



Social Protection Discussion Paper Series

Costs of Projects for Orphans and other Vulnerable Children: Case studies in Eritrea and Benin

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and Anne Kielland

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COSTS OF PROJECTS FOR ORPHANS AND OTHER VULNERABLE CHILDREN: CASE STUDIES IN ERITREA AND BENIN

by Menahem Prywes, Diane Coury, Gebremeskel Fesseha, Gilberte Hounsounou, and Anne Kielland¹

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ABSTRACT

Very little information is available on the ex-post cost of delivering services to orphans & other vulnerable children (OVC). This hinders large scale planning of interventions for OVC. This study responds by estimating the costs of some recent projects for OVC in Benin and in Eritrea.

The study shows that the cost of institutional solutions is high relative to family-based solutions. The average annual economic cost per child of a group home for orphans in Eritrea averaged about \$1,900; that for an orphanage in Benin was about \$1,300. The corresponding cost of orphans' integration into families in Eritrea was about \$100. The cost of assisting street children in Benin was almost \$650 and the cost of assisting children in abusive labor in Benin was almost \$570.

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I. Introduction.

1.1 **Reasons for the study.** The objective of the study is to better understand the costs of delivering services to orphans and other critically vulnerable children (OVC) in two geographically different contexts in Africa.

1.2 Over the past three to four years, the staff of the Africa Region at the World Bank prepared several small and medium-sized interventions for OVC, notably in Eritrea, Benin, Burundi and the Republic of the Congo (Brazzaville). These were attempts to respond to the emergence of a large and growing cohort of orphans, street children and children in the worst forms of labor. A major constraint in designing these interventions was limited knowledge of how to deliver services that benefit OVC at low cost. Moreover, little information is available on the actual, ex-post, costs of delivering in these children. This situation remains a major impediment to preparation of larger scale interventions for OVC.

1.3 The compilation of tables of costs per child from actual data on project operations is intended to help preparation teams build up the cost of delivering services to children in countries in the Africa region. Moreover, these cost estimates are meant to give teams a basis for estimating the approximate cost of delivering alternative packages of services. The resulting tables could be useful in preparation of education projects, social funds, and multi-sectoral HIV-AIDS projects, all of which can support delivery of services to orphans.

1.4 **Cost analysis versus cost-effectiveness analysis.** In several respects, this study is inspired by Desmond & Gow's (2001) pioneering study of alternative approaches to orphan care in South Africa. The study was perhaps the first to measure actual costs of alternative types of orphan care. More significantly, the study attempted to measure the cost-effectiveness of orphan care, that is, the cost of delivering a given package of services to orphans. This attempt demonstrated the difficulty of measuring cost-effectiveness. In sum, Desmond & Gow clarified the limits to measurement of cost-effectiveness of approaches with very different components.

Table 1.1: Cost Effectiveness Analysis of the Six Models of Orphan Care in South Africa

| Model of care | Site | Rand per child care month | Rand per minimum standard child care month |
|---|---------------------------|----------------------------------|---|
| Column 1 | Column 2 | Column 3 | Column 4 |
| Statutory residential care | Nazareth House | 2938 (3873*) | 2590 (3525*) |
| Statutory adoption and foster care | Durban Children's Society | 609 | 410 |
| Unregistered residential care | Jardim House | 996 | 957 |
| Home-based care and support | Sinosizo | 506 | 306 |
| Community-based support structures | The Pin Project | ** | 276 |
| Informal fostering/ Non-statutory foster care | Nceba Village | ** | 325 |

Source: Desmond & Gow (2001), p. 37. *Including medical costs associated with the child's HIV positive status. **Fail to meet material minimum basket of needs

1.5 Desmond & Gow do successfully demonstrate that the actual cost per child of residential care is far above the costs for community-based approaches. The figures on Table 1.1 report that the costs of a statutory residential care institution (Nazareth House) is far above the actual costs of a statutory adoption program (Durban Children's Society), and a home-based care and support program (Sinosizo). They did not compute results of the cost per child of community-based support structures and of informal fostering because these did not deliver their minimum standard package of care.

1.6 This information on costs is useful in planning care for orphans. However the comparison is complicated by the different services offered under each model of care. So Desmond & Gow attempt to compensate for these differences in services by computing the cost in Rand for a minimum standard child package of care per month (Column 4 of Table 1.1). However the value of the comparison in column 4 limited, since some of the models of care did not actually deliver the minimum standard package of services.

1.7 **Limitations of this study.** This study draws on some practical conclusions from Desmond & Gow that limit its scope to the costs per child of each project. The conclusions are that comparison of the cost-effectiveness of alternative investments in OVC is complicated by differences between the:

- i. Characteristics of children entering each project,
- ii. Quantity and quality of services to the children in each project, and the
- iii. Benefits of the services to the beneficiary children, which vary in terms of health, educational achievement, and anthropometrical measures of nutrition and in other respects.

1.8 Differing characteristics of children entering projects mean that their costs per child are not a good estimate of cost-effectiveness per child. For example, it costs more to achieve a given set of outcomes for a cohort of entering HIV-positive infants than for a cohort of healthy six-year olds.

1.9 The differing quantity and quality of services among projects also lead to different costs and different outcomes. For instance, the number of years of school subsidies and the extent of support to foster families differs across investments.

1.10 This is not a study of cost-effectiveness because there are no detailed data on the characteristics of the cohort of OVC served by each project and on outcomes for the cohorts. Moreover, cost-benefit analysis is not possible without observations on indicators of outcome. Finally, costs and benefits may be difficult to evaluate because of spillovers. However, keeping these challenges in mind, it still seems useful to examine some experiences that are seldom considered from the perspective of costs.

1.11 **Measures of cost.** This study focuses on measurement of the average annual economic costs per child over the period of service delivery because this is the best measure of overall economic cost of a project to society. There are other legitimate points of view

on costs. Governments and donors have an interest in knowing the up-front cost of starting a project to serve OVC since they must raise these resources. Therefore the study also presents start-up costs.

1.12 **Country coverage.** This study assesses the actual costs of investments in OVC in the only Bank-supervised investments in Africa that have been under implementation for at least two years. These are the IDA-supported orphans component of the Integrated Early Child Development Project (IECD) in Eritrea and the Child Protection Fund in Benin. These countries priorities regarding OVC differ: while child disability and worst forms of child labor have been recognized as critical OVC issues in Benin, orphans are among the most vulnerable children in Eritrea. The limited coverage of countries and types of OVC will limit application of the resulting costs in planning. However these are the only cost data that are easily accessible to the authors at the World Bank.

II. Definitions of Basic Concepts.

2.1 The concepts, definitions and methods applied in this study are drawn from standard references on cost-benefit analysis and in particular World Bank (1996) and UNAIDS (2000). The authors also benefited from early drafts of FHI International's procedures for collecting data on the cost of services to OVC.

2.2 **Financial and economic costs.** The *financial cost* of a project measures what government and donors actually pay for goods and services. However, most organizations serving OVC benefit from valuable donations and voluntary labor that are not captured by a financial analysis. For example, the organizations often receive food, clothing, social assistance, free publicity, free supervision from professionals, free medical care, etc. They sometimes also benefit from special discounts on goods and services. The value of the goods and services received but not purchased form the *imputed cost* of the project.

2.3 The financial costs, adjusted to include the imputed costs, form the *economic cost* of the project. By including imputed costs of volunteer labor and donations, for example, the economic cost measures the cost of a project in terms of the value of the resources the project would absorb in an alternative use.

2.4 **Capital and recurrent costs.** *Capital costs* are expenditures on goods with an expected lifetime of more than one year, such as expenditures on buildings, furniture, computers and vehicles. *Recurrent costs* are expenditures on goods that last less than a year and on services. Recurrent costs measure the cost of running the project such as salaries, utilities, fuel and food. In comparison to recurrent costs, capital costs are normally high in the first year of a project. But capital goods provide services over several years and can potentially be re-sold. Therefore, in a cost analysis, the cost of capital goods is divided over the life of the good.

2.5 **Discount rate and the annualization factor.** In a financial cost analysis, the cost of capital is divided over its expected lifetime. The cost for each year represents the value of depreciation of the capital good. An economic analysis of costs also values the opportunity cost of the money tied up in the capital good. In other words, the analysis measures what the capital could have earned in an alternative investment. This rate of return is known as the *discount rate*.

2.6 The total economic cost of capital is then the value of depreciation plus the opportunity cost. For simplicity, this study estimates that annual value of depreciation as equal to the value of the capital good divided by its lifetime in years (straight-line method). Dividing the value of a capital good by the *annualization factor* gives the average annual economic cost of capital.²

² The annualization factor is $1 / [(r(1+r)^n) / (1+r)^n - 1]$ where r is the discount rate and n is the lifetime of capital.

2.7 **Start-up costs.** *Start-up* costs are the costs of initiating a project and can include both capital and non-capital costs. The start-up cost can include, for example, capital costs such as the cost of construction, of vehicles and of office equipment. It may also include non-capital costs such as the cost of studies, of identification of the beneficiaries, and of recruiting and training staff, and of training beneficiaries.

2.8 **Joint and specific costs.** Many implementation agencies, and in particular NGOs, run more than one project. The *specific costs* are specific to a project; in contrast, some costs are for goods and services that benefit more than one project and these are called *joint costs*. These costs can be salaries to staff and consultants who work on more than one project, expenses related to the rent and utility use of shared offices and vehicles etc. When project staff work on several projects, the specific costs of their labor for a project are usually estimated based on the time they spend on the project. Similar rules are used to estimate a project's share in office space and vehicle use.

2.9 **Economic and functional classifications of costs.** The *economic classification* presents a breakdown of recurrent and capital costs. Recurrent costs consist of wages and salaries, goods, utilities, etc.; capital costs consist of structures and equipment. The *functional classification* presents costs by project activity. For example, the functional costs of a project for educating OVC could consist of lodging, education, health, psychosocial support, and administration.

III. Methodology.

3.1 **Data collection.** We (the authors) collected annual data on actual project expenses from financial statements, and when no statements were available, through interviews with stakeholders. We then used documents on project activities and detailed descriptions of expenses (especially bills and receipts) to classify these financial costs according to the economic classification.

3.2 **Imputation of ‘hidden’ economic costs.** We identified ‘hidden costs’ such as donations, voluntary work and savings realized from below market prices from interviews with project staff. The imputed value of these hidden costs was then estimated from information gathered from experts such as real estate agents and car salesmen, through consultation with the institutions that provided the relevant types of goods and services, through comparison with the costs of reference projects that had to pay for similar goods and services, or through reference to standard local salary and price lists. The financial costs plus the imputed costs lead to the economic cost of each project.

3.3 **Adjustment to common year prices.** All costs prior to 2003 were inflated to their value in units of 2003 currency by adjusting them for changes in the national consumer price index.

3.4 **Estimation of annual cost of capital.** We valued capital goods at cost at time of purchase, when information was available. Otherwise the capital goods were valued by market reference. The estimated life of capital goods in Benin is drawn from a local accounting reference and the same assumptions were used for Eritrea:³

- ✓ Buildings: 50 years.
- ✓ Vehicles: 5 years.
- ✓ Furniture: 5 years.
- ✓ Computers and electronic equipment: 3 years.

3.5 We estimated the annual financial cost of capital goods using the straight-line method. The estimated annual economic cost capital goods also includes the cost of tying up funds in the capital and thereby losing the return from an alternative low-risk investment. We applied the rate of 12%, which is standard in many studies at the World Bank, and then applied an alternative rate of 3%. The annualization factor was selected, based on the capital good’s remaining years of useful life and the discount rate.

³ Source: SYSCOA, Système Comptable Ouest Africain, Guide d’application. Union Économique et Monétaire Ouest Africaine.

3.6 For example: A car valued at 1 million CFA Francs car has an expected useful life of 5 years. With a 12% discount rate, the annualization factor is 3.6. Dividing the value of the car on the annualization factor gives $1,000,000 \text{ CFA Francs} / 3.6 = 277,778 \text{ CFA Francs}$, which would here be the average annual economic cost of the car.

3.7 **Real Estate.** Real estate does not loose value so it is not depreciated. However, the funds used to purchase real estate could have been placed in a low-risk alternate investment. For example, with a 12% discount rate: $\text{Property value} * 0.12 = \text{estimated annual economic cost of real estate}$.

3.8 **Start-up costs.** In addition, we collected data on project start-up costs that occurred before the time period studied (if there were such costs before 2001, and if these investments are still significant for the functioning of the project. Examples of the type of start-costs that were considered are:

- Investment in capital goods;
- Studies & surveys;
- Identification of beneficiaries;
- Initial recruitment and training of permanent staff;
- Development of organizations, such as project management units;
- Pilot projects.

3.9 The estimates of actual start-up costs per child are not annualized. That is because they meant to measure the cost to government and donors of launching a project. The average annual economic costs are annualized because they are measures of the cost to society of the project.

3.10 Furthermore, the start-up costs per child are effectively start-up costs per place or 'seat'. That is because each project experiences turnover as children enter, benefit, and exit from the project.

3.11 **Annualization of start-up cost in the computation of annual economic cost.** For the calculation of the annual financial cost, start-up costs per project were distributed over years using the straight-line method. For the calculation of annual economic cost, start-up costs were distributed over years using the relevant annualization factors. For Benin, the non-capital start-up costs were distributed over 5 years. For Eritrea, the lifetime of start-up costs on non-capital expenditures was the estimated length of time the expenditures provide a service to the beneficiaries.

3.8 An average cost over three years is estimated using a weighted average. The weights are computed from the number of children served in each year.

IV. The Benin and Eritrea Experiences.

4.1 **Benin - Child Protection Fund.** In Benin, AIDS, urbanization, and poverty have contributed to a significant rise in the number of orphans, street children and to the emergence of child trafficking. Faith-based organizations, secular NGOs and government agencies have all responded to this emerging and visible crisis by providing services to assist the children, and when possible, to reintegrate them into their families or stabilize them in group homes.

4.2 The Child Protection Fund was started to address commercial trafficking in children. The Fund is financed by a grant from Japan and its activities are implemented through the World Bank (IDA)-supported social fund. In Benin, middlemen visit rural villages and persuade rural parents to give up their children for placement with an urban child household, claiming, for example, that the children will be well fed and attend school. They then place the children as servants with urban households, as sales children in the market place, or

worse. Some children have been found as far away as Nigeria. The Fund supports campaigns to inform parents about the outcomes for trafficked children, small investments to help communities retain their children, and programs to recuperate and return escaped child laborers. The Child Protection Fund's engagement with local NGOs and other local groups provides an opening for studying their costs of delivering services. The study in Benin covers projects in three areas, the:

- ◆ Fight against child trafficking,
- ◆ Recovery and reintegration of street children, and
- ◆ Orphans placement and care.

4.3 The costs of three of these projects were selected for a detailed cost analysis based on the availability of detailed cost data for 2001-2003.

4.4 **Benin - GRADH project to combat the worst forms of child labor.** The first of these projects combats child labor in the craftsman sector and is implemented by the *Groupe de Recherche et d'Actions pour le Développement Humain* (GRADH). The children are known locally as “azovi”, which means ‘child worker or ‘child apprentice’. The are mainly young boys from 7 years and up who have been placed with craftsmen and who are used as cheap or free labor by car mechanics, carpenters, masons, etc. Moreover, young girls who have dropped out of school or who have never been to school work for free for their tutor.

4.5 The Ministry of Labor and the ILO are implementing programs for the professional associations of craftsmen in order to train them in teach apprentices, prevent abuse, and to set working conditions. The project focuses on



exploited child laborers and in particular child street vendors, garbage collectors and domestic servants. It also serves children who are too young to work as in these areas but are abused as cheap or even free labor in workshops.

4.6 The project intervention begins with a survey of artisans and craftsmen, in collaboration with the artisans' association. The survey registers apprentices and identifies children in difficult work conditions so that they can be assisted by the GRADH. The project then invests in apprenticeship arrangements for the older children and reinsertion of the younger children into schools.

4.7 The project receives support from the Archbishop of Cotonou, ENDA *Jeunesse Action* in Senegal and from the members of GRADH. The project does not require any major capital investments, unlike orphanages or training centers. For the most part, it takes place in the open, that is, in the children's workplace and with their foster parents and families.

4.8 **Benin - Red Cross project for street children and victims of trafficking.** The project serves street children and victims of child trafficking in Cotonou, the largest city in Benin. The project serves mostly boys, but an increasing number of girls also benefit. The children considered in this study are all under 14 and are regular clients of the project. Some children over 14 visit the project's shelter and participate in project activities. The project objective is to reintegrate the children into society.

4.9 The project staff works in the streets and other public places where they meet and builds relationships with eligible children. They motivate the children to enroll in the project through these relationships. The children then move to the project shelter for rehabilitation and live there until they can be reinserted. The children stay in the shelter between 1 day and 8 months before reinsertion, depending on the state of the child and on whether the family is ready, able and willing to consider taking the child back again. The Red Cross estimates that

the average time for a child in the project is around 3 months. Finally, the project reinserts the children into their families, foster homes, or into an educational placement.

4.10 In spite of thorough preparations of both the child and the family, such reintegration poses a considerable challenge. Children who have been away from family care for a period can be hard to re-socialize due to their street exposure. In many cases family problems were associated with the departure of the child in the first place.



4.11 Aside from the Japan Social Development Fund, the project receives support from the Belgian Red Cross.

4.12 **Benin - Ouidah Community Orphanage.** The main objectives of the orphanage are to care for and support orphans through primary school and to promote their integration into families and society. The orphanage receives children following a court order or after intervention by government social services or the police child protection brigade. Most but not all the orphans have lost both parents. Sometimes orphans who have lost one-parent are referred to the orphanage when the remaining parent seeks official help because he or she cannot take care of the child's basic needs. Therefore, some of the children are not always at the orphanage: they sometimes spend time with their remaining



parent. Through these arrangements, the orphanage attempts to maintain the relationship between the children and their relatives.

4.13 The orphans are usually accepted at age 5, when they are ready to start school. They remain at the orphanage until the age of 16, which corresponds with the minimum time it takes to complete primary school. There has been only one case of a child remaining in the orphanage in order to get his secondary level diploma. Therefore, children are in general expected to stay in the orphanage for 11 years. Because of its small size (23 children), the orphanage is comparable to a group home.

4.14 The Ouidah orphanage is a private non-profit institution. The orphanage is financed by a French charity and also receives support from the Ministry of Social Protection, Families and Solidarity. The orphanage receives regular food donations from the World Food Program and Catholic Relief Services, and also from some relatives of the children. Moreover, the orphanage has access to a plot of farmland where it grows subsistence crops and also raises chickens and rabbits.

4.15 **The Eritrea Integrated Early Childhood Development Project (IECD).** The Eritrea IECD project expands delivery and improves the quality of basic services to young children. To achieve this, it delivers services in the areas of health care, nutrition, psychosocial stimulation, early childhood education and social protection. These services aim to benefit children under the age of 6, primary school-age children; and 32,000 children facing especially difficult conditions –mainly orphans. The study focuses exclusively on this last, orphan’s component. The costs of earlier efforts to support orphans, for instance in Uganda, were not monitored and recorded. The orphan’s component of the Project is the first of the current generation of Bank-supported investments in orphans. Therefore the three years of experience with implementation of the orphans’ component provide a special opportunity for learning.

4.16 The orphans component of the IECD consists of three sub-components (called ‘projects’ in the context of this study) that:

- (i) Reintegrate orphans into their extended families,
- (ii) Place orphans in group-homes, and
- (iii) Place orphans through an adoption program.

4.17 Planned investments in the orphans component amounts to \$US 12.4 million, of which US\$ 10 million is an IDA credit, 5% from the Government of Eritrea and the rest contributed by the Italian Cooperation. Since the inception of the component, in 2001, more than 24,300 orphans have been reunified with 8,500 close relatives, who were given in-kind support equivalent to 10, 000 Nakfa. Moreover, 7 group homes that host 84 children have been built and furnished. But only 27 children have been placed through the adoption program (14 locally and 13 outside the country).

4.18 The Project Management Unit (PMU) focuses on administrative and financial management and the Ministry of Labor and Human Welfare implements the program. Yet, most activities are conducted at regional level (except the adoption program), while the central level deals with the development of manuals, training and administration. There are 6 regions (or zobas) in Eritrea, each of them having representatives of the PMU and the Ministry.

4.19 **Eritrea - Reunification & reintegration.** Following independence, many Eritrean families absorbed war orphans and this imposed an extra economic burden on the families. In response, the reunification & reintegration project promotes the reintegration of children with their close relatives by providing their host family with economic support. The terminology used may be misleading as most children are not ‘physically reunited’ within their extended families; most of them are already living with them when the families receive the economic support. (‘Tracing and reunification’ *per se* concerns essentially children placed in residential care). Under the program, host families choose between support in the form of livestock or an income-generating scheme.

4.20 **Eritrea - Group homes.** The community-based group homes consist of a single unit (home) grouping 10 to 12 orphans who could not be reunited within their extended families. In order to recreate a family-type setting, children of various ages (starting from 5 years old) and gender are cared by a group mother and her assistant, and provided with all their basic needs: shelter, food, clothing, school and health care. To facilitate children's reintegration in the community, the homes are built close to their village of origin and children go to public schools.

4.21 **Eritrea - Adoption.** In the adoption program, unrelated volunteer families adopt orphans through legal procedures, and treat them as their own offspring. This program remains weak in Eritrea, as adoption outside bloodlines is not widely practiced. It is managed at the central level by the Ministry's department of Child Welfare.

V. Summary of Cost Estimates.

5.1 **Start-up costs.** Table 5.1 below presents the start-up costs of three projects in Benin and a further three in Eritrea. These are economic start-up costs because they include the imputed costs of donated land and labor. However the table is a good approximation of the financial cost of larger scale programs because it would probably not prove possible to scale-up donations of land and labor.

5.2 As might be expected, the start-up costs of an institutional solution, such as the 4 groups homes in Eritrea, is significantly more expensive per child, at about around \$10,700, than the non-institutional projects. The next most expensive start-up cost is for the Street Children project in Benin, because this involved construction of a center for street children. Information on the start-up costs of the Ouidah orphanage in Benin is not available because start-up took place more than 30 years ago and no records are available.

TABLE 5.1: BENIN & ERITREA-- SIZE & STRUCTURE OF AVERAGE START-UP COST PER CHILD IN SIX PROJECTS

(12% discount rate)

| Project | <u>Benin: Child Protection Fund</u> | | | <u>Eritrea Orphans</u> | | |
|--------------------------------|-------------------------------------|----------------------------------|-------------------------|------------------------|----------------------|-----------------|
| | <u>GRADH Child Labor</u> | <u>Red Cross Street Children</u> | <u>Ouidah Orphanage</u> | <u>Reintegration</u> | <u>4 Group Homes</u> | <u>Adoption</u> |
| Years | 1999-2000 | 1999-2000 | before 1974 | 2001-2003 | 2001-2003 | 2001-03 |
| Capital costs | 4% | 77% | NA | 4% | 93% | 0% |
| Non-capital costs | 96% | 23% | NA | 96% | 7% | 100% |
| Total | 100% | 100% | NA | 100% | 100% | 100% |
| Cost per child in US \$ | \$90 | \$807 | NA | \$555 | \$10,709 | \$159 |

5.3 **Average annual economic costs.** The average annual economic costs over 2001-2003 are highest for the institutional projects: the Adi Keith Group Home (the only Eritrean group home for which detailed annual data are available) and the Ouidah Orphanage (Table 5.2). Both are small-scale and therefore broadly comparable institutions: the Ouidah orphanage cares for 23 students and the Adi Keith Group home cares for 11. The cost of the Ouidah orphanage would be higher if data were available on costs of construction and the total would probably be more comparable to the cost of the Adi Keith Group Home.

5.4 The child labor and street children projects in Benin cost \$646 and \$566 per child per year. Impressively, the Eritrea orphans reintegration component, which served over 24,000 orphans, cost only \$96 per child per year. The adoption project was also relatively cheap, but has served only 24 children.

5.5 It is perhaps worth repeating that the costs of projects are not fully comparable because of the different packages of services they deliver and because of their different cohorts of beneficiary children.

TABLE 5.2: BENIN & ERITREA - SIZE & STRUCTURE OF AVERAGE ANNUAL ECONOMIC COST PER CHILD IN SIX PROJECTS

(12% discount rate)

| Project Years | <u>Benin: Child Protection Fund</u> | | | <u>Eritrea Orphans</u> | | |
|---|---|---|--|---------------------------------|--|----------------------------|
| | GRADH Child Labor 2001-03 | Red Cross Street Children 2001-03 | Ouidah Orphanage 2001-03 | Reintegration 2001-03 | Adi Keith Group Homes 2003 | Adoption 2001-03 |
| Personel Share (%) | 45% | 20% | 41% | 6% | 9% | 52% |
| Other recurrent (%) | 44% | 31% | 56% | 90% | 27% | 48% |
| Capital Share (%) | 11% | 50% | 3% | 4% | 64% | 0% |
| Total cost (%) | 100% | 100% | 100% | 100% | 100% | 100% |
| Avg annual cost per child in US \$ | \$566 | \$646 | \$1,315 | \$96 | \$1,943 | \$29 |

5.6 **Observations on costs of the Benin projects.** The cost per child of many smaller projects in Benin seems high in terms of the volume of funds that would be needed to scale-up the programs throughout the region. However, scaling up would lead to lower administrative costs per child.

5.7 Furthermore, some donors prefer to support a relatively high standard of care out of concern for children. And some donors show a distinct preference for supporting delivery of hardware to projects, and NGOs are made painfully aware that having high standard buildings helps attract new donors. Donors can thereby become a source of high costs

5.8 **Observations on the costs of the Eritrea projects.** Relying on costs only may be misleading: the higher cost of the group homes is probably linked to better quality, relative to children reunited with their extended families.

5.9 Many stakeholders believe that the reintegration and reunification project is the most cost-effective arrangement and the best suited to local preferences. This model of care is relatively cheap and supplements host parents' ability to support an extra child. However, because most parents are poor rural dwellers, the quality of the care may not always be high. Some evidence suggests however, that reunited children tend to perform better at school than other children. However, nothing is known on the nutritional and health status of these children, or on whether they have experienced any form of abuse.

5.10 Group homes offer orphaned children a secure and caring environment but are too costly to replicate on a large scale. Yet, costs could be reduced by relying on local construction materials and by equipping the homes with less equipment (group homes have TV set and electrical *ingera* bread maker). The homes could also switch to less expensive but still nutritious food items to feed the children.

5.11 Although adoption was relatively cheap, it would be difficult to scale-up because adoption into unrelated families is not widely accepted in Eritrea. However, urban families may begin to participate in adoption programs and this would raise the quality of care.

VI. Discussion of Detailed Cost Tables.

6.1 **Benin - Child labor project.** The start-up cost of the child labor project are almost exclusively hidden costs and consist mainly of volunteer labor time of the members and staff of the organization (Annex Table 1). This cost includes preparatory meetings related to the establishment of the NGO, development of basic texts and an action plan, as well as the development of the project design. Time also went into fundraising, networking, and development of a relationship with Government, craftsmen associations, as well as legal work to register the NGO. The costs also include the survey of craftsmen and their apprentices in the project areas since the survey forms the basis for project activities.

6.2 In the computation of average annual economic costs, the start-up costs are depreciated over 5 years, which is equivalent to the project period. The economic classification of the average annual economic costs for 2001–2003 appears on Annex Table 2.

6.3 Staff time forms a high share of the recurrent costs of this project. Project staff work directly with children in their work places, as compared to a center; therefore they can only assist a few children at the time, and this also requires extensive traveling. The project also focuses on communication with stakeholders (children, craftsmen, parents, foster parents, legal structures and other government bodies), and this also is reflected in the cost structure. Much of this communication is done by volunteers.

6.4 The direct support to the children consists of the distribution of clothes, food, soap, and other basic necessities, and also includes medical visits when project children get sick or injured. Children are also occasionally given pocket money to cover other basic needs, such as visits to their biological parents. The project owns a single used car, project workers also travel using the seven mopeds owned by the project. The project owns no buildings and little electronic equipment

6.5 **Benin - Street children and victims of trafficking.** These start-up costs consist of both financial and hidden or imputed costs (Annex Table 3). Most importantly, in the initial year the municipality donated a property with an old building to the project. In 2004, a real estate agent valued the property at 60 million CFA and the buildings at 70 million. At the time of the donation, however, the existing building was run down and unsuitable for the purposes of the project. The building's estimated value in 2000 was about 20 million CFA. In 2001, a considerable investment was made in buildings, furniture and center equipment. The valuation of the building in 2004 reflects these investments.

6.6 During the preparation phase, the project director visited a similar project run by the *Croix Rouge* in Burkina Faso, and also went on a mission to Cote d'Ivoire. A preparatory survey was carried out in Cotonou to better understand the planned projects challenges and

opportunities. The estimated cost includes the work of two Belgian consultants who assisted during the survey in the definition and preparation of the project plan. The Belgians also supported the staff recruitment process and the organization of the first project workshop where some staff training also took place. A Belgian part time worker contributed to the development of a methodology for monitoring and evaluation.

6.7 Annex Table 4 presents the average annual economic cost per child of the child labor project. Capital costs account for an important share – more than 1/3 – of the cost per child. In addition to the building, the furniture makes up half of the capital costs, and the project also owns a 4-wheel-drive vehicle, which at the time it was purchased had a value of CFA 21 million. The project also possesses 8 mopeds and several computers.

6.8 As in the child labor project, the street child project requires extensive staff time, both at the center and in relation to the reinsertion efforts with the children's families. There are considerable staff travel costs, and costs of maintenance of the project vehicles. The direct support to the children consists mostly of the value of food and clothing, but also includes travel to families, medical visits and some pocket money.

6.9 **Benin – Ouidah Community Orphanage.** The orphanage was built more than 30 years ago and no data on start-up costs were available. For this reason the authors did not calculate start-up costs, and the table on average annual economic costs does not include any start-up costs.

6.10 **Eritrea - Reunification & reintegration project.** The program is mainly managed at regional (zoba) and local (village) levels and consists of five main activities:

- Identification of needy orphans;
- Economic needs assessment of host families;
- Workshop to present results of the need assessment and to select beneficiaries;
- Provision of economic support in kind to host families; and
- Child welfare monitoring and follow-up.

Most of the costs of the reunification and reintegration program (except costs related to the monitoring activity) are start-up costs (Annex Table 6). These are one-time expenditures that benefit the child over many years. In most regions, the project started in 2001 and some start-up activities continued through 2002, while child welfare monitoring and follow-up activities were carried out in 2003.

6.11 Detailed start-up and operating costs were recorded in five out of the 6 regions of Eritrea for the years 2001, 2002 and 2003. Costs were recorded for one cohort of beneficiaries per region for which adequate data were available - 2312 families caring for 6048 orphans. The start-up costs were then distributed over 10 years. The economic classification of the average annual economic costs per child appears on Annex Table 7.

6.12 **Eritrea - Group home project.** In computing the cost tables, the authors measured or estimated the cost of each of the following steps in the construction and the operation of a group home:

- Construction of the group home (e.g., selection of the site, design of the house, selection of the contractor, construction of the house);
- Furnishing the group home;
- Selection of the mothers and assistants;
- Selection of the children;
- Payment of the utilities, children's care expenses and staff salaries; and
- Monitoring and follow-up of the children well being

6.13 The group home project is mainly managed and implemented at regional level. Data are recorded for the group homes that have been operating for at least 6 months. Start-up costs are computed for a sample of four groups homes: two built over 2001-2002 and two built in 2003 (Annex Table 8), as well as for the Adi Keith Group Home (Annex Table 9). Detailed costs of operating a group home are only available for the Adi Keith Group home. Again, the authors used financial statements of the IECD at the central and regional levels as

well as extensive interviews with local implementers (social workers, regional and central PMU officers and civil servants) to obtain a comprehensive record of costs.

6.14 The largest share of the costs is capital-related expense (93%): the construction of a home itself costs US\$ 62,000 on average. Non-capital start-up costs are minor, as are management costs (the latter form 6% of total costs). Non-capital start-up costs not associated to any capital costs (such as selection of group home mothers and children) were annualized over a 10-year period. This reflects the assumption that the children will benefit from this investment over the estimated 10-year period they will remain in the group home (e.g., from 8 years old to 18 years old). The average annual economic cost per child appears on Annex Table 10.

6.15 **Eritrea – Adoption project.** The authors valued the costs of each of the following steps in the adoption process:

- Selection of parents
- Selection of the child
- Legal decision
- Handover of the child to the adoptive family
- Child welfare monitoring and follow-up

6.16 The cost estimates are derived from data collected on four local adoptions, which took place in Asmara and outside the capital city over 2001-2003 (Annex Tables 11 & 12). In addition, no PMU management costs were imputed because of the marginal involvement of PMU officers and funding in the adoption process.

VII. Sensitivity Analysis

7.1 The most significant assumption in the cost analysis was to set the discount rate at 12%. This seems compatible with thinking of the discount rate as the planned rate of return on a private non-financial investment –such as a commercial or industrial project. Moreover,

the rate of 12% reflects a relatively strong preference for current as opposed to delayed consumption. Alternatively, the discount rate can be thought of as the real rate of return on a low risk alternative investment, such as US government bonds. For purposes of comparison, the discount rate is set at 3%. (The real rate of return on US government bonds is now running somewhat below 3%). Moreover, the 3% rate reflects a less of preference for current consumption and a greater preference for consumption in distant years (or benefits for children) than 12%.

TABLE 7.1: BENIN & ERITREA - SENSITIVITY ANALYSIS OF ECONOMIC COST, 12% VERUS 3% DISCOUNT RATES

| Project Years | <u>Benin: Child Protection Fund</u> | | | <u>Eritrea Orphans</u> | | |
|--|---|---|--|---------------------------------|--|----------------------------|
| | GRADH Child Labor 2001-03 | Red Cross Street Children 2001-03 | Ouidah Orphanage 2001-03 | Reintegration 2001-03 | Adi Keith Group Homes 2003 | Adoption 2001-03 |
| Avg annual cost per child in US\$: 12% | \$566 | \$646 | \$1,315 | \$96 | \$1,943 | \$29 |
| Avg annual cost per child in US \$: 3% | \$563 | \$536 | \$1,308 | \$66 | \$1,305 | \$17 |
| Percentage difference | -1% | -17% | -1% | -31% | -33% | -39% |

7.2 An analysis of the sensitivity of the cost estimates to a lowering of the discount rate from 12% to 3% shows a 31% to 39% decline in average annual economic costs per child of the Eritrea projects (Table 7I.1). The decline in the Benin estimates is much smaller. This is explained by the relatively high start-up costs of the Eritrea projects.

VIII. Conclusions.

8.1 The objective of the study has been to estimate the costs of delivering basic services to orphans and other critically vulnerable children (OVC) in Sub-Saharan Africa.

8.2 The estimates can be used to determine whether such projects can be scaled-up, given a pre-determined financial envelope. Furthermore, project teams can use the estimates for

planning and budgeting. However the costs per child of the different projects are not fully comparable because of the different characteristics of the children served and the different outcomes. Detailed data on the characteristics of the children and on outcomes are not available, so it is not possible to conduct a cost-effectiveness or cost-benefit analysis.

8.3 The study shows that, the average annual economic cost per child of institutional solutions is high relative to family-based solutions. The average annual economic cost per child of the Adi Keith Group Home for orphans in Eritrea averaged about \$1,900; and that for the Ouidah Community Orphanage in Benin was about \$1,300. The corresponding cost of orphans' integration in Eritrea was less than \$100. The average annual economic cost per child of a project for Street Children in Benin was almost \$650 and the cost per child of a project to assist children in abusive child labor in Benin was almost \$570.

8.4 The costs per child of the projects in Benin seem too high to scale-up to serve the volume of OVC in the region. The group homes in Eritrea also seem too expensive to scale-up. However the Eritrea reunification and reintegration project is relatively cheap. But this is a limited intervention, consisting mainly of transfer of revenue generating micro-projects to foster families (often livestock). Because of its low cost, this support has already been delivered to the foster families of 24,000 orphans.

STATISTICAL ANNEX

**ANNEX TABLE 1: BENIN GRADH CHILD LABOR PROJECT,
START-UP COSTS IN 1999-2000**

(In CFA Francs and in 2003 prices, for 155 children)

| | | | Start-Up Cost Per Child | Start-Up Cost Per Child in US\$ |
|-----------------------------------|--|------------------|-------------------------------|--|
| Value of time invested | Development of basic texts (consultant) | 250,000 | 1,603 | \$2.77 |
| | Survey on child labor in apprenticeship in 3 cities | 1,500,000 | 9,615 | \$16.64 |
| | Development of Action Plan (consultant) | 250,000 | 1,603 | \$2.77 |
| | Editing of project draft (project team and consultant) | 250,000 | 1,603 | \$2.77 |
| | Cost of time spent on fund-raising and ministry coop. | 150,000 | 962 | \$1.66 |
| Workshops and meetings | General assembly, 35 people, establishment of NGO | 1,500,000 | 9,615 | \$16.64 |
| | Workshop on activities to be undertaken | 250,000 | 1,603 | \$2.77 |
| | General assembly, 35 people, on action plan | 1,500,000 | 9,615 | \$16.64 |
| | Workshop on progress | 250,000 | 1,603 | \$2.77 |
| | Workshop on project start-up | 1,300,000 | 8,333 | \$14.42 |
| Recruitment | Recruitment of staff by recruitment agency | 500,000 | 3,205 | \$5.55 |
| Miscellaneous | Registration fee for NGO | 100,000 | 641 | \$1.11 |
| | Registration in official journal | 25,000 | 160 | \$0.28 |
| | Telephone installation and purchase of cell phones | 300,000 | 1,923 | \$3.33 |
| Total | | 8,125,000 | 52,083 | \$90.11 |

Note: Exchange rate for 2003 is 578 CFA Francs / 1 US\$

**ANNEX TABLE 2: BENIN GRADH CHILD LABOR PROJECT,
ECONOMIC CLASSIFICATION OF COSTS --AVERAGE OVER 2001-2003**

(In CFA Francs at 2003 prices; for 155 children; 12% discount rate))

| | Financial cost | Imputed costs | Economic cost | Cost per child | Cost per child US\$ |
|---|---------------------------|--------------------------|--------------------------|---------------------------|--------------------------------|
| RECURRENT COSTS | | | | | |
| Personnel | | | | | |
| Permanent staff | 10,234,824 | 0 | 10,234,824 | 66,335 | \$115 |
| Volunteers | 478,364 | 956,727 | 1,435,091 | 9,536 | \$16 |
| Consultants/occasional services | 5,604,821 | 4,550,088 | 11,025,955 | 69,556 | \$125 |
| Travel costs | 4,209,299 | 632,774 | 5,069,837 | 33,411 | \$58 |
| Rent | 795,238 | 856,410 | 1,651,649 | 10,713 | \$19 |
| Utilities | 822,498 | 0 | 822,498 | 5,031 | \$9 |
| Supplies | 713,733 | 0 | 715,491 | 4,677 | \$8 |
| Provision of support to the children | 4,359,968 | 1,431,017 | 8,264,103 | 49,380 | \$85 |
| Information activities | 1,917,854 | 2,732,060 | 4,649,914 | 32,415 | \$56 |
| Fees | 277,477 | 98,278 | 375,755 | 2,930 | \$8 |
| Maintenance | 346,008 | 0 | 347,725 | 2,215 | \$4 |
| CAPITAL COSTS | | | | | |
| Furniture | 88,425 | 0 | 122,812 | 954 | \$2 |
| Training material | 469,807 | 0 | 587,259 | 4,499 | \$8 |
| Vehicles | 397,415 | 0 | 551,965 | 4,804 | \$8 |
| Depreciation of past investments, incl. start-up costs | 1,579,368 | 1,552,083 | 4,566,580 | 26,354 | \$46 |
| TOTAL | 32,295,098 | 12,809,438 | 50,421,458 | 322,809 | \$566 |

Note: The exchange rate for 2003 is 578 CFA Francs per 1 US\$

**ANNEX TABLE 3: BENIN RED CROSS STREET-CHILDREN PROJECT,
START-UP COST IN 1999-2000**

(In CFA Francs at 2003 prices, for 224 children)

| | | Start-up costs | Start-up Cost per Child | Start-up Costs per Child in US\$ |
|-------------------------------|---|-----------------------|--------------------------------|---|
| Value of time invested | Initial survey | 1,500,000 | 6,696 | \$11.59 |
| | Project development and development of action plan | 500,000 | 2,232 | \$3.86 |
| | Cost of time spent on ministry collaboration and fund raising | 150,000 | 670 | \$1.16 |
| | Travel related to project dev. and fund raising (Burkina & RCI) | 4,350,000 | 19,420 | \$33.60 |
| | Technical assistance Croix Rouge Belgium | 15,000,000 | 66,964 | \$115.86 |
| Workshops and meetings | Project validation by CR Benin | 655,000 | 2,924 | \$5.06 |
| | Workshop for staff | 1,400,000 | 6,250 | \$10.81 |
| Recruitment | Recruitment of project staff, made by recruitment firm | 500,000 | 2,232 | \$3.86 |
| Miscellaneous | Registration fee for NGO | 100,000 | 446 | \$0.77 |
| | Registration in official journal | 25,000 | 112 | \$0.19 |
| | Installation of phone and purchase of cell phones | 300,000 | 1,339 | \$2.32 |
| Property and buildings | Buildings | 20,000,000 | 89,286 | \$154.47 |
| | Property | 60,000,000 | 267,857 | \$463.42 |
| Total | | 104,480,000 | 466,429 | \$806.97 |

**ANNEX TABLE 4: BENIN RED CROSS STREET CHILDREN PROJECT,
ECONOMIC CLASSIFICATION OF AVERAGE ANNUAL COSTS FOR 2001-2003**

(In CFA Francs at 2003 prices, for 224 children, 12% discount rate)

| | Financial cost | Imputed cost | Economic cost | Cost per child | Cost per child in US\$ |
|--|---------------------------|-------------------------|--------------------------|---------------------------|-----------------------------------|
| RECURRENT COSTS | | | | | |
| Personnel | | | | | |
| Permanent staff | 5,734,202 | 0 | 5,734,202 | 24,716 | \$43 |
| Volunteers | 709,540 | 560,867 | 1,543,620 | 7,179 | \$12 |
| Consultants/occasional services | 2,769,071 | 5,498,430 | 9,563,703 | 40,829 | \$71 |
| Travel costs | 9,084,192 | 0 | 9,084,192 | 43,697 | \$76 |
| Utilities | 967,895 | 0 | 967,895 | 4,216 | \$7 |
| Supplies | 1,117,174 | 0 | 1,117,174 | 4,299 | \$7 |
| Provision of support to the children | 7,872,409 | 2,497,629 | 11,020,854 | 46,095 | \$80 |
| Information activities | 1,674,352 | 0 | 1,674,352 | 7,261 | \$13 |
| Fees | 264,694 | 115,271 | 379,965 | 1,573 | \$3 |
| Maintenance | 1,581,732 | 0 | 1,581,732 | 7,256 | \$13 |
| CAPITAL COSTS | | | | | |
| Furniture and tools | 2,792,422 | 530,679 | 3,508,106 | 16,064 | \$28 |
| Training material | 448,952 | 86,444 | 561,189 | 2,659 | \$5 |
| Vehicles | 14,375,905 | 5,364,069 | 21,439,531 | 96,273 | \$167 |
| Buildings | 743,154 | 2,833,256 | 4,476,830 | 20,226 | \$35 |
| Real estate | 0 | 3,840,000 | 5,040,000 | 22,500 | \$39 |
| Depreciation of investments & other start-up costs | 3,427,200 | 2,300,607 | 6,446,747 | 28,780 | \$50 |
| TOTAL | 53,562,895 | 23,627,252 | 84,140,095 | 373,622 | \$646 |

**ANNEX TABLE 5: BENIN, OUIDAH ORPHANAGE,
ECONOMIC CLASSIFICATION OF AVERAGE COSTS OVER 2001-2003**
(In CFA Francs at 2003 prices, for 25 children, using a 12% discount rate)

| | Financial cost | Imputed costs | Economic cost | Cost per child | Cost per child in US\$ |
|--------------------------------------|---------------------------|--------------------------|--------------------------|---------------------------|-----------------------------------|
| RECURRENT COSTS | | | | | |
| Personnel | | | | | |
| Permanent staff | 6,494,728 | 0 | 6,494,728 | 257,162 | \$445 |
| Volunteers | 87,563 | 175,125 | 262,688 | 10,458 | \$18 |
| Consultants/occasional services | 691,153 | 411,807 | 1,102,960 | 44,698 | \$77 |
| Travel costs | 1,099,355 | 0 | 1,099,355 | 44,102 | \$76 |
| Rent | 368,976 | 0 | 368,976 | 14,959 | \$26 |
| Utilities | 1,012,191 | 0 | 1,012,191 | 41,818 | \$72 |
| Supplies | 1,345,972 | 29,075 | 1,375,047 | 55,924 | \$97 |
| Provision of support to the children | 2,391,249 | 4,282,188 | 6,673,437 | 266,403 | \$461 |
| Fees | 112,093 | 0 | 112,093 | 4,655 | \$8 |
| CAPITAL COSTS | | | | | |
| Furniture | 350,583 | 136,338 | 486,921 | 19,855 | \$34 |
| TOTAL | 13,953,863 | 5,034,533 | 18,988,396 | 760,034 | \$1,315 |

Note: Exchange rate in 2003 is 1 US\$ = 578 CFA Francs.

**ANNEX TABLE 6: ERITREA ORPHAN REINTEGRATION PROGRAM,
AVERAGE START UP COSTS OVER 2001-2003 ^{a/}**
(In Nakfa in 2003 prices; 6,458 children in 2,493 families, not annualized)

| Expense | Financial cost | Imputed cost | Economic cost | Ec. cost per child | Ec cost per child in US\$ ^{e/} |
|---|-----------------------|---------------------|----------------------|---------------------------|--|
| Activities | | | | | |
| Identification of beneficiaries | 30,861 | 10,734 | 41,595 | 32 | \$2.37 |
| Economic needs assessment of beneficiaries | 138,031 | 86,561 | 224,592 | 174 | \$12.84 |
| Workshop | 120,927 | 75,619 | 196,546 | 152 | \$11.22 |
| Provision of nutrition & income gen. activities ^{b/} | 8,716,977 | 34,479 | 8,751,456 | 6,763 | \$499.11 |
| Capital | | | | | |
| Vehicles ^{c/} | 60,176 | 0 | 60,176 | 47 | \$3.47 |
| Other capital costs (PMU regional) ^{d/} | 2,262 | 0 | 2,262 | 2 | \$0.15 |
| Other capital costs (PMU central) ^{d/} | 311,031 | 0 | 312,229 | 241 | \$17.79 |
| Project management costs (imputed) | | | | | |
| Regional PMU level ^{d/} | 37,314 | 0 | 37,314 | 29 | \$2.14 |
| Central PMU level ^{d/} | 105,388 | 0 | 105,388 | 81 | \$5.98 |
| Central level MLHW ^{d/} | 3,234 | 0 | 3,234 | 3 | \$0.22 |
| TOTAL | 9,526,203 | 207,393 | 9,734,794 | 7,525 | \$555.35 |

a/ A weighted average has been used to compute average costs. b/ It consists mainly on livestock, and sometimes inputs for income generating activities. c/ The value of the vehicles are based on the actual number of days of car use over 2001-2003 and the predicted days of car use over the remaining years of the life of the vehicle. d/ Imputation by region. e/ In 2003, USD 1= Nakfa 13.55

**ANNEX TABLE 7: ERITREA - ORPHAN REINTEGRATION PROGRAM,
ECONOMIC CLASSIFICATION OF AVERAGE ANNUAL COSTS OVER 2001- 2003 ^{a/}**

(In Nakfa in 2003 prices, based on data for 6,048 children in 2,321 families; using a 12% discount rate)

| Expense | Financial cost | Imputed Costs | Economic cost | Ec cost per child | Ec. Cost per Child in US\$ ^{d/} |
|--|-----------------------|----------------------|----------------------|--------------------------|---|
| CURRENT COSTS | | | | | |
| <i>Salaries</i> | | | | | |
| Salaries of Civil Servants | 41,389 | 0 | 54,095 | 36 | \$2.65 |
| Volunteer Labor (Imputed) | 0 | 57,642 | 57,642 | 38 | \$2.80 |
| <i>Nutrition & income-generation activities</i> | | | | | |
| Livestock and small income-gen. activities | 909,110 | 0 | 1,609,043 | 1064 | \$78.52 |
| <i>Other operating costs</i> | | | | | |
| Misc. costs (Per Diem, Fuel, Public Transport Costs, Refreshments, stationeries) | 110,472 | 11,726 | 141,678 | 94 | \$6.94 |
| Other costs of PMU Regional (imputed) ^{c/} | 5,114 | 0 | 7,970 | 5 | \$0.37 |
| Other costs of PMU Central (imputed) ^{c/} | 11,479 | 0 | 20,138 | 13 | \$0.96 |
| CAPITAL COSTS | | | | | |
| Vehicles ^{a/} | 12,493 | 0 | 17,352 | 11 | \$0.81 |
| Other capital costs (PMU regional) ^{c/} | 454 | 0 | 631 | 0 | \$0.00 |
| Other capital costs (PMU central) ^{c/} | 43,681 | 0 | 60,668 | 40 | \$2.95 |
| TOTAL | 1,134,192 | 69,369 | 1,969,218 | 1,302 | \$96.10 |

a/ A weighted average was used to compute average costs. b/ The value of the vehicle is based on the actual number of days of car use over 2001-2003 and the predicted days of car use over the remaining years of the life of the vehicle. c/ Imputation by region. d/ In 2003, USD 1= Nakfa 13.55.

**TABLE 8: ERITREA GROUP HOME PROGRAM FOR ORPHANS,
AVERAGE START-UP COSTS OF FOUR HOMES in 2001-2003**

(In Nakfa in 2003 prices, for an average of 9 children per home) a/ b/

| | Financial Cost | Imputed Cost | Economic Cost per Child | Ec. Cost per Child | Ec. Cost per Child in US\$ c/ |
|-------------------------------------|---------------------------|-------------------------|------------------------------------|-------------------------------|--|
| <i>Capital costs</i> | | | | | |
| Construction of building | 840,432 | 651 | 841,083 | 90,928 | \$6,710.55 |
| Furnish the house | 70,697 | 50 | 70,747 | 7,648 | \$564.43 |
| Value of the land | 0 | 0 | 0 | 0 | \$0.00 |
| Vehicles | 5,209 | 0 | 5,209 | 563 | \$41.55 |
| Other capital costs (PMU regional) | 3,218 | 0 | 3,218 | 348 | \$25.68 |
| Other capital costs (PMU central) | 328,368 | 0 | 328,368 | 35,499 | \$2,619.85 |
| <i>Start-up activities</i> | | | | | |
| Selection of land & contractors | 2,814 | 0 | 2,814 | 304 | \$22.44 |
| Selection of children | 2,514 | 1,104 | 3,618 | 391 | \$28.86 |
| Selection of group home mothers | 328 | 0 | 328 | 35 | \$2.58 |
| Training of group home mothers | 9,348 | 1,092 | 10,403 | 1,125 | \$83.02 |
| <i>Project management (imputed)</i> | | | | | |
| Regional PMU level | 26,174 | 0 | 26,174 | 2,830 | \$208.86 |
| Central PMU level | 40,550 | 0 | 49,237 | 5,323 | \$392.84 |
| Central MLHW level | 772 | 0 | 997 | 108 | \$7.97 |
| TOTAL | 1,330,425 | 2,896 | 1,342,195 | 145,102 | \$10,708.64 |

a/ Two groups homes were built over 2001-2002 and two other groups home were built in 2003. b/ A weighted average has been used to compute average costs. c/ Exchange rate USD1 = 13.55 Nakfa

**ANNEX TABLE 9: ERITREA ADI KEITH GROUP HOME FOR ORPHANS
(DEBUB REGION),
START-UP COSTS OVER 2001-2002
(In Nakfa at 2003 prices, for 11 children)**

| Expense | Financial cost | Imputed Cost | Economic cost | Ec. cost per child | Ec. Cost per Child in US\$ |
|------------------------------------|-----------------------|---------------------|----------------------|---------------------------|-----------------------------------|
| <i>Capital costs</i> | | | | | |
| Construction of the building | 886,042 | 0 | 886,042 | 80,549 | \$5,944.59 |
| Furniture the house | 96,157 | 0 | 96,157 | 8,742 | \$645.13 |
| Value of the land | 0 | 0 | 0 | 0 | \$0.00 |
| Vehicles a/ | 9,331 | 0 | 9,331 | 848 | \$62.60 |
| Other capital costs (PMU regional) | 2,459 | | 2,459 | 224 | \$16.50 |
| Other capital costs (PMU central) | 180,593 | | 180,593 | 16,418 | \$1,211.63 |
| <i>Start-up activities</i> | | | | | |
| Selection of land & contractors | 2,529 | 0 | 2,529 | 230 | \$16.97 |
| Selection of children | 4,591 | 1,278 | 5,870 | 534 | \$39.38 |
| Selection of group home mothers | 314 | 0 | 314 | 29 | \$2.10 |
| Training of group home mothers | 9,348 | 1,055 | 10,403 | 946 | \$69.79 |
| <i>Project management</i> | | | | | |
| Regional PMU level | 11,764 | 0 | 11,764 | 1,069 | \$78.93 |
| Central PMU level | 42,781 | 0 | 42,781 | 3,889 | \$287.03 |
| Central MLHW level | 916 | 0 | 916 | 83 | \$6.15 |
| TOTAL | 1,246,826 | 2,333 | 1,249,159 | 113,560 | \$8,380.81 |

a/ The value of the vehicle is based on the actual number of days of car use over the 2001-2002. b/ 4.17% of total capital costs have been imputed to this group home in 2001 and 2002, respectively; for non-capital expenses shares are 6.25% and 3.13%. c/ 0.7% of total capital costs have been imputed to this group home in 2001 and 2002, respectively; for non-capital expenses shares are 1.07% and 0.52% respectively. d/ 4.17% and 2.08% of the MLHW staff time has been imputed to this group home in 2001 and 2002. e/ Exchange rate in 2003 USD 1= Nakfa 13.55.

ANNEX TABLE 10: ERITREA - ADI KEITH GROUP HOME FOR ORPHANS (DEBUB REGION)

ECONOMIC CLASSIFICATION OF COSTS FOR 2002-2003

(In Nakfa in 2003 prices, for 11 children, at a discount rate of 12%)

| Expense | Financial cost | Imputed Cost | Economic Cost | Ec. cost per child | Ec. Cost per Child in US\$ ^{a/} |
|---|-----------------------|---------------------|----------------------|---------------------------|---|
| CURRENT COSTS | | | | | |
| <i>Salaries</i> | | | | | |
| Salaries of remunerated personnel: civil servants & GH staff) | 22,424 | 187 | 23,568 | 2,143 | \$158.12 |
| Estimated value of volunteer labor | 0 | 151 | 151 | 14 | \$1.01 |
| Consultant | 813 | 0 | 1,439 | 131 | \$9.65 |
| <i>Costs of operating the GH</i> | | | | | \$0.00 |
| Utilities | 778 | 0 | 778 | 71 | \$5.20 |
| Sanitary items | 580 | 0 | 580 | 53 | \$3.89 |
| Maintenance | 152 | 0 | 152 | 14 | \$1.02 |
| Others | 183 | 0 | 183 | 17 | \$1.25 |
| <i>Provision of support to the children</i> | | | | | |
| Education | 323 | 0 | 323 | 46 | \$3.40 |
| Food | 57,231 | 0 | 57,231 | 5,203 | \$383.97 |
| Clothing | 3,978 | 0 | 3,978 | 362 | \$26.69 |
| Health care | 262 | 0 | 262 | 24 | \$1.76 |
| Sanitary items | 193 | 0 | 193 | 18 | \$1.30 |
| <i>Operating costs</i> | | | | | |
| Implementation (per diem, fuel, public transport costs, refreshments) | 998 | 75 | 2,384 | 217 | \$16.00 |
| Other operating costs PMU regional level (imputed) ^{a/} | 4,267 | 0 | 5,329 | 484 | \$35.75 |
| Other operating costs PMU central level (imputed) ^{b/} | 3,945 | 0 | 8,126 | 739 | \$54.52 |
| CAPITAL COSTS | | | | | |
| Vehicle | 1,866 | 0 | 2,592 | 236 | \$17.39 |
| Building | 17,468 | 0 | 105,231 | 9,566 | \$706.01 |
| House equipment and furniture | 18,938 | 0 | 26,303 | 2,391 | \$176.47 |
| Other capital costs (PMU regional) | 492 | 0 | 683 | 62 | \$4.58 |
| Other capital costs (PMU central) | 36,119 | 0 | 50,165 | 4,560 | \$336.56 |
| Total | 171,009 | 413 | 289,649 | 26,332 | \$1,943.30 |

^{a/} Exchange rate in 2003 USD 1= Nakfa 13.55

**ANNEX TABLE 11: ERITREA ADOPTION PROGRAM,
START-UP COSTS OVER 2001-2003**

(In Nakfa in 2003 prices; 4 children placed in 4 families.)

| Expense | Financial cost per child | Imputed cost | Economic cost per child | Ec cost per child in US\$ |
|-------------------------------------|-------------------------------------|---------------------|------------------------------------|--------------------------------------|
| Selection of parents | 37 | 494 | 531 | \$39.17 |
| Selection of children | 63 | 489 | 552 | \$40.72 |
| Legal decisions | 59 | 506 | 565 | \$41.66 |
| Handover | 33 | 234 | 267 | \$19.72 |
| Monitoring and follow-up (1st year) | 132 | 104 | 236 | \$17.42 |
| TOTAL | 324 | 1826 | 2150 | \$158.69 |

Notes: Exchange rate in 2003: USD 1: Nakfa 13.55. The costs of the awareness campaigns on children's rights (including adoption) were launched in different regions but the costs are not included here: No PMU costs are imputed here, as the adoption activity is marginal.

**ANNEX TABLE 12: ERITREA - ADOPTION PROGRAM,
ECONOMIC CLASSIFICATION OF AVERAGE ANNUAL ECONOMIC COSTS
PER CHILD, 2001-2003**

(In Nakfa, in 2003 prices; 4 children in 4 households, at a discount rate of 12%)^{a/}

| Expense | Financial Cost per Child | Imputed cost | Economic Cost per Child | Ec. Cost per Child in US\$^{b/} |
|---|-------------------------------------|-------------------------|------------------------------------|--|
| CURRENT COSTS | | | | |
| <i>Salaries</i> | | | | |
| Salaries of Civil Servants | 52 | 0 | 77 | \$5.68 |
| Volunteer Labor (Imputed) | 0 | 125 | 125 | \$9.22 |
| <i>Other operating costs</i> | | | | |
| Fees (court, check-up, photos, etc.) | 0 | 75 | 75 | \$5.54 |
| Public transport costs | 1 | 35 | 37 | \$2.73 |
| Accommodation & meals | 0 | 73 | 73 | \$5.39 |
| TOTAL | 53 | 309 | 387 | \$28.56 |

^{a/} Child are assumed to be adopted at age 3 and care for until they reach 18. ^{b/} Exchange rate in 2003: USD 1: Nakfa 13.55.

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