the intrahousehold bargaining is completed.

Now take the case where the problem is one of interhousehold distribution, where poorer households

send their children out to work, but wealthier households send their children to school -- the two decisions being rational given the wealth levels of the two households. Then it should be clear that a ban on child labor makes the poor household worse off since it is a restriction of its opportunity set -- much better to target transfers conditional on child labor (which will, paradoxically, increase child labor).

Suppose, as is quite likely, that the ban is not enforced, but the ban creates rents in the system. Quite simply, if employers are the ones who would be fined, they bribe the policemen etc. to let them continue, but this is an extra cost to them. This will reduce the demand for child labor and, in a competitive setting, will reduce the wages of children and reduce the extent of child labor. The consequences can once again be thought through for efficiency, intrahousehold equity and interhousehold equity.

To the extent that more children now go to school this will move the system closer to efficiency if the market failure is in the market for education -- but once again, it would have been better to intervene in that market directly. To the extent that the head of household was sending the child into the labor market against its better interest, the lower wages will force a reallocation to schooling which will increase the child's welfare. But to the extent that intrahousehold allocation is governed by bargaining power and cash income confers this power, the child will be worse off. Finally, to the extent that poorer households send their children to work based on rational decisions which do not entail intrahousehold inequity, lowering the wages of child labor will make these poorer households worse off.

The welfare economics of child labor thus leads to a complex and richly textured analysis which does not suggest a single, or even a dominant, way of approaching the issue. An array of policy instruments is likely to be required, addressing different aspects of failures arising from efficiency or distributional considerations. In particular, it seems clear that legislation, even if it could be enforced, is at best only one instrument in an array that has to be used.

There is however, a major counter to the "welfare economics" perspective on child labor. This is the "***non-welfarist***" framework where certain "rights" are self-evident, natural and given. Policy analysis has to take these as constraints and proceed on this basis. A good example is slavery. It is generally accepted that nobody has the right to sell themselves into slavery -- irrespective of whether this would be welfare improving from the

efficiency (or even the distributional) point of view. It can be argued that child labor falls into this category. The fact of child labor violates a basic human right, and it should be banned. It is also easy to see how a focus on international conventions and legislation emerges from the "basic rights" perspective. Not only is the signing of conventions and passing of legislation symbolic - a clear expression of the acceptance of the right in question - but vigorous attempts at enforcing such legislation are seen as furthering a basic right. In this framework, the fact that attempts to enforce legislation may hurt the very group whose right is being protected is not as important a consideration.

Legislation can also, of course, be justified in a welfare economics framework, though its efficacy has to be heavily qualified. But from both the "welfarist" and the "non-welfarist" point of view the key issue has to be one of ***enforceability***. As we will discuss in the next section, most developing countries simply do not have the administrative capacity to enforce the full gamut of child labor legislation, in the face of overwhelming incentives for the existence of child labor. In fact, what capacity exists is probably too thinly spread to have an effect. Moreover, the fact of the legislation makes it more difficult to put in place other interventions -- since child labor is not supposed to exist if the legislation is being enforced. And added to the above is the fact that in many societies certain types of child labor, even if exacting, are not seen as a violation of children's rights. On the contrary, apprenticeship, work on the farm, etc. is seen as an important rite of passage.

Putting together these arguments, we would argue that while it is certainly appropriate for nations to accede to international conventions as a statement of overall objectives, specific legislation on child labor should be tailored to their enforcement capacity, and directed to what might be termed the extremes - as seen by society. Thus, for example, child prostitution would be accepted universally as a candidate for legislation and targeted heavy enforcement. The same would apply to children in bonded labor. But when it comes to children working on farms, or even factories, a better approach is to provide incentives for schooling, and to use the fact of child labor as a targeting device to transfer resources to the child and its family -- to focus, in other words, on drawing children away from labor but protecting them when they do find themselves at work.

5. Policy Intervention

The foregoing discussion brought out a number of variables which can be affected by economic and social policies. Let us start with ***fertility.*** Ceteris paribus, where the number of children is reduced the amount of child labor will decrease. This is not the place to review what works and does not work in family planning and population policies (for a recent review, see .....), and it suffices to underline the importance of such policies as a tool to reduce child labor. Moreover, the relationship between fertility and child labor becomes stronger in later phases of demographic transition, so that the effect of population policies on reduction of child labor will increase over time.

Child labor is strongly associated with poverty. Poor households need children's income to survive and/or to insure against unforeseen income losses. Successful ***poverty alleviation policies*** (see e.g. the recommendations in World Bank, 1990) will thus tend to reduce child labor. Since in most countries poverty alleviation is a long-term objective, short term actions aimed at reducing income risk for poor households will also have beneficial effects on child labor. Examples are the provision of agricultural credit or credit for small household enterprises, or other policies which provide insurance against income loss (e.g. by granting flexible repayment terms of existing loans, or providing community-backed consumer loans without collateral). Such programs would contribute to breaking the bonds which caused bonded child labor in areas where it is now prevalent.

We cited several examples earlier in the paper where ***technological change*** contributed to the reduction of child labor (mechanization and changes in cropping patterns in agriculture, mechanization in carpet weaving, introduction of wheelbarrows in quarrying, etc.). Programs to promote adoption of such technologies obviously deserve a place in the list of policy instruments to reduce child labor.

The benefits of ***educating girls*** for child welfare are well known. One of those benefits is the reduction of child labor, through the income effect stemming from an enhanced contribution by an educated mother to her family's income, and the associated demand for “quality” children, i.e. children who do not work but go to school.

Since school attendance and work are the main competing claims on the child's time, the balance can be shifted in favor of ***school attendance*** by reducing its cost. Direct costs can be reduced through subsidies and

indirect costs by bringing schools closer to the children's homes. Moreover, where costs of education are low, the negative effects from large household size on school attendance can be largely offset, and this is likely to reduce the supply of child labor. This consideration is especially important in an era of economic adjustment where many countries need to cut levels of government expenditure, including often social expenditure. Maintaining measures which keep the cost of education low for poor households makes sense not only from a pure educational perspective but also as a tool to diminish child labor. The way education is provided can also be made more flexible to meet the needs of working children. In particular, evening and weekend classes, and schools near the work place, would promote attendance. Informal and vocational education will often attract the children more and provide skills they can more easily relate to.

Last, but not least among economic measures with an impact on child labor is the provision of ***alternative income sources*** for children and ***improved employment opportunities*** for their parents. This is of course affected by the overall state of the economy, and the government's economic policies, especially those relating to employment and the labor market.

An interesting program which combined social and economic incentives was sponsored by ILO in Manila to help scavenger children working on “Smokey Mountain” - Manila's infamous garbage dump. The program attempted to provide children with an alternative, more safe, source of income to scavenging garbage, and provided training and credit to their parents to help them set up small businesses. Initially the program failed, but after a more intensive approach, a small number of children were effectively helped. The program illustrated that the key to success is to provide alternatives to both the economic and social “pay-offs” of children's work, but it also showed that it is difficult and costly to do this, and depends critically on local community involvement (Gunn and Ostos, 1992). This experience in the Philippines has been shared by other programs also: community operated multiple-service programs providing alternative employment for children as well as education and health services, have had some success but typically with limited coverage. They are resource-demanding and complicated to operate (Myers, 1991).

Finally, let us turn to ***legislation***. Historically, the single most important and common approach to the problem of child labor has been the adoption of legislation. The ILO has sponsored many Conventions and

Recommendations banning child labor and most countries now have some form of legislation or regulation prohibiting the employment of children below a certain age and specifying the conditions under which minors may work (Bequele and Boyden, 1988). The age threshold and the scope of the legislation vary. In the majority of countries the minimum age for entry to employment is 14 or 15, but there are about 30 countries where it is only 12 or 13 years (ILO, 1992). In many countries higher minimum ages apply for hazardous work. Almost all legislation exempts work in household enterprises, but some limit the scope further by excluding also domestic service and agriculture.

One fundamental problem with enacting and enforcing legislation banning child labor is that there are no interest groups to support it: the government often considers it embarrassing to admit the existence of child labor, the employers of children will obviously be hostile to legislation, and the children themselves and their parents are usually not organized (Morice, 1981). Legislation is therefore likely to be effective only where there is a capable administration, determined to implement the laws, where there is relative difficulty in hiding child work, and relatively little advantage from child work (Rodgers and Standing, 1981). This situation, especially the last factor, existed in the cotton mills of eighteenth-century Europe. The employment of children started falling a half century before the introduction of legislation, mainly because it was to the advantage of factory owners to switch to adult workers. Particularly, the growth of the cotton industry drove up the wages of children, and the maturing of child workers produced a labor market for productive adults, where transaction costs associated with hiring and screening adult workers fell (Galbi, 1994). Legislation to ban child labor thus fitted in with an ongoing economic trend.

Documentation about effective enforcement of child labor legislation is spotty at best. Most information pertains to labor inspectors describing their degree of understaffing and their difficulties to visit factories and to enforce penalties before the courts. There is little question that in many countries, labor inspectorates are seriously understaffed. In the Philippines e.g. there are fewer than 200 inspectors nation-wide for almost 400,000 employers (Bequele and Boyden, 1988).[5] The ongoing trend towards "informalization" in the labor market will make inspection even more difficult in the future. In fact, it has been argued that in some cases child labor

[5]. A detailed and interesting description of enforcement problems and issues in the case of Sri Lanka is in Goonesekere (1993).

Box 2. Eliminating illegal child labor in Hong Kong

Hong Kong's experience in successfully eliminating child labor stands in sharp contrast to that of many other countries. There were five key ingredients

1. Regular and persistent inspections by the Labor Department; in 1986, over 250,000 inspections were carried out in industrial and commercial establishments
2. special and annual campaigns to detect child employment
3. the spread of education
4. all young workers were required to carry identity cards with their photograph, thus facilitating enforcement
5. the introduction of social security benefits, especially social assistance to poor families, which assured a minimum income and eliminated the need to rely on child labor.

Source: Pong (1988)

legislation may have contributed to this process, because it makes it easier for employers to hide child laborers (Bequele and Boyden, 1988).

Weak enforcement does not of course provide an argument for not passing legislation. Apart from its symbolic value, it can be argued that legislation is the only way to effectively address some of the more extreme cases of child work, such as prostitution, child soldiers, etc. However, the legislation cannot be seen in isolation from enforcement capacity (see Box 2). Where such capacity is limited, it needs to be concentrated on those cases where economic incentives are not likely to have much impact.

In putting in place child labor legislation, an argument can be made for using a graduated approach. As Rodgers and Standing (1981) pointed out "it is one of the ironies of child labor that, where it is prohibited by law, the law is likely to leave child workers unprotected, since legally they do not exist" (p. 39). The law should hence address also issues of working conditions (safety, working hours, etc.) and ensure that these regulations apply to all workers, including children. It may be easier, in a first phase, to force employers to limit children's workdays, to provide adequate lighting or safety equipment, rather than to force them to forego child labor altogether. (However, for an opposing view, see Goonesekere, 1993, who argues that a gradual approach leads to confusion and is harder to implement than absolute prohibition.) Similarly, outlawing certain practices in general, e.g. bonded labor as a means to repay credit, may have a beneficial effect for children, even when it falls short of stopping child labor.

Legislation can also affect child labor through compulsory schooling laws. The record of enforcement seems better here than with legislation banning child labor (Weiner, 1991). However, here too, a certain level of enforcement capacity is needed, not just in the form of inspectors but also a well functioning birth registration system, a high level of literacy, etc. The community has a potentially crucial role here, since community-based monitoring of school enrollment and attendance is more likely to succeed than occasional visits from an inspector of the Ministry of Education. (Weiner, 1991, illustrates these points for the case of Europe and North America.)

Ultimately then, and as was argued in the previous section, child labor is best addressed through a combination of legislation and economic incentives (Myers, 1991; Goonesekere, 1993). This is now well accepted by international agencies addressing the problem of child labor, such as UNICEF and ILO (see e.g. UNICEF, 1986; ILO, 1992). It is unlikely that any one approach will succeed everywhere and the balance between legal and economic measures needs to be adapted to the incidence of child labor, the type of prevalent work and work arrangements, and the conditions of the markets. To illustrate this we revisit the four prototypical child workers we described earlier, and suggest ways to help them and their families (Box 3).

Box 3. Four child workers: How to help them"

Deepa, school girl in rural Maharashtra, India

Deepa's mother has completed middle school (less than one in ten mothers in her area have done so) and she knows the value of education. This is why she insists that Deepa attends school full-time even though she must still help on the family farm after school hours. Deepa has only two brothers, which makes her family size below average, and they too must work on the farm each day. Probably, her grades suffer because the farm work makes her tired, sometimes too tired to study, but she knows she is luckier than most. The Child Labor Act in India exempts agricultural work from regulation and hence her work is perfectly legal. Indeed it is not clear that legal intervention in the situation of Deepa, her brothers, and millions of school children like them could be enforced and would help. However, to the extent that many of their families are smallholders and quite poor, the continued school attendance of the children is not assured. These families would be helped by measures which reduce the direct costs of education, such as free books or school meals. Also, much of the children's work on the farm could be avoided if their father was able to buy an oxen and better farm tools. A credit program for smallholders could help ensure the children's further education.

Ade, street trader in Lagos

Since Ade is not yet 14 years old, his street trading activity is illegal under Nigerian law. The police make some effort to enforce the law, and in 1988, almost 7,000 street traders were arrested, and most were convicted. Trouble is that a new wave of other kids immediately took their place. Street trading makes an important contribution to household income and many children demonstrate that it can be combined with schooling achievements. The latter are jeopardized when children work too many hours. Rather than banning the activity, the law might focus on restricting trading hours. In order to protect the children, some of their trading places might be consolidated in informal open air markets. Also, a system could be instituted to monitor the health condition of the children better, and perhaps provide free school meals.

Juan, quarry worker in Bogotá

Juan's work on the quarry is necessitated because his father has no education and can only obtain employment irregularly. Juan's work is part of the family's survival strategy. Moreover, his parents do not perceive education to have a high pay-off in view of Colombia's economic situation, especially high unemployment. The improvement in this situation is clearly the long-term objective of Colombia's process of economic reform. Juan's father may not benefit much from any such improvement because he lacks basic skills. A training program aimed at the poor squatter areas may help. Since many of the children in the quarry do go to school, school meals and free shoes and clothing (which many families cannot afford) could increase attendance. It was observed that even simple technological improvements, such as the use of wheelbarrows had reduced the demand for child labor (previously children carried the stones piece by piece). The introduction of dump trucks further accentuated the displacement of child workers. The government could promote the adoption of these innovations, perhaps by small subsidies. This would enhance the demand for adult workers from the same squatting areas (who traditionally work in quarrying activities). Colombia has a law prohibiting the employment of children under 18 years old in mining and extraction. The quarries never receive a visit from an inspector of the Ministry of Labor. Stepping up inspection efforts will not help as long as the economic needs of the families are as dire as they are. Attempts to involve the community more in ensuring that each child receives at least a part-time education, and providing some in-kind benefits at the school, may be the only realistic way to help the child quarry workers in Bogotá in the current economic situation.

Taeng, masseuse in Bangkok

Taeng, and many girls in her situation come from poor farming villages with insufficient economic opportunities. Creating more means of income is the prime challenge here to reduce the supply of girls being sent to Bangkok. Improved agricultural extension, double cropping, new cash crops, all will help. Opening up opportunities outside agriculture would both increase income and reduce income vulnerability. Improving access to credit for the farmers from another source than the "agent" would avoid that child prostitution becomes the means to pay off a loan. On the legislative side, the problem is enforcement, since prostitution is illegal in Thailand. The difference between the law and the reality is such that enforcement needs to be focused on child prostitutes. In view of a growing health problem (AIDS, drug use) among prostitutes, free medical services to those below 18 years of age would be a case in point where the illegal activity can be used as targeting device.

Brazil and India have both followed approaches that combine legal action with economic incentives. In India, the legal framework is provided by the 1986 Child Labor Act, prohibiting the employment of children below 14 in hazardous occupations. The economic framework is in the National Policy on Child Labor, which targets education for all children up to age 14, and proposes an extensive system of non-formal education combined with employment and income generating schemes in areas with a high incidence of child labor. A series of pilot projects has been set up (Narayan, 1988).

n Brazil, the focus is on street children. The Government has recognized that its customary bureaucratic procedures would fail to effectively address this problem. Instead, a community-based strategy was set up, where the Government's role was limited to providing technical support. By 1986, local volunteer "commissions" existed in most major urban areas—organizations that were able to mobilize community-based resources (Myers, 1988).[6]

If economic incentives and legislation are the two pillars on which efforts to help working children need to be based, the effectiveness of each will be greatly enhanced by simultaneous efforts at advocacy and mobilization, and empowerment of the children and their families. Because many of the most exploited and endangered working children go unnoticed, their situation must be brought forcefully to the attention of government and the public, in an effort to mobilize a constituency to defend them. Advocacy entails combating ignorance but also prejudice, fear and denigration towards working children. There is a great irony in such negative views, because working children often assume great responsibility to help themselves and their families (Myers, 1991). Many working children and their families operate within very limited economic and social options - effective empowerment can expand those options, and give the children a larger share of society's possibilities and benefits. Myers (1991) discusses ways to achieve this, most of which are characterized by a strong involvement of local communities, but aided and supported by national or international organizations.

As said, child labor has much negative stigma attached to it, certainly among government officials. Sometimes a more positive view can open a road to helping working children more effectively. In particular, it may be possible

[6]. For a further discussion on street children, see UNICEF, 1986; for a review of national and international actions on behalf of street children, see Taçon, 1991.

to use child labor as a targeting device, and extend certain benefits to child workers. As the previous section indicated, this is especially appropriate where child labor is a manifestation of poverty. Many working children are inadequately fed and do not go to school. The government could provide "factory meals" to working children, as it provides in some cases school meals to children in school. Similarly, primary health care workers could be mandated to visit and provide free care to child workers. Employers could be ordered to restrict children's work day to five or six hours so that children can attend school at least part-time. Such measures would benefit children who are in an economic situation which is not likely to change in the short run and would make them better off. (In fact, the added benefits may be perceived as an increase in real wage and increase the supply of child labor - this is not, however, a reason for not helping child workers and can be seen as an effectively targeted transfer to poor families.)

Such programs of course would require rather profound shifts in many governments' current attitude of denial and/or "all-or-nothing" bans. We think that such gradual solutions which recognize an economic reality and take advantage of it to help those in an unfortunate situation, will ultimately contribute to the long-term elimination of child labor.

Finally, there are other factors that we have not discussed yet, which can profoundly affect the lives of children. One such factor is peace. We must make a distressing call of attention to the impact of war and ethnic and civil strife on children. There is evidence that increasingly boys, sometimes as young as 12 years, are being used in the fighting militias. Often they are abducted and forcibly conscripted (Goonesekere, 1993). While in such situations, civility and law enforcement are absent, the use of children in such conflicts should be considered a war crime not to be forgotten after the end of the conflict.

6. Conclusion

On September 30, 1990, the first World Summit for Children promised to reduce child mortality and malnutrition, and set targets to be reached by the year 2000. There were no explicit goals relating to child labor, but the targets included basic education for all children and completion of primary education by at least 80 percent of children. These goals, if met, will reduce child labor.

Indeed, the evidence reviewed in this paper shows that education interventions play a key role in the reduction

and eventual abolition of child labor. However, other measures are needed as well, such as fertility interventions, the adoption of technology, improvements in employment opportunities for adults, labor market policies, and legislative action. Such measures need to be accompanied with efforts at advocacy of the condition of working children, and empowerment of the children and their families.

There is an encouraging consensus emerging both in the literature and in the policies of international agencies concerned with child labor, that effective action must aim in the first place at protecting the children and improving their living and working conditions. This implies a less stigmatized view of child labor, recognizing e.g. that the condition of child labor can itself be used as a targeting device to help the children with schooling, health, nutrition and other interventions. The long-term objective of elimination of child labor needs to be approached through a package of legislative action and economic and social incentives, which take into account the types of child labor and child labor arrangements present in a country, as well as its institutional and administrative capacity.

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