



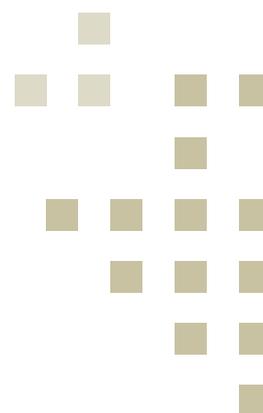
[613] Working Paper

An Essay on Child Labor in Sub-Saharan Africa – A Bargaining Approach

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An Essay on Child Labor in Sub-Saharan Africa – A Bargaining Approach

Jens Christopher Andvig

[Abstract] The separation of children from their families have a large number of social and economic aspects. At least the economic aspects are under-researched. At the point of transition of leaving their families somehow the children have to be considered as separate decisionmakers. This is the perspective I adopt in this essay. The question raised is whether poverty, changes in social norms or external shocks to the family system such as the AIDS epidemic, lead the children to prematurely fend for themselves in the context of Sub-Saharan Africa

An essay on child labor in Sub-Saharan Africa – a bargaining approach

1. Introduction

Almost half of the population in Sub-Saharan Africa are children. Most of the children older than five do some work. Most of that work is performed inside the children's own family or at least under its overall social control. In a preceding paper I focused on that kind of child work. This paper will first deal with children's labor when they for one reason or another become either *separated* from their families or for other reasons prematurely responsible for their own economic survival. The size of this child population is completely unknown. It constitutes all the children that control their own supply of labor in the market and all the children working in the household sector who know that the care they receive is conditional on their labor efforts, whether they are living with their parents or not. Together I will call the two groups' activities for child-“controlled” labor. The children's survival is conditional on their work. Since they may be separated from their families by their own or the caregivers will, there are potential “threats” of exit, “threat points” of some kind that will have impact on the children's share of labor efforts and consumption. Hence, I will look upon the exits of children and their share of the households' labor offers and consumption to be determined through a series of bargaining games. Game theory will only be applied in a rather informal, loose sense.

The plan of the first part of the paper is the following: After a brief presentation of empirical examples indicating that non-controlled child labor is not an invented issue, I will first discuss economic factors that influence parents motivation for keeping or sending away children and the children's motivation for staying or leave. The perspective is, like Iversen (2000), a bargaining process where the children from a fairly young age are active bargainers. Second, I will discuss regular economic factors that influence shifts in the bargaining positions, in particular the ones associated with the so called demographic transition that finally has been observed in

several African countries. Third, I will focus on the most important shock to the family structure today, the AIDS epidemics.

Then I will discuss briefly some of the major markets for child labor in the countries of Sub-Saharan Africa. In these markets child-controlled and parents-controlled child laborers compete. While the aggregate size of the child labor markets in Sub-Saharan Africa is unknown it is generally agreed that it constitutes less than 5% of the child population that may conceivably work, that is from the age of 5 to 15.

In some cases young children may be given shelter in their own families, but neither food nor clothes, which they have to pay for with their own labor/income or go without. Turnbull (1973) observes such a situation during a famine in north-east Uganda among a tribe called Ik.. While I have observed similar harsh contracts in the countryside of Kenya under more normal circumstances, they are probably rare and difficult to observe in a systematic way. Normally child labor with excessive responsibilities goes together with a separation of the child from its original household, a child migration. This may be caused by *external* shocks that hit either many households simultaneously, such as wars and famines, or shocks that hit the single household such as the death of the child's major guardian(s). The AIDS epidemic is an intermediate case since it hits many households at the same time..

Divorce is a less clear cut case of external shock, but will often be experienced as such by the children, and may also in the end cause an early separation between the child and both its parents. In the same category where economic and non-economic motives may be mixed is excessive use of violence directed towards either mother or child, that may either be deliberate¹ or caused by partly uncontrolled personality factors such as alcoholism.

¹ V. Rao and others have made several well-documented studies of instrumental use of violence in Indian families applied by husbands who are dissatisfied by the dowry and try to increase it ex post Bloch and Rao, 1998. An empirical study that shows the strong effect of domestic violence on low-age child migration in a sample of Indian families is V. Iversen (2000, a). We are not aware of any similar studies made in any Sub-Saharan African country. Dowry violence is, of course, not an issue, but unclear property rights to assets are common, where the use of domestic violence might be applied in order to turn the unclearness to one's (normally husband's) favour.

Separations between the child and its original family may, however, also be caused by purely economic adjustments made by the households that may cause the child to leave at its own initiative, or may make the adults force it to leave home. A consideration of these adjustments leads to a complex of issues under-researched in economics: When is the optimal time for children to split off and start their own independent economic life? How are the loss(es) or gain(s) distributed between the children and the adults? Swift changes in the average age when the children leave home may even make havoc on established housing markets in developed economies and the economic resources spent in developing such independence are considerable. But in these countries the children are rarely children when that happen. In many poor countries, however, including the African, a large number of children have to leave homes so early and fight for their survival through their own work that they are children proper.

A normative question that then arises is whether the present pull or push mechanisms will make too many children to fend for themselves at too tender age, i.e. to perform a form of child labor, even given the present poverty levels. The definition of child labor is the same as the one in the former paper:

Child labor is work performed by children who are too young for the task in the sense that by performing it they unduly reduce their present economic welfare or their future income earning capabilities either by shrinking their future external choice set or reducing their own individual productive capabilities.

Often it is not the labor task itself that makes it potentially harmful, but the social setting in which it is performed and what motivates it; whether it is work done to share the work tasks in the family within reasonably secure surroundings, or whether it has to be done in order to be able to satisfy the child's own necessary private consumption, partly driven by fear of non-survival.

While the family-controlled work performed by often small children has become a significant, but circumscribed problem when schooling has become a realistic alternative for children spending their time, and sweatshop child labor still is mainly a

problem for the future in most of Sub-Saharan Africa, I believe the forms of child labor due to their frequent separation from their parents or other guardians are an acute welfare issue in many African countries today, with impact on a significant number of children.

Extensive poverty, emerging land scarcity combined with specific strains on traditional African family organizations, are weakening their authority structures and making old norms irrelevant or dis-functional, I believe are the major broad causes for the problem of un-controlled child labor in Sub-Saharan Africa. The specifics of the situations are likely to vary enormously, however.

2. Examples of early child responsibility for economic survival

The most clear-cut example showing how early responsibility for own survival may be forced upon children is told in Turnbull's (1972) ethnographic horror story from the Ik tribe in north east Uganda². There he could observe that most members of the tribe in order to survive lost most moral inhibitions. Old norms about sharing, hospitality or caring for members of the family lost their grip. It became acceptable to steal or grasp food from individuals too weak to defend themselves (but not actively to kill them). The outcome was that after a while first the old members of the tribe started to die, then the children. The famine apparently was slow to build up, and in the meantime Turnbull was able to observe several important changes in the social and economic organization. With respect to children he made the following interesting observations:

- (1) The mother throws out the child when it is about three years when she has finished breast feeding it.
- (2) Afterwards it may not expect to get any more food from its parents, not even to stay in their hut. It is, however allowed to live within their compound and build

² Turnbull's study has been heavily criticised by fellow anthropologists, most strongly by Barth (1974). The major thrust of the criticism of Turnbull was ethical: His naming informants doing criminal activities, his suggestion of forced migration of a whole tribe to stamp out its moral rot, as he perceived it, and so on. His ethnography has not been disputed to the same extent, although several have wondered how it was possible to stay in the area for several months without noting that it was acute famine at the time. Nevertheless, the observations referred to in this text are trustworthy, but should be interpreted not as the outcome of a long (unexplained) moral degradation as Turnbull seems to have

its own shelter when becoming competent enough. Before that they may sleep under a granary.

(3) The children organize themselves in two sets of bands, one junior band of 3-8 years, one senior from 8-12. Each band contains about 6-12 members. Every child has 1-2 other members close in age that they cooperate with more closely. When considered adult they are thrown out of the band. The adults are not making gangs, but has to survive on their own.

It is worth noting that in this situation where there is a high degree of lawlessness, the children in these isolated villages organized themselves in a very similar way as street children do today in Nairobi or Lagos. While the situation described by Turnbull was extreme, it reveals some underlying realities of growing up as children: Until a certain age at least children will produce less than they consume, that is, if their guardians' horizon is short, or they have no assets to employ them, it will pay to get rid of their children. In an environment where the risks of losing their parents are high, the children will have to be prepared to survive on their own, which normally implies that they must learn to work from an early age.

In addition to reduce the economic burden of child rearing, reducing the parents' economic incentives to throw them out prematurely and hence reducing the children's risk of non-survival for that reason, child labor increases their survival probability if the worst happens and they are forced to stay on their own. It reduces the time period when they consume more than they produce.

If thrown out, they may be able to adjust not only by working more and ganging up with other children to reduce the risks associated with food gathering, whether that happens in the urban or rural commons, they will have to adjust their consumption down.

done, but rather as a temporary outcome of an acute famine situation where the majority of the people for some reason stayed in the drought area.

What makes Turnbull's story so horrifying was that the children lost their parents mainly through the latter's moral withdrawal, although it was induced by hunger. That children may be forced away from home under more ordinary situations is indicated in Bwibo and Onyango (1987) study of different child worker groups in Kenya. While the majority of children had told them that poverty was the major reason for moving, 3-4% told that they were regularly forced away by their parents while 1-2% had to that because of family disorganization. Orphanage had caused a further 3-4% to leave. In an extreme group (50 boys and 50 girls, 12-17 years old, chosen because they had been punished for stealing) around 10 % told they had been forced away.

These numbers may, of course tell very little about the size of the problem at the macro level, but they do tell that the problem exists: a significant number of children are forced away from their families, having major family ties cut, and are only able to survive through their own work

The Bwibo and Onyango's (1987) survey of child labor groups were collected before the AIDS epidemic had become so serious in Kenya and elsewhere in SSA that adults were dying in large numbers. Recently we have descriptions of how children have to cope on their own when parents/guardians have died because of AIDS or, in the case of Rwanda mainly through violent deaths. After the genocide UNICEF believed that one had somewhere between 40 000 to 80 000 child-headed households in the country, but only 1939 children was actually registered as living in such households, so the number is uncertain, but the existence of the phenomenon is not (*World Vision*, 1999). In this case sibling groups tried to band together and establish new rural households headed by persons so young that they have to be considered as children themselves.

In a study of AIDS orphans in the Kisumu and Siaya districts about 5% of the children was living completely on their own without any adult caregiver (Ayieko, 1997). - The change in the family systems in many parts of Africa and its role in changing the children's economic conditions is an underlying theme in this paper. Towards the end I will address this issue more head-on.

3. Child labor, child exit and the bargaining approach

The main issue dealt with in this paper is children leaving their present families. Their exit possibilities are likely to have impact on the distribution of goods and labor efforts inside the family unit where the children already stay. Since the early 1980s a literature has developed where the focus is on intra-household allocation where the husband and wife are bargaining with their expected utility at exit (divorce) as threat-points.³ A possible extension is to add the child as an additional agent who may also exit at any point of time, where the child's expected utility if leaving is its threat-point.

Whether this situation is modelled as a non-cooperative or cooperative game the internal distribution of consumer goods and labor (unpleasant tasks) will then be influenced by how well off the different family members will be when exiting on their own or in other ways refusing to cooperate. Roughly, the better the outside position, the larger the share in the goods and the less share of the unpleasant tasks the agent will receive.

This may appear to be reasonable extension when analyzing adolescents in the family, but it is difficult to see how it may apply to smaller children for at least four reasons:

- 1) children have no choice in the matter of residence. They are stuck with their parents or appointed guardians.
- 2) The traditional authority structure in most families does not give them scope enough to make them independent decision-makers, hence no significant bargaining may take place.
- 3) They are not rational decision-makers.
- 4) They have no threat-points since they are unable to survive on their own

³ A survey of ideas and methods of analysis applied to developing countries evolving from this approach is in Haddad et.al. (1997). Originally the literature was focused on issues relevant for developed countries.

Objection 1) may apply to most European or Asian family-systems. The main exception is in the case of divorce where the child has a realistic threat of changing residence when the terms in the present family becomes too unfavorable.. In many African ones, however, the children may have a saying, as Reynolds (1991, xxxi) observes in the case of the traditional Tonga people:

“the freedom of the children lies in the fact that once old enough to move about they have a choice in the matter of residence and thus of their guardians. The Tonga say that a child may be permitted to decide where it will stay since otherwise it will cry that it is being treated like a slave, whereas it is a free person. ... Even if both parents are still alive and living together, the children may still take themselves off to live with other relatives. Their parents have no right to curb them. ... The right to self-determination among men, women and children is a deeply held Tonga value”

The widely spread of the fostering institution give also a realistic exit opportunity for many children, particularly in West Africa (Serra, 1996) but only in some cases will the fostering parents be outside the parents' control. I am not aware of any statistical exploration of the fraction of African foster children who are choosing the residence in the manner of traditional Tonga

Looking at the authority structures, there are of course, a large variation. Many will not allow children much scope in any major area of family activities, and certainly not in their choice of residence. The scope for applying the bargaining approach is probably widening, however, since there are reasons to believe that many of the traditional African family norm structures are loosening (Kilbride and Kilbride, 1990, Weisner et. al, 1997).

How to characterize children as decision-makers, when they get the opportunity, what are their capabilities as economic bargainers? Very little really systematic is known from economic real life situations. Recently a few economists have started to study children's economic behavior in experimental situations, however. It is, of course, problematic to apply the results from simple, experimental choice situations with safe, protected US children to the complex and risky real life situations of African children. Nevertheless some of their results are suggestive. Somewhere between the age of 7 and 11 children follow the transitivity axioms about as well as adults (Harbaugh et al. 2/4/ 2000). Their degree of altruism may be slightly lower (Harbaugh

and Krause, 1/14/ 1999) or significantly lower (Peters et al. 1999). Their degree of risk aversion is very heterogeneous across individuals, but not so different from adults (Krause and Harbaugh 3/19/ 1999). The real major difference was in their degree of patience, their *time preference*. Six year olds have a discount rate at least two times the one of an adult (ibid.).

Overall, in simple situations children appear to be sufficiently rational to make that a possible approximation. In more complex ones they are more likely to be framed and the assumption of IIS (independence of irrelevant alternatives) also applied in formal bargaining theory is likely to be violated in more serious ways than is the case for adults. The major problem with a hardboiled bargaining approach of studying the interaction between parents and younger children is not lying here, however. It is the weakness of children's threat-points that, if combined with total lack of altruism among the adults and applied to very young children, would tend to lead to the absurd conclusion of general infanticide. Or, rather that humans would not get any children to bargain with in the first place, since, as demonstrated in Deaton and Muellbauer (1989) the costs of children are higher than the (economic) gains for the parents. The costs were so high that even when expected remittances or other assistance at old age are included, no economic surplus should be expected.⁴

The two most well-known ways to avoid this absurdity of the economic approach to the study of families have both been suggested by Gary Becker (e.g. Becker, 1981). In one children are regarded as consumer durables, as goods in their parents' utility functions. In the other, children are recognized as decision-makers but at least one of the parents is altruistic at the same time as he under normal circumstances has sufficient resources to induce even selfish children to make the decisions which follow from the household head's maximizing program⁵, and they thus become decision-makers in a more passive sense than in the bargaining approach.

⁴ The last calculation was not made by them in this paper.

⁵ In a preceding paper (Andvig, 2000) I discussed two papers by Baland & Robinson (1998) where child labor is introduced into a Becker altruism framework, but where non-pareto optimal family allocations might arise due to an assumption that the children are independent decision-makers in a second period.

While Becker's ways to make the existence of children compatible with an economic approach to the family, he does not solve the problems of the bargaining approach for the obvious reason that he does not apply it himself. As mentioned one of its problems is that it will predict that the younger children will get worse deals than they get under normal circumstances.

The way left to defend a bargaining approach is to consider the bargaining process as circumscribed by social forces of non-economic kinds: bonding, altruistic love or unconscious socio-biological motives of maximizing the number of surviving genes. Riding on the top of such forces we may consider the force field of economic bargaining between parents and children as adding its effects to the final observable outcome⁶. Considered this way, I find the bargaining approach as a reasonable first approach.

Just to fix ideas, let us look at a family that distribute the gains of being together compared to the situation where everyone have to survive on their own. The child's share in the gain inside the family will be smaller the larger the difference between his utility of staying and the expected utility of its threat-point is compared to that difference for the other family members. Since that expected utility should increase with age, smaller children should receive a smaller share of consumption and make larger labor offers (relative to their productive efficiency) than older children. This is, as indicated before, hardly a plausible result in general. However, if the strength in the parents' feelings of altruism –expressed through the values their threat-points (where the child is not present) are steeply decreasing with children's age, the unreasonable outcome for younger children does not follow.

Note that the bargaining approach implies that that the parent who cares less about the family in the sense that her threat-point is low, for example because of stronger altruistic feelings for the children, will receive a lower share of the benefits and a larger share of the costs. To mitigate this outcome, many have argued that women

⁶ One way to do this is to make altruism exogenous by having a direct impact on the adults' threat-points so that their utility there, when the children are not present, are lowered. If so, the children's share in consumption will increase and their labor efforts decrease if the adults become more altruistic in this sense. The argmax of the corresponding Nash product are higher compared to the outcome if only non-altruistic threat-points were present. It will be reasonable to assume that the exogenous altruism is declining with the child's age.

should care less about the family and become tougher in intra-family bargains. If the children are separate decision-makers, the outcome will be that not only men but also children will lose.

Going back to the issue of child labor, the bargaining approach implies mechanisms where the children's ability to get work in the market feeds back to the work they are doing at home. For example, if there is an excess supply of child labor in the market where the children are the suppliers, and the number of jobs increase, the value of the children's threat-points are likely to increase and the children in the relevant age groups are likely to receive a larger share of the family's consumption and do less of its work. This will apply even to the children who don't do any work in the market themselves.

4. Studies of child labor applying the bargaining approach

I have discovered only a few studies that apply a bargaining approach to the study of child labor and actually none has dealt with empirical issues in an African context, although its assumptions are likely to fit better in some of the African countries than elsewhere.

Moehling (1997) collects data from a large household survey made in the USA in 1917-1919 when the children's participation in the labor market still was significant. The data allowed her to study the effects of children's (market) income on the families' expenditure. The children were in the age group 12-18, that is most of them were in fact adolescents.. She found that as the children's (12-18) share in the family income increased, the families' expenditures change into a direction that favored children of that age group while the share of the expenditures that went to the other groups went down, including the share of expenditures on younger children. The fathers' expenditures declined the most, however, suggesting a significant decline in his power.

The focus of Iversen (2000a) is different. It seeks to document that child migration is a significant phenomenon in the rural neighborhood of the Indian city Bangalore, and

that a large fraction of that migration is decided by the children themselves. It also makes a couple of hypotheses about which factors that influence that type of migration. Due to the sensitive nature of questions asked, the sample is rather small, 169 observations all together Children are defined as being below the age of 15. A surprising result is that the effect of household income on the probability of autonomous migration is not clearly negative. Household violence is an important factor, however, as is , of course, the age of the migrant. Older children migrate more frequently.

The most striking result is the apparent importance of village-level determinants, however. Child migrants as percentage of the total number of boys age 10-14 range from 3% to 30% in the different villages. The total number of child migrants is 169 while the child-decided or autonomous ones are 45, i.e. more than 20%. When it comes to the autonomous migration, the village impact seems to work through the peer group where the oldest members have the largest impact. In parents-induced or cooperative (parents and child decide together) migration household relatives become more important. The feedback effects from the child migration to the child labor inside the households are not studied empirically, but the extent of it indicates that in the Bangalore neighborhood, the exit option is a realistic alternative, and are likely also to fix a welfare floor for the children in the rural communities.

Indian conditions differ in many ways from African countries. The family structure and the norms regulation task allocations and the children's rights and duties are different. Moreover, such large and organized markets for child labor as the one in Bangalore are rare. I have not found any attempt to analyze children's shares in family allocation processes as the outcome of family bargaining where children constitute a separate group, and where run-away possibilities may have significant effects.

However, Iversen (2000) specifies a model theoretically that discusses the child labor within a bargaining family with some stylized African features, and where intra-family bargaining is crucial for the outcome, but the children are not acting as a separate bargaining group. They are making a coalition with the women in the family contests instead and have no separate threat-points. Their conditions, if exiting, are

not specified. Hence, strictly speaking the model falls outside the scope of this paper. In addition, some of its institutional assumptions are likely only to fit a minority of rural African communities, I believe. Nevertheless, it illustrates how important the intra-family bargaining process may become both for the economic efficiency of the family child labor and its distributive consequences.

In the main model the family produces a cash crop on fields managed and owned by the husband using the input of children, husband and wife. Food crops are made by the wife(s) only, who own the food plot. The wife receives part of the cash crop for her labor input, while the husband receives nothing of the food crop. The threat point of the husband is determined by him receiving the whole cash crop applying his own and the children's labor, but without his wife's. The wife withdraws to the food plots. Women are altruistic, their children's consumption (but not labor offers) are arguments in the utility function of the women, and share their income with the children. The children receive nothing from the adult men in the family who are not altruistic.

In a labor surplus economy where children and women's labor are close substitutes, it is clear that any exogenous increase in the amount of child labor will leave family income unchanged and only increase the value of the men's threat-points, and therefore decrease the consumption levels of women and children. If the household is in a non-cooperative state, an increase in the amount of child labor will obviously only increase the husband's income, leaving the other household members' income undisturbed.

If the children are only working on the mother's plot (a case not yet studied by Iversen), given a labor surplus economy, the only effects of an exogenous increase in the child labor should be an increase the wife's leisure without any effects on the children's and women's consumption. With time restraints on women's labor, their control over the children's labor power increases the value of their threat-points, so if the children work more, both the total food production and their (and the women's) share of household income will increase. Child labor will increase the children's welfare.

A kind of intermediate case is where the children work on the husband's cash crop land, but where the mother has the power to withdraw them together with her own labor. It creates less clear-cut results.

Although the children here have no power to act on their own, we see how the likely impact of their work on their own welfare might be strongly influenced by whether the agent in control of their labor power is the one possessing altruistic feelings or not - according to the bargaining approach. It is clear that there are many different rules operating in different parts of Africa. While Udry (1996) reports a case from Burkina Faso that is close to the husband controlled child labor, Reynolds (1991) reports a case from Zimbabwe close to the food crop- mother controlled child labor in the fields. I know of no systematic empirical classification of African child labor along this dimension. In addition to different tribal customs, there is likely to be substantial individual variation. My hunch will be, however, that Reynolds' case is more typical than Udry's. Also frequent will be the case where boys are father-controlled and girls mother-controlled.⁷

6. Extended families, child labor and the bargaining approach

The Tonga view is that children have a right to choose their preferred residence in the family. This implies, of course, the existence of an extended family among whose adult members the children are allowed to move, and where the parents may force the child to move if they are dissatisfied with the children's behavior or lack the means for their economic survival. When considered together with the fact that in many areas in Sub-Saharan Africa land was not scarce until recently, that the basic technology is fairly easy to acquire, it was possible to establish new families at a young age. The alternative of exiting both for younger and older children was more clearly present and relevant for intra-family bargaining even if no market for child labor is present, making exiting feasible that way.

⁷ If an income transfer to women and children are desirable in most cases, applying the strong assumptions in Iversen's models we see that increasing the girls' labor will have a desirable effect, while the boys' labor will work in the opposite direction.

When this early exiting freeze into a common behavioral code for children together with high fertility at young age for women, the result may become quite harmful to the children when circumstances change: If land becomes scarce, if the extended family becomes weakened, or children less desired and children continue to exit at an early age, their welfare levels may be reduced in unintended ways.

The empirical study of these phenomena has focused on the study of foster children. In a former paper (Andvig, 2000) I have presented some of this research, focusing on Ainsworth (1996). The living standard survey from Cote d'Ivoire that it is based on, does not make it possible to distinguish between child-induced or parents-controlled fosterage, however. I believe the majority of the fostering decisions are made by the parents, but there are reasons to believe that a substantial minority of the children initiate their moves on their own⁸. In any case, for most West African countries, the stock of children fostered out is so substantial that it will have to influence the situation of non-fostered children, too. It is ranging from about 15% to above 30% for the children in the age group 5-9, and 40% in the age group 10-14% (Serra, 1996, 7)⁹. More girls than boys were fostered out, but the difference was less than one might expect, given the importance of the labor demand component in fosterage (22% of the girls compared to 18% of the boys).

Ainsworth (1996) showed that foster children work more and receive less schooling than the receiving household's own children. This does not imply that the children's situation here necessarily is worse than in their parents' household. Many move up the social ladder. Nevertheless, the expected welfare of the child in prospective fosterage may act as a realistic threat- point for determining the children's share of household labor and consumption. If the actual share is too low compared to it, the child move. If it is too favorable, the parents send it away.

In the literature it is noted that the fostering institution has several desirable risk-sharing properties which makes it less risky for poor households to get children: If it is hit by an economic shock, it may send its children away and thereby keep up the

⁸ Cfr. The effects of the AIDS shock in the Nyanza area are described later.

⁹ Since we have introduced some Indian data on child migration, it may have interest to note that the corresponding numbers for Sri Lanka are 2.9% and 4.2% (Lloyd and Desai, 1992).

adult consumption stream. If a parent dies, it reduces the economic risks for the children in question to stay without guardians.

For the children, the foster arrangement may also increase their exposure to risk, however. If their new home is exposed to an economic shock, they are the ones less likely to get food. If the atmosphere is bad, and their new home is ridden by violence, they are ones most likely to be beaten most often and most severely. Only if the return option is always open, will the total risk exposure for the children certainly be reduced.

What happens, if for some reason, children become less intensively desired, for example during a process of demographic transition? If economic motives are important, fostering parents will now only receive children if they work more and/or consume less. The children's position even within their own families become weakened, and they also have to work more or consume less. If this kind of "market" for children do not have flexible "prices", a downward shift in demand will cause the number of fostering positions to decline. Hence, it becomes more difficult to move out "superfluous" children, which will cause a further negative shift in the demand for children, risking to undermine the very institution of child fostering itself. Making the possession of children more "liquid", the it may also making the spread of changing attitudes towards holding children more swiftly. If the family system cannot handle the change, the risk then is that the excess will be relieved by some of the children being sent into the urban commons or into areas where there still are excess demand for children without having the return option available..

While a negative shift of demand for children inside a single family may cause a similar response, where the children receive less benefits and have to make more offers, it is likely to become more localized and the propagation mechanisms working slower.

It is, of course, one-sided to consider child fostering institutions as a pseudo-market for children. In many cases the movement of children are also guided by elaborate webs of norms along which also guide children's behavior. For example as the family system of Mende in Sierra Leone as outlined by Bledsoe (1996) prescribes harsh

treatment in the sense of little food - hard labor - violent punishment – combinations for foster children. It is then not considered as any form of negligence or lack of altruism on the part of the foster parents, or any weak bargaining situation for an excess of children. Rather, the foster parents are doing their social duty of socializing the child properly in a way that is difficult for the parents to do. If, for some reasons, the demand for children is reduced under these circumstances, children should then expect less harsh treatment and less labor because the foster parent would not be so motivated in disciplining the child. Needless to add, a bargaining approach will not be appropriate, since the assumption that children have at least some important scope for independent decision-making does not hold in this case..

7. Demographic transition¹⁰ and the issue of child labor

High fertility rates and high child labor participation rates are both characterizing many African family systems. When a steady stream of new children are born into the system not ruled by a strict norm system, the children's bargaining position is kept weak. The younger children generate a number of working tasks for the older, particularly for the girls, and the child labor participation rate is held high. The extensive labor performed by the children keep the costs of having children down and the birth rate up. This does not mean that the birth rate is kept high because of child labor, but rather that a system where the somewhat older children do much of the household chores and may move easily across households to where they are most in need, make high fertility more easy to sustain. High child labor participation rates in households and farms thus go together with high fertility rates.

During the stylized demographic transition the population growth first rises due to improved health services (or increased income during an industrialization episode), which reduces the death rate while the birth rate stays constant. The result is an increasing population growth rate. It then follows a period where it takes time for the population to adjust to the new, increased survival rates, an unhappy situation of dis-equilibrium arises with an excess number of children. The children's situation worsens, they will have to work more at home, receive less consumer goods (if the

bargaining approach is applicable, maybe they will receive even a smaller share), and the will be tempted to, or forced to, leave home at an earlier age.

Finally the population growth rate is reduced to a new equilibrium through a fall in the birth rate. When the birth rate is decreased through economically calculated decisions on the part of prospective parents, not through the old mechanisms of famines and war, rate, the children's welfare should increase, child labor be reduced and the motive for sending children away lessened together with the overall pressure on the environment. One is back on a track of equilibrium population growth rates where both the death and birth rates are lower than they were before the demographic transition. Hence, a reduced birth rate should signal that the children's welfare should soon increase. Is that true?

Around 1990 it became clear that birth rates in significant parts of Sub-Saharan Africa (Kenya, Zimbabwe, Botswana, Zambia, large parts of Nigeria) were finally falling after several decades of historically almost unprecedented population growth. Would this signal an improvement in the children's situation in the same areas?¹¹ In the longer run, I will definitely expect so, in the short run the likely outcome is more open. The extended families' absorption's capacity of new children may decline more steeply than the actual number of births.

Trying to explain the high fertility of most African countries and the absence of any demographic transition till then, Caldwell pointed to a number of characteristics of the African family systems, including their ideology (Caldwell, 1976, Caldwell & Caldwell, 1987). The first and basic one they share with other areas where most of the economic activities are taking place in families:

1) The value of goods and services supplied by the children to their parents are higher than what they receive when child labor and services delivered when parents are old, are included. That is, Caldwell claims that in poor countries there is a *net transfer*

¹⁰ I will here assume the main outlines of the stylised development of a demographic transition known to the reader.

¹¹ The total fertility rate decrease was strongest in Kenya and Zimbabwe. In Kenya fell the total fertility rate from 8.1 in 1970-75 to 6.3 in 1990-95, in Zimbabwe it fell from 7.2 to 5.3. In other countries it was constant, like Tanzania (7.8) or even increasing, in Rwanda from 8.3 to 8.5 (U.N., 1995)! Amore detailed analysis (Thomas and Muvandi, 1994) brings some doubts on how dramatic the decline in the

from children to parents over their life times, while in industrialized countries the net transfer is going the other way. When interpreted in a narrow economic sense Caldwell's proposition does not appear reasonable on the basis of a large number of econometric studies on the economic costs of children in poor countries¹², but the theory should probably not be read that way. All kinds of non-economic transfers such as expected support in political contests, value of having children in one's own burial rituals, parents' self-realization, and so on. This makes the theory difficult to operationalize, but it is nevertheless suggestive :

2). The African *fostering* institutions with its costs-sharing and risk spreading properties have evidently kept fertility high¹³ and have made the declining consumption potential for siblings when their numbers increase less visible to the parents.

As long as there are no declining return to having children, the stock demand for them should stay constant.. Historically the social and economic costs for the father to exit has declined recently and have reduced the expected sunk costs in child raising for him – but increased it for the mother. If his fertility preferences are the limiting factor, this should increase the desired stock and the observed birth rate. If it is the mother's preferences that limit the birth rate, the decreased responsibilities of men will cause the birth rate to go down and reduced the effective stock demand for children. When schooling possibilities opened in Sub-Saharan Africa, the return was not clear. Given the large income a good white-collar job could get in the 1970s; for the parents an increase in the number of children might even bring increasing expected return (Bledsoe, 1994).

birth rates has been in Kenya, Botswana and Zimbabwe, but not that a significant decline has taken place.

¹² An early, but still very influential study was Deaton and Muellbauer (1986), but the econometrics of the issue is quite involved even when expected remittances are not included.

¹³ The most well-known fostering institutions are the West African ones where there frequently are large status differences, but also family relationships between the family units at the sending and receiving ends. A very different system of fostering children has been ruling at the plantations in the Seychelles (Pedersen., 1989?). There women have been able to combine a high fertility rates (TFR of 5.4) with high participation rate in the labor market by women adopting older children when in need of work assistance at home. Among the 54 women in the island researched, 28 had given away 44 children to other women. While almost a-ideological we see here a system where extensive child labor is combined with high fertility and frequent movement of children across households.

If the stock demand for children is higher than the actual stock –and it is a stock demand in this context - since children bring yields over several decades - the increase in the number of children is determined by the supply side: Sexual customs, norms about marriage age for women, birth technology, and so on. If so, any policy of population control would be rather futile and the issue of children’s labor outside their family control, which I discuss here, would be absent or a very minor one.

Here it is worth noting that the eventual excess stock demand for children is based upon *expected* return, expectations based upon values of a mixed ideological and economic nature, some rather fragile. Expectations may shift rather swiftly, or at least faster than the rate new children are born into the system. A sufficient negative shift in expected returns of having children may cause the society suddenly to possess an excess stock and all “capital” owners would in principle like to get rid of the capital, but they can’t since the capital is there and may only decrease by depreciation.¹⁴

While the birth rate certainly will not go to zero, a similar mechanism may contribute to a significant decline of those births which has been inspired by expected yields.

Moreover, as already pointed out, the fostering “market” for children is likely to be fragile, and if the market becomes thinner because of an initial decline in yields, the expected return of having children for risk averse parents will experience a further decline. Caldwell & Caldwell (1992, 227) found that the number of fostered children dropped from 29% to 14% in connection with the demographic transition in the Ibadan area, but they suggested a different causal mechanism for the decline in the fostering institution. They believe it was mainly caused by the children not accepting being fostered out any longer.

How may such decline in expected returns of having children come about? One reason for a negative shift in demand for children may be a sudden increase in costs, for example, a sudden implementation of obligatory schooling where the parents don’t expect any compensating advantages. Or maybe a sudden realization that a given education level does not give any high-paying jobs any longer. The child must either make another costly step up the educational ladder, or stay unemployed. Or,

¹⁴ Such drastic adjustment, that follows from neo-classical capital theory, is outlined and developed into an analysis of economic depressions, in Fisher (1932) and Haavelmo (1960).

(foster)parents realize that family values are weakening so at any given level of child income, expected remittances go down or disappear wholly.¹⁵ The evidence here is mixed, and there exist no firm evidence that remittances in fact are going down,¹⁶ but the fears that this is likely to happen is widespread (Weisner, 1997). There are also many other, more subjective observations that leave an impression that the decline in the birth rate in countries like Kenya is not caused by any smooth modernization process where Becker-like explanations appear applicable: where increasing female income make their time more scarce, where increased demand for quality children reduce the demand for their numbers, and so on. In fact, the income is not increasing, although schooling was in the early 1990s (but not now). Rather, the decline in birth rate appears to be associated with an “African family crisis” (Weisner, 1997) still not clearly analyzed, but where one of several equilibria of the social interaction¹⁷ patterns in African families make children less strongly desired. One of the reasons, but maybe not the main one, is that children’s labor are more difficult to apply in the households when new social norms about their schooling duties are introduced and the old authority structures are weakened, and where it becomes more difficult to set them into work against their wish.

Is not this incompatible with the bargaining approach? A rather obvious implication of a negative shift in the demand for children within that framework is that the childless threat-points of the adults move up and the children’s share in consumption decreases and their share in family labor increase since their relative bargaining

¹⁵ In this case it is possible to argue that the increased likelihood of social “deaths” that happen when children give no remittances also could work in the opposite direction and increase the birth rate. In an interesting paper Eswaran (1998) argues in an overlapping, three generations model that a decreasing mortality rate among children shall lead to a decreasing birth rate if parents fear very low consumption levels in their old age. An increasing number of social deaths should have the same effect as an increasing mortality rate and cause an increase in the birth rate.

¹⁶ Even if we look at the evidence from Kenya, a country where it is likely that old family values have eroded more than most of the African countries, the evidence is weak. Studies made in the early 1970s suggested that children spent around 20 % of their income on their parents while a study made in the early 1990s showed that they only spent 6%. The methods used were so different that the studies are difficult to compare, and the difference in the results might be insignificant (Andvig, 1998). Dow et al (1994) that addressed the issue head on of whether there had occurred a decline in *expected* remittances in Kenya from 1981 to 1992, when the birth rate had started to decline, found (unexpectedly) no firm evidence of any decline.

¹⁷ Durlauf and Walker (1999) sketch how social interaction patterns may cause a fertility transition, but pointing to different behavior elements than I have outlined. Nevertheless, when looking at the fostering institution, we in fact has a case of what they call social multiplier, in this when one family starts to desire less children, that makes fostering out more difficult, making children less desired by other social units.

strength is weakened.. The children's share of net benefits in the families should go down. The simplest way to see that we haven't hit upon a contradiction is to regard the observable labor performed by the children in the family as a function of both the ruling *norms* about child labor efforts and the bargaining strength of the children. The bargaining strength is a function of aggregate demand for children and the social norms about the level of child labor to be performed. If the latter shift downwards, for example because of changing views of proper child behavior or a forced increase in the school participation rate, it affects both observable child labor directly and aggregate demand for children in a negative way. The final outcome, whether the children will work more or less will hinge upon the strength of the effects, but for the norms to be meaningful the direct effect of a norm of less work for the children should outweigh the indirect effect. Otherwise the norm would move back to its old values.

When a significant decrease in the birth rate first was observed in some of the high fertility areas of Africa, most experts considered it to signal significant social and economic progress, a view that there are few reasons to doubt for the longer run. Few have seen it as a problem in the short run. The decline in the birth rate has either been seen as a smooth adjustment in some desirable modernization process following economic growth: Increased schooling, more nuclear family structures where parents invest more time in their children, want them to work less, and so on. When not wholly smooth, and the transition has been considered as the outcome of a stock dis-equilibrium situation, the cause of the stock dis-equilibrium has been perceived simply as the cumulative effect of a medicine-induced increased survival rate of children that after a while cause the number of children to be higher than the stock demand and this drag the birth rate down.

However, as just argued, in poor economies where children are also considered as an important economic and social assets, sudden shifts in their valuation may cause significant changes in demand and a stock dis-equilibrium may suddenly arise. In both cases of dis-equilibria, the children's welfare is likely to go down, but more dramatically so in the last case since it is likely to have greater negative impact on their relative bargaining position.

It is not easy to distinguish between the cases empirically. Too little precise knowledge of the different social interaction patterns are available. In all cases the fertility rates will drop, child labor participation rates go down, but less so in the demand shift case. The school participation rates are likely to rise. While empirically a more marginal phenomenon, if a strong negative demand shift has taken place, more children are likely to be pushed out of the families. The number of street children will be higher.

Another way to explore empirically which situation is the most likely one, is to see what happens when the family system is hit by an AIDS epidemic where a large number of adults die and many children become orphans. If there exist a kind of equilibrium or excess demand for children, the AIDS orphans should easily be absorbed by the families, if we have an excess supply situation many more children will be forced to try to survive on their own or being forced into orphanages. That is, the theory outlined above will predict that the probability is higher that any given AIDS shock may have stronger negative effects on the children's welfare and drive (or tempt) more of them into uncontrolled child labor in areas that have already experienced a significant decline in the birth rate.

Alas, the information about the population of pushed out children, such as the abandoned fraction of the street children is not significantly precise to really test this hypothesis, but the AIDS epidemic has so strong impact on the African children's welfare including their labor efforts for independent survival, that it should be brought in.

8. The AIDS epidemic and African child labor

The AIDS epidemic has now reached so large proportions that it has significant economic effects and even stronger effects on the social fabric in many African countries. More than 23 million are now believed HIV- infected and two million to have died from AIDS in 1999 (UNAIDS, 1999). The deaths are occurring disproportionately in the age groups who are parenting. The effects on the children, even

if we disregard the emotional sides, depend on a large number of factors, whether it is the father or mother, or both, who died, what kind of household they lived in before the death, the inheritance rules, and whether and how the extended family system works in the area or not. For example, in most cases the loss of the mother means in practice that her children have become orphans, and particularly so if the clans are matrilineal, the loss of a migrated father may only mean the loss of some family income. But in areas of strong patrilineal clans and patrilocal residence, the children's loss of a father may imply so strong loss in rights that their mother has to leave and they may follow her or stay and become in effect orphans. Many complexities arise and in areas of land scarcity and excess supply of children many kinds of nasty behavior may be triggered off by an adult death.¹⁸

The likely effects of adult AIDS deaths on the children's labor obligations in the rural farms will depend on whether the household stays intact or not. If it stays intact, the combination of financial strains of the disease which may make it more difficult to go to school and the loss of adult labor power means that their labor obligation increases. If a new adult moves into the household, whether family-related or a new stepparent, the outcome is likely to be more work, less food (Ainsworth and Semali, 1999) and less schooling (Müller and Abbas, 1990). If both parents die, a reorganization will normally take place and more children will in fact have become responsible for their own survival and thus become child laborers in this sense. They will either create their own rural households or one or several children will run away or be forced away under the reorganization.

For obvious reasons, these are events that are difficult to study empirically. Ayieko (1997) is one of few that has gone into a study of child-headed household from a social science point of view. The field work was taken place in the Nyanza province of west Kenya. The sample consisted of 2878 orphaned children from 1101 households.

In almost 60% of the cases children were distributed to next of kin, but in almost 30% of the cases the children themselves made the choice of the caregiver. The

¹⁸ Topouzis and Hemrich (1994?) present a large number of horrifying real life stories from Uganda.

grandparents took care of more than a third of the children, uncle and aunts more than a fifth., while a fourth of the children remained in the original house.

57 households, 5.2%, became child-headed. In those there were more boys than girls for two major reasons. Boys were more likely to be able to stay on the land because of the inheritance rules. Secondly, girls were more in demand so they were more easily absorbed elsewhere. They were more useful as domestic workers and would marry away and would not compete with the other children's resources. 3.6% went simply away looking for income, 1.5% went to an orphanage. Thus we may conclude that in this area more than 10% of the children were definitely not absorbed by the family system in the first round.

Many of the orphans are likely to experience that they are unwanted. Ayeko (ibid.11) reports that "Given the growth of individualism and the nuclear family amongst villagers many caregivers do not welcome the obligations that come with an extended family support system." He also mentions a number of cases where orphans are mistreated and exploited. It is likely then that after a while more than the 3.6% of the children will go away looking for income. If we guess that after a couple of years an additional 5% of the children will leave, it means that in this area about 15% will not be absorbed, but will have to take care of their own survival.

It is impossible to know whether this 15 % is representative for the AIDS epidemic areas of Sub-Saharan Africa. To be able to tell, I believe one needs several studies mapping the orphans' destinies under different conditions, among one very important one is whether there are indications of excess demand or supply of children. Like most of Kenya, the Nyanza area had experienced a demographic transition before the serious spread of the AIDS epidemics and may have lower absorption capacity than the remaining high fertility areas. On the other hand it is an area where traditional culture is stronger than in more urban areas.

Seen from one point of view, the extended family system's ability to absorb orphans is impressive. Nevertheless, it is weakening and the result is that a large number of children has to labor in order to survive whether it is done openly or whether they know that their present care hinges upon their ability to please reluctant caregivers

through their labor and other services. I believe this is the most serious child labor issue in Africa under present conditions.

How many African children may be involved? If these local areas in Nyanza are representative and if my guess of an additional 5% of the children moving into the labor market is correct, it will be around 750 000 children wherein 430 000 will seek the labor markets to survive. If there only are the initial labor markets seekers, that group is reduced to 180 000.¹⁹

What kind of labor markets are operating in Africa to which these children search their survival? That is the question we will discuss in the remaining sections.

9. The child labor supply

So far the focus has mainly been on the processes by which children become separated from their families, and the feedback effects on the family and the children's position there, if they are gainfully employed. The focus has been the families. Here the focus is the markets and how children may act in the few markets for child labor that are operating in Sub-Saharan Africa. I will not analyze every kind of child labor market, but have chosen some of the largest ones and some that may high highlight some important characteristics of the children's situation. Both from a positive theoretical and from a welfare analysis point of view, it is useful to distinguish between parents-controlled and child-controlled labor supply. However, I am not aware of any study that empirically separates child-controlled from parents-controlled supply in any African country, but I believe it to be more prevalent in at least some African countries than elsewhere.²⁰

When regarding *parents-controlled child labor supply* we are looking at situations where the children are living at home or work together with one of their guardians, but their labor activities are monitored by an external agent who buy the services. The

¹⁹ These estimates are based on the UNAIDS (1998) estimate of a stock of 5 million orphans (children who have lost their mother or both parents) in Sub-Saharan Africa.

²⁰ Referring to a study from South Asia, Siddiqi & Patrinos (1995) claims that only 8% of the work decisions are made by the children. In an informal study of early school drop-outs in Kenya, admittedly

agent pays some money for the child's activities, but their wages will normally be controlled by their guardians who may or may not redistribute some of the proceeds to the children. As they grow older they are likely to be able to keep a larger share for themselves both because that is considered proper and because their bargaining strength increases with age..

This form of labor will compete with labor at home and schooling for the child's time. In rural conditions wage labor will be preferred to work at home by both the children and the guardians, although it is more difficult to combine with school. Such work apparently is difficult to come by, however Presumably, a large share of the labor performed in the towns by children is parent-controlled in this way, even much of the work by so-called street children. Here again boundary cases arise, as the family authority-structures weaken and the children's actual work and income become more difficult to control by the guardians. I will return to the complex implicit contracts that arise in such weakened structures later.

Anyway, when at least one of the parents is living in a town, the child labor performed at fixed sites, like in shops, will be followed closely by the parents. Although rarely performed on sites controlled by the child's guardians, this form of child labor is not so different from the one taking place on the farms. However, the work process is not directly monitored by the parents, so it is mainly here we can find possible sweatshop exploitation of a capitalist variety in Africa. If we may allow generalizing from the surveys in Ghana and Côte d'Ivoire, this can at most apply to a few percent of African child labor, however, especially when we keep domestic work wholly outside the denominator.

Much of the existing economic analysis of child labor applies to the case of parents-controlled supply of child wage labor. When the guardians themselves are wage earners, the supply of the child's labor in the market will be related to the adults' wages in different ways. In the case of altruistic parents that supply is likely to increase when the parents' wages decrease, or when the parents become unemployed. In a less altruistic family where the father disappears, the same is likely to happen.

a very special sub-group of children, Bwibo & Onyango (1987,107) found that 41% of the boys and 52% of the girls had made this decision themselves.

When African countries are growing, with given authority-structure of African families, this form of child labor is likely to increase at the same time as the labor markets for adults also become thicker, while child labor in the homesteads will decline. We will get into a Basu-type of situation with single decision-makers supplying two types of goods and the possibility of multiple equilibria arises (Basu, 1998). Since the market for child labor is still undeveloped in most African countries, the scope for applying active policy to avoid the "bad" equilibria is wider than elsewhere. The small number of sweatshops actually employing children in Africa becomes a stronger reason for having an active policy against child labor because it is simpler to prevent a "bad" equilibrium to arise than to move away from it. Admittedly, the rarity of child sweatshop work makes it more difficult for the public to be concerned and support such policies.²¹

In a former paper I argued that the relationship between poverty and child labor performed in the households was not. The empirical evidence is ambiguous and theoretically it is reason to expect conflicting forces that act: child labor in household with more assets have higher marginal productivity that works against the income effects on children's schooling and leisure.

The notional child labor supply, on the other hand, is likely to be a declining function of income, straight. Rural poverty and growing land scarcity will continue to be the main drive behind both forms of child labor supply. Since excess supply is an important characteristic of many child labor markets in Africa, the size of the markets will be determined from the demand side.²² That means that the observed income elasticity will be determined from the demand side. That income elasticity is likely to

²¹ Note that these two forms of child labor - the labor performed at home and outside home - are likely to interact in complicated ways. For example, a father who disappears from his family in town - it often happens - is likely to cause child labor at home (domestic work) to decline and at least the search efforts for gaining income for the children to increase. If he disappears from the farm, the tendency for both forms of child labor is to increase. If then a new partner to the mother arrives, her children still have to supply a large share of their income at the same time as the demand for their work at home increases. When earning money, a child's bargaining power in the family increases, and it might be used to shorten his working hours in the household by more than follows from his given time restraints alone

²² 5 July 1997 *Nation* brought a small note about a quarry opening up in a village in Muranga north of Nairobi. Within weeks almost 20 % of the students in the nearest primary school dropped out. Note that

be positive – increasing income means more child labor at African income levels at a given social norm combination.

While declining income has similar effects on the two forms of child labor supply, other changes may have opposite effects. To see that, let us recapitulate the sources of child-controlled labor supply. It has basically four sources: (1) in a two-stage decision process a child's original guardians force her out from the household in the first stage, and she supplies labor in the second stage, (2) she might decide on her own to leave them and supply labor, or (3) she might stay, but the guardians don't care about her income earning activities. The last possibility presupposes a far-going breakdown in the family's authority-structure. The same applies, but to a less degree for the other possibilities. (4) Random events such as war, adult illness and famines may separate the child from her guardians. It is obvious that the break-down of family authority will decrease parents- controlled and increase child-controlled labor supply.

If there is excess supply on the child labor market activities, the number of children actually employed will be in the main determined from the demand side, it will also be determined from the demand side. That is, the demand side will determine which services from children adults are willing to pay for.

10. Some rural child labor markets

One should expect the great mass of African child labor to be performed in local agricultural labor markets. Although information is scarce, local markets for child labor in agriculture appear surprisingly thin in most places, however, and concentrated to harvesting of marketable crops, crops that bring in cash. In a country like Kenya during the high season children constitute 58% of the workforce on the coffee plantations and farms (Grimsrud, 1996). Some child labor is brought in through family networks but most of the labor services from the children are in this case bought in the market. Children who are too young for picking get drafted to take care of their still younger siblings in order to release the adult females and older children from child care. Commercial agriculture is probably one of the sectors that hires the

this observation partly conflicts with Grootaert (1998) in his econometric modeling assumes that

largest amount of child wage labor in the African countries, and practically the only one in the formal economy, but no overall figures are known.

Permanent agricultural child servants doing work in the fields, rented on the market or drafted in a feudal manner similar to pre-industrial Europe, living with or close to their parents, appear to be rare. The combined existence of extended families and fostering traditions is probably the main reason for the thin child labor markets in the countryside.

In addition to markets for agricultural work there are also markets for house girls in the countryside. Of their size and ways of operating we know next to nothing.

11. The market for domestic services

The market for domestic services is the only extensive market for child labor in sub-Saharan Africa. In the city of Cotonou in Benin it is estimated that half of the households have a domestic servant, almost everyone a girl (World Bank, 1994, 38); in Lomé (Togo) one third of the households are estimated to have a house girl, most of them children. If half of the urban households had a house girl and assuming a household size of five we should find around 20 million house girls in African cities. We believe this number to be too high and 5 million closer to the truth²³

If we instead apply numbers from Zimbabwe in this speculative way, we get a similar result, however. Around 1990 there was registered 100 000 house girls of a total population of 9 million people and an urbanization rate around 27.5%, which implies that house girls constituted around 4% of the urban population. Generalizing that wildly to the whole Sub-Saharan Africa we get a total house girl population of 7.8 million. If we consider that some house girls are adults, we may get a number not far away from 5 million. In a study of child domestic labor in Kenya (Onyango et al,

schooling is the preferred option.

²³ Using numbers from *World Development Report 1998*, we reach that number the following way: Total urban population is 196 million. Assuming each household has 5 members and every second has a house girl we will reach that number. We find this result unrealistic because the household surveys from Ghana and Côte d'Ivoire should indicate that an estimate of 5% of the children in the age group 7-15 as being in the market is too high, but if 5% are participating and assuming that the age group is constituting 25% of the total population, and domestic work 2/3 of the total child labor market, we will

1995) the estimate was 50 000 child domestic workers. With the population estimates and urbanization rates from Kenya the time of the survey and again generalizing wildly, we will get around 2 million house girls in Sub-Saharan Africa. Altogether, we should then guess that somewhere between 2 and 8 million African children work as urban house girls at the moment. In addition there is a considerable number of house girls in the countryside, too, but here we will not even try to guess the African total.

How is the life of house girls? How does this market operate? The supply is mixed between the parents-controlled and the child-controlled supply.

In practice, as the geographic and social distance between the employer and the parents increase, the child becomes more left on her own. The poorer the parents, the less control will they be able and willing to give. The majority of parents are poor so most often, the supply of domestic services becomes child-“controlled”.²⁴

Many of the characteristics of the child such as age and geographic origin are observables and signal her degree of exploitability **before** the hiring, while the household characteristics become first clear for the child **after** it. This may easily lead to a situation where the weakest children become allocated to the harshest households. Since the youngest children will have the weakest exit opportunities (they will be known to be close to the borderline where they consume more than they produce), the outcome in the bargaining process after their arrival is likely to result that the weakest get the lowest pay and the longest work hours. Age and geographical distance are observable characteristics that may indicate weakness. Softer households will be unable to exploit weakness and will accordingly not look for weak children while harsh households will.

get 5.1 million house girls. If we more realistically assume a participation rate of 3% we will get 3.1 million.

²⁴ In a survey conducted in Lomé 95% of the children was sent to town or left on their own because of rural poverty. As reported in World Bank, 1996. Most of the following analysis is based upon observations made in Nairobi. In other cities the transactions may be less distrustful, and more family-based.

Observers with first hand knowledge of the market tend to describe it as segmented (see, e.g. Bwibo & Onyango, 1987). The youngest house girls, down to 6 years old or so, but normally between 8-12, get very low pay if anything at all, long hours and often harsh treatment, including physical punishment. A normal payment for a house girl of this kind in Nairobi is around 6 US\$ a month. (In Lome and Cotonou, the payment is about the same) On the other hand, because of age and lack of knowledge of the urban setting, they may make many mistakes, not taking care of the still younger children in the house nicely, and so on.. The households who demand them are normally in the lower income range. They are lower-quality house girls.

The reason why so many young girls have marketable skills is that they have learnt most of these tasks at home and can pursue them in another, but foreign home environment. The effects of house girls on urban school participation rates are mixed. On the one hand rural house girls release the urban girls from child care so they may go to school, and the urban women may acquire the cash income that is needed for survival. On the other hand, the house girls themselves most often are not allowed to go to school²⁵ and the ones employed by the poor are often too young to take care of the youngest children in an urban setting..

The older house girls are more independent, more difficult to rule and less harshly exploited since their bargaining position is stronger, but they are more often exposed to sexual harassment. Their pay is considerably higher, often close to 40 US\$ a month, and they are employed by households in the higher income end in the urban population. While less exploited this segment of the market have its own efficiency problems, particularly in cities with a low trust environment.

The transplantation of male polygynous behavior to the large city contributes to this. Employing a house girl in a low trust environment, the housewife fears that the girl may steal, particularly her husband or boyfriend. Wise management dictates then a short-term contract and a quick turnover of house girls. Although the house girls are often exposed to serious sexual harassment, the housewife's problem is real. Seen

²⁵ A survey conducted in Benin found that while the enrollment rate for children living in households with close relatives (parent, uncle, aunt) was 86.2% against 25% for children living among non-relatives (World Bank, 1996, 38).

from the house girl's point of view, an adult male with a well-paid job in the formal sector may be a promising object for investment in time and care, a chance for upwards mobility, although a risky one. The risk of being dumped or getting pregnant is high.

The short-term-ness of the employment- contract induces a low degree of loyalty and may increase the risk of stealing, either goods²⁶ or persons, since the house girl knows that she will soon be fired anyway.

This segment of the market has several negative effects due to its short-term-ness. The children that belong to the household get a low quality care with negative consequences for their future capacities. The house girl experiences lower welfare and a more insecure situation than necessary, with a higher risk of transition to formal prostitution. Experience too often confirms the low-trust house wife house girl game, spreading it to new urban families.

These external effects are to some extent mitigated when the house girl and the household belong to the same family or village network. Where these are weak, as they are in parts of Kenya, commercial networks that collect information about households' but particularly house girls' characteristics, have arisen.²⁷

Given the size and importance of the market for house girls in African countries, much more should be known about it than we do at present. It is not even clear whether house girls are more prevalent in the higher or the lower income African countries. The higher density of house girls in Zimbabwe compared to Kenya might be explained that way, but normative trends may work for lower demand. Onyango (1993) reports a dramatic decline in the number of house girls counted in the same

²⁶ In Bwibo & Onyango (1987, 107) who made a survey of school school drop-outs, found that while 4 % of the boys had dropped out because they had committed a crime, 7% of the girls had. 31 % of the girls who had been caught stealing, reported they had done so because they were dissatisfied with their employer while only 14 % of the boys reported this as a reason. 10% of the girls and none of the boys reported that they were caught stealing because their employer had lied on them. While indirect and circumstantial, this survey gives some evidence of the game outlined in the text.

²⁷ Incidentally, it may tell something about the change in the remittance game that some of these bureaus in their adds to the girls tell that they will keep their job site secret to avoid begging from their parents!

two townships of Nairobi, one from late 1970s the other from late 1980s, a period where income should be stagnant or slowly rising, not in rapid decline.

12. Child prostitution

Unlike the situation in Asia, very little is known about child prostitution in African countries. One of the reasons is that most of it appears to be rather unorganized: few formal hierarchies, i.e. brothels have coalesced around these activities.

Nevertheless it is likely to be fairly extensive. It is a repugnant fact of the society that sexual attraction is one of the few characteristics of children for which there is a willingness to pay.

It is a well-known characteristic of African prostitution that it is often difficult to distinguish between pure market transaction and more informal ways through which girls may apply sexual attraction to gain economic favors, and may in that way survive economically while still children. To my knowledge practically nothing is known about the size of the informal friendship based transfer, nor is there any serious, published knowledge of the extent of child prostitution pure and simple. What we do know, is that the phenomenon is very visible around tourist sites, and that there is a considerable outflow from the house girls- to the child prostitution-markets.²⁸ Many of the girls who live as street children are also part-time prostitutes.

A few boys, particularly some who are living close to tourist beaches and safari areas, also gain a living through prostitution.

13. Street children

Unlike the girls, boys learn very few skills that are marketable at an early age and also may be applied by young children in an urban environment.²⁹ When they run away

²⁸ In their, admittedly, very small sample of 30 prostitutes in Nairobi Bwibo & Onyango (1987) found that 24 had been house girls.

²⁹ Here a remarkable change in the gender composition in the market for domestic servants has taking place historically in many African countries since the turn of the century. Then most domestic servants were boys. A historical study of part of this process for Zimbabwe is Grier (1994). That study shows

from home, or are pushed out from home, or for some other reason have to bring in cash income, they most often have to roam about in the streets or in the rural neighborhoods to look for more or less random opportunities, legal or illegal, to gain some income. The main driving force behind the recruiting of street children is, again, likely to be the rural and urban poverty. Loss of parents or bad atmosphere at home, including adult alcoholism and male violence are other candidates. In addition to the lack of skills, an early development of seemingly emotional independence and a boyish lack of risk aversion are important as reasons for why boys are going to the street rather than to compete with girls for domestic work.³⁰ This lack of risk aversion might in some cases become a marketable characteristic useful in smuggling and some other criminal activities. The profession of child conductor at mini buses belongs to this category as do child soldiering.

The nature of this search process for income implies that the children have to stay in the streets for most of the day. How many who stay there at night, and who have no guardians at all, is disputed.³¹ The children are usually organized in bands where the youngest associate most closely with the one closest in age. This way to band also apply for early child survival in rural areas, as noted by Turnbull (1972). In addition to give mutual support and protection, the banding also assists in the collection of information and risk sharing, so much so that it outweighs the advantages of possible cornering of information and the income opportunities that operating alone may sometimes yield.

how the movement of boys into the labor market weakened the authority structure of the male household heads.

³⁰ While Onyango et al. (1991) found 91% her street children were boys, Suda found 73%. Part of the explanation of the discrepancy is that the first sample was only based upon daytime observations. Presumably, the income opportunities are better for girls at night.

³¹ In the following we will rely on several studies of street children in Nairobi, mainly Onyango et al. (1991) and Suda (1993). Onyango found that 67% lived at home, and only 27% on the street. Suda found that 53% of the children had to survive on their own, while 45% were taking care of by their parents, only 2% by relatives. High dispersion in results is to be expected in this research, since street children naturally is a low trust group, and are not to be expected to report truthfully about their activities. It is easy for researchers to be fooled. In this case the results are reconcilable, however, by the fact that quite many children in Kenya is living with the guardians on the harsh terms that they are provided with shelter, but have to provide food for themselves. The higher share of night time activities in Suda's observations may be another factor. Suda found that 29% of the children had to provide their own shelter. Compared to the prevailing opinion among researchers, the street children in Nairobi are more left to their own than street children elsewhere.

While a large share of their labor can hardly be considered useful (Onyango classified 21 % of their activities as begging, Suda 46%) most of them are certainly working long hours, more than 60 hours per week on average. 70% use drugs of which glue is the most affordable one.

How extensive is the street children phenomenon in Africa? Again, no reliable information exists. However, Onyango made a careful calculation for Kenya in 1988-89 and estimated the number to be 16 300. A crude calculation, using the urbanization and population rates of Kenya at that date, gives that roughly 0.3% of the urban population were street children. A crude generalization to the whole Africa today will give around 600 000 street children. This is probably a somewhat cautious estimate. Most observers believe that the number of street children has arisen steeply recent years. The AIDS epidemic makes that to be expected. The impression of steep rise may easily be exaggerated, however, since street children tend to band together in the centers of the cities and become much more visible as they are growing.

The standard NGO/journalist estimate of street children in Kenya now is 300 000. If we accept that estimate, we will get 7 million street children in Sub-Saharan Africa. That is a too high estimate, I believe. It does not fit with the more careful Onyango calculations for Kenya. On the basis of her survey from the late 1980s Onyango et al. also estimated a separate growth rates for the street child population in Kenya at that time. If that rate is held constant, it would give 40 000 street children in 1997, and close to 0.48% of the urban population would then become street children, 933 000 for the whole Africa. A reasonable number for the whole Africa should then become close to 1 million street children, probably the second or third largest market for child labor in the continent. In post-conflict areas the number is certainly higher.

In addition one will find a number of children roaming around in the countryside, almost in the manner of the children of Ik, although not quite as young. And instead of roaming around in the mountains they will keep close to the roads. Like their urban counterparts many will be sheltered by their family, but earn their cash needs themselves. About their number it is at the moment impossible even to have a reasonable guess.

14. Child slavery in Africa

In several countries of Africa newspapers tell stories about children who are sold practically as slaves. It applies mostly to the West Africa, countries like Benin, Togo, Nigeria, Burkina Faso and Central Africa. Children are sold from Benin and Togo and bought in Nigeria. In addition there is reported incidences of slavery, both for adults and children in Mauritania and Sudan, but this is of a different type, which does not fit the problem to be discussed here, which is a situation where people are free to move and slavery is not protected by open use of arms. How extensive the problem is from an empirical point of view is not clear, but it is likely to be empirically marginal, but it may yield insight into children's economic activities.

The economic reasons for selling the children in areas where there exist an excess supply of children are not difficult to understand. It has been outlined in preceding sections where we have seen that when emotional ties are weakened, and children are not expected to pay the parents something back at old age any longer, families may even push out children without receiving any income. If paid, the incentives should be even stronger. Since young children consume more than they produce, the younger the children the more it is possible to save by selling them. They will save consumption expenditures. The problem is that no one is likely to buy.

Why should anyone want to buy a child in an African context where there exists strong traditions for children to move away at an early age, and where there does not exist any legal protection of the property rights slavery needs? Even if the children have to work hard, the economic value of what small children will consume is likely to be higher than the value of what they produce, and the older children are likely to run away if they are not paid.

It is precisely this property that may induce slavery at an early age. The adults know that as small children grow older, they become more fit and independent. They will cross the line where they consume more than they produce and go into surplus. If they work, that normally implies that they will be able to produce more, but at the

same time will they be able to bargain for a larger share of whatever they produce. Adults are aware of that characteristic, and an exploitative parent will try to settle for a contract when the children are young. That is only possible to prospective buyers who are in a position where it becomes difficult for children to renegotiate the contract when they move into a stronger bargaining position, i.e. some form of temporary slavery or bonded labor. Unlike India, parents lack the kind of parental authority that may make such contracts credible. Furthermore, in an area of excess supply of children no one is likely to pay for children when they may get them for free through some kind of fostering arrangement, although the children themselves, given their weak bargaining position are willing to work under exploitative conditions without running away.

Hence, the children must be exported out of the excess supply and into an excess demand areas where prospective buyers at the same time must know that the child is not able to run away as soon as it reaches its economic surplus age. The children are also bought young because they are then more malleable. Here young children's malleability, that they are more easily framed, particularly when socially isolated. That contribute to minimize the risk that they will have the urge to run away when older. If the buyers may rely on a sufficiently low probability of the children running away, and may get a large enough share of the children's surplus, they may be willing to finance some of the period when children needs more than they can make, expenses the parents normally have to provide. The paradox is that in areas where slavery is not legally protected, children may only be sold when young, but then they don't yield any surplus which they do when older, but then they will run. How to make the children deliver the surplus and bind them for that period?

There are various ways to achieve this. One is the South-Asian version of bonded labor where the children are supposed to pay down the parents' creditor by working at an extended period at the creditor's farm, themselves receiving no payment, since the parents had already received the money through the credit. The child is working under the double supervision of parents and the creditor. It is difficult to see how this child labor might become a loan security without it being known that there will be a high degree of parental control over the child extending into its surplus period at the same time that at least locally the intergenerational transfer of debts are legally defended.

As just stated, this is will often not be the case for the children within an African context, since the tendency to run away is probably higher and parental control, particularly in the child surplus areas, weaker. Such a loan will have no security.

The few cases observed of child slavery where adult slavery is not also present in an African context are situations where space between the sellers and buyers is created. The crux is that the period of the buyer's control might be extended if the children are moved into areas where they don't know the language, do not have the social networks nor the financial resources to return. In this way the children might become temporary slaves.

No mean parental motives are necessarily involved. The economic essence of these transactions are in both the African and Asian case that the children's economic survival is achieved through a credit operation where the consumption is paid back by the child's later increased working capacity.

The shuffling of children through the African extended family system performed and still performs in many ways the same task, in most cases in a more gentle way. However, if the status difference between the receiver and sender of the child is high, the child may be treated almost like a slave and the parents will not dare to defend it (Bledsoe, 1996). At the fostering system's endpoint it probably works very much like a market system, however, except that there must be some kind of family understanding and policing of where the child is supposed to stay. In that way it may itself police a slavery- like system. I have argued, however, that this system is working less well and may disintegrate in a child surplus area. The children may then be transported into areas where they may be considered more useful on a purely commercial basis.

It is the existence of organized middlemen activity that on a commercial basis transport children far away from their homes that has received the media attention lately. The point of transporting the children so far is to move them out of the family-networks that even the children might use in such situations.

Summing up, I believe that the commercial middlemen activity is another indication of the existence of areas with an excess stock of children. The middlemen have discovered that there are profits to be had by transporting the children into excess demand areas. Coming from afar, buyers have now the opportunity by isolating the children also to earn the economic surplus of their services, since the children are lacking the networks to make it safe to run away at a much older age than children born in the area.

15. Child soldiers

Around 10% of the population in Sub-Saharan Africa has lived the last decades in areas where armed conflicts have become part of everyday life. The consequences for the welfare of the population in the short-run are, of course, extremely harmful. The negative effects for the growth rate in GDP in the longer run tend to persist after the conflict has ended. One reason is that investors have noted that, if a conflict has occurred, the probability of a new conflict is higher than in other areas with otherwise the same characteristics (Collier and Gunning, 1998).

The conflicts have strong impact on the societies in which they take place. They assist in weakening the family structures. Many small children and women are running out of the conflict areas while the older children, particularly boys may try to survive on their own. The conflict areas tend to develop their own economic structure where both the household production, the property rights and the supply and demand structure become deeply affected. The negative effects on the household economy, including the risk of getting killed or robbed, means that the incentive for moving out of the poor farms for elder children becomes even stronger than in peacetime. While also many of the elder children move out of the conflict area, the excess supply situation in the child labor market in the conflict area persists. We have already noted the increase in the number of street children, among whom many child soldiers are recruited.

Unlike the situations that arise under famines, new “jobs” matching the older boys’ skills may be created in this situation, however, since the warring armies normally need more manpower. While certainly much forced drafting of children into the armed forces is taking place, it is in the nature of the economic situation that many boys will join the armies on a voluntary basis despite all the horrors connected to soldiering. The likelihood of getting food increases, the army has some family-like characteristics, and as the fighting goes on, the alternative of staying at home and the prospects for surviving there worsen anyway.

The problem to explain in those situations is not why children want to join the armed forces, but why the armies accept them, sometimes even force them to join at and particularly at such early age that they may hardly be useful. The explanation should be sought along the same lines as for child slavery. There are basically two reasons for this early conscription: (1) Like households far away from the children’s village, armies are able to control the children’s movement until they reach their “productive” age, so the armies may appropriate their surplus then. In the meantime the children may help with non-military tasks; (2) if not taken today, the enemy might take them and use them later.

The reasons why children get military useful while they still are children, are partly due to technological changes that make younger children potentially more militarily useful than before, and partly due to their characteristics. While in other areas of economic life the technological change has gone against the use of child labor, the opposite has happened in some forms of warfare. The development of light, and fairly reliable hand-weapons makes it possible to delegate military tasks to individuals who are neither physically strong nor technically very competent. The lack of risk aversion and short horizons of many boys may to some extent compensate for their lack of discipline. The average age in many African armies is frightfully low.

Save the Children Fund (Sweden) keeps a databank that registers the effects of wars on children. According to it, there are more than 100 000 child soldiers in Sub-Saharan Africa now. The largest contingent was in 1997 in Sudan. Recent developments in Congo, Sierra Leone and Angola may have changed this.

That the military market for child labor has negative external effects and is harmful to growth is almost self-evident. The harmful physical and psychological wounds these children receive will certainly reduce their future working and learning capacities. Despite this and all the fears and stresses created, like the other markets for children's services, the notional supply of child labor is so large compared to the demand that even in the case of child soldiering the market is basically demand restrained.

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