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EXPANDING ECCE IN BANGLADESH: IT CAN BE DONE

An assessment of the financial feasibility of achieving Education for
All Goal One: expanding and improving comprehensive Early
Childhood Care and Education, especially for the most vulnerable and
disadvantaged children

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Preface

Early Childhood Care and Education is both a right in and of itself and a profitable investment in the human resources and the social capital of societies. This was one of the core messages of UNESCO's Education for All Global Monitoring Report of 2007.

This message is well understood by policy makers and NGOs in Bangladesh today. Nobody needs to be convinced of the need to achieve EFA Goal One: expanding and improving comprehensive Early Childhood Care and Education, especially for the most vulnerable and disadvantaged children. The fact that only a minority of children in Bangladesh actually have access to quality programmes is not a result of a lack of political will, but of tight fiscal constraints in a country that is battling to universalize and improve primary education. In fact, at this very moment, in November 2008, Bangladesh is facing a triple crisis: the global food crisis, the credit crisis, and climate change. It seems the worst time to advocate for increased spending on a public service.

Yet, the foundation for a society that is able to face such crises is laid in children's development during the very first years of their lives. This report shows that the costs of achieving Goal One are not insurmountable as long as the focus is on the poorest and on scaling up innovative and cost-effective approaches that are already being practiced in Bangladesh. Good examples are those programmes that improve the knowledge and skills of parents once their first child is born. The economic returns will be many times the original investment. Some of these returns take time to materialize, others will reveal themselves within just a few years, as drop out rates in primary education decrease.

With the publication of the Operational Framework for Pre-Primary Education in March of this year, Bangladesh made a big step forwards to EFA Goal One. Early Childhood Care and Education has been conceptualized, standards have been set, and a vision has been formulated. Estimating the costs of realizing that vision was seen as the next step. This report makes that next step. It shows that expanding and improving Early Childhood Care and Education can be done, even today.

I value very much Mr. Jan van Ravens' extensive knowledge and experience in the area of ECD world wide, from which this report has benefited tremendously.

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ACRONYMS

CBO   Community-based Organization
CGECCD   Consultative Group on Early Childhood Care and Development
ECCE   Early Childhood Care and Education
ECD   Early Childhood Development
EFA   Education for All
GDP   Gross Domestic Product
GOPRB   Government of the People's Republic of Bangladesh
MICS   Multiple Indicator Cluster Survey
NGO   Non-governmental Organization
NPA   National Plan of Action
PDEP   Primary Education Development Plan
UN   United Nations
UNESCO   United Nations Educational, Scientific and Cultural Organization
UNFPA   United Nations Population Fund
UNICEF   United Nations Children's Fund
UPE   Universal Primary Education

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Executive Summary

Chapter 2. An ECCE development perspective

Until recently, ECCE in Bangladesh has been provided by a rich array of organizations without a strong overarching framework. The Operational Framework for Pre-Primary Education, developed by a coalition of stakeholders under the guidance of the Ministry of Primary and Mass Education and released in March 2008, marks the beginning of a common vision and shared standards. At the international level, there is an emerging consensus as well. It is captured in the "4 Cornerstones" issued by the Consultative Group on Early childhood Care and Development. Among other things, it advises governments to enroll children of four and five years old in good quality early learning programmes, while during the first four years of their lives, their parents should attend programmes that enhance their parenting skills. The Operational Framework of Bangladesh, the "4 Cornerstones", as well as EFA Goal One are points of departure for this costing study.

Chapter 3. The case for ECCE in Bangladesh

Despite impressive progress in terms of human development, Bangladesh still faces a number of challenges that ECCE can help to face. Under-5 mortality improved significantly and is lower than the regional average. But in combating stunting, Bangladesh lags behind five countries in the region. At 36%, the percentage of children with low birth-weight is the highest of the region, while the percentage of underweight children is equaled only by Nepal. Only 35.6% of the children is breastfed immediately birth, and still only 81.5% is breastfed on the first day. Pedagogically beneficial interaction between parent and child occurs in too few families, partly as a result of changing life patterns and erosion of traditional child rearing practice. The percentage of children that reach the last grade of primary education has remained stable in recent years, while other countries in the region showed more progress.

Chapter 4. Demographic and socio-economic context

Although overall population growth will continue of some time, the growth of newborn age cohorts seems to have stopped. In each of the years between now and 2015, about 3 million children are likely to be born at the maximum, and a decline is foreseen after 2015. This seems a unique window of opportunity to reach the 40% most vulnerable and disadvantaged children before 2015, to fully universalize ECCE after 2015 when the demography lends a helping hand. Bangladesh is slowly moving to a favorable situation in which income generating age cohorts will be larger than education demanding age cohorts. Consistently high economic growth rates – with projections of 7% for 2008 and 2009 – would make the education budget grow with some US$ 100 million every year, even if that budget's share of GDP would remain at its low level of 2.2%.

Chapter 5.   Mapping the existing provision

According to a household survey, 7.0% of all 3 year olds in Bangladesh attend ECCE. For 4 year olds the attendance rate is 22.0%, and for 5 year olds 32.0%. Especially in Rajshahi Division there are many districts with extremely low attendance rates. About a million of the enrolled children can be found in "baby-classes" and many others in faith-based and private facilities. The largest group, almost 1.4 million, is found in programs provided by NGOs that cater predominantly for poor children. These NGOs also enroll almost 1.3 million parents in programmes that enhance their parenting skills.

Chapter 6.   Simulating a scenario for ECCE Goal One

Out of all of the 3 million children that are projected to be born annually in the years to come, 1.2 million (40%) will live under the poverty line. Almost one million of them are found in rural areas, but urban slums are home to many excluded children as well. Enrolling these children at age four and age five in ECCE programmes costs US$ 9.34 per child per year. This unit cost is based on a number of assumptions such as a reasonable salary for the teacher, who is trained 15 days per year and supported by a well-prepared coach. The unit costs includes materials and space or facility, but excludes food and nutrition. US$ 5.45 is needed to enroll one parent for one year in a parenting programme, and since poor parents tend to have 3 or more children on average, the cost per child per year are a mere US$ 1.82. The total costs of enrolling all of the four and five year old children under the poverty line in ECCE programs, plus the costs of enrolling the parents of 0-4 year old children under the poverty line in parent programmes, is US$ 31.2 million.

Chapter 7.   Putting the estimation in perspective

The figure of US$ 31.2 tends to be an underestimation. Seeking out just the children under the poverty line is not possible in practice; more children will be taken on board. Also, unit costs tend to be higher in times of expansion than they are in a system that is in a steady state. Reaching the most excluded groups by small scale provision pushes up the costs. The costs of providing a package of food and nutritional supplements to half of the 0-6 year olds under the poverty line are high; they may exceed twice the US$ 31.2 needed for programme delivery. But even these costs are dwarfed by the potential growth in the budgets of the Ministries of Primary and Mass Education, Women and Children Affairs, and Health and Family Welfare, as a result of economic growth. Moreover, the economic returns on the investments in ECCE will eventually be many times the size of those investments. On the short term, ECCE may pay itself back for 87% in reduced drop out rates alone.

I.   Introduction

Bangladesh is widely known for its excellent achievements in expanding primary education and reaching gender parity. It has been standard setting when it comes to cooperation between government, NGOs, UN-agencies and donors. Yet, serious funding problems persist as secondary and tertiary education require increasing attention, and primary education has not yet entirely been universalized.

Against this backdrop, it seems a daunting challenge to achieve - or even to make substantial progress towards - EFA Goal One: expanding and improving comprehensive Early Childhood Care and Education (ECCE) especially for the most vulnerable and disadvantaged children. In most of the countries that face the same constraints as Bangladesh, ECCE policy remains restricted to doing the very minimum: addressing only the most pressing needs and experimenting with ECCE modalities in the hope that one day the resources will be available to go to scale. Indeed, the current Primary Education Development Programme (the PEDP II 2003-2008) pays little attention to ECCE despite its emphasis on education quality (GOPRB, 2003), while the Second EFA National Plan of Action (NPA II, 2003-2015) does address ECCE but allocates just US$ 41 mln to it (almost exclusively from the development budget) on a total budget of US$ 2320 mln (GOPRB, 2007:58-60)[1]. The recent Operational Framework for Pre-Primary Education of March 2008 (GOPRB, 2008a) is a crucial step forward in various respects, but does not yet contain an assessment of the costs of scaling up.

It is not the intention of this report to criticize these policy choices. They are understandable and by no means exceptional. What UNESCO does intend with this report, is to draw attention to the fact that (i) ECCE is not only a goal and a right in and of itself but impacts strongly on the quality and efficiency of further learning in education and beyond, (ii) that the benefits of ECCE spill over to many aspects and areas of society and economy, and (iii) that the *costs* of investments in ECCE can remain limited if certain conditions are met. A few examples may illustrate this. For children of 4 and 5 years old, a daily school preparation program of just 2 hours can make the difference if the quality is good. If children are 0-4 years old, one well prepared facilitator can provide strong educational support to several groups of 15 to 20 parents and reach literally hundreds of children through those parents, depending on how many children the parents have. Providing low-cost nutritional supplements through programs for children and/or parents can be very beneficial for children's physical development and learning abilities. If mobilized, communities can do a great job in producing learning materials and equipping the facility. Indeed, enhancing ECCE in a defensibly cost-effective manner is "the most powerful investment that a country can make, with returns over the life course many times the size of the original investment" (Irwin et al, 2007:28).

UNESCO is the champion of the "whole EFA-agenda", meaning that not just UPE and gender parity must be addressed, but also adult learning, the quality of education, and indeed ECCE. It is by seeking creative and innovative ways and by learning from existing programs in the country that UNESCO Dhaka Office wishes to explore ways towards achieving EFA Goal One. The plural "ways" is not coincidental. There is not a single one best way, and no one has the perfect recipe. This is why this report has an interactive nature. One of its elements is a simulation tool, which allows the users of this report to alter all the demographic and

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[1] The figure of US$ 41 million was found by adding up items A1, A2, D4 and D5 in Table 8.2 (pages 58-60) of the NPA II. In addition, Tk. 9.900.000 (about US$140.000) is allocated to baby-classes (page 61).

programmatic assumptions that are made, and to observe the impact of those changes on final outcomes. E.g. if the report assumes a maximum group size of 25 children while the reader is concerned that this is too large for good learning outcomes, the reader can change this "parameter" to 20, or 18, or any other value; the overall outcomes will automatically be adjusted. Breakdowns by Division and urban-rural are provided, while breakdowns at District or even lower governance level are possible.

"Exploring ways towards achieving EFA Goal One", as it was formulated above, is in essence the brief of this report. Based on a contextual analysis and a mapping of existing provision, the report will develop scenarios for expansion of ECCE, estimate their costs, and suggest ways to cover those costs[2].

The architecture of this report is as follows. Chapter 2 formulates a development perspective for ECCE in Bangladesh. Departing from the Operational Framework for Pre-Primary Education that was published in March of this year, we shall look at both the state of the international consensus and the existing practice in Bangladesh to propose an overall delivery model that guides the further work in this report.

Chapter 3 then makes the case for ECCE in Bangladesh, not by rehearsing all the well-known benefits that are often quoted in the literature, but by looking at present conditions for children in Bangladesh and how ECCE can make a difference.

The demographic and socio-economic context is the subject for chapter 4, while chapter 5 maps the existing provision of ECCE in Bangladesh today.

These are the stepping stones for chapter 6 which is perhaps the heart of this report. It determines how many children must be reached in order to include "the most vulnerable and disadvantaged" of them, and multiplies these numbers with the unit costs (the costs per child per year) that are derived from both national and international experience. It is in this chapter that the simulation tool is introduced.

The estimation that chapter 6 produces, is put in perspective in chapter 7. It addresses targeting issues and efficiency losses; takes existing provision into account; looks at the costs of food and nutrition; and points at funding sources and economic returns.

Chapter 8 draws conclusions and makes recommendations.

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[2] Terms of Reference, pages 4 and 5, "Objective of the Report" and "Major Responsibilities"

II. An ECCE development perspective

Any assessment of the practical and financial feasibility of achieving Goal One would ideally depart from a shared and Government validated vision on what ECCE actually entails in Bangladesh and where it is going. This chapter first reviews a number of important policy and planning documents; then discusses the critically important Operational Framework for Pre-Primary Education of March 2008 (GOPRB, 2008a); and finally proposes to adopt for this costing exercise an ECCE development perspective that is both in accordance with international consensus and rooted in existing practice in Bangladesh.

In the Introduction of this report it is already noted that the Primary Education Development Programme II is silent about ECCE (GOPRB, 2003). The EFA National Plan of Action (GOPRB, 2007) has more to say and it underscores (i) the importance of ECCE for school success and holistic development, and (ii) the need for concerted action between various ministries, local governments, NGOs, Community-based Organizations (CBOs), and last but not least families and communities. But the EFA National Plan of Action emanates no strong commitment to action, emphasizing only the immensity of the challenge ahead. In other words, a "comprehensive policy vision on ECCE remains to be developed" (GOPRB, 2007:39).

Rather similar is the position that the National Strategy for Accelerated Poverty Reduction takes (GOPRB, 2005:125-126). It mainly underscores the importance of ECCE and encourages NGOs and CBOs to take action. More concrete is the National Plan of Action for Children for 2004-2009 (GOPRB, 2004:30). It sets a target for increasing enrolment in Early Childhood Development (ECD) programs: from 10% at the beginning of the Plan's period to 30% at the end. However, the Plan does not specify which programs qualify as sufficient and how long children must be enrolled (is just one year considered enough or must it be longer). As major interventions for ECCE, the National Plan of Action for Children advocates for awareness raising activities directed at parents; for community-based childcare centers where literate mothers are trained to become caregivers; and for appropriate learning materials and attractive facilities for early learners.

While the ideas that the National Plan of Action for Children puts on the table will certainly be useful for this report, there is no clear and agreed vision coming forward from the various policy documents that were discussed above. They contain no consensus on where we want to stand ten years from now, what ECCE would ideally look like, and, more in particular, how many children from which groups will be following which kind of programs at which ages. Answers to these questions must be available for a costing exercise.

A major step forward is therefore the publication in March 2008 of the Operational Framework for Pre-Primary Education (GOPRB, 2008a). Departing from a clear vision on ECCE[3] it defines standards for early learning and development, and from there it draws important conclusions regarding the requirements that ECCE provision must meet (e.g. number of hours, children per group, teacher preparation, management and oversight). These conclusions are well in accordance with the international state of the art, and since the Framework was prepared by a government led working group of key stakeholders and

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[3] The Operational Framework uses the terms ECCE, ECD and ECCD.

experts[4], this report will consider them as officially endorsed, even if it may not have been subject to decision making.

Although the authors of the Operational Framework have wisely separated the vision development from the issue of funding (the working group sees costing and funding as a task of its own, to be taken up in the near future), they did formulate concrete targets:
"The long term vision is that all children, 3-5 years of age, are attending preschool programmes of some kind and have access to programmes of health, nutrition, social, physical and intellectual development, and be initiated into formal education. The short term vision is to include all children of 5 to below 6 age group under preschool education." (GOPRB, 2008a:19).

For this report, we will need to put exact dates on "short term" and "long term" in order to calculate costs, but there are two other issues that deserve discussion as well. One concerns the following order. The Operational Framework proposes that first, the enrolment of all 5 year olds will be universalized; then that of all 4 year olds; and then that of all three year olds. While this is by no means an unusual strategy for educational expansion, it may not work for ECCE since it seems at odds with the need to prioritize the vulnerable and disadvantaged children. Some 5 year old children grow up in safe environment with caring parents. A part of them may be attending kindergarten, others not, but the enrolment of the latter may be much less urgent than the enrolment of not just 5 year old children in disadvantaged groups, but also the younger ones. Indeed, the practice in many other countries is that some targeted programmes reach disadvantaged children at multiple ages (partly via their mothers) while children in less needy groups are well cared for at home. The other issue, closely connected to the first, is that even after the universalization of ECCE for the 3-5 group, the critical first three years (where rapid brain development shapes children's abilities to learn and develop) remain out of the picture, again to the disadvantage of especially the poor. Let us take a quick look at what the international literature has to say.

While many reports on ECCE have in the past underpinned and underscored the enormous benefits of it for the child, the family, the society and the economy, three recent statements have been made that are of special importance, especially since they carry important recommendations as to *how* ECCE can best be expanded. We limit our review to just these three.

The first is the 2007-edition (published in 2006) of the EFA Global Monitoring Report (UNESCO, 2006) which was titled Strong Foundations and was dedicated to ECCE. It brought together global knowledge about ECCE and drew important conclusions for policy making and practice. Secondly, three articles on ECCE were published in January of 2007 in the very reputable medical journal The Lancet (Engle et al, 2007; Grantham-McGregor et al, 2007; Walker, 2007). Again, the authors mainly collected and reviewed existing research outcomes, but the mere fact that the articles made it to The Lancet implies a recognition of the present scientific solidity of the global knowledge base. Investments in ECCE are now as economically secure as − if not more secure than - those in physical infrastructure, industry, agriculture, et cetera.

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[4] The working group was chaired by Mr. A. S. Shameem Ahmed of the Ministry of Primary and Mass Education, while members were from the Ministry of Women and Children's Affairs, National Curriculum and Textbook Board, Directorate of Primary Education, Institute of Education Research of Dhaka University, Dhaka Ahsania Mission, Early Childhood Development and Resource Center of BRAC University, and UNICEF.

The third important statement on ECCE came on behalf of the Consultative Group on Early Childhood Care and Development (CGECCD) in 2008. This CGECCD is a global network of all the main players that are active in the field of ECCE, such as UNESCO, UNICEF, World Bank, Plan International, Save the Children (UK and USA), the Open Society Institute (known for its Step by Step methodology), and many more. Having drawn lessons from the Global Monitoring Report, from the articles in The Lancet and from other sources, the CGECCD issued a statement called "The 4 Cornerstones" (CGECCD, 2008). These are four key policy recommendations[5]:

- For the youngest (0-4), ensure at the very least that the parents have access to parenting programmes that address holistic child development, especially for the poor.

- The four and five year olds (assuming that primary school starts at age 6 as in Bangladesh) should follow early childhood programmes that prepare for school entry.

- The first few years in primary education must be tuned to the needs of young children, e.g. by attending them in small classes.

- Ensure that ECCE is part of all the important policy documents, both on education and on poverty reduction and development more in general.

Before discussing these four elements it is important to be clear about their formal status. They have not been officially endorsed by any government or supranational body. But they do reflect the consensus of, among others, a number of important organizations that are also active in Bangladesh[6]. Thus, one could defend that they be used as a guiding light for this report. The following quote from the CGECCD website may clarify how the 4 Cornerstones must be seen and used.

"Participants from all regions of the world contributed to the development of **4 Cornerstones**, or key messages about early childhood development. Since we know that there is no magic age or program, the cornerstones are meant to reflect the developmental spectrum of early childhood from prenatal through the early primary grades. Moreover, given that investments in early childhood vary tremendously across regions, the cornerstones were meant to be adapted to the particular needs and issues emerging at the country and community level."[7]

The third of the 4 Cornerstones concerns primary education and lies beyond the scope of this report. The fourth concerns the inclusion of ECCE in policies, and this precisely what this report aims at. So this leaves us to deal with Cornerstones 1 and 2. Very briefly, the recommendation is to cover the 0-6 age range by four years of parenting programmes, followed by two years of enrolling the child in school preparatory programs. Even more briefly: a 4+2 model as we will further refer to it in this report. Parenting programmes are being practiced in Bangladesh at a large scale as we shall see in chapter 5, and there is strong international evidence about their effectives (Evans, 2006).

It should be emphasized that adopting the 4+2 model would not imply that no 0-4 children in Bangladesh would be cared for in nurseries, crèches, kindergartens, centres, or whatever the name is. Some children under 5 attend such institutions already and this will of course remain the case. In fact, the demand for day-care for some of the under-fives is likely to rise

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[5] For brevity, the 4 Cornerstones are not quoted literally.
[6] For example, at a Global ECCD Workshop in March 2008 in Dhaka, Plan International decided that its global programme framework will be built around the 4 Cornerstones (CGECCD, 2008:73).
[7] Quote from CGECCD website, visited on 26 October 2008.

autonomously, with the growth of female employment. But the focus of this report is on Goal One, and hence on the most vulnerable and disadvantaged children. Their parents are unlikely to be able to afford day-care, while governments all over the world fail to provide it for the whole age group. E.g., the European Union has a set a target of just 33% coverage for the 0-3 group, and even this is considered to be a challenge (CGECCD, 2008:8). Thus, expanding day-care as a strategy to reach the many poor families in Bangladesh seems an unrealistic scenario.

If we now compare the 4+2 model with the proposal in the Operational Framework to enrol all children of 3-5, the main difference is that the latter does not address the critical first three years. Of course this can be fixed by covering these three years by parenting programmes. This would result in a 3+3 model. This, however, is much more costly (Van Ravens and Aggio, 2008a). The reason for this cost difference is the large "span of control" and hence the high efficiency of parenting programs. For instance, in one week, one facilitator can attend 5 groups of 20 parents each and indirectly reach some 300 children or even more, depending on family size.

Since even the resource mobilization for realizing the 4+2 model is likely to be challenging, we propose to put the 3+3 on hold and start with the 4+2 model. It should be noted and emphasized, that *from* the 4+2 model one can always move on to the 3+3 model, once funding is available; so the perspective of the 3+3 model is not excluded forever.

III. The case for ECCE in Bangladesh

Arguments to invest in ECCE are abundant and nowadays well-documented. The previous chapter already highlighted the 2007 edition of the EFA Global Monitoring Report and the three articles in The Lancet of January 2007. The core argumentation is that the first years of a child's life is a period of rapid brain development. For many fundamental skills, there is "sensitive period" within those first years in which that particular skill can be developed relatively easily. If one or more of those windows of opportunities are missed, for instance as a result of a lack of early stimulation and/or nutritional deficiency - it is much more difficult – especially for poor children in developing countries – to catch up later. In essence, this is the reason why well-designed, evidence based interventions – sometimes at low cost – can make such a difference in children's lives, not just in primary education performance but over the lifetime. On their turn, these positive impacts on the individual spill over to the families in which they grow up, to the families that they start themselves, and to society and the economy at large.

This argumentation is well-known to policy makers today[8] and there is no point in elaborating it. What must be done, however, is underscoring the need for ECCE investment in Bangladesh in particular. What are the problems that Bangladesh is facing today and that ECCE can help address?

This chapter reviews a number of empirical studies regarding the conditions in which children are born and grow up in Bangladesh. The key message emanating from these documents is that progress is undeniable, and that there is no reason to believe that goals will never be met. But at the same time, the country has such a long way to go on the road out of poverty that much remains to be done notwithstanding the progress in the past. E.g. malnourished pregnant mothers giving birth to infants with low birth-weights are still causing children to enter this world with important disadvantages, impeding learning (GOPRB, 2004:14). Integrated child services, addressing health, nutrition, learning and child protection alike, are urgently needed to be scaled up.

The National Action Plan for Children (GOPRB, 2004:20) reports important progress in reducing under-5 mortality, from 146 per thousand in 1991 to 69 in 2003, while the latest EFA Global Monitoring Report even has a figure of 65 for Bangladesh for the period 2005-2010, against a regional average for South and West Asia of 89. Improved education, especially of the mothers, was mentioned as one of the causes of this success. It is not clear whether this concerns the expansion of regular education or specialized parenting programmes, but in any case expansion of the latter can help reducing under-5 mortality even further, e.g. to the levels of Iran (32), Maldives (42) or Sri Lanka (16).

The stunting rate among 6-71 month olds also declined: from 68.7% in 1985 to 49% in 1999/2000 (GOPRB, 2005:12). The most recent EFA Global Monitoring Report gives a figure of 43% (UNESCO, 2006:264), and although this concerns a different time period (19996-2005) and a different age group (under 5), it does allow comparison with another countries. In this case, Bangladesh performs worse than Bhutan and Pakistan, and much worse than Iran, Maldives ad Sri Lanka. An even sadder story must be told for underweight children. Despite a decline from 72% to 52% during most of the 1990s (GOPRB, 2005:12), the EFA Global Monitoring Report gives a figure of 48% which is the worst of the region,

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[8] See for instance page 13 of the Operational Framework for Pre-Primary Education (GOPRB, 2008a:13)

equalled only by Nepal (UNESCO, 2006:264). At 36, the percentage of children with low birth weight is by far the highest of the region, approached only by India at 30%[9] (UNESCO, 2006:264).

The percentage of children in Bangladesh that is immediately breastfed (within one hour after birth) stands at 35.6 which leaves a lot of room for improvement. This figure shows remarkably little variation based on income, education level and living area. Only regional differences are somewhat larger, with a maximum of 42.3% for Sylhet and a minimum of 32.4% for Chittagong. The only outliers are the tribal people, at a mere 29.9%. The number of children who are breastfed within one day after birth (including of course those who started within one hour) is 81.5%, again with very little variation, even for the tribal groups. This breastfeeding diagnosis, too, underscore the case for parenting programmes that start before the birth of the first child (all data in this paragraph are from: Bangladesh Bureau of Statistics / UNICEF, 2006:20-25).

Regarding parenting practices, the National Action Plan for Children notes that traditional patterns have changed in Bangladesh since the influence of the extended family and the community have decreased (GOPRB, 2004:27). The nature of families has changed with the move from village to city, fathers are often absent during much of children's formative period, and more mothers are working outside the home (UNICEF Dhaka Office, 2008:3). A warm, caring and nurturing environment is not available for all children. Less than half of the children grow up in household in which members are engaged in activities that promote learning and school readiness (Bangladesh Bureau of Statistics / UNICEF, 2006:83-84). More in particular, activities at home to enhance intelligence and school-readiness are not the norm. About half of the 2-5 year olds receives warm and responsive care, is stimulated to develop their learning ability, or is read to by the parents and encouraged to write. For other activities such as encouraging participation, setting examples, encouraging mixing with others and engaging in sports and games, the scores are much lower. Teaching how to speak and promoting the interest for learning was done by the parents of 31% of the children (UNICEF Dhaka Office, 2008:3). About half of the children are exposes to corporal punishment and verbal pressure (Ibidem).

The last issue for this chapter is performance in primary school. The net primary school completion rate stands at 46.7% as measured by the MICS-2006 survey (Bangladesh Bureau of Statistics / UNICEF, 2006:94). Since the net rate only concerns the percentage that completes primary education timely, the figure is relatively low compared to other assessments of completion that are addressed below. But the MICS provides interesting breakdowns. Although net primary completion correlates strongly with wealth, even children from the richest groups only score 64.4%, against 30.7% for the poorest. By far the best scores are found for children with mothers that followed some years of secondary education (71.0%) or completed secondary education or even entered higher education (73.1%). As one would expect, children of mothers with no education fare worst, at 33.2%. Again, this represents a strong case for more school preparation and parent support.

MICS also reports little variation across regions but strong disparities between rural (43.8%) and urban (53.6%) children. However, within urban areas, children in slums fare worst at 32.5%. As in many other countries, rich and poor, girls perform better than boys (52.1% against 41.5%) according to MICS-2006, but the EFA Global Monitoring Report notes a

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[9] The value for Afghanistan is missing.

diminishing gap (UNESCO, 2006:305). The survival rate to last grade (which is clearly a different measure of school efficiency than completion) has remained stable at 65% between 1999 and 2004, but the gap between boys and girls changed in those years from 60 against 70 to 63 against 67. Compared with some other countries in the region, Bangladesh has been outperformed by Nepal (from 58 to 79) and India (from 62 to 79). Bhutan stood at 81 in 1999 (no value for 2004), while in 2004 Iran scored 88 and Pakistan 70 (no values for 1999). Too many values are missing for a sound calculation of the regional average for South and West Asia, but it is clear from the above figures that Bangladesh starts to lag behind. In fact, its score of 65% is only just above the regional average for Sub-Saharan Africa which stands at 63% (UNESCO, 2006:307).

A World Bank report (2008:27-34) contests the suggestion that progress has stopped. Using, among other indicators, the (gross) primary completion rate for children up to age 19 (which of course results in higher values since it includes the many late completers) it signals continued improvement for girls (see table 13 of the World Bank's report) and a slowing pace of improvement (but no stagnation) for boys in the last decade (table 12). But even the World Bank report cannot avoid drawing alarming conclusions. Based on the Bangladesh Household Income and Expenditure Survey of 2005, it concludes that only 28% of the poorest children of 6-15 have completed grade 5, while even the richest only reach 57%.

As noted earlier, the conclusion for this chapter is that despite important progress, there is a strong case for investing in ECCE and thereby improving nutritional status, parenting practice and school completion.

IV. Demographic and socio-economic context

For any planning or costing task in the area of education, the demography of country is an important issue. First because it tells us how many children there will be in the coming years per age group, and second because it determines the balance between the number of adults that potentially generate income and the number of children and youth in the education system. This balance is important for the affordability of education provision.

In figure 1 we see the so-called population pyramid for Bangladesh in 1991[10]. This is a common way for graphic representation of a population: males are on one side and females on the other, and age goes from bottom to top. This typically produces the shape of a pyramid in poor countries with high fertility rates: every new generation of children is larger than the previous one. In 1991, this was still the case for Bangladesh. Figure 1 shows an ever growing school age population, against a much smaller working age population. These are very difficult demographic conditions to expand an education system.

Figure 1: Demographic profile of Bangladesh, 1991
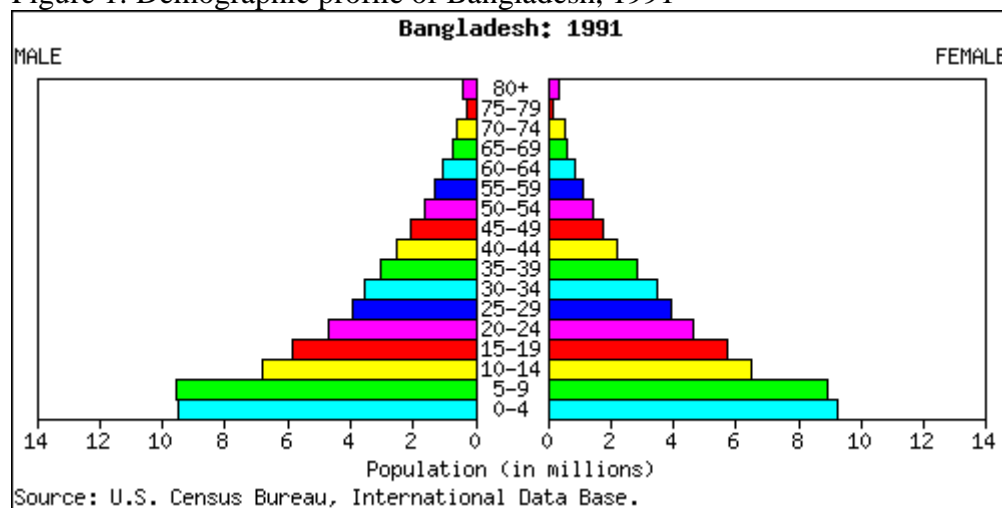
In the demographic profile of 1998 (see figure 2 on next page) we can observe that the era of explosive population growth has come to an end for Bangladesh. After a historical maximum of 3.561.000 births in 1991, the annual number of births had continuously declined to 2.6 million in 1998, followed by a historical minimum of 2.4 million in 2001 (Bangladesh Bureau of Statistics, 2007:25). The costing implications are quite important, and manifold.

First it makes a serious difference whether each age cohort consists of 3.6 million or of 2.4 million. The total required capacity of any sub-system of education, and hence overall costs, would decrease by 33% if the number of births would remain at that level (which by the way is not entirely the case, as we shall see). Had Bangladesh already achieved universal primary education, then it could now free up primary education capacity (financial resources, learning space, human resources) to help expand ECCE, as is the case in some countries. However,

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[10] The source is the website of the US Census Bureau. This does not mean that we will base this costing exercise on American estimates; we will use the estimates of the Bangladesh Bureau of Statistics. The graphs of the US Census Bureau are merely used since they provide a good illustration of the discourse.

with a Net Primary Enrolment Rate of 94 in 2005, Bangladesh still has a gap to close. But even that will be easier to do with smaller age cohorts.

Second, figure 2 illustrates that the largest age cohorts that Bangladesh probably ever had (the green bar) will slowly move through the education system, and eventually out of it. So even secondary and higher education – while still likely to enrol an ever higher *proportion* of the age cohort – will find it easier to expand. The competition between subsystems of education (pre-primary, primary, secondary, higher) for scarce resources, whether public, private or foreign, will be not quite as hard as it would have been it the case of continued growth of age cohorts.

Third, the economic and financial potential for funding the education system will be enhanced. As the green bar moves out of the education system, it will move into the labour market. In other words, for the first time in history, income generating age cohorts will be larger than education demanding age cohorts. This process will continue, even if the new age cohorts stop growing (this is also why overall populations usually continue to grow for a number of years after the birth stabilization; Bangladesh will also face this situation). The extent to which these income generating age cohorts will indeed generate a lot of income depends of course on economic development and employment opportunities. At this moment, in 2008, the situation does not look good, but the demographic potential is there.

Figure 2: Demographic profile of Bangladesh, 1998
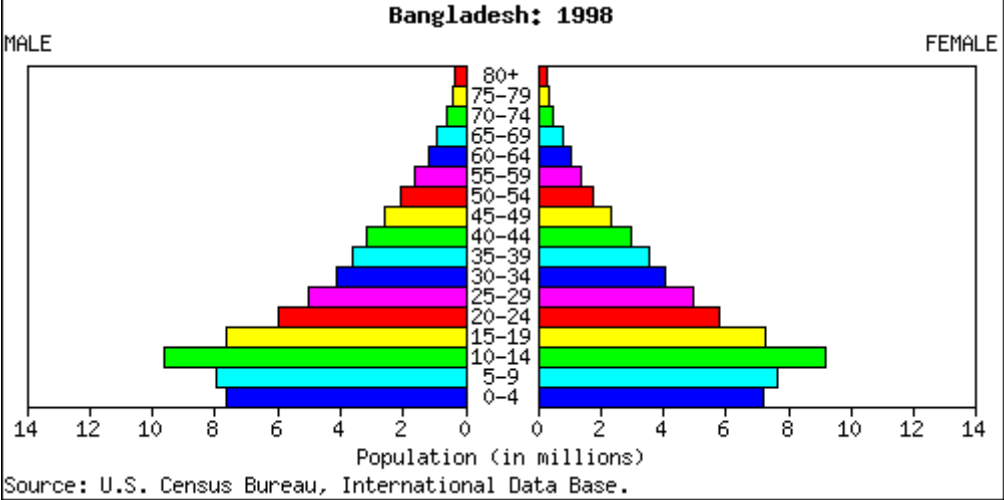
For this costing study, we must not only look at historical figures but also forecast how many children will be born annually between now and 2015, the final year of the EFA and MDG period. The EFA National Plan of Action (GOPRB, 2007:17) contains the following table.

Table 1: Population projections for selected age groups, 2000-2015

Age Group	Base Year	Projection by Selected Years (In 000s)			
	2000	2005	2010	2015	Total population in 2015
3	3173	3168	2849	3002	
4-5	6183	6322	5879	6229	
3-5	9356	9490	8728	9231	
6-10	15685	15867	15884	15211	
11-15	15822	15503	15728	15765	
16-17	6364	6163	6096	6242	
15-24	29683	31038	30784	30956	
15-44	66066	73540	79831	84871	
15+	84640	95800	106508	117106	163200

Source: copied from EFA National Plan of Action (GOPRB, 2007:17) and based on projections made by World Bank, UNFPA, Planning Commission, Bangladesh Bureau of Statistics.

Table 1 suggests that after having decreased between 2005 and 2010, the number of 3 year olds – and hence the number of annual births – will increase between 2010 and 2015, passing the threshold of 3 million. Remarkably, however, the figures for 2000 and 2005 are much higher than the ones found in a report of the Bangladesh Bureau of Statistics (2007:25), while for both sources these are simply historical figures, not forecasts. In other words, these figures may not be entirely reliable.

An alternative way to get a sense of the development of the number of annual births is by looking at the development of the Total Fertility Rate. This rate has declined steadily over recent decades, from over 5 in 1981 to around 2.5 in the beginning of the present decade. After that however, it had remained almost stable until 2006 (the latest year for which we have the historical figure) (Bangladesh Bureau of Statistics, 2007:50). A breakdown by income groups reveals that total fertility has risen among the 20% poorest since the mid 1990s, remained stable for the next 20%, and decreased only for the richest 60% (GOPRB, 2005:42). Since our aim is to estimate the costs of expanding ECCE for most disadvantaged groups, this rising fertility among the poorest is important to keep in mind.

Figure 3, shows the historical number of births per year. This trend does not entirely reflect the trend in the Total Fertility Rate because of fluctuations in the number of people in the age group in which mothers normally give birth. The fertility rate may go down in a certain period, but if the number of young women grows in that same period, the number of births may still grow. Even though figure 3 by itself does not contain a forecast, it allows us to draw a few important conclusions:

- Having fallen below the 3 million level in the mid 1990s, the annual number of births started to climb back up after 2001.

- However, the trend clearly flattens, and on the relatively safe assumption that the fertility rate will not start rising but remain at around 2.5 maximally, the annual number of births will approach but not surpass the level of 3 million between now and 2015.

- Since most families in Bangladesh have their first child between ages 20 and 24 (Bangladesh Bureau of Statistics, 2007:48-49), we can expect a marked decrease in the

annual number of births after 2015, as the relatively small age cohorts born after 1995 reach the fertile age. This will even be so in the unlikely case that the fertility rate would resume to grow to some extent.

Figure 3: Annual number of births in Bangladesh, 1981-2006 (x 1000)
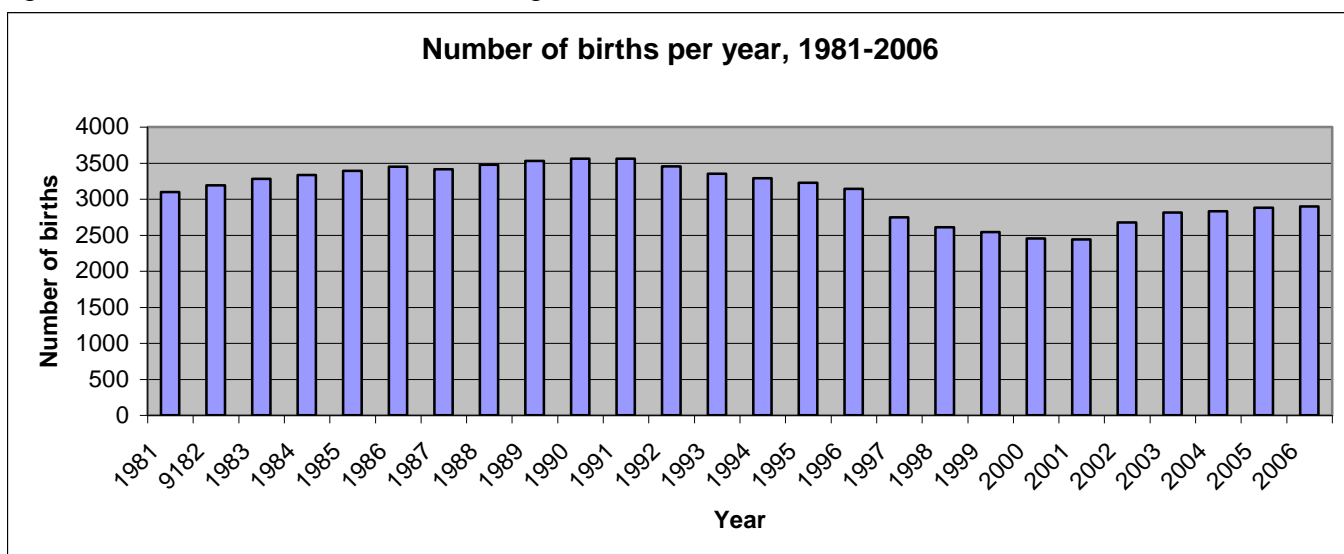
Source: Bangladesh Bureau of Statistics, 2007:41-42.

All things considered, it is proposed that we work on the assumption that each age cohort born in the relevant period (2008-2015) will consist of no more than 3 million children, with the perspective of a marked decrease after 2015. This is a strong argument for trying to include the vulnerable groups between now and 2015, while striving for universal access after 2015, when the demography lends a helping hand.

Economic development is another issue we must look into. Education in Bangladesh is generally funded from three main types of sources: domestic-public, domestic-private (fees) and foreign (development budget). The potential of the first two sources depends on the economic development in and of Bangladesh. Income inequality in Bangladesh is modest; the richest 20% have 4.6 times as much as the poorest 20%, and this is actually a very good score, even globally (UNESCO, 2007:244-251). This suggests that growth does trickle down to the extent that the middle and lower-middle groups – though not the very poorest – should be able to afford some school costs. Table 2 shows annual growth rates between 1997/1998 and 2005/2006.

Table 2: Annual growth of GDP (constant prices), 1997/1998 – 2005/2006

Year	1997/8	1998/9	1999/0	2000/1	2001/2	2002/3	2003/4	2004/5	2005/6
Growth	5.23%	4.87%	5.94%	5.27%	4.42%	5.26%	6.27%	5.96%	6.63%

Source: National Income Section, Bangladesh Bureau of Statistics.

The sequence of annnual rates shows a very steady and sustainable pattern. There are no years with double digit growth rates, but there are no years below 4% either. The poverty reduction strategy even assumes 7% for both 2008 and 2009 (GOPRB, 2005:183). The question is of course whether Bangladesh can reach and sustain 7% economic growth in the face of food and credit crises. However, when underpinning its optimistic growth forecast, the macroeconomic analysis of the poverty reduction strategy – though it could not foresee the

two crises – refers to a series of structural measures that have strengthened the economy durably and make it more resistant to external impacts, be it natural disaster or global economic recession.

So if we rely on the 7% growth forecast for the coming years, and if we take into account that currently 2.2% of GDP is spent on education in Bangladesh (World Bank Office Dhaka, 2008:14) and that GDP stands at around US$ 67 billion[11], then we can deduct that (i) the annual education revenue budget (not including spending from development budget) equals US$ 1.474 billion, and (ii) that this budget will increase with an additional US$ 103 million annually, even if education's share remains at 2.2%. We shall use this US$ 103 million, rounded off to US$ 100 million, as a general reference point, indicating the elasticity of the education budget and its scope for new investments. This implies by no means that much of the US$ 100 million *must* be allocated to ECCE; in the reality of the political process, this financial space is likely to be claimed for many purposes, within and outside the realm of education. But nevertheless, the US$ 100 million is a good indication of the order of magnitude of the financial resources that can potentially be mobilized. It must be kept in mind that it concerns an *annual* increase that materializes in any year of substantial economic growth, and that this gain will be retained in less favorable economic circumstances, except in the unlikely event of negative growth.

One could add that the present 2.2% of GDP that Bangladesh invests in education is very low, especially in light of its good growth performance. The regional average for South and West Asia is 3.8% and that of developing countries 4.5%. Even in Bangladesh itself, the percentage was once a bit higher: around 2.5% in the mid 1990s (World Bank Office Dhaka, 2008:11-14). If we assume that educational spending in Bangladesh would grow to just the regional average of 3.8% between now and 2015, then the education budget would be more than one billion dollars larger than it is today, even at zero economic growth. More realistically, a combination of a modest economic growth of, say, 4% and just halving the gap with the regional average in terms of education spending as a share of GDP, can easily free up several hundreds of millions of dollars, annually.

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[11] This figure is found by multiplying pc. GDP by total population, both for 2005. The source is the EFA Global Monitoring Report, Annex Table 1 (UNESCO, 2007:248-249). The EFA National Plan of Action estimates GDP to be "over 60 billon US dollars" (GOPRB, 2007:18).

V. Mapping the existing provision

There are essentially three ways to map the provision of ECCE programmes. All three have their pros and cons but combining them usually brings good results. The first is to look at provision through the lens of a household survey. The Multiple Indicator Cluster Survey of 2006 contains some questions about early childhood education (Bangladesh Bureau of Statistics / UNICEF, 2006:87-88). The question regarding attendance pertained just to the children of 36-59 months old, thus excluding the five year olds, but there was also a question whether children in primary grade had attended early childhood education in the previous year. If we assume that these were five years old (which is not entirely correct), and if we break down the 36-59 months olds into 3 and 4 year olds, we can construct the following table.

Table 3: Attendance of early childhood education by age, MICS, 2006

Age	3 years old	4 years olds	5 years old
Attendance rate	7.0%	22.3%	32.0%

Source: compiled by author on the basis of MICS 2006 (Bangladesh Bureau of Statistics / UNICEF, 2006:87-88)

The average for the 3 and 4 year olds stands at 14.6%, and there is regional variation around this figure; Rajshahi is lowest at 10.3, and Chittagong highest at 16.2%. The latter figure is certainly influenced by programme interventions for tribal groups, for at 22.3% tribal attendance is higher than both rural (15.5%) and urban (12.0%). Possibly as a result of the pro-poor policies, there is less variation than one would expect according to variables such as mother's education and wealth. Regional variation among the 32% of the 5 year olds that attend is again limited, and again tribal attendance is high, this time at 53%, exceeded only by the non-slum dwellers in city corporations (55.0%). Among the 5 year olds there is much more variation according to mother's education and wealth than among the 3 and 4 year olds. Figures 4 and 5 show the numbers of enrolled and excluded children by division for 3+4 year olds and 5 year olds respectively.

Figure 4: Enrolled (blue) and excluded (red) 3+4 year olds by division, 2006
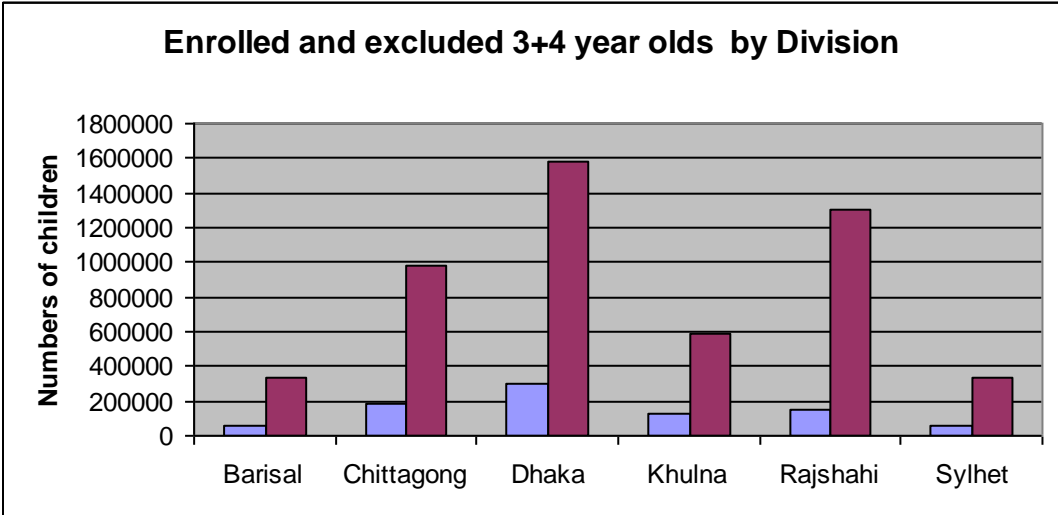
Source: compiled by the author based on enrolment percentages reported by MICS-2006. The distribution of the entire population (not just the 3+4 year olds) over the six Divisions was derived from data retrieved from the website of the Bangladesh Bureau of Statistics. This distribution was then applied to the number of 3+4 year olds

that are assumed to live in Bangladesh in the coming years, i.e. 2 x 3 million (see figure 3 and argumentation in previous chapter). Finally, these 3+4 year olds were divided into enrolled and excluded children.

Figure 5: Enrolled (blue) and excluded (red) 5 year olds by division, 2006

Source: see figure 4.

Figures 4 and 5 do not point at marked differences between the divisions. Some have larger absolute numbers of excluded children, but this is generally because these are larger divisions, population-wise. Rajshahi is the exception; it has not only large absolute numbers of excluded children, but is also in a exce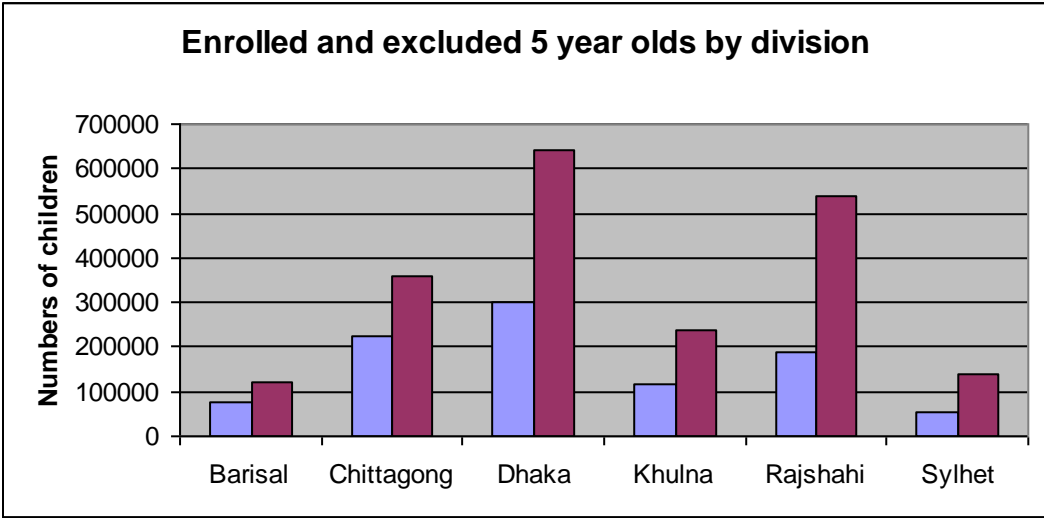ptionally dire situation in relative terms. Rajshahi has nine districts where less than 10% of the 3+4 year olds have access (in Kurigram just 3.0%), while Chittagong and Khulna have one district where this is the case and the remaining divisions none.

Table 4 is the source table for figures 4 and 5. It shows that the total absolute number of enrolled 3 and 4 year olds is about 876000, while for the 5 year olds this is 960000. This is relevant for the second and third approaches to mapping provision, hereafter.

Table 4: Enrolled and excluded 3+4 year olds and 5 year olds by division, 2006

Division	All ages	3+4 yr	enrold %	enrolled	excluded	5 yr old	enrold %	enrolled	excluded
Barisal	8173718	394373	15,5	61128	333245	197186	38,6	76114	121072
Chittagagong	24290384	1171983	16,2	189861	982122	585992	38,5	225607	360385
Dhaka	39044716	1883863	15,8	297650	1586213	941932	31,9	300476	641455
Khulna	14705229	709511	17,4	123455	586056	354755	32,8	116360	238396
Rajshahi	30201873	1457206	10,3	150092	1307114	728603	26,1	190165	538438
Sylhet	7939343	383064	14,1	54012	329052	191532	27,4	52480	139052
Bangladesh	124355263	6000000	14,6	876000	5124000	3000000	32	960000	2040000

The second of the three approaches to map provision is to look at official international education statistics. In the case of ECCE these have the double disadvantage that one never knows whether enrolled children actually attend (household surveys always measure real attendance) and that one must guess which programmes are included in the statistics. The EFA Global Monitoring Report gives a gross enrolment ratio of 18% for 1999 and one of 11% for 2005; these would be averages for the 3, 4 and 5 year olds (UNESCO, 2007:272-

273). Since this is a remarkable decrease we need to investigate whether this can be confirmed by other figures.

MICS allows us a comparison since the previous edition was in 2000. The interval between the two MICS-editions (2000 and 2006) is not very different from the moments of measurement of the Monitoring Report (1999 to 2005). Indeed, MICS-2000 reports a much higher absolute number of enrolled children: 2.6 million, UNICEF Dhaka Office, 2008) against some 1.8 million in 2006. However, this is partly due to a drop in the total number of 3, 4 and 5 year olds children: from 11.52 million to some 9 million in 2006 (see figure 3). If we control for this, the enrolment *rate* dropped less sharply: from about 22.5% in 2000 to some 20% in 2006. We conclude that the figures of the Monitoring Report (i) exclude a number of programs that are included in the MICS data, and (ii) that the sharp drop of 18% to 11% can only partly be confirmed by MICS data. An explanation for the remarkable decrease according to the Monitoring Report could be that the decrease in enrolment took place predominantly in ECCE sub-sectors that are covered by the statistics of the Monitoring Report while the decrease was less sharp or absent in those sub-sectors that were not covered by the Report. It remains remarkable and sad, however, that ECCE in Bangladesh has actually lost ground in recent years. If only the capacity of 2000 had been retained, then the percentage of enrolled children would now have been higher than it presently is.

The third and last approach is to look at enrolment and/or attendance figures of concrete government and NGO programmes. In this approach, too, there is a risk that one may not take all programmes into account, but we shall see if by looking at provision we can build a picture that is broadly consistent with the MICS outcomes.

Table 5 contains the results. The table is based on the 2007-edition of the invaluable Directory of ECD Organizations in Bangladesh, published by the ECD Network Secretariat (Bangladesh ECD Network, 2007). This contains detailed information on 191 ECCE organizations, most of them providers, ranging from very small to very large. The directory makes it possible to count separately the enrolment of children from 0-3, children 3-6, and parents. Many programs would have allowed a further breakdown between 3 and 4 year olds and 5 year olds, but this was not possible in all cases. A caveat regarding the parenting program is that it is not always clear what age their children are when they (the parents) enroll. The 4+2 model that we discussed in chapter 2 assumes that parents attend these programmes when their children are in the first four years of their lives, but this does certainly not apply for all parenting programmes in Bangladesh today. Moreover, in some programmes, both the father and the mother attend (though often in separate groups) which leads to double counting from the perspective of the numbers of children that are being reached.

Some figures may no longer be accurate today as a result of growth. E.g. BRAC (or BED, in the table) enrolls now some 660.000 children rather than 500.000, and BSA has grown to 612.000 enrollees[12]. These recent developments have not been taken into account in order to keep the exercise consistent; the objective is to contrast the enrolment as reported in the Dictionary with the MICS-data of 2006, and the latter are not updated.

In order to organize the information in a manageable way, providers have been allocated to three groups: small providers (with less than 1000 children in both age groups); medium providers (between 1000 and 5000) and the larger providers. The latter are mentioned by

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[12] Information provided during interview at Shishu Academy.

name in the table. The enrolment of the medium providers has been added up normally, while the enrolment of the small providers has been estimated. A sample of some 20 small providers has been selected, from which total numbers have been added up, and this has been extrapolated to all small providers. Thus, table 5 gives a fairly good overview of overall enrolment, and shows also the share of the main providers.

Table 5: ECCE participation by age group / parents based on Directory of ECD Network

Provider	Age 0-3	Age 3-6	Parents
Less than 1000 children	5000	30000	7000
Between 1000 and 5000 children	9100	30700	112000
More than 5000 children:			
BEP		543000	500000
BRIF	3060	5180	10355
BSA		500000	
Care Banglad.	31800	31800	291000
Caritas		12700	
ESDO		5125	
FIVDB		13630	17770
Grameen Shikka		8900	8500
GSS		13920	
Heed Banglad.		6200	3875
ICDP		40000	147000
JCF		8500	
Plan	26500	34200	26500
RDRS		31200	62500
STC USA		39200	28300
Serve the People		10250	
SSS	26150	7700	58060
VERC		6800	7700
WVB		9475	
Sub-total > 5000	87510	1327780	1161560
Total overall	101610	1388480	1280560

Source: compiled by the author on the basis of the Directory of Early Childhood Development Organizations in Bangladesh of the Bangladesh ECD Network (Dhaka, 2007).

What do we learn from table 5? First of all, and as expected, the number of enrolled children of 0-3 years old is quite limited: some 100.000 on a total number of some 9 million children. However, this is of less relevance, since we have assumed in chapter 2 that this age group will be covered by parenting programs.

The total number of about 1.4 million children of 3-6 raises a question: from the MICS data of 2006 we derived that some 1.8 million children attended in this age group; this figure is found by adding up the total number of enrolled 3+4 year olds and that of the 5 year olds in table 4. The question is: where are the missing 400.000? Let us look at what other sources say.

The EFA National Plan of Action reports that during the 1990s, nearly one million children attended baby-classes in government primary schools and registered non-government primary schools, and that a similar number was enrolled in other institutions (GOPRB, 2007:37). These nearly 2 million children bring us close to the 1.8 million derived from MICS-2006; the small difference can be explained by the drop in absolute numbers of enrollees between 1999/2000 and 2005/2006 that we discussed earlier. UNICEF Dhaka Office (2008) confirms the one million enrollees in the baby-classes (in 2001 the number had grown to 1.050.000) and mentions a number of providers that are not included in the Directory such as the 242.000 children in madrasas and an estimated number of 540.000 children in temple and mosque based learning centers. Also, a smaller provider such as Save the Children UK (2758 children) is not yet included in table 5. If we would add all these to the 1.4 million found in table 5, it would even take us well beyond the 1.8 million of MICS-2006. However, it is not sure that MICS respondents would say yes to the question whether their children participate(d) in ECCE if it concerns the religious providers or baby-classes. In any case, the 1.8 million derived from the MICS-data is certainly not an overestimation.

Finally, the nearly 1.3 million parents enrolled in parenting programs is an impressive and perhaps unexpected number, exceeding the estimations of around 700.000 found in an earlier mapping exercise (GOPRB, 2008b:34). As said, there may be overlap in the sense that both parents of the same child participate, while the parenting programs reported in the dictionary cover all ages, not just the 0-4 age range for which the 4+2 model assumes the provision of parenting programmes exclusively (this caveat will be addressed in the next chapter).

While the 1.3 million enrollees point at an existing capacity that is substantial, it says nothing about the duration of these programmes. One study found that out of a sample of 43 parenting programmes, 25 had a duration of one year; 11 were half a year, and 7 were longer that one year (GOPRB, 2008b:42). It can be concluded that these 43 programmes generally fail to cover the whole age range of 0-4. We shall take both the capacity for children and that for parents into account in the next chapter, which simulates a scenario towards achieving EFA Goal One.

VI. Simulating a scenario for EFA Goal One

Estimating the costs of any public service is a matter of estimating two components: the number of beneficiaries, in this case the number of children that receive a package of ECCE services in accordance with the 4+2 model, and the unit cost, i.e. the cost per child per year. We start with the former. The text of EFA Goal One gives good guidance: in countries where not all children can be reached at once, the most vulnerable and disadvantaged groups must be prioritized. Exactly who these groups are is a political choice, at the end of the day. But few will disagree that these groups should include at the very least the children of those who are living below the poverty line, plus children affected by conflict, natural disaster, HIV/AIDS and other epidemics, as well as disabled children (Van Ravens and Aggio, 2008b).

In practice, there will be a great overlap between the group below the poverty line and the more specific categories that were just mentioned, especially in Bangladesh where 40% of the population live below the poverty line. In order to simplify we shall therefore focus on just the group below the poverty line, but it must be kept in mind that when it comes to concrete planning, non-poor children affected by conflict, disaster, disease or disability must be included as well. Moreover, in times of natural disaster, the services needed for any children, rich, middle class or poor, are subject to change. This is particularly relevant to Bangladesh where the risk of flooding is big and exacerbated by climate change. E.g., while school meals are provided to children that attend primary school, younger children have to cope without them. This inequality must urgently be addressed, but it is not an issue for regular ECCE policy development.

The simulation tool that underpins this chapter is constructed in such a way that special groups, affected by special circumstances, can be added. In this chapter, however, we will focus on those below the poverty line. Figure 6 contains poverty rates for 2000 and 2005 broken down by division. While the overall poverty rate dropped in that period from just below 50% to 40%, the rates remained high in Barisal and Rajshahi, while a slightly rising rate in Khulna made this division the third poorest of the six.

Figure 6: Poverty rates by division, 2000 and 2005
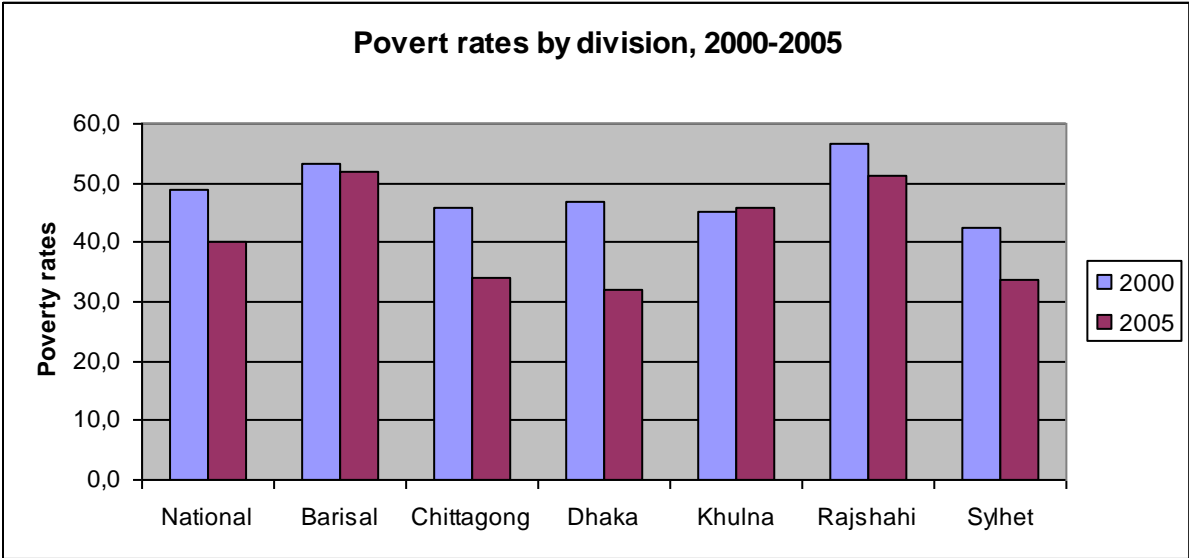
Source: constructed by author based on data from Bangladesh Quarterly Economic Update September 2006, Asian Development Bank, Dhaka Office.

Figure 7 provides a breakdown of poverty rates by rural and urban areas, just for 2005. As expected, rural rates are consistently higher, and the difference is important enough to maintain the rural-urban distinction throughout the further analysis. It must be kept in mind however, that the relatively low average urban poverty rates in Dhaka and Sylhet conceal extreme poverty in the slums. Usually, people in urban slums are worse off than the poor on the country-side, and Bangladesh is no exception.

Figure 7: Rural en urban poverty rates by division, 2005
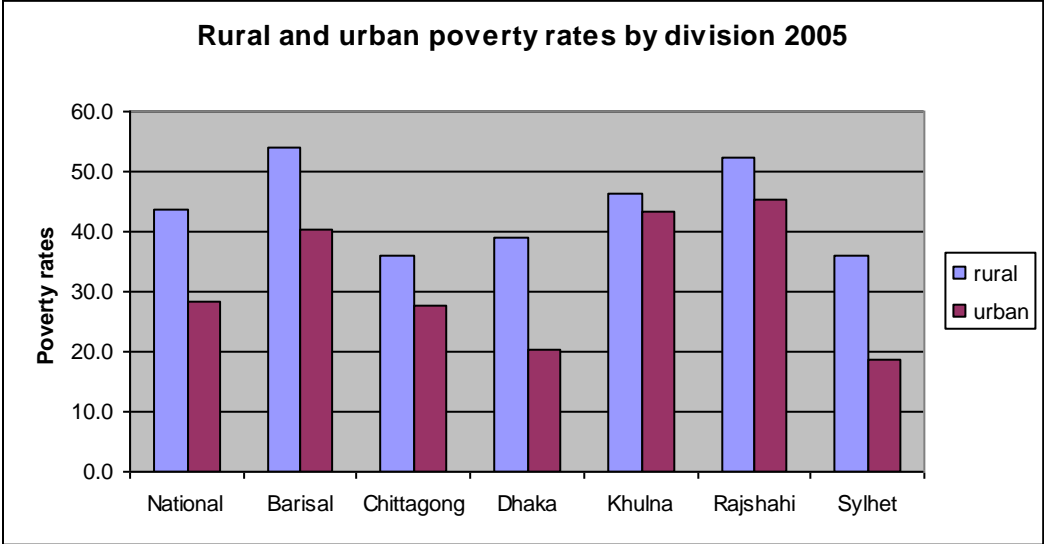
Source: see figure 6

We now go through a number of steps in order to prepare the population input to the simulation tool. Table 6 starts off with the distribution of the total population over the six divisions. This total population figure is no longer accurate, but for reasons of data-consistency it was not possible to go with the latest figure since other data needed for this exercise were dated somewhat. However, at the end of the day it makes little difference since we eventually calculate towards the 3 million that we assume to be born annually in the coming years(see chapter 4, figure 3). What counts is the distribution; this may have changed since growth is likely to have been uneven over divisions and over rural and urban areas within them, partly as a result of difference birth rates, partly as a result of rural-to-urban migration. But again, inaccuracies will be limited, and more recent figures can always be entered in the simulation tool.

The share of urban residents in Bangladesh' population is 25% nationwide, but the figure differs by division, as the second column of table 6 shows. Figures regarding the urban-rural balance by division have been adjusted proportionally to match the 25%, and the urban and rural shares have then been applied to total number of inhabitants for the relevant division. This resulted in absolute numbers of urban versus rural inhabitants per division, still for all ages (3rd and 4th column). This distribution has then been applied to the assumed 3 million newborns per year, 750000 of which will be born in urban areas, and 225000 in rural areas (5th and 6th column).

Table 6. Total population and cohort of 3 million children by division and urban/rural

	Total population				Cohort 3 mln children	
	Total	urban %	urban abs	rural abs	urban abs	rural abs
Barisal	8173718	15.9	1296592	6877126	31280	165907
Chittag.	24290384	23.0	5579390	18710994	134600	451392
Dhaka	39044716	35.5	13873757	25170959	334696	607235
Khulna	14705229	23.2	3415047	11290182	82386	272369
Rajshahi	30201873	17.1	5174179	25027694	124824	603779
Sylhet	7939343	22.0	1749839	6189504	42214	149318
Banglad.	124355263	25.0	31088816	93266447	750000	2250000

Source: compiled by author

Table 7 starts with the distribution of the 3 million children over urban and rural areas in the six divisions (1st and 2nd column), and it applies the relevant poverty rates (3rd and 4th column) to each of these areas. The result is the absolute number of children below the poverty line, for each division broken down by urban versus rural (5th, 6th and 7th column). This will be the population input for the simulation tool, but it should be emphasized that users of the tool can alter this input as they wish. E.g. people may want to enter the same data, but more recent, or calculated in a different manner. Or people may wish to use different criteria for children's eligibility for the ECCE service; it should be noted that there are many ways to define and measure poverty. And finally, people may wish to apply the model at a lower administration level, e.g. the district level. All this is possible.

Table 7. Projected number of newborns under poverty line, by division and locality

	Cohort of 3 mln ch.		Poverty rates		Poor children per cohort		
	urban	rural	urban	rural	urban	rural	Total
Barisal	31280	165907	40.4	54.1	12637	89756	102393
Chittag.	134600	451392	27.8	36.0	37419	162501	199920
Dhaka	334696	607235	20.2	39.0	67609	236822	304430
Khulna	82386	272369	43.2	46.5	35591	126652	162242
Rajshahi	124824	603779	45.2	52.3	56420	315776	372197
Sylhet	42214	149318	18.6	36.1	7852	53904	61756
Banglad.	750000	2250000	28.4	43.8	217528	985410	1202938

Source: compiled by author

Unit costs: the regular ECCE programs

The next step is to determine the unit costs, or costs per child per year. Much depends on the assumptions we make. E.g. if we raise the salary of teachers from Taka 1500 to Taka 2500, total costs go up by the millions, even in dollars. We will discuss the unit costs step by step, copying the respective elements from the simulation tool into the text below, explaining the assumptions made and clarifying at the same time how the tool works. The simulation tool is incorporated in one file of the spreadsheet programme "Excel", it is available together with this report, and it is titled "Bangladesh ECCE Simulation Tool". It must be emphasized that the costs of foodstuff, nutrition and ECCE related health services are not yet included in the simulation tool; they will be discussed in the next chapter.

The small table hereunder is the part of that file that concerns the programme that children follow. Most of the people that were interviewed for this report advised to keep the daily number of hours limited, e.g. at 2 hours per day, hence the red[13] figure 2 following "Hours / day". All red figures can be altered in the simulation tool. The number of days per week is usually 6. The number of weeks per year is less straightforward. Many interviewees said that the school year is usually all year around, with the national holidays as the only exception. However, if we would multiply 2 (hours per day) times 6 (days per week) times 50 (weeks per year), we get 600 hours. This is quite a lot for pre-primary education. So for the time being, this report assumes just 40 weeks per year, leaving space for holidays and for some degree of seasonal school-closure. The total number of hours per year is then 480. This is automatically calculated (black figure).

Children:

Hours / day	2
Days / week	6
Weeks / year	40
Hours / year	480

The next set of parameters concerns the teacher. This is perhaps the most difficult issue. Some NGOs pay very low salaries – sometimes less than Taka 1000 per month – simply because there is not much money while there are many children in need. Understandably, this creates a risk of less motivated teachers, absenteeism and high turnover. This report proposes a "normative" approach, which implies the following. We assume a fairly good normative salary of, say, Taka 3000 per month, which is close to that of a government teacher. However, what the ECCE teacher actually receives, is *proportional* to the real number of hours that she or he works. So normatively, a regular full time job would consist of 40 hours per week and 45 weeks per year. Both assumptions can be altered. For these 1800 hours per year, a teacher *would* receive, for instance, Taka 3000 per month. This is automatically converted into US$ 514 per year (the exchange rate can be altered in a light blue cell at the bottom of the Excel file). We also assume that for every two hours of teaching, one half hour is needed for preparation or other activities. Now, suppose a teacher runs two groups of children on an annual basis, e.g. one of four year olds in the morning and one of 5 year olds in the afternoon. The annual number of hours would be 2.5 (hours per day) x 6 (days per week) x 40 (weeks per year) x 2 (groups per teacher) = 1200. The concrete salary that she or he receives would be 1200 / 1800 x US$ 514 = US$ 343 per year, or Taka 2000 per month.

Teacher normative:

Hours / week	40
Weeks / year	45
Hours / year	1800
Salary / month Tk.	3000
Salary / year US$	514
Salary / hour	0.29
Extra time / lesson	0.5
Group size	25

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[13] In black and white printed text, the red font color is of course not visible. However, these figures can be recognized as the grey figures that are slightly lighter than the fully black figures.

Admittedly, a salary of Taka 2000 per month is not fantastic, but it is more than many NGO teachers now receive, while some teachers would have the option to increase that salary to a fulltime level, e.g. by running a group of parents or taking up another part-time job.

Based on these parameters, the simulation tool calculates the salary costs per hour, and multiplies this by the total number of hours that a teacher needs to work for one group, during one year. This overall salary cost is then divided by the number of children in one group, which is now set at 25 but can of course be altered. The result is that the teaching component of the salary cost stands at US$ 6.86 per child per year.

The teacher also needs to be trained. Many NGOs nowadays have good results with short (sometimes absent) initial training, followed by regular in-service training, e.g. once a month. In this report we assume that the teacher is normally paid during these training days, and that on average, the training takes 15 days per year; this would be an average over both initial and in-service training. If we multiply this by 8 (the number of training hours per day), and then by the teacher's salary per hour, we get a total cost of salary during training of US$34.29. In order to get the costs per child we divide by twice the group size, assuming that teachers run two groups on average. This may not always be the case, but from an efficiency point of view it is highly recommendable: training is costly and the costs should be spread over as many children as possible. If this is considered not feasible, one can enter 1 behind groups per teacher, or perhaps an average of 1.5. On current assumptions, the resulting costs of training per child per year would be US$ 0.69.

Teacher training:	
Training days	15
Hours / day	8
Salary teacher	34.29
Groups / teacher	2

The person who trains the trainer – we shall refer to her or him as the coach – is a highly skilled person earning, for instance Taka 9000 per month or US$ 1543 per year. We assume that she or he no only provides training, but also provides guidance and oversight. So, on a permanent basis, this coach has a "case load" of for instance 20 teachers. To get the cost per child, her or his annual salary must be divided by the case load, then by the group size, and then by the number of groups per teacher. The result is a coaching component of US$ 1.54 per child per year.

Coach:	
Salary / month Tk.	9000
Salary / year US$	1543
Case load	20

Finally, ECCE requires material investment. Very different approaches are being pursued. Sometimes costs are zero, when parents and communities are being involved. Other providers have the experience that most poor people in Bangladesh are too occupied making a living that one cannot count on their in-kind contributions. On balance it seems fair to assume that each facility requires a certain set of learning materials (sometimes this literally a tin-trunk), costing US$ 15, and that this needs replacement every five years; both the costs and the depreciation time can be altered. The costs of the learning space or facility are even more difficult to assess. Sometimes there are only hidden costs, e.g. when a space in a primary school or a private home is used for free; sometimes money is then spent on equipping the

place for the younger age group. In other cases, NGOs provide the funds for the roof while community members build the construction with local materials. Renting spaces is also not unusual. In general, one could assume that some US$ 100 is spent over 15 years, be it on rent, refurbishing, or construction of a simple learning place. Since two groups can use the space per day, we divide costs by two, and of course also by group size, in order to get costs per child per year. This would be US$ 0.25, on current assumptions.

Materials:	
Set for 1 class	15
Life cycle (years)	5
Space or facility	100
Life cycle (years)	15
Classes / facility	2

If we add up the four cost components per child per year (teaching, training, coaching and material), we arrive at the full unit cost of US$ 9.34. In the 4+2 model, this would apply to all four and five year olds. We shall address the total costs implications of this after having addressed the unit costs of the parenting programs.

Unit costs: the parenting programs

Despite similarities, the unit costs for parent programmes follow a slightly different logic than those of the regular programmes addressing children. We assume that groups of parents are led by a "facilitator". This is a slightly more skilled person than the teacher, since she or he also needs to have adult training skills. Again we assume a normative salary, this time of Taka 3500 per month or US$ 600 per year. With a normative number of 1800 hours per year, the salary per hour is US$ 0.33.

Various interviewees advised to keep sessions short, e.g. at 2 hours per session, since many parents in the target group are illiterate and hard working people with little time available and a short span of attention. As in the case of teachers, we assume that extra time is needed for each session, and perhaps more than in the case of regular ECCE groups. This time may be needed to talk with individual parents after sessions, or perhaps visit some of them in case of illness. So for each session we assume 2 hours of duration plus 2 hours of extra time, resulting a salary cost per session of US$ 1.33.

Facilitator	
Salary / month Tk.	3500
Salary / year US$	600
Hours / year	1800
Salary / hour	0.33
Hours / session	2
Extra time / session	2
Salary cost / session	1.33

The next question is: how many sessions are needed? Again very different answers were given. One or two per month is not unusual according to international experience, but this often applies to programmes with a much higher number of hours per session. Most poor people in Bangladesh can only free themselves for a short time span, so frequency must be higher to compensate this. We propose a frequency of 4 sessions per month when the child is in the first year of its life, 3 sessions per month in the next year, and 2 sessions per month in

the last two of the first four years of the child's life. Based on this, the simulation tool calculates the average number of sessions per month; multiplies it by 12 to get the annual number; multiplies it with the salary costs per session (see table above); and finally devides it by the group size, which is normally smaller than for children, e.g. 15. The result is a facilitator component of US$ 2.93 per parent (not yet per child!) per year.

Sessions / month 0	4
Sessions / month 1	3
Sessions / month 2	2
Sessions / month 3	2
Sessions / month av.	2.75
Group size	15

Further, we assume that facilitators are well-qualified but that they do need coaching. Given the large "span of control" (one coach oversees many facilitators, who in turn address many parents with many children) it is worthwhile to hire very well prepared people for this job. We assume a salary of Taka 9000 per month of US$ 1543 per year, and a case load of 20 facilitators. To get costs per parent we divide the annual salary by case load, by group size (i.e. number of parents per group), and finally by the number of groups that a facilitator can attend. With an average number of 2.75 sessions per month (see table above) of 4 hours each (totalling 11 hours per group) a facilitator can address 3 groups parents at one time, or 4 at the maximum. If we assume 3, the resulting coaching component would costs US$ 1.71 per parent per year.

Coach:	
Salary / month Tk.	9000
Salary / year US$	1543
Case load	20
Groups / facilitator	3

For materials, the logic is the same as for the groups of children, but the number of groups per facility is much larger. If any group of parents uses the space for only 5 or 6 hours per month, many other groups can use the space, be it for the parenting programme, be it for other community activities. The resulting material component costs US$ 0.80 per year.

Materials / group	10
Life cycle (years)	5
Space or facility	100
Life cycle (years)	15
Groups / facility	10

To get full costs per parent per year, the simulation tool adds up the three components: facilitator, coaching and material, finding a total of US$ 5.45. To finally translate this into costs per child per year, we need to take into account that most families have more than one child. If the mother and/or father enters the program when the first child is born, the younger children benefit from that training as well; it does not need to be repeated. The average number of children per family is currently 3, while it tends to be even higher among the poorer groups on which we focus (GOPRB, 2005:42). This brings total costs per child per year down to just US$ 1.82, illustrating the cost-effective nature of parenting programs.

Final outcomes

Table 8 contains the "final" outcomes of the exercises. But the word "final" should not be taken literally, since outcomes can be influenced heavily by changing the parameters, as we shall see. The table first presents the target group, i.e. the 40% poorest of the 3 million children that will be born in Bangladesh annually in the coming years. These 1.2 million children are divided over the Divisions and over urban and rural areas. The bottom row contains total figures for Bangladesh. The target group figures are blue, indicating that they too can be changed in the Excel file.

In the next column, the numbers of children in the target group are multiplied by the unit cost of US$ 8.65 for the programs for the children. The total costs for one age cohort is a little over US$ 10 million, as the bottom cell in this column shows. Since the 4+2 model assumes that both the 4 and the 5 year olds follow these programs, the simulation tool multiplies these figures by two (column "2 cohorts"). Similarly, the unit cost of US$ 1.56 of the parenting programme is multiplied by the numbers of the children in the target group, and then by 4 since this is what the 4+2 model assumes. Finally, the green figures in the column at the right side show the overall costs of the 4+2 model in Bangladesh: about US$ 31 million annually.

Table 8: final outcomes of simulation tool for 4+2 model

Division	Locality	Target gr.	Programs for children		Parent programs		Total cost 4+2
		1 cohort	1 cohort	2 cohorts	1 cohort	4 cohorts	cohorts
Barisal	urban	12673	118354	236708	23013	92050	328758
	rural	89756	838236	1676471	162985	651942	2328413
Chittagong	urban	37419	349458	698916	67948	271793	970708
	rural	162501	1517605	3035209	295081	1180325	4215534
Dhaka	urban	67609	631404	1262807	122769	491077	1753885
	rural	236822	2211692	4423384	430039	1720155	6143539
Khulna	urban	35591	332386	664772	64629	258515	923287
	rural	126652	1182809	2365618	229984	919936	3285554
Rajshahi	urban	56420	526909	1053818	102452	409806	1463624
	rural	315776	2949047	5898094	573409	2293636	8191731
Sylhet	urban	7852	73330	146660	14258	57033	203693
	rural	53904	503412	1006824	97883	391531	1398355
Bangladesh	urban	217528	2031504	4063009	395003	1580013	5643022
	rural	985410	9202791	18405582	1789379	7157518	25563100
	total	1202938	11234295	22468591	2184383	8737531	31206121

Source: compiled by the author.

Table 9 contains a simple sensitivity analysis, showing how the outcomes change as certain parameters are altered. It also shows the extra costs of the 3+3 model discussed in chapter 2.

Table 9: Sensitivity analysis of simulation tool for selected parameters

Parameter change	Outcome in US$ million
None (current assumptions maintained)	31.2
Hours per day for children from 2 to 3	37.8
Number of sessions per month for parents from 2.75 to 5	35.1
Teacher salary from Taka 3000 to Taka 2000	25.2

Salary of coach (both programme types) from 9000 to 5000	28.3
Set of materials for one class from US$ 15 to US$ 25	31.4
3+3 model instead of 4+2	40.3

Source: compiled by the author.

Not surprisingly, table 9 shows that an increase in the number of hours per day for children has a strong impact on total costs; these would increase by US$ 6.6 million. Much less is the cost effect resulting from a marked increase of the number of sessions per month for parents. Reducing teacher salaries by Taka 1000 saves a lot of money but is not advisable for quality reasons. The impact of changes in the salary of coaches is rather limited, while their importance for the quality of programmes is considerable. Even smaller is the effect of spending more money on materials for children; generosity towards them is not costly. Finally, the 3+3 model is much more costly than the 4+2 model: one "cheap" year of parenting programs is replaced by a much more expensive year of programmes for children, making the whole arrangement US$ 9.1 million more expensive.

Apart from the interactive nature of this cost estimation, there are more reasons why the 31 million dollars are not the final answer to the question how much the achievement of EFA Goal One would cost. The next chapter therefore addresses the issues of targeting and transition costs; of taking the existing provision into account; of food and nutrition; and of funding and returns.

VII.   Putting the estimation in perspective

Targetting and transition costs

This report assumes that the programme intervention only reaches the children below the poverty line and that reaching all the others can best be done after 2015 when the demography lends a helping hand. However, a child just below the poverty line may be living next door to a child just above it. It would be practically impossible, and morally inappropriate, to take the former child on board and refuse the latter. In practice, an expansion strategy is more likely to seek out entire villages where the average number of people below the poverty line is high, and enrol all children in that village, including the ones that are above the poverty line (although some of the latter may not have the need or wish to enrol). Thus, it can and should not be avoided that a lot of children outside the target group will be enrolled. This means, that in practice the overall costs may be higher than table 8 suggests, the more so since certain economies of scale do not always apply. On balance, it seems wise to anticipate that the resources requirement will clearly exceed the estimated US$ 31 million.

Another reason for such an anticipation is that the substantial expansion of a public service always brings transition costs. Policies must be formulated, plans must be made, the roll-out of provision must be undertaken, curricula must be developed and materials produced, teachers must be trained, et cetera. Even though some of these initial activities have been taken into account in the simulation tool, the costs per capita of an expanding system are always higher than that of a system that has been in a steady state for some time. Certain efficiencies of scale that we assume will not be there right from the start. And the more we reach the most excluded, the more costly it gets. E.g. the assumption that teacher may have a class of 4 year olds in the morning and one of five year olds in the afternoon will not be adequate in villages that are simply too small for having two separate classes. These villages are forced to combine the two age cohorts in one group, requiring extra skills from the teacher, or perhaps an extra class assistant.

Taking existing provision into account

One could argue that the US$ 31 million are the costs of running the 4+2 model for children under the poverty line, but not the *extra* costs. In other words, one could subtract the costs of the present provision from the US$ 31 million, arriving at a lower estimation. E.g. of the estimated 2.4 million 4 and 5 year olds that live under the poverty line, at least 1 million are likely to be already enrolled[14]. Likewise almost 1.3 million parents are already in parenting programmes (table 5), and few of them are likely to live above the poverty line.

However, many of the participants of the sharing meeting of this report on 6 November 2008 emphasized that the mere fact of the enrolment of these children and parents does by no means imply that their funding is secured. On the contrary, by far most of the programmes listed in the Directory are provided by NGOs depending on sources of income with a low degree of predictability. To build a stable ECD system in Bangladesh that reaches all those

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[14] See table 5 in chapter 5. About 1.4 million 3-6 year olds are enrolled, according to the Directory of the Bangladesh ECD Network (2007). As most if not all of the providers in that Directory report that they focus on the poor and the hard-core poor, we can safely assume that most of the 1.4 million live under the poverty line. And given the age focus of these providers, it is also safe to assume that at least 1 million of the 1.4 million are 4 or 5 year old.

who live below the poverty line, all of the funding must be secured, both of existing forms of provision and of new ones.

Foodstuff, nutrition and ECCE related medical services

Although it was the initial ambition of this report to estimate the costs of holistic, integrated child services, this appeared to be difficult. Not only was information on the provision of ECCE related services scarce, but what could be found pointed to rather high unit costs. For example, the costs of the daily biscuit that the World Food Programme distributes on a large scale (some 900.0000 daily) has risen from Taka 4 to Taka 6 due to the globally rising food prices. On an annual basis this is about US$ 30 per child, which is almost three times the cost of enrolling one child in a program during one year. Likewise, an "essential package" that the World Food Programme distributes among 600.000 primary school children (also including micro-nutritients and fortified food) costs US$ 23 per child per year, while total annual costs have risen from US$ 8 million to US$ 14 million, again due to the food crisis. BRAC University mentioned another package including breakfast, noon meal and two snacks; this would costs US$ 32 per child per year.

What makes it difficult to put these unit costs in a macro-perspective is that it is difficult to estimate the number of children who need these packages. Do all of the 40% born under the poverty line require these services? Or half of them? If we assume that half of the 1.2 annual newborns need it, total costs would be US$ 13.8 million for just one age cohort, easily rising to some US$ 75 million for all age cohorts, i.e. more than twice the US$ 31 required for programme provision.

While there is every reason to make this investment for young children below the poverty line, and while all arguments for integrated child services stand firm, there is a political risk in integrating learning costs and food and nutrition costs in one model. This risk is that total costs may be so high that neither of the two objectives is achieved. As a result of globally rising food prices, the costs of school meals and certain supplements have become so high, that a separate advocacy strategy seems needed, apart from advocacy for ECCE.

The funding of ECCE, and its returns

Yet, there certainly is hope. At the end of chapter 4 we saw that the education budget will grow by US$ 100 million every year even if the share of GDP that is allocated to education remains at its low level of 2.2%. Similar increases can be expected in the budgets of the ministries of Women and Children Affairs and of Health and Family Welfare.

These amounts of money dwarf the additional US$ 31 that is minimally needed annually to achieve EFA Goal One, and even the money that would be needed for a package of food and nutrition for half of the 0-6 year olds below the poverty line. These investments in children seem by no means unaffordable for a rapidly growing economy like that of Bangladesh.

And the investments will pay off. A strong body of literature has been developed in recent years galvanizing the evidence of the material and immaterial returns of ECCE. A report by the World Health Organization (Irwin et al, 2007) titled Early Child Development: A Powerful Equalizer reports impressive benefits from all over the world. Jaramillo and Mingat (2006) found that 87% of the investment in ECCE pays itself back as a result of reduced primary education drop out alone. The OECD (2005) reports that an increase in the average

numbers of years that children participate in education in a country by one year, will eventually lead to an increase in the GDP of that country by 3% to 6%. Even if the whole 4+2 arrangement would be equivalent to just one tenth of one year of regular education, then the gain for Bangladesh would be a staggering US$ 200 to 400 million in absolute terms, every year again[15].

Finally, there is one category of benefits that none of the research reports addresses. These are the direct "spin offs" of service delivery. For instance, the 900.000 biscuits that the WFP distributes go at a cost, but they are produced in Bangladesh. They come from modern and safe factories, offering good conditions of employment to the Bangladeshi citizens that work there. Their salaries will not miss their "multiplier effects" into the local community. Likewise, if thousands of women are trained and assume teaching jobs in remote villages, these teaching jobs may be the only forms of salary employment in those contexts. The impact of their salaries on local economies can be compared with that of micro-credit. And if parents gather together on a regular basis to sit down and reflect on the education of their children, it may actually be for the first time in their lives that they gather and reflect on something in a group setting under the guidance of a knowledgeable person. The impact on social capital is likely to be substantial.

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[15] The impact of ECCE investment on GDP is of course not immediate. It takes time to reap the benefits. The impact of drop out rates, however, is very quick indeed.

VIII.   Conclusions and recommendations

Conclusions

1. A defensible estimation of the extra costs of achieving EFA Goal One in Bangladesh is US$ 31 million annually. This is based on the following findings and assumptions.

2. Three million children will be born annually in the years between now and 2015, and the total number of 0-6 year olds will be 18 million in each given calendar year. About 40% of them, 7.2 million, live below the poverty line.

3. Following a policy advice of the Consultative Group on Early Childhood Care and Development, the 4 and 5 years olds among them, 2.4 million in total, should follow ECCE programs of good quality, delivered by well-prepared teachers. This costs US$ 22.5 million annually.

4. Following that same advice, parents should attend programmes that enhance their parenting skills during the first four years of their children's lives. This costs US$ 8.7 million. With the US$ 22.5 million for children, this makes about US$ 31 million.

5. The costs of providing a package of foodstuff and nutrition to all 0-6 year olds below the poverty line are very high, partly due to rising food prices. Providing an package of food and nutrition to half of all 0-6 year olds under the poverty line may cost more than twice the US$ 31 needed for programme delivery.

6. High as these cost requirements may seem, they are dwarfed by the expected growth of the budgets of the Ministries of Primary and Mass Education, Women and Children's Affairs, and Health and Social Welfare. Even if their shares of GDP remain unchanged, current growth would substantially inflate these budgets. At 2.2%, education's share of GDP lags far behind the regional average. Closing half of the gap with that regional average would also raise sufficient resources.

7. The case for making the investments is strong. Despite impressive improvements in the conditions of children in Bangladesh, there is still a lot of room for further progress. A reduction of school drop out alone may pay back a large part of the investment. Immediate impacts on people and local communities, and indirect impacts on the economy, will be many times the size of the original investment.

Recommendations

1. It is strongly recommended to see this report not as a statement but as a tool.

2. The Operational Framework for Pre-Primary Education of March 2008 paves the way for expansion of ECCE, formulating a vision and setting standards. From there, concrete costing and planning can take place with the help of the simulation tool. Any geographical area where many disadvantaged children are expected to live can be entered in the simulation tool, and all parameters can be adapted.

3. Debate among stakeholders about the parameters of the simulation tool can lead to further consensus building, beyond what is already achieved in the Operational Framework. While existing provision in Bangladesh is the result of efforts of various organizations, the further expansion could take place based on commonly agreed principles and parameters. This enhances transparency and efficiency, while safeguarding the autonomy of the providers[16]

4. Transparency can underpin advocacy. A plea for structured expansion makes no chance if overall costs are unclear. With a concrete price tag, funds have a much better chance of being obtained, especially if evidence on the important material and immaterial benefits of ECCE is presented.

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[16] This is comparable to the so-called faire-faire approach to youth and adult learning in Senegal. Notwithstanding an enormous diversity of providers, a consistent national policy could be built upon a framework of operational principles.

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