Implementing the Millennium Development Goals 2000-2015: Has Education Made a Difference?

Special Issue

Cresantus Nombo Biamba

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Foreword

The Yellow Report Series is an integral part of the Institute of International Education‘s (IIE) strategy to promote and to disseminate academic writings of national and international nature since the 1970s. This series allows first and foremost academic and research staff as well as visiting researchers to publish valuable research material acquired in the course of research and projects at IIE. This series as all other IIE series, namely: (1) IIE Studies in International and Comparative Education; (2) IIE Master’s Degree Studies; (3) IIE Work-In Progress Reports serve to keep updated the institution’s extensive programmes, projects and activities for research, education, training, scholarship, and networking in the field of International and Comparative Education, which are always inclusive and connect the Northern with the Southern, the Eastern and the Western hemispheres.

The present research report, Implementing the Millennium Development Goals 2000-2015: Has Education Made a Difference?, is the 125th of such report. Comparative research in developing countries and the Millennium Development Goals are also valuable contributions to the vision of IIE.

I would like to express my deep appreciation to Cresantus Nombo Biamba, for his outstanding contribution to the series and to International and Comparative Education.

Vinayagum Chinapah

Professor and Head of IIE
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The Institute of International Education (IIE) has supported this project as part of its programme of research and innovative development projects, which it hopes will be of value to policy makers, practitioners and service users. The facts presented and views expressed in this report are, however, those of the author and not necessarily those of IIE.
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<td>ADB</td>
<td>African Development Bank</td>
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<td>ADEA</td>
<td>Association for the Development of Education in Africa</td>
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<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
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<td>CEDAW</td>
<td>Committee on the Elimination of Discrimination Against Women</td>
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<td>DFID</td>
<td>Department for International Development</td>
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<td>EFA</td>
<td>Education for All</td>
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<td>EU</td>
<td>European Union</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>HDR</td>
<td>Human Development Report</td>
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<td>HDRO</td>
<td>Human Development Report Office</td>
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<td>HEI</td>
<td>Higher Education Institutions</td>
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<td>HIV</td>
<td>Human Immune Virus</td>
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<td>ICCS</td>
<td>International Civic and Citizenship Education Study</td>
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<td>ICPD</td>
<td>International Conference on Population and Development</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<tr>
<td>LDC</td>
<td>Less Developed Country</td>
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<td>MD</td>
<td>Millennium Declaration</td>
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<td>MDGs</td>
<td>Millennium Development Goals</td>
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<td>MDGRs</td>
<td>Millennium Development Goal Reports</td>
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<td>MFA</td>
<td>Ministry of Foreign Affairs</td>
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<td>NGO</td>
<td>Non-governmental Organisation</td>
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<td>ODI</td>
<td>Overseas Development Institute</td>
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<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<tr>
<td>PISA</td>
<td>Programme for International Student Assessments</td>
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<td>PRSP</td>
<td>Poverty Reduction Strategy Paper</td>
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<td>SADC</td>
<td>Southern Africa Development Committee</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>SSA</td>
<td>Sub-Saharan Africa</td>
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<td>TIMSS</td>
<td>Trends in International Mathematics and Science Study</td>
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<td>UN</td>
<td>United Nations</td>
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<td>UNDG</td>
<td>United Nations Development Group</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<td>WB</td>
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<td>WHO</td>
<td>World Health Organization</td>
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Overview

In recent years there has been a growing body of literature on the interconnectedness of the Millennium Development Goals (MDGs) and the need to maximize opportunities for education and their linkages. The existing empirical studies confirm some of the arguments about the benefits of education and the linkages to the MDGs.

With the developmental outcomes of basic education in mind, this desk study set out to examine in what ways, and under what conditions investment in education is important in relation to the millennium development goals. It provides a synthesis of research on the potential contribution of basic education to achieving the MDGs, focusing on key texts produced by the international institutions. Within this review a key focal point will be the context in which education appears to impact the various MDGs outcomes, which is referred to as the “enabling environment”. The report sought to explore the evidence about the contribution of basic education to poverty reduction and the achievement of the MDGs within certain countries or regions. It considered the critical support systems, policy environments and national capacities upon which good quality basic education depends, and assessed the role of basic education in developing and sustaining these.

In response to the global call to achieve the MDGs by 2015, many countries are making remarkable progress demonstrating that setting bold, collective goals in the fight against poverty yields results. Expanding access and improving the quality of education are both imperative for MDG progress. A balance must be struck to move both objectives forward.

It is widely stated that expanding education is critical to making further progress on the MDGs, for broadening the growth of education, and for tackling persistent poverty and inequality (ADB, 2008; Kabeer, 2010; UNICEF, 2010; UN, 2011). Various reports stress continuing disparities in MDG progress between different regions.
Chapter One

1.1 Introduction

The Millennium Development Goals (MDGs), which were agreed at United Nations General Assembly Millennium Summit in 2000, address challenges in poverty reduction, hunger, health, gender equality, education, and environmental sustainability, an ambitious set of development targets aimed at reducing poverty and improving the lives of people all around the world by 2015. Over the past decade, notable progress has been made on each individual MDG even in the poorest countries and the most difficult circumstances. Such success shows that the MDGs can be achieved. Indeed, the MDGs have led to unprecedented commitments, partnerships and progress in combating poverty and hunger, in improving school enrolment, in fostering gender equality and in extending equal access to health care. Yet progress is uneven between and within regions and countries and often too slow to meet the 2015 deadline. There is a growing realization that, without renewed commitment and concerted action, some countries will not reach all of the MDGs.

1.2 Background

In response to the global call to achieve the MDGs by 2015, many countries are moving forward, including some of the poorest, demonstrating that setting bold, collective goals in the fight against poverty yields results. Robust economic growth in the first half of the decade reduced the number of people in developing regions living on less than $1.25 a day from 1.8 billion in 1990 to 1.4 billion in 2005, while the poverty rate dropped from 46 percent to 27 percent (UN MDG Report, 2010). However, the global economic and financial crisis, which began in the advanced economies of North America and Europe in 2008, sparked abrupt declines in exports and commodity prices and reduced trade and investment, slowing growth in developing countries
Nevertheless, the collective efforts towards achievement of the MDGs have made effects in many areas. Encouraging trends before 2008 had put many regions on track to achieve at least some of the goals. The economic growth momentum in developing regions remains strong and, learning from the many successes of even the most challenged countries, achieving the MDGs is still within grasp: Progress on poverty reduction is still being made, despite significant setbacks due to the 2008-2009 economic downturn, and food and energy crises. The developing world as a whole remains on track to achieve the poverty reduction target by 2015.

The overall poverty rate is still expected to fall to 15 percent by 2015, which means around 920 million people living under the international poverty line half the number in 1990.

- Major advances have been made in getting children into school in many of the poorest countries, most of them in Sub-Saharan Africa.
- Remarkable improvements in key interventions, for malaria and HIV control, and measles immunization, for example have cut child deaths from 12.5 million in 1990 to 8.8 million in 2008.
- Between 2003 and 2008, the number of people receiving antiretroviral therapy increased tenfold, from 400,000 people to 4 million, corresponding to 42 percent of the 8.8 million people who needed treatment for HIV.
- Major increases in funding and a stronger commitment to control malaria have accelerated delivery of malaria interventions. Across Africa, more communities are benefiting from bed net protection and more children are being treated with effective drugs.
- The rate of deforestation, though still alarmingly high, appears to have slowed, due to tree-planting schemes combined with the natural expansion of forests.
- Increased use of improved water sources in rural areas has narrowed the large gap with urban areas, where coverage has
remained at 94 percent, almost unchanged since 1990. However, the safety of water supplies remains a challenge and urgently needs to be addressed.

Mobile telephone continues to expand in the developing world and is increasingly being used for m-banking, disaster management and other non-voice applications for development. By the end of 2009, cellular subscriptions per 100 people had reached the 50 percent mark (MDG Report, 2010).

Still, unmet commitments, inadequate resources, lack of focus and accountability, and insufficient dedication to sustainable development have created shortfalls in many areas. Moreover, as the UN MDGs Report 2010 points out, the effects of the global financial crisis are likely to persist: poverty rates will be slightly higher in 2015 and even beyond, to 2020, than they would have been had the world economy grown steadily at its pre-crisis pace.

The lack of reliable, timely, and accessible data on MDG-related investments and outcomes has been a major challenge to both tracking progress and ensuring that interventions are effective. Inspired by the Millennium Development Goals target of achieving universal primary education, the IIE has commissioned this educational desk research project to study why investment in education is important and linking the findings to the MDGs.

1.3 Objectives and Outcomes

In recent years there has been a growing body of literature on the interconnectedness of education and the Millennium Development Goals (MDGs). The purpose of this desk study is to synthesize global evidence generated through various MDG Country Reports and supplementary documents that focus on trends toward progress and on the gaps and disparities that have arisen. The study will help to establish a better understanding of how investment in education can lead to development outcomes that aid the achievement of the MDGs.
The study will produce: A review of evidence about the causal links between a range of outcomes and effects of investing in education in relation to the relevant MDGs.

1.4 Methodology

The research is based on an analysis of the global literature, as well as the grey literature on MDGs since they were first launched. This report discusses and demonstrates the link between investments in education and review the evidence about the causal links between a range of outcomes and effects of investing in education in relation to the relevant MDGs. The review was undertaken by identifying research relevant literature, which explicitly addressed the relationship between the various MDGs and educational outcomes. This literature included research texts, policy papers, evaluations and various other reports.
Chapter Two

Education Outcomes and MDGs

2.1 Introduction

The positive economic impact of education is reflected in its contributions to increase national income and individual earnings. Rate of return studies have consistently shown a positive correlation between years of schooling and earnings, with higher returns resulting from schooling in low-income countries and investment in education for women and children from deprived groups. Recent evidence also shows that levels of cognitive and non-cognitive skills acquired by students during schooling, rather than years of schooling, contribute most to increased income and lead to a more highly skilled workforce. Both PISA (Programme for International Student Assessment) and TIMSS (Trends in International Mathematics and Science Study) cite improved workforce skills as a better predictor of economic growth than average levels of schooling. Many social development indicators are also positively associated with educational levels. Lastly, the present focus on universal primary education (UPE) and gender parity in the Millennium Development Goals (MDGs) places Education For All (EFA) within the framework of a “collective endeavour to eliminate poverty”. All of the foregoing points constitute good arguments and a solid rationale for investment in education and the expansion of educational provision.

Primary education is a powerful lever for poverty alleviation and social and economic growth (World Bank 2004). Its results can be empowering, enabling graduates to take charge of their lives and make more informed choices, contribute to the building of a democratic polity, increase earning potential and social mobility, improve personal and family health and nutrition (particularly for females), and enable women to control their fertility.
It is widely stated that expanding education service is critical to making further progress on the MDGs, for broadening of growth, and for tackling persistent poverty and inequality (see ADB, 2008; Kabeer, 2010; UNICEF, 2010; UN, 2011). Various reports stress continuing disparities in MDG progress between different regions (especially between core and peripheral regions, urban and rural areas, and conflict-affected and peaceful regions). Within these under-served regions, various marginalised groups are persistently disadvantaged: women, certain minority ethnic or religious groups, and people with disabilities (see UN 2008, UN 2011, UNICEF 2010, Kabeer 2010).

Since the launch of the MDGs at the Millennium Summit in New York in September 2000, the MDGs have become a widely accepted yardstick of development efforts by governments, donors and NGOs. The MDGs are a set of numerical and time bound targets related to key achievements in human development to be reached by 2015, from their levels in 1990. They include halving income-poverty and hunger, achieving universal primary education and gender equality, reducing infant and child mortality by three-quarters, and reversing the spread of HIV/AIDS and other communicable diseases. Almost all the countries in the world, have committed themselves to attaining the targets embodied in the Millennium Declaration by 2015.

2.2 Linking Education, MDGs and Context

| MDG 1: Eradicate extreme poverty and hunger |
| MDG 2: Achieve universal primary education |
| MDG 3: Promote gender equality and empower women |
| MDG 4: Reduce child mortality |
| MDG 5: Improve maternal health |
| MDG 6: Combat HIV/AIDS, malaria, and other diseases |
| MDG 7: Ensure environmental sustainability |
| MDG 8: Develop a global partnership for development |

Figure 2.1: The Eight Millennium Development Goals (MDG)  
2.3 MDG 1: Eradicate Extreme Poverty and Hunger

MDG 1 focuses on efforts to reduce the number of people living in extreme poverty, generally defined as living on less than $1.25 per day, to assure that able adults have jobs and to improve nutritional standards.

2.3.1 Reducing Poverty and Achieving Sustainable Development

At the 2005 World Summit, the international community reaffirmed its commitment to cut in half the number of people living in extreme poverty by 2015 and achieve the eight Millennium Development Goals (MDGs), a series of time-bound and quantified targets to attack poverty's root causes in a multi-dimensional way.

The scale of the challenges, and the benefits of success to individuals, communities and the family of nation, are enormous: the global population is expected to increase from about 7 billion today to 9.3 billion by 2050, and the population of the 48 Least Developed Countries will more than double to reach 1.7 billion. Almost all of the net increase in population is occurring in the urban areas in developing countries, and in many of them, the number of people living in poverty is rising.

Moreover, the supportive development environment that prevailed in the early years of this decade is now threatened as the world faces a global economic slowdown and a food security crisis. At the same time, the effects of climate change are becoming more apparent.

2.3.2 Dimensions of Poverty

Substantial evidence suggests that the slower population growth and investments in reproductive health and HIV prevention (particularly among adolescents), education, women's empowerment and gender equality reduce poverty.
Carrying out the Programme of Action adopted at the International Conference Population and Development (ICPD) in Cairo and reaching its goal of universal access to reproductive health information and services by 2015 is an essential condition for achieving the MDGs.

A central premise of the ICPD is that the size, growth, age structure and rural-urban distribution of a country’s population have a critical impact on its development prospects and on the living standards of the poor. Poverty is multidimensional: impoverished people are deprived of services, resources and opportunities, as well as income. The ICPD realized that investing in people, and empowering individual women and men with education, equal opportunities and the means to determine the number, timing and spacing of their children, could create the conditions to allow the poor to break out of the poverty trap.

Evidence from India suggests that higher starting rates of human capital can lead to more rapid rates of economic growth and poverty reduction (Ravallion & Datt, 2002). Research on India finds that government investments in education have a modest impact on poverty and productivity, but that investments in rural roads and agricultural research are more effective in this respect (Fan et al, 2000). A similar study on China finds that government expenditure on education had the largest impact in reducing rural poverty and regional inequality and significant impact on production growth (Fan et al, 2002). This finding that investing in human capital is more likely to drive poverty reduction and balanced growth than investment in physical capital is supported by a number of other studies on China (Hare & West, 1999; Heckman, 2005; Fleischer et al, 2008). Several studies estimate that extending basic services in poor countries can deliver large growth benefits, and that the return on investment associated with this expansion is good compared to other avenues of spending (Hutton et al, 2006; Frontier Economics, 2012). These estimates should however be treated with caution.
2.3.3 Critical Investments for Poverty Reduction

Generally studies have shown that countries in which poverty levels are the highest are generally those that have the most rapid increases in population and the highest fertility levels. Countries that have reduced fertility and mortality by investing in universal health care, including reproductive health, as well as education and gender equality, have made economic gains. A 2001 study of 45 countries, for example, found that if they had reduced fertility by five births per 1,000 people in the 1980s, the average national incidence of poverty of 18.9 percent in the mid-1980s would have been reduced to 12.6 percent between 1990 and 1995.

2.4 MDG 2: Achieve Universal Primary Education

The most important of the MDGs is to achieve universal primary education, one of the most recognized pillars of human development. The priorities contemplated by the MDGs are comprehensive and mutually reinforcing, so while enhancing education is a development goal by itself, it is also widely recognized as the main avenue of social mobility and, therefore, of escaping poverty (MDG1). MDG 2 focuses on education. Improved educational opportunities, especially starting with the earliest years, opens the doors to better income and advanced agricultural productivity, helps combat harmful legacy views of gender roles, allows people to make smarter choices surrounding health risks and behaviors and offers a broader view of the environment and global economy. MDG 2 centers on universal access to a full course of primary education.

Several country case studies show a clear link between efforts to extend education to rural areas and improvements in school enrolment rates (MDG 2). Case studies on Cambodia (Engel & Rose, 2011), Benin (Engel & Cossou, 2011) and Ethiopia (Engel, 2011) describe how targeted investments in rural education have contributed to rapid improvements in enrolment rates and more equitable service provision. These case studies find that these successes cannot be attributed entirely to programmes to extend services – they have also
been assisted by broader improvements in governance and in social and economic development. They also stress that rapid increases in access levels have tended to be accompanied by a decline in quality.

A small number of studies have examined the broader economic benefits of extending education to people with disabilities. These studies (from Nepal, the US, South Africa, Bangladesh and Vietnam) find that extending education to people with disabilities has significant economic benefits, by increasing subsequent levels of employment and income (Lamichhane & Sawada, 2009). They also stress that inclusive education is more cost-effective than specialist provision for people with disabilities.

2.4.1 Wide-Reaching Impact

Education has wide ranging effects throughout society and links directly to poverty reduction efforts. Poverty levels are lower among families in which the head of the household has had some education than in those where the head of the household has no education. In Serbia, the poverty level was three times the national average in households that were headed by someone with no education. Education is also directly related to improved health. In Syria in 2008, 77 percent of the mothers who had a child who died prematurely were illiterate or had not finished primary school. Educated mothers are also much more likely to have their children immunized.

2.5 MDG 3: Promote Gender Equality and Empower Women

Girls and boys have equal rights to quality education. According to the Department for International Development (DFID) (2010) the fact that 39 million girls fail to attend primary school is both a tragedy for the girls themselves and a disaster for development. An increase of 1% in the number of girls with secondary education boosts annual per capita income growth by 0.3% and four years additional schooling lowers fertility rates.
Access to education, through primary school and beyond, is also a critical factor in creating gender equality and, as more countries adopt the principle of universal primary education the focus is beginning to shift toward preventing girls from dropping out. “The main challenge is the ability to keep girls in school once enrolled, including up to secondary level and higher”. According to the MDG Country Report (2006) from Niger, “This requires improvements in productivity among poor households to enable them to reduce the opportunity cost of sending girls to school. […] Thus, this issue covers the whole challenge of reducing poverty”.

In Ghana, where the MDG Country Report (2008) puts it on track to fulfilling MDG 3, the country has initiated some efforts that make remaining in school an attractive option for girls. Among these interventions are the construction of women’s dormitories in secondary schools, the provision of school supplies [and] uniforms to needy girls, the sponsoring of scholarships for girls, the opening of “gender-friendly” toilets and the offering of meals, including rations that can be taken home. “Active implementation of activities to promote girls’ education has helped to eliminate barriers to enrolment and encouraged participation and attendance,” the Country Report states.

For many countries, major steps made toward gender equality have included drafting an appropriate legal framework and building representation of women on the national legislations that create those laws. The principles of gender equality have been written into the constitutions of some countries, but individual laws have often had to be changed or repealed altogether to reflect adequately the principles of gender equality set out in the Committee on the Elimination of Discrimination Against Women (CEDAW) and reflected in MDG 3. In many countries, legislation dealing with inheritance rights, land rights, asset ownership, access to credit and protection from violence, has been scrutinized and revised to ensure gender equality.
2.6 MDG 4: Reduce Child Mortality

Improved outcomes for women and children include: more education, lower fertility rates, higher nutritional status, and lower incidence of illness, among others have broad individual, family, and societal benefits (World Bank, 2011). Though the evidence is thin, on the causal relationship from maternal and child health to growth or poverty reduction, it is robust in establishing the intrinsic importance of general health to the individual and its instrumental importance as an input into the accumulation of human capital, which in turn is a determining factor of economic growth (WHO, 2002). Several studies point to a strong correlation between health and poverty (Strauss & Thomas, 1998; Bloom & Canning, 2000; WHO, 2001; Gallup & Sachs, 2001; Sachs & Malaney, 2002). There is also evidence of a health related poverty trap (Gallup & Sachs, 2001; Bonds et al, 2010). Despite the lack of good studies on the existence of a potential causal (instrumental) link between MCH and household or national wealth, maternal and child health is intrinsically valuable not only to mothers and children but also to the broader global community as is evident from the prominent placement of MCH in the Millennium Development Goals (MDGs).

Child and maternal health now has a more prominent place on the international development agenda. The global initiatives on nutrition, child survival and maternal well-being announced at both the G8 summit in 2009 and the MDG summit in 2010 are welcome. However, current approaches fail to recognize the catalytic role that education, especially maternal education, can play in advancing health goals.

Equal treatment in education for girls and boys is a human right, and it is also a means of unlocking gains in other areas. Education improves child and maternal health because it equips women to process information about nutrition and illness, and to make choices and take greater control over their lives. Evidence from household surveys consistently points to maternal education as one for the strongest factors influencing children’s prospects of survival. If the average child mortality rate for sub-Saharan Africa were to fall to the
level for children born to women with some secondary education, there would be 1.8 million fewer deaths – a 41% reduction. In Kenya, children born to mothers who have not completed primary education are twice as likely to die before their fifth birthday as children born to mothers with secondary education or higher.

The 2011 EFA Global Monitoring Report provides striking new evidence on the health benefits associated with maternal education. Using household survey data, it shows that, in many countries, mothers who are more educated are more likely to know that HIV can be transmitted by breastfeeding and that the risk of mother-to-child transmission can be reduced by taking medicines during pregnancy. In Malawi, 60% of mothers with secondary education or higher were aware that drugs could reduce transmission risks, compared with 27% of women with no education.

Quality education has also been a factor in reducing maternal and infant mortality rates. According to Gakidu et al (2009), over half of the reduction in child mortality worldwide since 1970 is linked to “increased educational attainment in women of reproductive age”. Educated women are also more likely to seek out healthcare for themselves and their families. Studies on maternal health show that 90 percent of women with a secondary education in South and West Asia seek neonatal care, compared with only 50 percent of women with no education.

A case study of Bangladesh shows that improvements in targeting rural populations (Rodriguez, Peres & Samuel, 2011) have led to rapid falls in child mortality (MDG 4). This study acknowledges that success in achieving these outcomes has also been underpinned by broader factors such as economic growth and cultural homogeneity. A programme level impact evaluation in Ethiopia presents evidence that extending preventive and basic curative health services to previously under-served areas has led to an increase in the proportion of children vaccinated, but that the effect on preventive maternal care was limited and there was no broader decline in diarrhea and cough diseases among children (Admassie et al, 2009).
The 2011 MDG progress report claims that “targeted interventions” in health have succeeded in reducing child mortality, with the number of deaths of children under the age of five having declined from 12.4 million in 1990 to 8.1 million in 2009, although no detail is provided about how this calculation was made (UN, 2011).

2.7 MDG 5: Improve Maternal Health

Enabling people to have fewer children contributes to upward mobility and helps to stimulate development. When women can negotiate their reproductive health decisions with men, this exercise of their rights leads to an increased decision-making role within families and communities that benefits all. Because smaller families share income among fewer people, average per-capita income increases. Fewer pregnancies lead to lower maternal mortality and morbidity and often to more education and economic opportunities for women. These, in turn, can lead to higher family income. As women become more educated, they tend to have fewer children, and participate more fully in the labour market. Families with lower fertility are better able to invest in the health and education of each child. Spaced births and fewer pregnancies overall improve child survival.

Sexual and reproductive health services are key to curbing HIV. The pandemic is killing large numbers of people in their most productive years, increasing the ratio of dependents to the working-age population. Preventing AIDS-related disabilities and premature deaths translates into a healthier, more productive labour force that can improve a country’s economic prospects; many developing countries have large youth populations. Reproductive health programmes that address the greater vulnerability of adolescents to unprotected sex, sexual coercion, HIV and other sexually transmitted infections, unintended early pregnancies and unsafe abortions, and enable young women to delay pregnancy and marriage are important factors in breaking the intergenerational cycle of poverty. Investments in reproductive health, particularly in family planning, that result in lowered fertility can open a one-time only 'demographic window' of economic opportunity.
Evidence of the relationship between health status and education demonstrates that lower levels of educational attainment are associated with poorer health outcomes throughout life (Case, Fertig & Paxson, 2005; Poulton et al, 2002; Sacker, Schoon & Bartleya, 2002). The level of education has been found to be a powerful predictor of mortality and overall morbidity across the lifespan (Lleras-Muney, 2005), in people who have not completed high school at risk of a shorter life compared with those who do complete (Muller, 2002; Sundquist & Johansson, 1997). As well as being associated with a substantial reduction in educational outcomes, low socioeconomic status and poverty during childhood and adolescence are independent predictors of a number of illnesses including heart disease, cancer and diabetes (Albano et al, 2007; Kinsey, Jemal, Liff, Ward & Thun, 2008; Raphael, 2006). Children from such backgrounds are more likely to miss school due to illness, have poorer school performance and overall lower expectations about their educational achievements (Jackson, 2009).

The importance of early life experiences as a social determinant of health has been widely recognised by social researchers (for example, Raphael, 2006) and was endorsed in 2005 by the World Health Organisation, with the establishment of the Commission on Social Determinants of Health (World Health Organisation, 2010).

The foundations of adult health are determined in early childhood with the impact of early development and education setting the scene for future health outcomes and educational achievement. Poor emotional support and stimulation can lead to reduced readiness for school, low educational attainment, problem behaviour and the risk of social marginalisation in later life (Wilkinson & Marmot, 2003).

In most parts of the developing world children are disproportionately affected by poor health. The combined consequences of illness and social factors in this population have an adverse affect on educational outcomes for children, resulting in lower levels of achievement and attainment compared with other children (Schwab, 1999). There has been growing evidence over the last few decades of considerable disparities between poor and rich families.
across a number of health and social determinants (Ring & Brown, 2003). Illnesses and diseases that are more prevalent among children from poor family backgrounds compared with children from rich families contribute to a considerable burden of disease among these children and their families (Thomson et al., 2010). In addition, psychosocial factors such as overcrowded housing, domestic violence, greater interaction with the justice system, and alcohol and substance use negatively affect health status and mental and emotional well-being (Bailie & Runc, 2001).

Other indices such as life expectancy, the rate of teenage pregnancies, and infant and maternal mortality demonstrate poorer outcomes for families with low incomes (Thomson et al., 2008). Health status and educational achievement are inextricably linked but, for the most part, the two sectors operate independently from each other in the provision of health and educational services.

2.8 MDG 6: Combat HIV/AIDS, Malaria and other Diseases

MDG 6 calls on countries to stop and reverse the spread of HIV/AIDS and to secure universal access to antiretroviral drugs for people living with HIV/AIDS by 2015. For many countries fighting their way out of poverty, the ravages of HIV/AIDS represent not only a singular health crisis, but also the single greatest obstacle to economic growth and well-being. In 2008, sub-Saharan Africa accounted for almost three quarters of the global deaths related to AIDS and for about two thirds of those infected with HIV worldwide. In Asia, about 6 million households will sink into poverty between 2008 and 2015 as a result of the economic consequences of AIDS, based on an estimate by the Commission on AIDS in Asia.

Despite significant gains in universal access to treatment, significant gaps remain for most countries. And with new infections outpacing treatment scale-up for every two people put on treatment, five more are newly infected along with millions of AIDS orphans, AIDS is indeed a long-wave event, one that countries will have to
address for many years to come. MDG 6 also takes into account efforts to combat malaria, tuberculosis and other deadly diseases, striving to halt or reverse the spread of these diseases by 2015.

2.8.1 The Role of Education in HIV Prevention

Education has been identified as a key element in HIV prevention; even in the absence of HIV-specific interventions, education was seen to offer an important protection against HIV. The Global Campaign for Education (2004), for instance, estimated that universal primary education alone would prevent 700,000 new HIV infections each year. More recent studies and reviews find similar evidence: in their systematic review, Hargreaves et al (2008), for instance, found a tendency for higher HIV prevalence rates to be associated with the least educated in sub-Saharan Africa. Similarly, in their study in South Africa, Hargreaves et al (2008b) also found that attending school can be associated with lower-risk sexual behaviours; lower HIV prevalence among young men; and that secondary school attendance may influence the kinds of sexual relationships in which young people engage and thereby can also reduce HIV risk. They conclude generally that school attendance may reduce HIV transmission among young people.

2.8.2 The Role of HIV and AIDS Related Education

Given that education per se is a preventive factor against HIV acquisition, HIV specific interventions within educational/learning environments, are likely to have an even greater protective effect. And indeed, a number of studies conclude that there is sufficient evidence to support wide-spread implementation of school-based HIV related interventions (e.g. UNAIDS, 2011; Kirby et al, 2006; Ross et al, 2007; Harrison et al, 2010). In their systematic review, for instance, Mavedzenge et al (2010 and 2011) conclude that school based, adult led, curriculum based interventions showed clear evidence of reductions in reported risky sexual behavior.
Similarly, Yankah and Aggleton (2008) state that, “Overall, effective interventions were shown to have positive effects on knowledge, attitudes, skills and sometimes on behaviours” (pg 468).

For young women, who in many countries are particularly vulnerable to HIV and AIDS, a recent literature review concludes that one way to empower them to assert their sexual and reproductive rights is by increasing access to education, particularly secondary education (Hargreaves & Boler, 2006). More broadly it can be argued that HIV and AIDS related education is critical for young people since it provides them with information before they become sexually active or potentially engage in risk behaviours, including drug use (see also World Bank, 2002 and 2010). For young people who are already sexually active or using drugs, such education can also help protect them through providing information and knowledge about where and how to seek help, information and services.

2.9 MDG 7: Ensure Environmental Sustainability

MDG 7 takes a longer-term view of national development and efforts to reduce poverty, to ensure food security and to create the infrastructure needed to underpin social and health care advances. In doing so, it considers the protection of natural resources and an area’s biodiversity. In addition, this Millennium Goal calls for significantly better access to safe drinking water and basic sanitation, as well as improved living conditions for people living in slums. The Country Reports show that, although there has been progress toward these targets, many countries are struggling with environmental sustainability. In addition, MDG 7 has produced a wide range of ambiguity, with data often insufficient to allow assessment of the status.

A study comparing the impact of Dutch assistance on water and sanitation programmes in a number of countries finds that rural water programmes are broadly beneficial to poor communities and that the poorest people usually enjoy the benefits of improved water supplies. It also finds, however, that the very poorest and most marginalised communities typically have less access to these programmes and
benefit less from them (MFA Netherlands, 2012). A few studies have estimated that there are considerable economic benefits associated with improving access to water and sanitation (Hutton et al, 2006; Frontier Research, 2012).

An impact evaluation study shows that two water supply and sanitation projects in rural Pakistan improved households’ access to water supply and improved school attendance among high-school-age girls. However, the projects had no significant impact on the incidence and intensity of diarrhea and on increasing labour force participation and hours available for work (Rauniyar et al, 2011). Several other case studies (Uganda, Ghana, and Ethiopia) show that targeted efforts to improve rural water and sanitation have been successful (MDG 7C), though these studies do not examine broader impacts of these interventions on health outcomes, poverty reduction, or economic growth.

2.10 MDG 8: Develop a Global Partnership for Development

The final Millennium Goal takes broader view of development that supports national efforts to achieve the other MDGs. Among a diverse set of targets within MDG 8 that range from internet access to flows of official development assistance, one of the clear priorities encouraged by the Millennium Goal is integration with the global economy with equal opportunities through market access, international cooperation, debt policies and fiscal acumen. In the current volatile global environment, progress toward individual goals is difficult to assess.
Chapter Three
Linkages between Education, MDGs and their Relationships

3.1 Why is Education Important?

There is considerable literature showing that Education is a basic human right; a pathway to maximise individual potential, extend freedoms, build capabilities and open up opportunities. Quality education will equip and empower future generations with the ever changing skills and competencies needed to achieve sustainable development.

3.2 Education is also a Very Good Investment

It is widely stated that there is strong evidence linking levels of education – enrolment levels, but particularly levels of learning – to economic growth, improved health and nutritional outcomes, lower fertility and social stability (Figure 3.1). These gains underpin the critical role of education to achieving all the Millennium Development Goals (MDGs). The gains are often greater for girls than for boys when they complete a full cycle of quality basic education.
In general, countries with more educated populations enjoy higher rates of economic growth and less inequality. More recently, evidence has shown it is not only years in school, but what is learned in school, that counts. A recent study found that whilst an additional year of schooling was associated with a 0.37% increase in GDP, this increased to 1% when combined with improved learning outcomes.

Education is positively associated with improved lifetime earnings. Each extra year of education raises lifetime earnings by about 10%. Returns to education are higher for low income countries and for women.

Education, especially for girls, helps to improve health and to reduce fertility. Children of educated mothers are healthier, better nourished and more likely to survive as infants. Across the developing world, an additional year of schooling reduces infant mortality rate by between 5 and 10%.

Research has shown a strong relationship between levels of school achievement in science and awareness of global environmental problems. Both are associated with a greater sense of responsibility for supporting sustainable environmental management.

Education can play an important part in emergency response to conflict or fragility, in the long term process of reconstruction and building stability and in promoting civil engagement and democracy. Empirical evidence links levels and distribution of education achievement to indicators of democracy, stability and security.

**Figure 3.1**

*Source: DFID 2010.*
Education for All (EFA) agenda and Millennium Development Goals (MDG’s) has created awareness among many countries regarding the role of education in alleviating poverty and a big demand of building partnership for poverty reduction in most countries between educational and developmental sectors such as public and private sectors partnerships in achieving developmental goals is open.

The development of universal primary education in sub-Saharan Africa (SSA) has drawn widespread international support because of its perceived role in poverty reduction (UN, 2008). The expansion of secondary education in developing countries is now seen as a major priority due to its importance in linking primary education to tertiary education and further professional development as well as its role in responding to the demands of globalization and its potential to build skills for transforming livelihoods (World Bank, 2005; ADEA, 2007; AHDD, 2007).

In all countries education is considered a necessity from many perspectives. Firstly, from the economic perspective, it is a means to increased productivity and thus also a means to poverty reduction (URT, 2002). From the health perspective education, especially for girls is the most effective investment in reducing fertility levels (Kagia, 2007). From the overall socio-economic point of view, education is an investment in creating a competitive labour force that is important in attracting foreign investment. Yet other see education as a human right which everybody must have access to in increasing capacities of individuals to lead to the life they value and participate in all socioeconomic life (UNESCO, 2005). In spite of the importance of education, statistics suggest that many developing countries especially in SSA are still faced with a number of challenges in enabling their people to realize these potentials.
3.3 Life Skills Taught in School Vital to Reduce Risk of HIV and AIDS

Research conducted for the Global Monitoring Report (2012), “*Youth and Skills: Putting education to work*” shows the importance of investing in life skills education in school to ensure children have the confidence and negotiating skills to say no to sex and negotiate condom use. Tests with around 60,000 grade 6 students in fourteen countries in South and East Africa showed that only 7% of school children in the regions have the desired level of knowledge on HIV and AIDS; and just 36% have even the minimum level of knowledge. In twelve of the fourteen countries assessed in the regions, children from poorer households and those in rural areas scored significantly lower than those of high socio-economic status. In South Africa for example, one of the countries with the highest prevalence rates, more than half of students from rich households reached the minimum level of knowledge on HIV and AIDS compared with just one in five of those from poor households.

Even in the country scoring the highest on awareness of HIV and AIDS amongst schoolchildren, the percentages were low. Tanzania scored the highest and yet still only 33% of grade 6 students reported they had never attended HIV education classes during the year. Monitoring global progress towards Education for All goals, the 2012 Global Monitoring Report gathered evidence from across the region to demonstrate the impact that a life skills education – empowering children with confidence, self-esteem, decision making and ability to negotiate – along with HIV and AIDS education can have on increasing its prevention.

In Kenya, a life skills curriculum with grade 8 students decreased the incidence of teenage pregnancies by 61%. In South Africa, a life-skills education programme increased condom use at first sex by 10-12 percentage points for 14-18 year olds. Botswana halved the rate of new adult HIV infections from 2001 to 2009, partly thanks to introducing a life-skills education approach in 2006.
The new curriculum increased the percentage of women aged 15-24 years who correctly identified ways of preventing sexual transmission of HIV from 28% to 45% between 2003 and 2009.

3.3.1 Education and Poverty

Much of the above debate is set against the backdrop of the formal economy a world in which people are hired into an occupational hierarchy and progress within it according to their skills and abilities. An extremely important context, however, for a discussion of poverty is that part of production which takes place outside the formal sector, much of which is characterised by self employment in rural and peri-urban areas. There has therefore been much interest in examining the extent to which education affects production patterns in those activities.

It has been shown that primary schooling, for example, helps to increase the productivity of peasant farmers, particularly when they have access to the other inputs needed to enhance their production. It has been shown also that the earnings of the self-employed, including those in urban and informal sector activities are higher for the educated than for the uneducated. Furthermore, it has been demonstrated that increasing the schooling of women brings beneficial effects for their own control of fertility, for their own health, and that of their families.

Chinapah (2011) stresses that it is important to readdress the world’s increasing inequity, poverty and widening human development gap through access to relevant, equitable and effective education of the rural population who makes up the world’s majority of illiterate, unhealthy, malnourished, marginalized and oppressed population. The dynamics of rural transformation in the globalized world has created new educational imperatives that call for a re-evaluation of the role of present educational policies and priorities, and the re-examination of the role of education and learning (formal, non-formal and informal) for rural people from rather new perspectives. Chinapah (2011) further states that education should be seen as a key instrument for fulfilling the goal of the rural
transformation. It should contribute to the wellbeing of the rural people including food security, health, employment, protection of the environment and the management of our rural resources.

Human Capital Theory draws links between education and poverty in terms of education as a means of poverty reduction; another significant linkage runs the other way - i.e. the effect of macro- and micro-level poverty on levels of education. At the macro-level, it is generally the case that levels of enrolment correlate with GNP. Countries with low per capita incomes tend to have low enrolment ratios. However, there are a number of exceptions to this rule. In Africa, for example, extremely poor countries such as Lesotho, Madagascar and Togo have primary gross enrolment ratios in excess of 100 (Colclough, 2009). Among poor countries there is considerable variation, showing that low GNP does not necessarily translate into low levels of educational enrolment.

3.4 Gender Gaps in Education and Investment in Female Education

Studies have shown that gender-based discrimination remains one of the most intractable constraints to realizing the right to education. Without overcoming this obstacle, Education for All cannot be achieved. Girls are a majority among out of school children and youth, although in an increasing number of countries boys are at a disadvantage. Even though the education of girls and women has a powerful trans-generational effect and is a key determinant of social development and women’s empowerment, limited progress has been made in increasing girls’ participation in basic education.

According to Unesco (2010), girls’ primary, secondary and tertiary school enrolment has been maintained or increased in most countries since 2000. However females’ educational opportunity remains significantly lower than males and the gap is particularly marked in the poorest countries. Although it is generally true that those countries with high GNP have greater educational equality for males and females amongst poor countries, there is considerable variation in female/male ratios.
The literature shows that the last two decade has seen progressive emphasis on gender issues and increasing recognition of gender as a source of disparity. However, the analysis and response to the intersecting nature of disadvantages in education relating to ethnicity, poverty, geographic, and gender still needs to be strengthened. Identifying who is out of school is crucial for public policy formation, as is understanding why children start school late, which of them are pushed out of school and which of them never set foot in one.

**Jean's Story: An Adolescent Girl’s Belief in Education Provides Hope in Haiti**

When UNICEF met Jean Bernite just six weeks after the January 2010 earthquake in Haiti, she was living in a tent with four family members. Her situation mirrored that of more than a million earthquake-affected Haitians, including some 380,000 children and adolescents, living in crowded camps. Jean was volunteering to help earthquake survivors and was no longer attending school but was eager to return to the classroom.

A year later, her situation had stabilized. “I went back to school, and now I’m in my last year of high school… If there were two great things that I would love to change in my life, one is to go to college, and not only for me but all Haitian children who have finished high school and have no chance of going to college”, she said. “And after college, I would like to find a good job”. In Haiti, UNICEF and its partners have helped 720,000 young people like Jean return to school. By establishing new schools, procuring tents and educational materials, humanitarian agencies are working around the clock to ensure that every Haitian child has equal access to a quality education.

Though progress has been great, more than half of Haiti’s children do not attend school and the pace of school construction has been slowed by the need to clear rubble and enduring issues related to land tenure. “The change that I expected, I don’t see it yet”, Jean said of Haiti’s rebuilding process. “But what is good in my life is that I always wanted to graduate from high school, and now I’m in my last year, and I’m about to achieve that dream”.

The World Bank has stressed investment in female education as an important development strategy for developing countries and this strategy is broadly agreed across a range of agencies and, increasingly, governments. In particular the World Bank (2010) has stressed the high social rates of return to female education. It is widely claimed that educated women marry later, want fewer children and are more likely to use effective methods of contraception. Large differences in fertility rates are found between those who have completed at least seven years of education and women who have not completed primary education (UN, 2010). The more educated the mother, the lower is maternal mortality and the healthier is the child (World Bank, 2010). It is calculated that child mortality falls by about eight percent for each additional year of parental schooling for at least the first eight to ten years of schooling. This is explained through the use of medical services and improved household health behaviour, resulting from attitudinal changes and ability to afford better nutrition and health services.

3.5 The Impact of Education across Sectors: Democracy

Economic growth and democracy are described by the UNDP (2010) as essential to supporting a person’s development, which offers a path out of poverty, builds capacity to deliver quality services, unleashes broader prosperity, and is rooted in shared responsibility and mutual accountability. For example, well-functioning democratic institutions require an educated citizenry. Educated citizens are supportive of democratic ideals and institutions, and they play active roles in civic life and public decision making. Democratic regimes invest in education, and investments in better quality universal primary education lead to equitable growth. Furthermore, investments in societies with more education and greater civil liberties have higher rates of return. Finally, governments that demonstrate sound, equitable management of education services are more stable and credible to their citizens.
3.5.1 Education Lays the Foundation for Democracy and Development

Studies have long shown that education is as an essential component of the democratic state. At the dawn of American democracy, Thomas Jefferson argued that the viability of the young nation’s democratic institutions and ideals depended on the adequate education of all citizens. A century later John Dewey stated that democracy is more than just a form of government. It is “a mode of associated living”, that requires citizens to extend their definition of the group with whom they share an interest, breaking down the barriers of clan, race, and class.

Dewey defines education as the requirement for people to see outside traditional and cultural barriers, and thus define their individual interests as tied to a broader community of concerns (Dewey, 1916). Picking up the Jeffersonian line of reasoning, Dewey assigns the state primary responsibility for assuring education that can “discount the effects of economic inequalities”, and provide all citizens the skills and knowledge they need to build their own and their nation’s future.

Today, more nations are looking to build democratic institutions and promote active civil engagement and responsibility as key features of their development strategies. In fact, there is now a greater share of democracies among nations than at any time in history. Less than a third of countries could be classified as democracies in the early 1970s. That grew to more than half in 1996, and to three-fifths in 2008 (UNDP, 2010). A central challenge of development therefore is not just how to promote economic growth, but also how to reinforce the democratic institutions that help ensure all citizens have a say in a nation’s development and share in its fruits.

In his pioneering work, Lipset defined the socio-economic conditions that are prerequisites for democracy, with education figuring prominently among them (Lipset, 1959). Research identified education as one vitally important factor contributing to the emergence of more democratic states in Eastern Europe and Latin America, confirming Lipset’s hypothesis (Valverde, 1999). Recent
reviews of research reaffirm the primacy of the link between democracy and development, and education’s role as a foundation for both. The consensus is that democracy does not come about randomly. The socio-economic conditions necessary for democracy to emerge, and importantly, sustain, must be fostered within each country. To do this, countries and providers of development assistance must invest in education (Wucherpfennig & Deutsch, 2009).

3.5.2 Education Contributes to the Spread of Democratic Ideals

Based on a survey of voters in 18 African countries, Evans and Rose show how education is contributing to the spread of democratic ideals. They conclude that people’s levels of schooling predict their endorsement of democratic procedures and their rejection of non-democratic alternatives. Education has a stronger effect on attitudes towards democracy than other potential variables, such as social class, religion, or urbanity. Evans and Rose also argue that education offers a way to intervene in support of the development and stabilization of democracies. They affirm that, “The greatest aggregate gains in support for democracy are likely to be obtained by increasing the proportion of the population who complete primary education” (Evans & Rose, 2007).

In considering education’s link to democracy, development practitioners should note that research indicates education’s influence on political attitudes is not derived from instruction in civics or democracy oriented curricula. Rather, political attitudes are shaped through what is termed the ‘latent’ curriculum. This includes how classes are taught, (e.g., the level of self-expression and critical thinking that is promoted) as well as the larger climate of school governance. Participatory and democratic school culture, not a class in civics, is what contributes to social consciousness and increased adherence to democratic ideals (Ehman, 1980; Berman, 1997).

Evans and Rose explain how schooling plays a role in building support for democracy in part by enabling educated citizens to have greater access to media. Media access and the comprehension of information are critical to the emergence of democratic attitudes
World events continue to demonstrate the power of information technology and social media to spread ideas and ideals. However, an adequate level of education is required before people can exploit these growing communication channels. If this is achieved people can broaden their perspectives and redefine, as postulated by Dewey, their sense of shared interest.

3.5.3 Democracies Do a Better Job Investing in Education

Studies show that education underpins the development of democracy, and democratic approaches to governance tend to result in greater and better investment in education. For example, multiparty electoral competition is associated with higher levels of government expenditure on education. That higher level of funding also tends to be invested in primary education, while leaving higher education relatively unchanged. This has a redistributional effect, not only from one level of education to another, but from certain segments of the population to others (Stasavage, 2005).

Increased investment in the expansion and improvement of primary education improves socio-economic equity, but only if those investments are adequate enough to ensure a sufficient level of quality. When enrollment rates are low, children of the poor are the ones out of school. Therefore, they benefit most from investment in expansion of the system. As long as that expansion does not lead to an erosion of quality, then society as a whole becomes more equitable (Birdsall, Ross & Sabot, 1997).

Improved levels of equity, for example in access to education, explain in part why some countries have better rates of growth than others. Birdsall, Ross, and Sabot demonstrate how equitably provided quality schooling contributed to higher rates of growth in East Asia than in Latin America (Birdsall et al., 1997). In fact, the investments East Asian nations made in equitably expanding education laid the foundation for subsequent years of rapid economic growth (Birdsall et al., 1997). Access to education has been steadily increasing over the last 20 years, with growth in enrollment rates coming in those countries that needed most to expand the provision of schooling.
Developing countries for the most part have extended their education systems into poor, remote areas and have done more to ensure that girls enroll and persist in school.

While there is still more to accomplish, education systems are becoming more equitable. Equitable access to education is strongly associated with improvements in human development. Countries with the most equitable education systems have the highest Human Development Indexes, (UNDP, 2010). The 2007 World Development Report affirms that democratic participation enhances development outcomes. Countries with the greatest civil liberties have higher rates of return on public investments, and invest more in expanding access to education. Furthermore, higher levels of civic activity reduce corruption, improve governance, increase demand for human capital investment, and help prepare for and prevent disasters (World Bank, 2006).

3.5.4 Education Signals Responsive and Effective Governance and Contributes to Political Stability

For over 50 years, USAID has supported and promoted democracy in the developing world. For over a decade, the World Bank (2001) has also recognized that broad and equitable access to education is essential to democracy and sound governance. Systematic evaluations of effective governance like those included in the Worldwide Governance Indicators developed by the World Bank, the Human Development Index, or the Arab Democracy Index—all rely in part on measures of government provision of educational services and of educational opportunity and attainment within a society. These indexes all explicitly recognize that one measure of a government’s effectiveness is the degree to which it ensures the equitable provision of education: for boys and girls, for rich and poor, for urban and rural populations.

Using data from the Worldwide Governance Indicators, Kaufman, Kraay, and Mastruzzi demonstrate how education contributes to political stability and reduces corruption. Countries that achieve certain levels of educational provision, as measured by the
gross enrollment rate for secondary school, have higher levels of measured political stability as shown in Figure 3.2. The worldwide governance indicators also show that countries with higher levels of secondary school access have lower levels of corruption (Kaufman, Kraay & Mastruzzi, 2003).

In post-conflict situations and in otherwise fragile states, education plays an even more significant stabilizing role. Reopening schools helps to establish the credibility and legitimacy of the government, and demonstrates responsiveness to the needs of citizens. Education is the one public service that touches the lives of all, or almost all families. The quality of education system management is readily apparent to most people. Therefore, transparent and sound management of education services, with attention to equitable allocations of resources, and accountability for inputs and outcomes can be outward signs of a government’s efforts to meet the needs of its citizens.

![Figure 3.2: Education Underlies More Stable Governments](image)

**Figure 3.2: Education Underlies More Stable Governments**

3.5.5 *Education Supports Successful Decentralization*

As more countries decentralize, the opportunities for democratic participation multiply. In 2009, about 80 percent of countries surveyed for the Human Development Report had local governments with elected legislatures, and half of those had both an elected local executive and legislature (UNDP, 2010). The education sector in many countries is also decentralizing. The coupling of administrative and political decentralization offers expanded opportunities for citizens to play direct roles in controlling, and/or assuring, accountability for the provision of education services. Community and parental governance of schools has lead to schools that are more responsive to local needs, and therefore more effective in assuring access, completion, and learning (DeStefano, Moore, Balwanz & Hartwell, 2007). Investments in building capacity at the local level for effective public engagement in the governance and management of schools (essentially investments in decentralization) have high potential returns in terms of improved education and the spread of democracy.

3.6 *The Eight Millennium Development Goals (MDG)*

Studies have shown that democracy, civic participation, and civil liberties improve development outcomes and create the foundation for long-term stability. Transitions to democratic governance may lead to short-term instability, but evidence indicates that in the long-term countries will benefit from that transition; provided they have laid a foundation of equitable access to a basic education that provides young people with tangible skills and knowledge. Investments in quality education therefore contribute to establishing the virtuous circle through which increased civic participation and greater evidence of democratic processes and institutions lead to higher rates of equitably shared growth and economic development. This leads to further investments in education that are equitable and accountable, and therefore more effective, which continue to feed into greater and more equitable growth, and so on as depicted in Figure 3.3.
Implementing the Millennium Development Goals 2000-2015: Has Education Made a Difference?

Figure 3.3: Education and Democracy: High Potential for Increasing Returns


As DeStefano (2011) mentioned that, in a world where young people in a country can immediately mobilize to reclaim civil liberty by sending messages over Facebook, Twitter, and their cell phones, and where images of their democratic protests are immediately and ubiquitously available, Thomas Jefferson’s statement that, “Information is the currency of democracy”, has never been truer. Present and future generations can only benefit from the information that is so readily available to them if they have had adequate
opportunities for education. Dewey warned that, “freedom of action without freed capacity of thought behind it is only chaos”, a particularly relevant observation given recent popular uprisings reclaiming more democratic and civically responsive leadership according to DeStefano (2011).
Chapter Four
Trend Analysis

4.1 Introduction

Through a number of impact analyses it has been proved at the international level that education programmes contribute with cross cutting outcomes directly and in numerous ways to the achievement of the MDGs. This includes verifiable impacts on the economic situation mainly of poorer households and related effects on poverty reduction, education, health as well as the social status of women. Primary education is a basic human right, both transformative and empowering. Beyond this intrinsic importance, it is also indispensable for the enjoyment of other human rights and is a means for accessing broader social, economic, political and cultural benefits. Education contributes to building more just societies through reducing poverty and inequalities. No country has ever climbed the human development ladder without steady investment in education. Primary education is a powerful driver for the realization of all the Millennium Development Goals (MDGs) and for sustainable development more broadly.

Emerging concerns, such as global warming and the impact of recent economic downturn on national and household financial capacities, have underscored that primary education is struggling to be recognized as a major priority for additional policy attention and resources. There are proven multiple benefits of education on other aspects of development. It is important to remind the international community and policy-makers of the importance of primary education in strategies addressing a range of other developmental goals, including the other MDGs, and, in turn, the impact which other sectors have on educational outcomes. In the years leading to 2015, these aspects need to be emphasized.

Education is increasingly linked with other sectors, with the impact of basic education felt strongly across a number of sectors and goals. Similarly, progress in education depends on advances in
achieving other public goals, including the MDGs not related to education. It is important that policies recognize the inter-linkages between education and other areas, and that synergies are created in order to achieve the different internationally agreed upon goals.

4.2 What are the Social Outcomes of Education?

Studies show that adults aged 25 to 64 with higher levels of educational attainment are, on average, more satisfied with life, engaged in society and likely to report that they are in good health, even after accounting for differences in gender, age and income. Students in grade 8 (approximately 14 years old) who have higher levels of civic knowledge as measured by the International Civic and Citizenship Education Study (ICCS) are generally more likely to vote and be supportive of gender equality, although they are not necessarily more likely to trust civic institutions.

![Chart 4.1: Proportion of Adults Satisfied by Level of Education (2008)](image)

*Source: OECD, 2011.*
4.2.1 Context

There is growing interest in looking beyond the traditional economic measures of individual success, such as income, employment and GDP per capita, towards non-economic aspects of well-being and social progress, such as life satisfaction, civic engagement and health. Recent initiatives, such as the Stiglitz-Sen Commission on the Measurement of Economic Performance and Social Progress and the World Health Organization’s Commission on Social Determinants of Health, have been prompted by concerns that society is not as cohesive as it should be and that citizens are not as healthy and happy as they deserve to be. Studies show that several OECD countries have seen a decline in indicators of civic engagement, such as voting, volunteering and interpersonal trust, changes that may well have significant and lasting consequences for the quality of democratic societies (OECD, 2010). The health of the population is a major concern in OECD countries, as the increasing prevalence of conditions such as obesity and depression has led to a significant reduction in the quality of life for many individuals and growing public expenditures on healthcare.

A large body of literature suggests that education is positively associated with a variety of social outcomes, such as better health, stronger civic engagement and reduced crime (OECD, 2007c; 2010e). A small but increasing number of studies further suggest that education has a positive causal effect on these social outcomes (Grossman, 2006). There is also research suggesting that education can be a relatively cost effective means to improve health and reduce crime (Lochner & Moretti, 2004).

4.2.2 Other Findings

It is widely stated that adults with higher levels of educational attainment are generally more likely than those with lower levels of attainment to exhibit greater satisfaction with life, stronger civic engagement (i.e. vote, volunteer, express political interest and show interpersonal trust) and better perceived health. An individual’s
engagement in society and perceived health conditions appear to vary across different levels of educational attainment, even after accounting for age, gender and income differences. This suggests that education may have an impact on these outcomes by raising skills and abilities, although other factors related to the choice of education may also be at play. The differences in life satisfaction between below upper secondary and upper secondary attainment is partly driven by individual differences in income, suggesting that there may be income effects of education on life satisfaction for these individuals.

In a survey of some OECD countries, students in grade 8 with higher measured levels of civic competencies (i.e. knowing and understanding elements and concepts of citizenship) showed higher levels of anticipated adult electoral participation and supportive attitudes towards gender equality. However, the relationships between competencies and all the social outcomes are not necessarily positive. For example, in Chile, the Czech Republic, Greece, Italy, Mexico and the Russian Federation, the higher the level of civic knowledge, the less a student is likely to trust civic institutions. This suggests that country contexts may shape the ways in which competencies affect people’s perceptions of civic institutions.

4.2.3 Educational Attainment and Social Outcomes

Studies have shown that educational attainment is positively associated with various measures of social outcomes, including electoral participation, political interest, interpersonal trust, volunteering, self-reported good health and satisfaction with life (Charts 1 and 2) with the exception of electoral participation in Korea, all surveyed countries with statistically significant associations between education and these social outcomes show the relationship to be positive. In Canada, for example, only 63.4% of adults who have not attained an upper secondary education vote in national elections; but this proportion rises to 78.4% among adults with a tertiary education. These associations generally hold even after accounting for age and gender.
For most countries with statistically significant associations between education and either electoral participation or volunteering, the associations remain positive, even after accounting for differences in age, gender and income. This suggests that education’s contribution to civic engagement may involve fostering skills as well as raising incomes. For many countries there is not a statistically significant relationship between education and satisfaction with life for those with lower levels of education (i.e. upper secondary or below) once differences in income are taken into account. This suggests that obtaining an upper secondary education may contribute to life satisfaction largely by increasing individuals’ income. However, for
most countries with statistically significant association between education and satisfaction with life, the association remains significant among those who have attained tertiary education, even after accounting for age, gender and income. This indicates that higher levels of education may contribute to life satisfaction beyond their effect on income. For example, tertiary education may help individuals develop skills, social status and access to networks that could lead to greater satisfaction with life.

### 4.2.4 Civic Competencies and Social Outcomes

The Education at a Glance 2011 report notes that education can enhance social outcomes by helping individuals make informed and competent decisions by providing information, improving cognitive skills and strengthening socio-emotional capabilities, such as conscientiousness, self-efficacy and social skills. As such, education can help individuals follow healthier lifestyles and increase their engagement in civil society. Educational institutions such as schools can also offer an ideal environment for children to develop healthy habits and participatory attitudes and norms conducive to social cohesion. For instance, open classroom climate, practical involvement in civic matters and school ethos that promote active citizenship can foster civic participation.
Schulz et al. (2010) mentions that in some OECD countries, students in grade 8 (approximately 14 years of age) with higher levels of civic competencies show higher levels of expected adult electoral participation and supportive attitudes towards gender equality (Chart 3). In Norway, for example, those who are at the lowest level on a civic competency scale score only an average of 43.4 points on the ICCS scale of expected adult electoral participation, whereas those who are at the highest level on the scale score 57.0 points. They further state however, the relationship between competencies and social outcomes is not always positive. This may imply that national context shapes the way in which competencies affect people’s perceptions about civic institutions. Indeed, in countries with a relatively high level of perceived corruption, the more civic knowledge one has, the less likely it is that one trusts civic institutions. This does not necessarily imply a “negative effect” of
education, however. If civic institutions are indeed corrupt in a country, a negative relationship between civic knowledge and institutional trust may indicate that the education system in that country provides a sound and critical attitude towards institutions.
Chart 4.4: Civic Engagement, by Students’ Level of Civic Knowledge (2009)

Source: OECD 2011.
4.3 Impact of HIV/AIDS on Education and Poverty

While the causality between poverty and HIV is not clear, it is certain that HIV pushes households and individuals into poverty. Studies in the regions of Southern Africa and South-East Asia have found HIV/AIDS to negatively impact both the demand for and supply of education (Risely et al, 2007). Orphaned children are either pulled out of school or not enrolled at all due to the financial constraints of their affected families, and have to assume responsibilities of heading or providing for households. In this respect, girls are more vulnerable. In Kenya, links were found between parental deaths and children’s progress through school. In Tanzania, households that have experienced an adult death have been found to delay the enrolment of younger children in school, but try to keep older children enrolled. In Malawi, it has been shown that the death of an adult encourages children to marry earlier, drop out of school to help support the family, and take on informal labour schemes. In Zambia, it is estimated that more than 7 percent of approximately two million households are headed by children. The reduction in primary school enrolment has a domino effect on secondary and post-secondary enrolments as well.

A recent study in South Africa (2010) on HIV/AIDS in the higher education sector has shown that the mean HIV prevalence for students was 3.4 percent, while the mean prevalence among the academic staff was about 1.5 percent. The prevalence levels are much lower compared to the general population. Since Higher Education Institutions (HEIs) are reservoirs for future leaders and professionals, it is essential that they adopt strategies of lower prevalence, with no new infections.

The economic impact of HIV/AIDS presents huge challenges. While the causality between poverty and HIV is not clear, it is certain that HIV pushes households and individuals into poverty. While many illnesses create catastrophic expenditures which can result in poverty, HIV/AIDS is among the worst because its victims are ill for a prolonged period of time before they die, and many are the chief household income earners. Lack of education perpetuates
the cycle between HIV/AIDS and poverty, often arising from decisions concerning schooling, child-bearing, finances and unemployment. A number of studies have measured some of these negative outcomes, which suggest that there are significant inter-generational consequences of household coping strategies. While HIV/AIDS has a negative impact on education, it is also through education that appropriate mitigation initiatives can be implemented. The integration of HIV/AIDS education and life-long skills programmes in the school curricula can be an effective way of influencing behavioural changes in children from an early age.

4.3.1 Education and Skills Development

Some studies have shown that increased access to education is no guarantee that young people will develop the skills they need for a rapidly changing and increasingly globalised world (Hanushek & Woessmann, 2011; King & Palmer, 2006). Studies in several developing countries have shown that completion of primary education does not ensure even that students will have acquired even basic skills such as numeracy and literacy (Alemu et al, 2003; Galab et al, 2005; Heckman & Masterov, 2007; Hill & Chalaus, 2011). Moreover, expansion in school enrolment has placed strain on already limited resources for education in many developing countries, impacting on the quality of education that young people receive (Colclough et al, 2009).

Nonetheless, the expectation that schooling should deliver such skills is justified in a voluminous literature which examines the importance of cognitive and non-cognitive capacities, aptitudes and competencies for a wide range of life outcomes, including earnings, productivity, employment and well-being, as well as the more immediate outcomes of school retention, progression and achievement (Blanden et al., 2006; Carneiro et al, 2007; Glewwe, 2002; Heckman et al, 2006; Heckman, 2007). ‘Cognitive skills’ range from basic skills such as literacy and numeracy to much more complex problem solving abilities and capacities (Adams, 2011; Brunello & Schlotter, 2010). Individual cognitive functions and aptitudes may be considered to
form part of a broader conception of general cognitive ability/skill, or intelligence. By contrast, “non-cognitive skills” refer to affective or behavioural attributes, capacities or traits of the individual which are not themselves cognitive processes, but which are nonetheless important with regard to some of the same life outcomes associated with cognitive skills, for example income and employment.

Noncognitive skills include motivation, agency or self-efficacy and self-esteem. These skills may be expected to develop through children’s interactions with their parents, peers and teachers and may be fostered in formal school environments, but also through informal learning processes and other life experiences. They are considered important for the ways in which young people manage opportunities and constraints in their lives and are relevant for school adjustment, academic achievement, school completion, further education and economic outcomes (Borghans et al., 2008a; Carneiro et al., 2007; Dercon & Krishnan, 2009; Heckman et al., 2006; Heckman & Rubinstein, 2001). Importantly, while non-cognitive skills in a narrower sense, these traits are found to be associated both with educational access and achievement and with occupational aspirations and outcomes (Adams, 2011; Brunello & Schlotter, 2010).

4.3.2 Education Reduces Poverty in Rich and Poor Countries

It is widely agreed that the relationship between poverty and education operates in two directions: poor people are often unable to obtain access to an adequate education, and without an adequate education people are often constrained to a life of poverty. However, before addressing the interrelationships between poverty and education, it is important to discuss the concept of poverty. Throughout the world it has been found that the probability of finding employment rises with higher levels of education, and that earnings are higher for people with higher levels of education. A better educated household is less likely to be poor.

The impact of education on earnings and thus on poverty works largely through the labour market, though education can also contribute to productivity in other areas, such as peasant farming
In the labour market, higher wages for more educated people may result from higher productivity, but also perhaps from the fact that education may act as a signal of ability to employers, enabling the better educated to obtain more lucrative jobs. Middle-income countries that frequently have well developed markets for more educated labour are particularly likely to see the benefits of education translated into better jobs and higher wages. In Chile, for instance, between one quarter and one third of household income differences can be explained by the level of education of household heads (Ferreira & Litchfield, 1998, p. 32).

It was previously thought that the returns to education (the quantified benefits of investing in education) were highest at primary levels. This belief provided a strong case for expanding investment in primary rather than higher levels of education (Psacharopoulos & Patrinos 2004). However, new evidence seems more mixed. While some studies continue to show higher returns for primary education, there is now also much evidence that investment in education at secondary or even tertiary levels may bring even higher returns in some countries. This could indicate that returns to education vary with factors such as the level of development, the supply of educated workers, and shifts in the demand for such workers in the development process. It is well known that the demand for more educated labour rises as a country develops (Murphy & Welch, 1994). This increase in demand for highly skilled workers requires educational output to adjust accordingly, raising the relative returns to higher levels of education (Goldin & Katz, 1999).

Nevertheless, the absolutely poor in developing countries usually have low education levels. Some may still not even have access to primary education or may not complete their primary education. Universal primary education is therefore crucially important to reduce poverty. However, there are also examples of countries where the rapid expansion of education has resulted in lowering education quality, suggesting that countries face a trade-off between quantity and quality in the short to medium term. In such cases, the impact of education on poverty reduction may be small, and a lot of effort must go into protecting and enhancing the quality of
education. In developed countries there are sometimes groups of students who are excluded from the social mainstream. Some of the factors associated with this include poverty (especially relative poverty), language, ethnic minority status, or immigrant status (Schnepf, 2004). Although these factors may all separately contribute to social disadvantage and social exclusion, they often interact.

Thus, social exclusion is a common feature of many educationally ‘at risk’ students, both poor and non-poor. Social mobility varies across countries in the developed world. Generally, education improves job prospects for poor groups, although upward social mobility is more difficult for groups that are also otherwise socially marginalized, such as immigrant communities or ethnic minorities. Even among such groups though, education lowers poverty, but the returns to education may be smaller than for non-minority members due to discrimination.

### 4.3.3 Education’s Linkages with Economic Growth

The evidence showing that the quantity of education makes a difference to economic growth is not as strong as is often thought (Filmer & Pritchett, 2001). In fact, the recent international literature (Temple, 2001; Krueger & Lindahl, 2001) shows no simple causal relationship between education and economic growth. Education is often poorly measured, and the impacts do not always show up as statistically significant in cross-country growth regressions (Levine, 2004). This may be because large variations in the quality of education make it difficult to measure its impact across different countries. Research in this field has been hampered by suspect data and difficulties in specifying or measuring human capital and technology variables. Maddison (1989, pp. 77-78) made the following remark:
...the economic impact of better education is not easy to measure. Education is correlated with intelligence and family background, and its quality varies a good deal from country to country, so that it would be hazardous to assume that the quality of labour input rises pari passu with levels of education. Indeed all assumptions about the average contribution of education to growth must be very rough.

Because educational quality differs so greatly between countries, research that shows the effect of quality adjusted education is particularly important (Barro & Lee, 2001; Hanushek & Kimko, 2000; Hanushek & Zhang, 2006; Hanushek & Wößmann, 2007). Such research demonstrates quite conclusively that education of a good quality promotes economic growth. The impact of high and sustained levels of economic growth on a society and on general development can in turn be very large. An increase in the economic growth rate of developing countries can reduce poverty dramatically, as has recently been seen in countries such as China and India. In this way, better education can translate into sustained growth which can reduce poverty drastically.

There is also a relative aspect to the economic gains countries make from an educated labour force because competition for jobs and international competition between firms and countries are influenced by relative productivity. Education is thus very important to the economic performance and the international competitiveness of countries. Education not only has a direct productivity impact in the labour market, but its impact also operates in another way: a lack of adequate skills derived from education is sometimes an important constraint on the growth of countries. This applies to very poor countries, where the workforce may lack basic literacy and numeracy skills, and to developed countries that may face specific shortages of high-level skills, such as medical specialists or information technology experts. Londoño (1996) argues that inadequate education has been the most important factor holding back Latin American economic growth and thereby sustaining high levels of inequality and poverty. He is optimistic that improved education can bring a large
and relatively quick reduction in poverty. An important choice is also which education level to expand. Gemmelt (1996) finds that primary education is most important for economic growth in low income developing countries, secondary education for middle income developing countries, and tertiary education for rich countries.

4.3.4 Education Improves General Living Standards

Various studies have shown that education particularly of girls bring other social benefits besides higher incomes, which apply not only to the educated individual. Some of the advantages that education provides (externalities) both improve the living standards of communities and contribute to the social and economic development of countries. The benefits of education result in changes in people’s behaviour as a consequence of the knowledge gained. A long list of such benefits can be identified (Wolfe & Haveman, 2002), but not all of these changes in behavior necessarily have an impact on poverty.

Frequently, these benefits to a society are particularly large when female education improves. It is well known, for instance, that lower fertility is strongly linked to higher female education. Mothers’ education is also an important determinant of health care and sanitation in a household. This is reflected in, among other things, infant and child mortality levels that are much lower for the children of better educated mothers (Schultz, 1999). Better health status (for instance, lower levels of stunting) is in turn translated into greater success at school, thereby bringing positive feedback to education itself in the next generation. Similarly, parental education – and again, particularly that of the mother – also influences the support that parents can give to children, improving the quality and success of education in the next generation.

The education of girls has a further strong and very important effect on the role of women in society. It tends to draw more women into the labour market. This increase in female labour force participation expands income-earning opportunities for many households and better utilises the labour, skills, and talents of women. Education is seen as one of the most important ways of combating
HIV and AIDS, both in developed and particularly developing countries. In addition, there are other positive developmental impacts of education which may not be so clearly linked to poverty but which are nevertheless important. These include the fact that education improves the functioning, or even the sustainability of democracy in poor and rich countries alike, and that a higher level of education seem to reduce crime.

4.3.5 Education and Employment

According to New African (2004), one reason for the fall in the private returns to primary education is that, as the population of primary graduates increases, the value of primary education within the labour market falls. The reduced value of primary education in the labour market is a feature of increased supply of labour with primary education but also indicates changes in the demand for different skill levels. The rapid increase in the level of technology may mean that ‘basic’ education no longer provides the necessary skills to operate productively in modern societies. Evidence from several of the countries covered in this study implies that basic education is of little advantage for getting a job.

4.3.6 Education, MDGs and Human Rights

A completed primary education is a basic human right and is necessary for enjoying many other rights. It is transformative and empowering, and a means for accessing broad economic, social, political and cultural benefits. Primary education is a powerful driver for realizing all of the MDGs and for sustainable development more generally.

Human rights have not yet played a significant role in supporting and influencing MDG based development planning. There are some similarities between the MDGs and human rights. The content of MDGs partly resembles some economic and social rights, and both provide tools to hold governments accountable.
They can also reinforce each other since MDGs potentially provide benchmarks for economic and social rights, and human rights strategies can offer enhanced legitimacy, equity and sustainability to the types of policies needed to achieve the MDGs.

One of the key concerns from a human rights perspective is that the MDG targets are not sufficiently focussed on the plight of the poorest of the poor or inequality within a country. Several of the MDGs targets are not consistent with human rights and potentially diminish the gains enshrined in international human rights treaties. For instance, the target for Goal 2 should clearly state free, compulsory and quality primary education to bring it in line with international human rights treaties, and the strategies should ensure there is sufficient emphasis on the inclusion of disadvantaged communities and children with disability. While these inconsistencies between MDGs and human rights are not fatal, there is general agreement that some synergy would work to the advantage or even acceleration of MDG attainment. In this respect a number of actions can help in creating the necessary synergies:

- Aligning the Goals with human rights by harmonising MDG targets with human rights standards. This includes ensuring that the targets and indicators effectively correspond to economic, social and cultural rights, that gender is mainstreamed, and that efforts are adequately directed towards disadvantaged and marginalised groups or communities.

- Citizens should own the MDGs by ensuring enforceable rights, accountability mechanisms and sustainable strategies. The human rights approach offers a relatively objective and comprehensive framework for legal empowerment and accountability to help ensure that the MDGs are not only attained, but that the achievements are sustained beyond 2015.
4.4 Key Findings and Case Studies

A large number of qualitative country case studies provide detailed, long-term assessments of efforts to make education more accessible and improve progress towards the MDGs. The majority of these studies demonstrate a strong positive effect of these efforts, although some highlight shortcomings.

4.4.1 Economic Growth

While so many case studies examine the links between education and improvements in economic growth, the broader quantitative literature provides some comparative evidence to suggest that education boost growth. A cross-country quantitative study by Grimm (2011) finds strong evidence that health inequality dampens economic growth. Evidence from India suggests that higher starting rates of human capital can lead to more rapid rates of economic growth and poverty reduction (Ravallion & Datt 2002). Research on India finds that government investments in education have a modest impact on poverty and productivity, but that investments in rural roads and agricultural research are more effective in this respect (Fan et al 2000).

A similar study on China finds that government expenditure on education had the largest impact in reducing rural poverty and regional inequality and significant impact on production growth (Fan et al, 2002). This finding that investing in human capital is more likely to drive poverty reduction and balanced growth than investment in physical capital is supported by a number of other studies on China (Hare & West, 1999; Heckman, 2005; Fleischer et al, 2008). Several studies estimate that extending basic education in poor countries can deliver large growth benefits, and that the return on investment associated with this expansion is good compared to other avenues of spending (Hutton et al, 2006; Frontier Economics 2012).

Several studies examine the broader links between extending education to peripheral regions and economic growth. Ravallion and Datt (2002) compare economic growth in Indian states and find that
non-farm growth is more pro-poor in states with initial higher literacy, higher farm productivity, higher rural living standards and lower infant mortality. This demonstrates that improvements in human resource development can have a further impact by promoting higher rates of poverty reduction and growth that is more pro-poor. More broadly, they note that low basic educational attainment is a key source of income inequality and may suppress labour productivity.

Fan et al (2000) use a simultaneous equation model to estimate the direct and indirect effects of different types of government expenditure on rural poverty and productivity growth in rural India. They find that investments in rural roads and agricultural research had the largest poverty impacts and productivity gains. They found that government spending on education had the third highest impact on rural poverty and productivity, while spending on health had only modest impacts.

There is considerable literature on the relationship between human capital, growth and inequality in China (human capital refers to the population’s skills and knowledge and is related to education). Fan et al (2002) use provincial level data from 1970-1997 to estimate the effects of different types of government expenditure across China. They find that government expenditure on education had the largest impact in reducing rural poverty and regional inequality and significant impact on production growth.

Hare and West (1999) argue that improving human capital (especially through investments in education) and physical infrastructure in interior provinces is more effective at closing regional income gaps than efforts to promote enterprise growth, for example by providing credit to interior businesses. Heckman (2005) argues that the imbalance in investment in human capital compared to physical capital in China thwarts physical investment initiatives designed to foster growth in interior China. He argues that a more balanced portfolio of investment will promote economic growth and reduce inequality in the long run. This perspective is supported by Fleisher et al (2008) who conduct a cost benefit analysis of various policies in China.
They conclude that investing in human capital is a more effective policy to reduce regional gaps in China than investing in physical capital. They also find that it provides an efficient means to promote economic growth.

4.4.2 Education

Several country case studies show a clear link between efforts to extend education to rural areas and improvements in school enrolment rates (MDG 2). Case studies on Cambodia (Engel & Rose, 2011), Benin (Engel & Cossou, 2011) and Ethiopia (Engel, 2011) describe how targeted investments in rural education have contributed to rapid improvements in enrolment rates and more equitable service provision. These case studies find that these successes cannot be attributed entirely to programmes to extend services – they have also been assisted by broader improvements in governance and in social and economic development. They also stress that rapid increases in access levels have tended to be accompanied by a decline in quality.

A small number of studies have examined the broader economic benefits of extending education to people with disabilities. These studies (from Nepal, the US, South Africa, Bangladesh and Vietnam) find that extending education to people with disabilities has significant economic benefits, by increasing subsequent levels of employment and income (Lamichhane & Sawada 2009, Abetemarco et al no date). They also stress that inclusive education is more cost-effective than specialist provision for people with disabilities.

4.4.3 Health

Systematic reviews provide a solid basis for understanding the evidence on the impact of various mechanisms for improving health service delivery. A case study of Bangladesh shows that improvements in targeting rural populations (Rodriguez, Peres & Samuel, 2011) have led to rapid falls in child mortality (MDG 4). The study acknowledges that success in achieving these outcomes has also been underpinned by broader factors such as economic growth and
cultural homogeneity. A programme level impact evaluation in Ethiopia presents evidence that extending preventive and basic curative health education to previously under-served areas has led to an increase in the proportion of children vaccinated, but that the effect on preventive maternal care was limited and there was no broader decline in diarrhea and cough diseases among children (Admassie et al, 2005).

4.4.4 Water, Sanitation and Hygiene

A study comparing the impact of Dutch assistance on water and sanitation programmes in a number of countries finds that rural water programmes are broadly beneficial to poor communities and that the poorest people usually enjoy the benefits of improved water supplies. It also finds, however, that the very poorest and most marginalised communities typically have less access to these programmes and benefit less from them (MFA Netherlands 2012). A few studies have estimated that there are considerable economic benefits associated with improving access to water and sanitation (Hutton et al, 2006; Frontier Research, 2012).

An impact evaluation study shows that two water supply and sanitation projects in rural Pakistan improved households’ access to water supply and improved school attendance among high school age girls. However, the projects had no significant impact on the incidence and intensity of diarrhea and on increasing labour force participation and hours available for work (Rauniyar et al, 2011). Several other case studies (Uganda, Ghana, and Ethiopia) show that targeted efforts to improve rural water and sanitation have been successful (MDG 7), though these studies do not examine broader impacts of these interventions on health outcomes, poverty reduction, or economic growth.
4.4.5 Country Case Studies

A study on Cambodia’s progress in basic education finds that there had been substantial progress during the post-war period. “Almost all children are now entering school, and far more than before are completing primary school. The gender gap in primary and lower secondary school has effectively been closed. The rate of improvement has been most notable among girls, in rural and remote areas and among lower income quintiles” (Engel, 2011). This success is attributed to the government’s sector-wide administration and planning, and supply-side investments in services. The report also highlights the role of several innovative NGOs in working with the most marginalised to improve the quality and relevance of education. The primary school enrolment rate is approaching 100%. Secondary school enrolment has almost doubled over 10 years to 32% in 2009/10. Educational provision has become more equitable with substantial reductions in the gaps between rural and urban areas, boys and girls, and socio-economic levels. Despite this progress, however, high levels of corruption and low levels of institutional capacity are constraining further progress in education. Dropout rates remain high and low quality education remains a problem (Engel & Rose, 2011).

An ODI study examines the rapid growth in primary school enrolment rates in Benin since the 1990s, and a rapid decline in gender disparities in education. Disparities in access to education across regions and socio-economic groups have declined significantly over the same period. Despite progress, however, low quality education remains a problem. The study argues that key factors in this story “included the political support to prioritise improved access to education, supported by substantial increases in government and donor funding, and highly effective outreach campaigns to increase public perceptions of the value of education”. The report notes that “progress in education is likely to have contributed to, and in part been supported by, improvements in other areas of social and economic development.”
Enrolment rates are correlated with improvements in child and maternal health, infant mortality and morbidity rates and, particularly rates of malnutrition, which can significantly undermine learning abilities” (Engel & Cossou 2011, 14).

Another ODI study examines Ethiopia’s rapid and equitable expansion of access to education. Following the end of the civil war in 1991, primary enrolment grew rapidly, from 3 million in 1994-1995 to 15.5 million by 2008-2009. Secondary school enrolment grew fivefold during the same period, but education quality suffered badly, and large regional inequalities remain. Access to education has become more equitable in terms of gender, however, with the gender parity index in education rising from 0.66 to 0.88. There has also been a slight decline in the degree to which income inequality correlated with years of schooling. Key factors behind the expansion of access included a sustained government led effort to reduce poverty and expand the public education system equitably. This was backed by large increases in education expenditure and aid to the sector, as well as improved planning and implementation capacity at all levels (Engel, 2011).

A programme to achieve universal primary education in China since 1996, which focused on compulsory education for children living in poverty, successfully achieved its aim. Over five years, schools were renovated in provincial areas, teachers were trained, and equipment provided for west and central regions. Fees were eliminated for rural students in 2007 (National Centre for Education and Development Research, 2008).

Following independence in 1946, Jordan decided to build the knowledge-based sectors by improving basic education, and adopted a strong focus on rural areas. The country currently has a primary enrolment rate of 99% for both boys and girls, and a secondary enrolment rate of 85% (Roggemann & Shuki, 2010).

4.4.6 Extending Education to People with Disabilities

A small number of studies have examined the broader economic benefits of extending education to people with disabilities. A study on the wage returns to investment in education for disabled people in
Nepal finds that the estimated rate of return was very high amongst this group, ranging from 19.4 to 33.2 percent (Lamichhane & Sawada, 2009). The study also finds that years-of-schooling had a strong positive effect on the probability of employment.

Grimm (2011) uses a panel data set covering 62 low and middle income countries over the period 1985 to 2007 to examine the effects of education and inequality in health on economic growth. He finds “substantial and relatively robust negative effect of health inequality on income levels and income growth controlling for life expectancy, country and time fixed-effects and a large number of other effects that have been shown to matter for growth” (Grimm 2011, 448). He recommends that “reducing inequality in the access to health care and to health-related information can make a substantial contribution to economic growth” (Grimm 2011, 448).

The 2011 MDG progress report claims that “targeted interventions” in health have succeeded in reducing child mortality, with the number of deaths of children under the age of five having declined from 12.4 million in 1990 to 8.1 million in 2009, although no detail is provided about how this calculation was made (UN, 2011).

An ODI study examines Bangladesh’s impressive progress in the health sector. Infant and child mortality rates have reduced dramatically, immunisation coverage has rocketed and life expectancy has risen steadily. Increases in life expectancy are closely linked with performance in the field of immunisation and its impact on child mortality. Child mortality rates have fallen across all socio-economic groups, and have fallen more rapidly amongst girls and those living in rural areas. The report describes how innovative practices and approaches for targeting and empowering the most vulnerable, together with effective partnerships with non-governmental organisations (NGOs), have contributed to these successes. The report notes that NGOs have also played a key role in developing novel approaches and practices as well as in delivering educational services to under-served groups. Donor assistance has also played an important role in bringing about these changes as have underlying factors such as high levels of cultural homogeneity and social solidarity (Rodriguez, Pose & Samuel, 2011).
Another ODI paper examines the sharp improvements in health provision in Rwanda since the civil war and genocide in the mid-1990s. Although poverty remains high, Rwanda has made “remarkable improvements in the health status of its population, particularly among the most vulnerable, related to life expectancy; infant and child mortality; immunisation; family planning; HIV; malaria; and infrastructure” (Rodriguez, Pose & Samuels 2011a, 4). These improvements are attributed to a range of factors including “the introduction of a community health insurance scheme that contributed to the removal of barriers to access to health services while at the same time transforming health-seeking behaviour; the provision of quality health education services boosted by staff incentives and performance-based financing (PBF) schemes; strong leadership, commitment and vision leading to innovative reforms …and the decentralisation of the health sector” (p.4). Under five years age and infant mortality have halved in a 13 year period since 1994. The maternal mortality ratio has declined by 30% between 2000 and 2005.

A number of other country case studies describe how targeted efforts to extend health education service provision can lead to long-term improvements in health outcomes. Since its independence in 1948, Sri Lanka has focused on primary health, especially maternal and child health in rural areas, ensuring free provision of basic services and supporting community based initiatives. High levels of funding and equal distribution of resources have resulted in the best indicators for child and maternal health and access to primary health care in South Asia (Levine, 2004). In the 1980s and 1990s, large investments in health services led to increased equity in health for various East Asian countries including Korea, Singapore and Taiwan. Wagstaff (2005) argues that these investments laid the foundation for rapid economic advancement in later decades. In China, there have been substantial reductions in maternal mortality in the poorer, rural western provinces as a result of targeted government interventions (Liang et al, 2010). Yazbeck (2009) provides a number of additional case studies of how extending health services has led to improvements in health outcomes in Brazil, Cambodia, Colombia, India, Indonesia, Kenya, Kyrgyzstan, Mexico, Nepal, Rwanda, and Tanzania.
Chapter Five
Summary and Conclusion

5.1 Addressing 21st Century Challenges

Investing in education will be central to addressing 21st century challenges, including global competitiveness, climate change, conflict and insecurity. This is a two-way relationship. While measures are needed to counter the negative impact of economic recession, climate change and conflict on education, education must offer its own ways of combating and responding to the wider economic, environmental and social threats. If it fails to do so, educational gains will be lost, and education will quickly lose its relevance.

5.2 The Central Role of Education

In our knowledge-based world, education is the single best investment countries can make towards building prosperous, healthy and equitable societies. It unleashes the optimal potential in people, improving individual livelihoods and those of future generations. If all students in low-income countries acquired basic reading skills, 171 million people could be lifted out of poverty, equivalent to a 12% cut in world poverty. Yet a good education is more than an entry point into the job market.

By expanding educational opportunities, we can open the door to more equitable, dynamic and resilient patterns of globalization. It will be difficult to achieve sustainable development or lasting peace without the knowledge, skills and values cultivated through education. Indeed, education is the critical thread tying together all our hopes for the achievement of the Millennium Development Goals (MDGs). This is not a matter of choosing education over other issues of great importance. Our internationally agreed development goals are a complex tapestry, and education is the indispensable thread. As studies have shown educated mothers are more likely to have healthy children who survive. Educated families are less vulnerable to extreme poverty and hunger. Additionally, educated nations are more likely to
enjoy vibrant economies, political stability and a respect for human rights. Education is not simply a moral imperative, it is the smart choice.

5.3 Multiple Benefits of Education for Achieving the Other MDGs and Beyond

Efforts to achieve universal primary education and other aspects of the Education for All (EFA) agenda have to be addressed in harmony, or in some cases have to fight for attention, politically and publically, with other permanent and transitional national and international priorities such as food and fuel shortages and price increases, climate change, disasters triggered by natural and man-made hazards, infrastructure, livelihoods, and health. While many of these issues are inter-related and interventions in one may have positive multiplier effects on others, in practice, as countries emerge from the deepest world-wide economic recession since the 1930s, political attention and the allocation of any additional government revenues will be closely fought for. Although signs of economic recovery have started to emerge, it is feared that the aftershock of economic turmoil will be felt sharply across the social sectors and continue beyond 2010.

The effects of the crisis on education have already been felt and case studies conducted in 12 countries in August 2009 by UNESCO give reason for concern. Education budgets were still resilient in most surveyed countries, but several governments were planning to decrease their future budgets to reflect anticipated declines in revenue. Other UNESCO studies showed that the effects of the crisis on education seem more visible at the community levels than is indicated by government budget statistics and that vulnerable households were facing difficulties in meeting school costs. There were a number of accounts of increased absenteeism, school dropouts and child labour. In some countries, educational quality and equity in public schools were being jeopardized and the demand for education was expected to be affected due to declining household incomes and increases contributions required from families to counteract the fall in government allocations.
Protecting the gains made in primary education in many countries during the past decade and ensuring further progress towards the goal of universalization will require governments to increase the priority given to this sector and donors to expand and improve the effectiveness of their aid programmes. For this to occur in these difficult times, stronger cases emphasizing the need for basic education of reasonable quality in order for gains to be made in many other areas including poverty reduction, public health, gender equality, environmental sustainability, and participation and democratization. Arguments to make include:

- Links between increased education and higher productivity and incomes in agriculture are now well established. As this is the sector in which many of the poor participate, strengthening education within this sector is a goal to reducing poverty.

- Public returns of education are higher for low income countries, for lower levels of schooling and for women.

- Given that the level of a mother’s education (primary and secondary) is one of the strongest determinants of mother and child well-being and of daughters’ enrollment in school, increased female access to education generates cumulative social benefits.

- Ensuring children’s access to school is an important aspect of HIV prevention, as higher levels of education are associated with safer sexual behaviour, delayed sexual debut and overall reductions in girls’ vulnerability to HIV.

- The Programme for International Student Assessments (PISA) of the Organization for Economic Cooperation and Development (OECD) shows how science teaching equips young people with greater awareness of environmental issues and a stronger sense of responsibility for sustainable development. For the link between education and environment,
science education is a vital first step to ultimately drive political solutions on these issues and to hold governments accountable for addressing environmental problems.

- Education is conducive to democracy and peace in that it can facilitate the development of informed judgments about issues that need to be addressed through national policies. This is particularly important at a time of growing inequality within economies and societies and when around one third of out of school children live in conflict affected states.

- Increased levels of good quality primary and secondary education contribute to improving the understanding of the notion of peace, tolerance and human rights, conflict and mitigation. Additional years of formal schooling tend to reduce a boy’s risk of becoming involved in conflict.

These and the many other social benefits result directly from an extension of primary education and indirectly from behaviours associated with higher levels of education where primary education provides the base. While the impact of basic education across sectors and goals is wide, it is also the case that progress in education in turn depends on advances in achieving other public goals, including the non-education MDGs. It is important that policies recognize the inter-linkages between education and other areas to create synergies in achieving different internationally agreed upon goals.

Emerging concerns, such as global warming and the impact of recent economic downturn on national and household financial capacities, have underscored that primary education is struggling to be recognized as a major priority for additional policy attention and resources. There are proven multiple benefits of education on other aspects of development. It is important to remind the international community and policymakers of the importance of primary education in strategies addressing a range of other developmental goals, including the other MDGs, and, in turn, the impact which other sectors have on educational outcomes.
Education is increasingly linked with other sectors, with the impact of basic education felt strongly across a number of sectors and goals. Similarly, progress in education depends on advances in achieving other public goals, including the MDGs not related to education. It is important that policies recognize the inter-linkages between education and other areas, and that synergies are created in order to achieve the different internationally agreed upon goals.

In our knowledge-based world, education is the single best investment countries can make towards building prosperous, healthy and equitable societies. It unleashes the optimal potential in people, improving individual livelihoods and those of future generations. If all students in low-income countries acquired basic reading skills, 171 million people could be lifted out of poverty, equivalent to a 12% cut in world poverty. By expanding educational opportunities, we can open the door to more equitable, dynamic and resilient patterns of globalization. It will be difficult to achieve sustainable development or lasting peace without the knowledge, skills and values cultivated through education. Indeed, education is the critical thread tying together all our hopes for the achievement of the Millennium Development Goals (MDGs).
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Appendices

Appendix I

The Smart Choice

Education is the single best investment nations can make to build prosperous, healthy and equitable societies. Education unleashes potential in the individual and society to solve the problems of today, address the challenges of tomorrow and live in a world free of poverty.

Source: UN 2012.
## Appendix II

### Linking Education with Overall Development Efforts

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<th>Education Affects other Sectors</th>
<th>Other Sectors Affect Education</th>
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<td><strong>Health</strong></td>
<td>Improved child nutrition and health, through early child development, health, and feeding programs, contributes to school attendance and learning achievement.</td>
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<td>Expansion of schooling, especially of girls, lowers fertility rates, reduces child mortality, and improves maternal health.</td>
<td>Health information programs and access to health care improve attendance and performance of teachers.</td>
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<td>Through nutrition and other programs, schools improve children’s physical as well as mental development.</td>
<td>Combating HIV/AIDS reduces losses to the teaching force from the disease, absences from school of teachers and pupils charged with caring for relatives with AIDS, drop out of orphaned pupils.</td>
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<td>Life skills courses, health clubs, and other school-based programs including counseling, can promote health awareness and lifelong healthy behaviors (tobacco, substance abuse, hygiene, nutrition, HIV prevention).</td>
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Social Protection

Expansion of education opportunities reduces vulnerability of the poor, provides a route out of poverty for many.

Pro-poor distribution of education expenditures can reduce strain on the social protection system and vice versa.

Public works and employment programs and community driven social protection programs often involve school construction.

Safety net programs, or cash or food transfers conditional on school attendance, can enable poor households to keep children in school.

Experience in targeting for social protection may be relevant in developing techniques for cost recovery and subsidies in education.

Household surveys can yield important information for the education sector.

Effective employment policies are critical to realizing the employment and income benefits of education investments.
## Water and Sanitation

- Expansion of the school network can drive extension of water and sanitation services.
- Educated communities are more likely to have the resources and capacity to sustain water and sanitation facilities.
- Better education and training produces better water and sanitation engineers, more productive workers.

Water and gender separate sanitation in schools improves enrollment and attendance, especially of girls. Improves health, which improves attendance and learning achievement.

Water supply to communities and households increases enrollment and attendance, especially of girls, by improving health and reducing the time spent collecting water for household needs.

## Transport

- Educated communities have more resources and demand for transport services.
- Better education and training produces better transport specialists and engineers, more productive workers.

Improvements in transport give more children access to school; improve attendance rates of teachers and pupils; reduce the need for provision of dormitories/housing for students and teachers; and improve children’s security.
| **Social Development** | Education can promote social cohesion, social capital, reduce crime and youth delinquency.  
Targeted and non-formal education programs, use of mother tongue for language of instruction, promote inclusion of marginalized and disadvantaged groups. | Development of community and civil institutions can improve school performance by encouraging parental and local involvement in schools and demand for standards and accountability in provision of education services.  
Social and gender assessments yield important information for education sector. |
| **Agriculture, Rural Development, Environment** | Schooling increases agricultural productivity and awareness of environmental issues.  
Literacy facilitates communication and outreach to farmers and rural communities, organizational capacity, “voice”. | Improvements in rural incomes facilitate school enrolments and attendance. |
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