

Development Theory and Development in Practice: A Dialogue

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Chapter 1: Introduction: What is Development?

In the age of ever increasing connectivity, it is hard to remain disinterested in the plight of people who are either near us or thousands of miles away. People are willing to learn about the issues troubling others, and frequently they are willing to organise themselves and sacrifice both their time and hard-earned income to support a cause which they identify with. In fact, a Euro barometer survey indicates that within the European Union, Europeans show solidarity even in times of [economic] crisis... [up to] 85% find development aid very important or fairly important (Euro barometer, 2011). This is encouraging for the European Union: despite the global economic crisis, the solidarity towards the need to help others in developing countries has changed very little since 2009 (Euro barometer, 2012). At a more global level, there are greater attempts made for international coordination on issues such as poverty reduction, environmental sustainability and accountability.

The desire of individuals to organise themselves in order to help others has increasingly ensued through organisations, especially **Non-Governmental Organisations** (NGOs) and other non-profit entities, which can be collectively described as **Civil Society Organisations** (CSOs). There are many CSOs involved in development cooperation and we see that specialised organisations have developed with an exclusive aim of development assistance. The whole CSO community is far too diverse to be classified under one banner or goal, but there is a feeling that the community finds it hard to agree with economists' suggestions in the field of economic development¹.

The desire to discover how to stimulate development arose, nonetheless, from the field of political economy and its younger offspring, economics. Political economists (as the pioneer economists were called) were concerned about how to initiate and sustain interactions that would ensure the betterment of mankind. Yet, today it would seem that bar a few notable exceptions, the development community and the economics profession have diverged. The communication between those who are interested in the theory of development and those who practice development has been diluted.

¹In fact recent evidence from the United States argues that this holds true across society, with significant difference of opinion of the population and economic experts (Sapienza & Zingales, 2013)

Box 1: Some Useful Economic Terminology: Income

Gross Domestic Product (GDP): Is the market value of all products and services produced in an area over a fixed period of time, usually over a year or a quarter of a year.

Gross National Product (GNP or GNI): Is the market value of all products and services produced by residents of a nation/entity over a fixed period of time, usually over a year or a quarter of a year. The World Bank has now changed its terminology to be consistent with the United Nations system of reporting and hence Gross National Product it is now more commonly called Gross National Income (GNI).

Economic Growth: The Increase of GNI (sometimes of GDP), over a period of time

One might find the above too simplistic or dismiss it as fear-mongering. However, in smaller universities and institutions, there is no interaction between economics departments and development practitioners. In addition, the theory of economic growth is taught in Economics courses, but with increasing frequency, the theory and practice of effective development cooperation is removed from the curriculum of Economics degrees. As a result some universities do not offer development related degrees, while others have development economics and development cooperation (for practitioners) in separate departments.

In quite a lot of countries, development assistance and development economics are not linked in any way, and often they can be marginalised within their own departments. To add to the programs facing development education, there are those that dismiss development cooperation as at best ineffective and at worse as damaging to the prospects of developing nations (Moyo 2009).

It is also sad to say that for some economists, development assistance does not matter in how they perceive economic problems. This has even been the opinion of economists that specialise in economic growth. The reason is that when looked at in aggregate terms, development aid does not seem to lead to better developmental results: from a wide angle, there seems to be evidence that adds weight to the assertion. A meta-analysis of the relevant literature indicates that there is little relationship between faster economic growth and aid received at a country level (Doucouliagos and Paldam, 2009). As a result aid is not considered as an important determinant of economic growth by some economists. Doucouliagos and Paldam (2009: p.437) point out that “neither the standard textbook by Barro and Sala-i-Martin (1998, 2004) nor the 1,860 pages of the Handbook of Economic Growth, (Aghion and Durlauf, 2005) mention aid”.

New theories on economic growth, such as unified growth theory, seem to suggest that what specifies growth is path dependent²: aid can do little or nothing to help countries increase their per capita income (Ashraf & Galor, 2011).

Yet as we will show below this is not necessarily true, with aid playing a very important role for the development of a country. When seen at a micro level (i.e. judging each project at its merits), we see aid benefiting the lives of people. This micro-macro paradox (Mosley, 1987) is perplexing.

Yet perhaps the solution is to focus on making aid more effective, and in this regards the NGO and CSO community can help ensure that in the future the good results in the group are also visible when seen from a wider, macroeconomic perspective. Recent attempts by NGOs and research institutions³ to improve aid delivery methods and transparency practice go exactly in this direction. In this regard the focus by NGOs to emphasise more effective use of aid resources indicates that a large part of the problem is that aid is provided for many reasons other than whether it would be effective in increasing humanities welfare.

While the economics profession seems to be disengaging from the act of providing solutions to help stimulate development, there is also a retraction by development organisations in using economic theory to help them achieve results. It is often hard to see how economic theory applies in practice out on the field, while many of the practitioners come from diverse backgrounds, with little or no contact of the theory (and practical implications) of development economics. Development CSOs seem to be more focused in making delivery of aid effective rather than interacting with the recent development economics theories.

Since practitioners see aid as important and want to increase its effectiveness, why is aid being ignored and rejected as a factor of development by some economic theorists? The reason is that it is difficult to see the difference that development efforts have made up to now. Despite the amount of aid and development cooperation provided, development in the developed world is at best uneven; yet we are unsure of what the situation would be like with no aid given. As Duflo (2011) has stated, we are lacking an actual real life counterfactual, i.e.

² Path dependence argues that it is very difficult to change growth prospects that have been predetermined by a path set a long time ago.

³ Have a look at the Aid Transparency initiative (<http://www.publishwhatyoufund.org>)

how would life in Sub-Saharan Africa (SSA) be without aid? We simply do not know. Thus there is no consensus on whether aid is effective.

Humanity's success in its efforts to stimulate development through aid is bound to remain unknown, since we are not willing to stop all aid in order to evaluate the effectiveness of aid currently given. As a result of such uncertainty some have argued that aid does not stimulate development and have excluded it from the potential explanations of why development occurs, while others, especially CSOs, have shifted their focus in making the aid more effective for the local communities, in response to donors concerns.

The authors of the book believe that this controversy only exists if aid is seen at a broad, aggregate level. When one moves away from general macroeconomic data and focuses on specific case-by-case issues, there is evidence that development aid does matter and plays a significant role in improving the quality of life for people across the world.

In fact research indicates that although development aid might in aggregate be considered ineffective, Cassen (1986, 1994) showed that actual development programmes work, since about 50 per cent of all development projects have positive outcomes for the intended communities and very few of the remaining projects cause harm, even if an alarmingly high number of projects fail to achieve their stated aims. Hansen and Tarp (2000) and Collier & Dollar (2002, 2004) also argue that aid and development cooperation assistance programmes do promote economic growth of developing nations when measured using a goal-oriented approach.

The schism between development policy and development theory creates problems for development economic theorists and practitioners. Help can have unintended negative consequences which economic theory could predict thus avoiding in the field decisions that a practitioner might later regret. Barrett (2006) points out that food aid can have serious negative consequences when the conditions of the local market and the potential of installing an effective distribution system are not taken into consideration. Effective solutions to practical problems entail putting economic theory into practice.

In actuality, there is a positive way forward through greater interaction between economic theory and development in practice. By collaborating, development theorists and practitioners

can initiate projects that have a positive impact on communities on the ground, as well as in influencing policymakers to actively support effective projects. Such cooperation may lead to future macroeconomic data that will capture the benefits of aid in a way that will lay to rest the debate on relevance of aid to development.

The gap between economists and practitioners needs to be narrowed. We aim to explain to both economists and practitioners that they have similarities in their world view, and that a discussion can lead to breakthroughs both in theory and in effective practice.

This book aims to show that theory and practice in combination can provide the answers to make development cooperation more effective. Development economics has been a cornerstone in the first attempts of development cooperation assistance. Likewise, local development work has been effective in changing our perception of what is important to societies we aim to help. Economic theory and development cooperation in practise has been crucial in improving our understanding of what needs to be done and how.

Why are Economic Theories Relevant to Development Practitioners?

Many people might not know that economics was born out of the desire to understand, and the attempt to improve, our way of life. The development of economics into a distinctive field of philosophy was exactly due to the incessant concern to improve and augment the welfare of people. Adam Smith epitomised this in his seminal work “Wealth of Nations”: the desire to know what increases the material wealth of nations and how it could be nurtured, drove economics since its inception. Political Economy, as economics were called back then, aspired to understand and help communities reach a better quality of life, as the basis of economic thought.

This concern towards the lack of development for the majority of mankind has remained at the centre stage: at least eight of the winners of the Sveriges Riksbank Prize in Economic Sciences (colloquially known as the Nobel Prize for Economics), were awarded for work

relating to development issues⁴. Amartya Sen, Simon Kuznets and Robert M. Solow are notable examples of economists who were awarded the prize for expanding and broadening our understanding the process of development. This process is ongoing: notable economists, such as Daren Acemoglu, point out that despite a greatly more integrated world, the principal concern of Smith is even more valid, as inequalities between nations have increased since the 18th century (Acemoglu, 2012).

Economics has also managed to develop a more precise understanding of the actual goals of development by ascertaining ways to measure progress. Without tangible measures of progress (defined narrowly or widely), it is not possible to understand which actions help to increase prosperity or reduce the risk of famine, malnutrition and poverty. Development cooperation organisations have been assisted by economists' desire to produce testable data, and to create better and more inclusive data. This effort in generating information has been pivotal in any attempt to actively support the development of nations. Many of the economic instruments that we use today, such as estimates of income (See Box 1), have preoccupied economists since the 17th century, as economic commentators worried about the progress of their communities (Vanoli, 2005). The concern of economists about development remained in the forefront of economic thinking well into the twentieth century. Economics can help the CSOs to know what aid is effective by quantifying and testing results of the fieldwork.

In fact as economists understood development was more than just the sustained increase of income over time, it was economists that led the way in creating more accurate and more inclusive measures of development. Mesnick (2009: 94) states it was the economists Amartya Sen, Meghnad Desai, and Mahbub ul Haq, who led the discussion on a measure that would consider people to be the end goal of progress rather than the economy, setting the origins of the Human Development Index (HDI). Consequently, these economists created an index which was a powerful ally to the CSOs attempt to shift aid away from just economic growth.

Development economics in itself is a very modern and specific section of economics that only really gained traction in the 1940s and 50s (Seers, 1979). Simon Kuznets, (1966, 1971) a pioneer in developing instruments to measure economic growth, increased impetuous for

⁴ Many other Nobel Laureates could be included in this list, but for the purposes of this publication we are mentioning Amartya Sen, Robert M. Solow, Douglass C. North, Theodore W. Schultz, Sir Arthur Lewis, Gunnar Myrdal, Simon Kuznets and Paul A. Samuelson.

development by finding out that some countries had sustainable and prolonged increases of the economic growth rate that permanently transformed their societies (Kuznets called these incidences “**Modern Economic Growth**”). Yet Kuznets was also troubled with the increase in inequality and attempted to understand how income and inequality were related (Kuznets, 1955). Chapter 2 will introduce some general knowledge on development economics; Chapter 3 will evaluate concerns about what raises the standard of living in a sustainable way, while Chapter 4 will evaluate the interplay inequality and poverty can have with economic growth and development in general. Chapter 5 introduces the importance of the environment to any development effort and the need for sustainable development.

But what do we mean by development? The very concept of development has changed over time. After the Second World War the emphasis was placed in increasing income indicators for less developed countries, but gradually pushback from practitioners led to a more inclusive understanding of what should be the aim of countries. This was partly due to the belief that a focus on growth actually created great development obstacles through social exclusion, poverty, inequality and environmental degradation. The role of CSOs in promoting development in a broad way is now better understood by economists, through admitting the importance of civic institutions to economic growth (North 2006, Acemoglu 2012) and understanding the role of what the CSO community labels as development effectiveness.

As a result, development today is seen as a broad ideal beyond economic growth, where one needs to tackle several complicated issues in parallel aspects, including inequality and democratisation. Thus, development assistance has changed the way economists view economic development. By reintegrating economic theory with practise through this book we can perhaps show that the relationship between theory and practise has to remain close for both aid efforts and for economic theory to be effective.

The synergies between development theorists and practitioners have been instrumental in improving theoretical knowledge and aid effectiveness. Although economists and development NGOs have not always shared a common view on how to help less developed nations to achieve goals such as the Millennium Development Goals (MDGs), the debate and dialogue between these two groups is useful.

The book will revolve around three issues: Economic Growth, Inequality and Environment. It is important that the following debates can be understood by persons with interest in development issues, as well as development practitioners. This is by no means a technical book on economic development, neither an introduction to economic development topics to practitioners. It aims to introduce to the reader facts of development in theory and in practise and make them want to find out and experience more. The narrative of greater understanding through the interaction between theory and practise is the epicentre of this endeavour.

This is why the book is preferably described as a handbook: it wishes to explain and juxtapose how development theory affects CSOs work on the ground, as well as discuss how the different activities undertaken by NGOs influence development theory. Through the use of concrete examples this handbook aims to identify the synergies emerging from both the theoretical analysis and the practical aspects of development. The suggestions contained in this handbook are resolved to increase awareness for the important role played by NGOs vis-à-vis development theory, as well as to allow persons interested in development to get a grounding on the debates around these three important development issues.

Conclusion: How to Use This book

With a user-friendly approach, this book introduces major development economic theory issues while explaining how it has evolved over time. The book will argue that in this evolution the experience of development practitioners on the ground greatly improved our knowledge. It is not the book's intention to review the vast framework of development theory which has been produced to date; rather to review the main changes of economic theory over time and the role of aid work in bringing about the change. Any oversimplifications and omissions are thus unintentional, good natured and in the interest of space and communicability.

The handbook sets out to raise awareness on development issues in CSOs for the interested public, therefore, the layout of the handbook is purposely informative and communicative. You are invited to use the book as a portal for further reading in economic theory of development. It also makes a starting point for NGOs and development practitioners to increase their knowledge on key issues of contemporary development economics. The bibliography of the book will provide direction for additional reading to interested users. The

ultimate aim is to convince non-specialists that there is less disagreement than suggested between economists and practitioners: effective, socially responsible development cooperation and aid still matter in providing a better quality of life.

It would be far out of reach for this handbook to speak about all the issues of development. Instead, the handbook is centred on three issues of development economics and development cooperation where theory and practise make positive synergies: poverty reduction, economic growth and environmental sustainability. Development is much broader than the three issues we comment on, and readers who would like a more comprehensive understanding of development theory and practise can use this book as a stepping stone to more technical and all encompassing textbooks.

However while this book is aimed at the initiated in economics and development issues, it also provides the narrative of change within the development field to gain interest from those who have some development economics experience. Unlike many of the economic development textbooks, this book attempts to trace the evolution of theory and practice over time and to show that economists have often failed to prescribe the correct policies.

In this chapter the aim of the book was initially introduced and discussed, which is to bring together the knowledge gained from development theory and development in practise. While the role of aid in development is questioned by some, we argue with evidence that aid is important in changing the economic condition of the global population. However, it is important to make aid more effective in order for the general indicators of aid to be more conclusive and positive for the future economic wellbeing.

We will look at what we know in terms of the three main topics covered, i.e. economic growth, income inequality and environmental sustainability. Furthermore, the important linkages between these development issues will be highlighted and while, theory and practise will be explored as to how they have shaped our view of development and in that what we now know, is in part due to active discussions between development theory and development practise.

Discussions and information contained in the next chapters rest on the assumption that development theory and practice need to move on parallel levels and promote higher and

deeper degrees of interactions, in order to better understand a reality that is becoming increasingly more complex.

Chapter 2: Some Useful Background Knowledge

Before we begin, it is useful to provide some common definitions of terms that will be used throughout the book. Definitional confusion is one of the most common issues that can lead to lack of understanding between theoreticians and practitioners. This is especially true in development, since language used can have different meanings to economists and practitioners. Understanding definitions is the basic tool we will use to understand what can be considered development success. Definitions are highlighted **in bold** throughout the text. Some additional explanations are provided in the boxes dispersed throughout the book.

So what is development?

The meaning of development as a concept has changed over time; in addition, various groups conceive it differently. As a result there are frequent disagreements, due to the lack of mutual understanding between interested groups on what the true goal of what we call “development” is.

Until recently, development was considered under narrow economic terms. Back in the 16th century, mercantilist theoreticians conceived development as the increase in the wealth of a nation, which was expressed as the amount of precious metals held by the sovereign. By the start of the 20th century development was primarily perceived as an increase in economic progress. This was originally vague and efforts were made to pin-point what progress was considered to be. Economic progress became the goal of nations and several governments across Europe and Asia promoted industrialization and infrastructure policies, aiming to replicate the increase of economic activity that took place during the British Industrial revolution in the 18th and 19th centuries. Meanwhile there was an increasing understanding of what was defined as income and a convergence of opinion that income, rather than wealth, should be the leading indicator of economic progress.

With the onset of colonization there was an increasing desire to understand why colonised nations, which were once parts of mighty empires, now faced poverty and decline. Behind such work there was an implicit suggestion of the superiority of the colonizers; for some, economic progress was linked to a necessary shift towards a “western” style of culture and

Box 2: Foreign Aid

Foreign aid can be defined as including all the resources - physical goods, skills and technical know-how, financial grants (gifts), or loans (at concessional rates) - transferred by donors to recipients. This definition is purposely broad and might include resources directed for humanitarian, development and poverty needs. It can also include aid that is intended to fulfil strategic interests of either the donor or the recipient country. (Riddell 2007).

Official Development Aid (ODA)

It is provided by official agencies, including state and local governments, or by their executive agencies; and each transaction of which:

- a) is administered with the promotion of the economic development and welfare of developing countries as its main objective;
- b) is concessional in character and conveys a grant element of at least 25 per cent (calculated at a rate of discount of 10 per cent).” (OECD/DAC)

Humanitarian Aid, Emergency Aid

This can be part of the ODA and it is aid provided in situation of crisis, usually of a humanitarian nature (natural disasters, such as earthquakes, or man-made catastrophes, such as wars). Recent examples include the assistance provided to Haiti for the earthquake that hit in 2011, or the humanitarian crisis in Libya due to the change in regime.

What about Private Flow of Aid?

There isn't an agreement on how to define this type of aid, which can be generically referred to as 'international aid' or 'foreign aid'. As a result there have not been consistent estimates of the amount of private aid given. This can be the aid provided by citizens to NGOs, CSOs, as well as private initiatives such as pledge drives for international emergencies (for example Band Aid).

community organisation. Out of this interest the desire to increase income was placed as one of the key goals of a government. **Economic progress** was seen as an increase in the income of the average individual in a country or region. How to measure economic progress was then resolved in the 1940s and 1950s.

By the 1930s there was an understanding that areas of the worlds were not becoming part of the economic progress of the “western nations” and some of their dominions. The idea that something needed to be done for areas suffering from low living standards existed within groups and social institutions, yet the professionalization of development really gained traction just before the Second World War, when professionals were sent to less developed areas (often colonies) in order to promote better living conditions (Hodge, 2007). The incentives for the desire to promote growth varied: for some it was social and religious reasons, for others it was a desire to make colonies a stronger economic unit for the metropolis.

After the Second World War the nature of development economics and development assistance changed dramatically. The desire to increase development became part of the cold war between the two superpowers, as well as increasingly seen as a responsibility of the developed world towards the developing world. The need for post-war reconstruction created institutions such as the United Nations, the International Bank for Reconstruction and Development (IBRD), and the Organisation for European Economic Co-operation (OEEC, now broadened and renamed the Organisation for Economic Co-operation and Development, OECD), which were international institutions established to foster development. As this was taking place, development economics was embraced by university departments of economics as a separate dynamic branch of the economics discipline, while policy makers were interested in planning or encouraging projects which would stimulate better living conditions. Development assistance was increased, and official government organisations now run development projects, often without consulting with the CSOs already active in the developing world.

As a result of government assistance to less fortunate nations, development economics and aid policy became increasingly interlinked. However, development in the 1950s was not defined very broadly. As we will see in Chapter 3, economists active in development issues considered development mainly as an increase of the average income of an individual of a country or area. With the development of economic data such as GDP and GNI (see Box 1) economists had a tangible measure of progress: the increase of the GDP of a country or area, divided by its population, which is called the per capita GDP or GNI. The increase of per capita GDP or GNI over time is called **economic growth**. Economists would measure the rate of increase of the **per capita GDP or GNI** of a country or area to decide if there has been an increase, which **has now become synonymous with economic growth**. (Landes, 1969, Rostow 1960). Note that most news items report increases of GDP and not per capita GDP as economic growth, as it is a far easier indicator to report; however what we are really concerned about is the increase of the average income of the persons and hence per capita indicators are preferred. Despite being a flawed indicator (see Box 3) per capita GDP or GNI is still a useful and often quoted indicator of progress.

The **Gross Domestic Product (GDP)** of a country or area can be counted in three ways:

- As the market value of all final goods and services calculated during a time period (i.e. a quarter of a year or a calendar year);

- As the sum total of incomes of individuals living in a country during a time period;
- As all expenditure incurred by individuals during a time period.

These three ways should lead us to the same result as they compute the same thing, the total income; in other words, the total available production determines the total available income and is determined by the total expenditure. Hence in the circular flow of economic activity, the total income of a country can be measured in many different ways, but the answer should be the same. The GDP of a country or area should thus be the same regardless of the method that is used to calculate it.

Bear in mind that GDP takes into consideration the total production, regardless whether it is marketed or consumed through subsistence agriculture. Thus GDP is a universal measurement that can be used as a rough proxy for the level of the economy, and can compare across time and between nations.

Economic growth is the comparison of GDP across time to see if income increased. It is usually presented as an annual change. For example, the economic growth of The Gambia (located in West Africa) in 2010 was 5.5%, which means that the total income of The Gambia in 2010 was higher than the income in 2009 by 5.5%. For larger periods of time it is usual to present economic growth as the annual average growth period. For example, a substantial increase in income was marked in Cyprus over the period between its independence in 1960 and 2000, which, on an annual average basis is 4.6% (Barro and Sala-i-Martin, 2004: 5). That does not mean that the economy of Cyprus grew by 4.6% every year. In fact, the economy went also through severe **economic recessions**, defined as the decline in income for at least half a year, which indicates that the recessions combined with years when Cypriot income grew much faster, led to an annual average growth of 4.6%. The growth performance of Cyprus over that forty-year period can now be compared with other nations: it outperformed most Sub Saharan African and Latin American countries, but not as well as the Asian countries of Taiwan, Singapore, South Korea and Honk Kong, or other African countries, such as Botswana.

One must be careful to understand that the annual average over a large period of time can be misleading. Firstly, it does not tell us how economic growth took place. Both Thailand and

Cyprus have an annual average economic growth of 4.6% for the period 1960-2000. However Cyprus had rapid growth in the 1960 to 1980s, slowing down after reaching relatively high standards of living, while Thailand had slower growth until the late 1980s and early 1990s when economic growth was exceptionally high. Secondly, although countries aim for economic growth, the ultimate objective is to reach higher levels of income. A country can have economic growth rapidly increasing, however without living standards growing at the same rate, while on the contrary, life can still be more comfortable in western Europe, for example, but with relatively low economic growth, as the income level of the average citizen in western Europe is much higher. Thus, back to the Cyprus and Thailand example, the development of Cyprus (initial high growth increasing the GDP level, latter easing) warranted that Cypriots lived far more comfortably than Thais for the majority of the period. Thirdly, annual average growth over a long period of time is susceptible to the choice of when the year starts and ends. This is the **Gerschenkron Effect** that states that one needs to pick a year, which starts and ends with roughly comparable economic conditions. Picking a year of recession as the start year and a year of exuberant growth as the end year for example, can vastly overestimate the annual average economic growth rate of an economy, and thus overestimate the real achievements in increasing income.

There are other concerns in merely using the increase in GPD as the indicator for progress. The population grows and prices tend to increase. As prices increase, we need to be able to distinguish an increase of income from an increase in prices. If the GDP increased by 10% but prices increased by 10%, the real income of the population will have effectively remained unchanged. In the same way, if the GDP increased by 10% but the population increased by 10%, the real income of the population (per capita GDP) will have remained unchanged. What is more of interest then is to look at the changes in the purchasing power of people, i.e. determine whether the average household is able to attain a better quality of life than previously. In our two examples above, the purchasing power has remained unchanged, thus there has been no improvement to the average quality of life.

Consequently, statistically there is a distinction between **nominal GDP (also called GDP in current prices)**, which includes both increases in prices and income, from **real GDP (also called GDP in constant prices)**, which counts only increases in income. What does that mean? An increase in nominal GDP could indicate that a country's income has risen, but also that prices potentially rose, effectively keeping income the same. One does not know if the

income increased or not. However, an increase in real GDP accounts only for increases of income, thus we can be confident that economic growth is present. As a result, the per capita real GDP is the actual increase of average income, which ensures that the GDP will only increase if output increases and not if prices increase.

Over time it was also understood that GDP is not synonymous with the income earned by citizens and firms of a country; some discrepancies included for example migrants working abroad who send their income home but did not count as part of GDP, while foreign profits of companies sent abroad (and thus not really spent in the local economy) are also included. Thus a new indicator was created. **Gross National Product (GNP)** was set to distinguish the income of citizens of a state from the income generated within a geographical area (GDP) with the income of the citizens of a state (GNP). GNP takes the GDP and adds or subtracts the net property income from abroad. The income from abroad includes income sent by migrants (remittances) dividends, interest and other profits of citizens of a country that take place abroad and what is subtracted is remittances, dividends, interest and other profits that take place inside a country but are owned by foreigners.

The World Bank understood that for some countries there might be larger differences between GDP and GNP, as the income of citizens (GNP) might have substantial differentiation from the income produced in a country (GDP). Thus, GDP cannot be the only unit of measurement, whereas more accurate results can be attained with a measure similar to GNP to estimate a country's performance. However, for consistency purposes in cross-country comparisons, the World Bank uses the **Gross National Income (GNI)** for publications and as a measure of comparison. GNI is a very similar measure to GNP with the difference of a deduction of indirect business taxes, in order to make better comparisons between countries that impose or not such tax.

There will be times when it may be difficult to find GNI data and thus GDP will be used instead, which is also easier to calculate; however one should be aware of the major difference between the two: GNI measures the income of citizens of a country, while GDP measures the income produced in the geographic area.

To sum up, what is the best definition of economic growth? Although most of the above are often used as indicators of economic growth, the most apt would be the **Per Capita Real GNI (PPP adjusted) Growth Over Time**.

Thanks to the creation of the abovementioned calculation methods, international organisations have been able to create comparable statistics from most countries and regions of the world.

It is likely that, due to the growth of economic statistics spurred by the advancement of national accounting methods, economic growth (growth of per capita GDP or GNI) was for a time almost synonymous to development and progress. As a result, great emphasis was placed on tracking the rate of economic growth over time, both by international organizations and by country leaders in order to determine if the economic welfare of the average citizen was improving.

Box 3: What Measurement Counts as Economic Growth?

News channels are particularly excited to report the quarterly or yearly change of GDP of an economy. Yet what does that mean?

Let's try a small numerical example:

Country A has a GDP of €100 euro in 2009 and there are 10 people residing within its borders. If in 2010 the country has increased to a GDP of €110 then it will be touted by the media as a great success! Looking at the table below there is an increase of GDP by 10%, a very rapid rate of economic growth. If such a high growth rate remains, this country would double its GDP in just over seven years!

Of course this is not the best way of measuring economic growth. An increase in population means that in order for the average income of Country A citizens' to increase, the per capita GDP has to increase. In Country A the population increased from 10 to 11. If one divides the GDP by the population it realises that there is no growth of the per capita GDP: the rate of change on the average citizen is really 0%.

Country A	2009	2010
Nominal GDP	100	110
Rate of change	-	10%
Population	10	11
Per Capita GDP	10	10
Rate of change	-	0%

In fact the reported GDP is often in current prices, which means that it includes increases in prices also. What is more important to find is by how much the average income of the individual has changed. Except in the very rare cases when prices are falling but output is increasing, the real GDP growth will be somewhat below the nominal GDP growth, as is shown in the table below:

Country A	2009	2010
Real GDP	100	105
Rate of change	-	5%
Population	10	11
Per Capita GDP	10	9.5
Rate of change	-	-5%

So the newspaper's economic miracle is just a mirage: the real income of the average citizen is actually shrinking! Hence caution should be exercised when you hear economic statistics given as fact: people might just choose the one that serves their purposes...

For underdeveloped economies to prosper there is a need to maintain a high growth rate of per capita real GNI (over 3%) for a substantial period of time. Economists distinguish between cyclical increases of GDP or GNI that rise and fall in relation to economic cycles and extended periods of growth. Kuznets, one of the pioneers in the creation of economic indicators, was motivated by the fact that for the biggest part of human existence, per capita GNI did not rise the way it is expected to do today. Kuznets argued that what brought

development was a change in the economies of nations, which resulted in countries undergoing **modern economic growth**: a sustained rise in the per capita growth rate happening concurrently with an increase of the population. Figure 1 shows that modern economic growth is really a phenomenon of the last three centuries: never before has mankind managed to both increase its population and the average income per person for so long.

Figure 1 puts the time in the horizontal axis and tries to visualize what the average income of humanity was at various stages of the past two millennia. On the vertical axis is the total population of mankind: thus mankind has increased from under one billion people to over seven billion living humans today. The size of the dot indicates the average income: a small dot indicates a small average income for mankind, while a large one indicates a far larger income (the average income in selected dates is shown next to the dots). . The figure shows population and per capita income, whereby the larger the circle, the larger the per capita GDP of humans; the higher the circle the larger the global population living on earth.

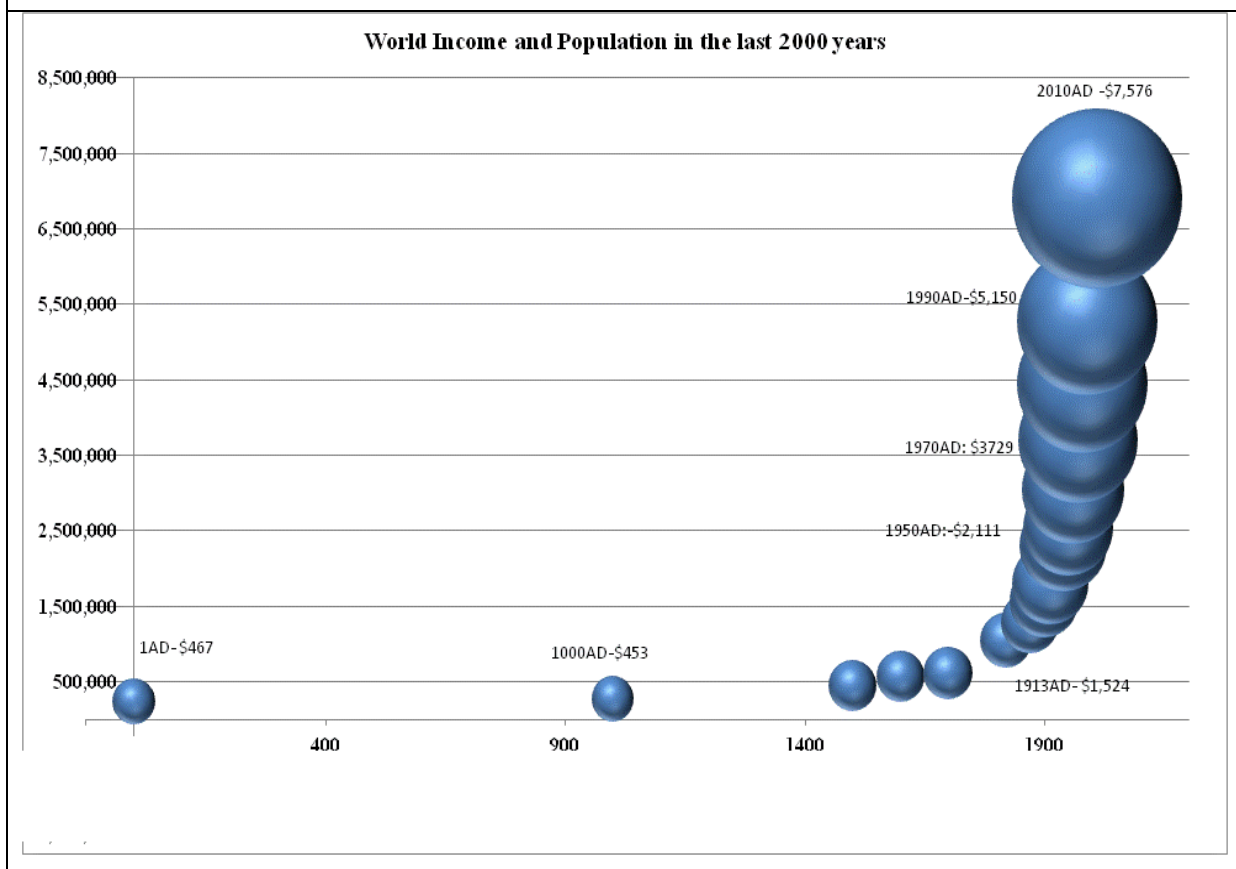
Thus in Figure 1 the per capita GDP (average income) is likened with the total population of the world at different times. Up until 1500 AD the population and the per capita income were inversely related, i.e. income growth occurred mainly due to a fall of population. As a result, both the population and the average income of the world were relatively stable at low levels. This has been referred as the **Malthusian Trap**, were the income of the population could only rise if the size of the global population was reduced. However during the last 300 years there has been an amazing transformation as both the population and the average per capita income has risen. This modern economic growth transformed the world, in that population could grow without being constrained by income (or vice versa!), breaking the Malthusian Trap. Thus development in terms of economic progress is primarily a phenomenon that is unprecedented in human history.

In the first decades after the Second World War, development was essentially focused on how to extend and promote the phenomenon of modern economic growth, highlighted by Kuznets. This awareness of a fundamental change in human existence let to attempt to understand what caused the joint increase of income and population. Gradually attempt to use theory to explain how to accelerate growth for a nation were also developed, some of which

are presented in Chapter 3. These led to policies being developed to promote per capita GDP in nations that had an income level lower than the global average.

Over time, there was an increasing frustration of economic theoreticians and development practitioners with regards to the narrow definition of progress as the increase of the average GDP or GNI per capita of a country or area. Attempts to initiate rapid development seemed to either prove ineffective, or create a multitude of other problems that were often almost impossible to solve.

Figure 1: Increase of Growth and Income since 1 AD



Note: Adjusted for Inflation using 1990 Geary-Khamis dollars. Source: Maddison, Angus, (2010) World Bank, (2012a) Visualizing Economics (2010)

Despite the fact that we today also rank other development necessities, income (defined as per capita GDP/GNI) is still important. Real per capita GDP or GNI is not just used to understand the long run view of economic development, but it is also actively used in economic policies and economic classifications. This measurement of average income of a nation has been used to stratify countries. The World Bank (see Box 4; World Bank, 2012b) classifies nations based on per capita GNI into the following categories: low income ($\leq \$1,005$); lower middle income ($\$1,006 - \$3,975$); upper middle income ($\$3,976 - \$12,275$); and high income ($\geq \$12,276$). According to the World Bank “These operational guidelines were established based on the view that since poorer countries deserve better conditions from the Bank, comparative estimates of economic capacity needed to be established. GNI, a broad measure, was considered to be the best single indicator of economic capacity and progress; at the same time it was recognised that GNI does not, by itself, constitute or measure welfare or success in development. GNI per capita is therefore the Bank's main criterion of classifying

countries” (World Bank 2012c). Hence there are real effects on how an economy is treated by international institutions depending on where an economy is classified by a per capita GNI basis. Although now we believe in broader measures of development, per capita GNI still matters in the way governments are treated by international institutions.

One of the issues that increasingly concerned economists, as development efforts re-doubled after the war, was the growth of **income inequality**. Income inequality is usually defined as a large variation of income within a nation or area. It can be measured in several ways (see Box 5) and, in general, income inequality suggests that the income of the wealthy in the community is very high when compared with that of the poorest. Income inequality did not receive enough attention in early development work, as it was suggested that it was a by-product of development that would resolve itself as countries reached “western” levels of prosperity. Yet, as Chapter 4 will indicate, pressure from persons who worked on the ground and the fact that development for the majority of the world’s population remained elusive, forced the economic community to act. Rising income inequality was a problem that development economics needed to understand in order to resolve, and not something that would disappear once progress was achieved.

Box 4: International Institutions

Towards the end of the Second World War there was an effort to create international institutions that would not only ensure the prevention of war, but also ensure the stability of the global financial system. Development was considered a crucial part of bringing global stability. The conference, held in July 1944 in Bretton Woods, created several institutions that sought to safeguard the global economy, including the International Bank for Reconstruction and Development (IBRD), the General Agreement on Tariffs and Trade (GATT), and the International Monetary Fund (IMF). These organizations work through representatives of nation-states on their boards and have their own international bureaucracy.

The United Nations (UN) was created in October 1945 and it became increasingly involved in issues of development through specialised agencies such as the Food and Agriculture Organisation (FAO), the World Food Programme (WFP) and many other sections. Meanwhile, the organisations established by the Bretton Woods conference evolved and adapted, diversifying their focus: the World Bank was created, including the IBRD as well as the International Development Association (IDA) and has made poverty reduction its main goal the World Bank Group which comprises three more institutions, also aims to facilitate investment and reduce economic friction; the GATT evolved into the World Trade Organisation (WTO) All these institutions have evolved over time to become much more independent. Many of these international institutions aim, either directly through loans and grants or indirectly through information and assistance, to help countries achieve a better standard of living. Some have been criticised for their work or real aims, but despite such criticism they remain an integral part of the development framework system.

In addition to these international institutions many others were created, so that there is now a plethora of organisations whose aim is stability and progress. Some of them work on the basis of nation-state membership, while others, particularly Non-Governmental Organizations, have adopted different organizational methods relying on organizations of local initiatives concerned about global issues.

Increasingly, it was understood that income inequality was not the only issue populations were facing while nations were developing. Practitioners of development assistance and economists were increasingly frustrated with the imperfections created by making the per capita income the sole measurement criterion. Among many others, Dudley Seers refocused the debate by arguing that development should be focused on needs and desires rather than on the available economic indicators (Seers, 1979). This idea was completely in tune with what was understood by development practitioners, who suggested that the emphasis on economic growth created so many other social and economic problems that would eventually make any achieved economic growth unsustainable. Out of these voices of dissent, the idea shaped was towards approaching development through the aspects of basic needs. The **basic needs approach** suggested a different form of development assistance in practise, which did not focus on the theory on promoting development as it existed at the time, but on ensuring that all individuals in society have the basic minimum for long term physical well being. In this

Box 5: Common Measurements of Income Inequality: The Gini Coefficient

Gini coefficient (also known as the Gini Index) is a frequently used measure of statistical dispersion, often used in relation to income inequality. The Gini coefficient measures the different values of a variable, such as income, among the whole population in a standardised way. As a result it can be compared across time and between countries or areas. It takes a value between 0 and 1 (but is sometimes shown as a percentile; i.e. 0.79 can be shown as Gini coefficient of 79).

If everyone in a country or area received the same amount of income there would be perfect income equality: as a result the Gini coefficient would be 0. If the income of a country is all received by just one person, with the remaining population receiving no income, the Gini coefficient will be 1: the most unequal society in terms of income.

Thus the Gini coefficient is telling us that an economy is more unequal the closer the coefficient is to 1. Sweden and Denmark are considered the least unequal with Gini levels of around 0.23, with the Gini coefficient of most of the developed nations hovering around 0.30/0.35 (OECD, 2008). Although it is considered that the poorer economies are the more unequal, instances of unequal economies are also found in developed economies. For example, the USA is more unequal than Poland despite having substantially higher income, with a Gini index of 0.38.

It is important to understand what the Gini index is measuring, which is the differences between incomes of a population. Low numbers of Gini inequality index would exist in a prosperous country with low inequality or a poor country where all persons have the same income. A poor country with no inequality will score low in the Gini index, but its income in relation to the world will also be very low. Thus Gini index measures the inequality within a population, and does not indicate inequality in the world, but only in each country.

There are other measurements that are used to register income inequality. When combined with other poverty indicators, Gini can allow one to get a better understanding of the economic vulnerability of the poor and the income distribution of a nation.

approach the elimination of absolute poverty by ensuring global minimal standards of consumption became the priority.

The basic needs approach helped explain the need to understand and define poverty. It is directly linked to our definition of **Absolute Poverty**, which is a measure of how many individuals fail to achieve the basic needs for long term physical well being. As theory was catching up to practice, it became clear that poverty mattered and that the existence of large poverty in a proportion of the population was a major stumbling block to development; therefore it could not be ignored. The need to combat poverty was thus acknowledged, both in terms of absolute poverty and relative poverty.

Today a universal unit of measurement of absolute poverty has been established based on the idea of a poverty line. Adopted by the World Bank the global measurement it depicts the

Box 6: Purchasing Power Parity (PPP)

How much does it cost to get your hair cut in your country? In Cyprus a haircut at a barber costs about 14 euro. In Nepal a similar haircut will set you back 40 Nepalese Rupees and in Nigeria 200 Naira. How does one compare prices and income since they are denominated in different currencies?

Well if you have euros you might want to have your hair cut in Nigeria, since 200 naira corresponds to about 1 euro! Better yet for the euro holder is to go to Nepal: having your hair cut in Nepal would only set you back 40 cents of a euro!

Why such discrepancy? Countries use different currencies and have different prices in their everyday life. As a result the exchange rate between two currencies does not directly inform us of the purchasing power of an identical amount of income. Purchasing Power Parity attempts to equate how much spending power one would have across the world in order to have internationally comparative estimates of income. It is based on the theoretical idea that all goods would be equally priced across the globe if there were no barriers. Then statisticians create a basket of goods and services and compare its price across different countries.

For example, the difference between the cost of the basket in Cyprus relative to the USA will alter its GDP when compared in Purchasing Power Parity terms. If the cost of the basket in Cyprus is more than in the USA then in order to equate for purchasing power parity we will lower the Cypriot GDP. If the basket in Cyprus is cheaper than we will increase the Cypriot GDP. As a result purchasing power parity increases the GDP of developing countries and deflates the GDP of developed nations. In order to compare income across countries, we need to first re-calibrate GDP based on the purchasing power differences.

Hence the absolute poverty line of \$1.25 is denominated in purchasing power parity i.e. taking account of different prices. It takes account of the fact that prices for basic needs are different for different countries. Hence it is an international measure of what the basic needs across the globe are. Purchasing Power Parity thus allows us to create an international dollar measurement, allowing for internationally comparable GDP/GNI measurement. There are alternative international units of measurement, with the most widespread being the Penn world tables, international dollar (shown as I\$) and the Geary-Khamis dollar (Shown as GK\$). All are acceptable, but just make sure that the income you compare is all denominated in the same international unit, calculated in the same base year (i.e. Per capita GNI in 1990 constant prices)

number of persons who fail to reach a universal minimum level of consumption as defined by a minimum set of basic needs. The World Bank revised the absolute poverty minimum (the poverty line) as \$1.25 (Approximately 1 euro) a day at purchasing power parity (see Box 6: Ravallion, Chen & Sangraula 2009).

However, the reduction of absolute poverty is not the only aim; communities are also concerned about the poverty within the societies own norms and standards: although all the people in a society might have incomes above the absolute poverty line societies still suffer when a section of their population lives in much lower incomes than the norm. **Relative poverty** indicates how much poverty there is within a population such as a nation. Here, the definition of a poverty line here is not universal as in absolute poverty and it can vary from

nation to nation: it is defined as the minimal needs and aspirations that persons should attain within their community.

Today inequality is perceived as including a much broader spectrum than just income, in fact the United Nations Development Programme's (UNDP) is currently compiling indicators which express the inequality as defined by a trifecta of issues: lack of access to income, lack of access to education and lack of access to greater life expectancy⁵.

The Human Development Index and the Millennium Development Goals

The focus on economic growth and the subsequent lack of a rapid and sustainable convergence of the developing world to the western high standards of living actuated to rethink development economics and strategy. Furthermore, research indicated that the relationship between GNI growth and living conditions was not simple, or linear (Adelman and Morris 1973, Sen 1973). Development practitioners observed with dismay large and expensive infrastructure projects taking precedence over urgent and less expensive projects that would immediately raise the living standards of local populations; in fact many of the large expensive infrastructure projects remained costly failures, while life expectancy, education attainment and sufficient nutrition levels remained depressingly low. In terms of theory the change of the concept of what development is took place through many academics, with Nobel Laureate Amartya Sen becoming one of the most prominent voices.

Amartya Sen understood that problems such as famine and poverty and consequently sustainable development are far more complicated; hence targeting an increase of GDP was not the right approach to development. Sen understood that the issues underpinning the persistently high rates of poverty and inequality were issues of access to resources. In his seminal work he proved that famines, such as the Bengal famine of 1943, can take place even when enough food is available: what occurs is that the disposed underclass fails to have access to the available resources, resulting in tragedy. This lack of access is the main issue of the poor: without access to healthcare, adequate nutrition and education, poverty can become a vicious cycle. For Sen, **access to resources** is defined by the ability to obtain the resources needed, and that is a far greater problem for development than increasing economic growth.

⁵ Try building your own development index! Go to UNDP Human Development Index (HDI) and give it a try: <http://hdr.undp.org/en/data/build/>

Improvement of access and economic growth should happen in tandem; without an increase of access to resources of marginalised groups, development, even if narrowly defined as real growth of per capita GDP, will not be sustainable. In order for the economy's growth to be sustainable it needs to be ensured that the people have the ability to access what is necessary to allow them to prosper.

The work of Sen and others led to a partial shift from westernization (an emulation of western ways of development), as well as a desire for the formalization of broader development goals. This desire for a more holistic understanding of development existed previously, however the understanding of the power of indicators on economic policy led to the movement to create a new indicator that would encapsulate development in a broader sense.

The result of that effort was the **Human Development Index (HDI)**, developed under the auspices of the United Nations Development Program (UNDP). The HDI attempts to rank countries in an index. This index takes account of per capita income, educational levels and health at equal weights; that means that all three are perceived to be equally important for development. It aims to capture a broader set of development: Longevity as measured by life expectancy at birth, knowledge as measured by a combination of adult literacy and school enrolment ratio, and the standard of living measured by the real per capita GDP in purchasing power parity terms.

In effect the HDI takes the existing real GDP per capita indicator and makes it part of a much broader whole, exactly because the HDI gives an equal weight to issues of economic growth, education and health. Thus economic growth remains an important part of the HDI but education and health are added, reducing the need to focus on just growth. As a result countries such as Cuba score much higher in the HDI, than in ranking countries in terms of per capita GDP, while countries of the Gulf score much lower in the HDI.

By 2010 there was an understanding that the HDI was very successful in dealing with policy concerns for issues other than economic growth, and yet issues still remained. As a result there was a twofold approach by the UNDP: to improve the indicator itself (called the New Human Development Index - NHDI), and to allow for other issues of development to be included in the indicator. As a result, there are currently ways to include other issues, such as gender inequality in more inclusive indicators.

The change in emphasis from economic growth to the HDI index had also allowed renewing development efforts around basic needs goals. With the then imminent change of the millennium, there was an ardent desire to ensure that the basic needs of humanity were fulfilled. The basic needs approach was discussed and officially established in the Millennium Summit in 2000, which aimed to target global efforts in tangible results.

The Millennium Development Goals (MDGs) are eight international development goals that were officially established following the Millennium Summit and the adoption of the United Nations Millennium Declaration. The declaration was successful in committing 193 United Nations member states and at least 23 international organizations to work towards achieving these goals by year 2015. The eight general goals were considered at the time as valiant but achievable, so long as policy makers, aid organisations and NGOs would dedicate focused resources onto achieving tangible results.

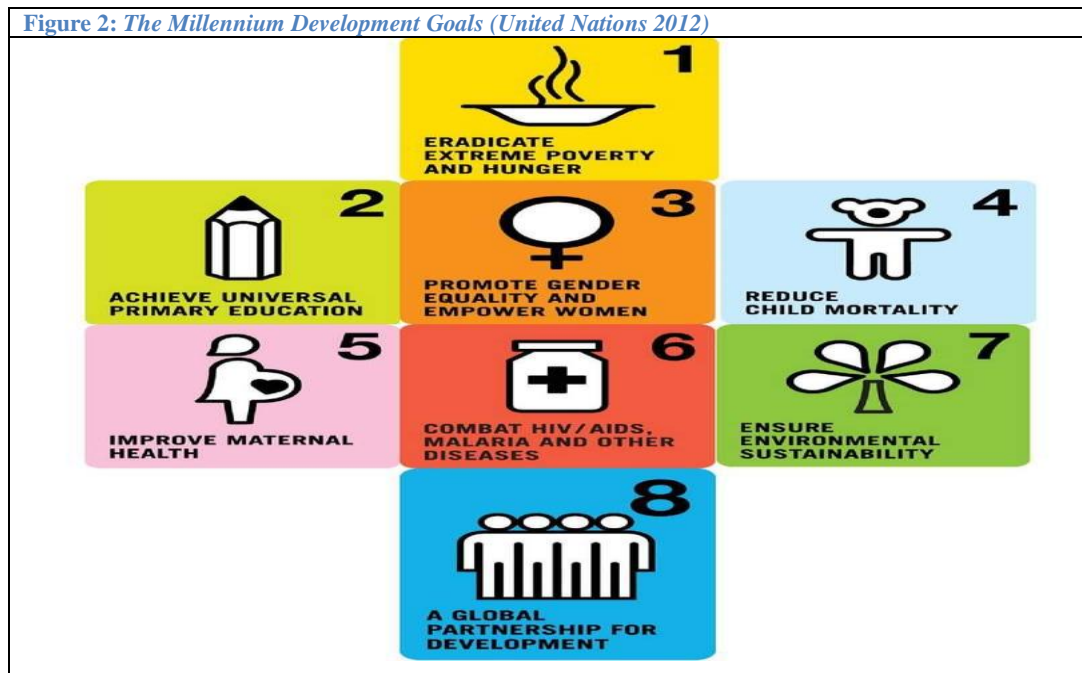
The Millennium Development Goals are:

1. eradicating extreme poverty and hunger,
2. achieving universal primary education,
3. promoting gender equality and empowering women
4. reducing child mortality rates,
5. improving maternal health,
6. combating HIV/AIDS, malaria, and other diseases,
7. ensuring environmental sustainability,
8. developing a global partnership for development.[1]

Progress in the Achievement of the Millennium Development Goals (MDGs)

The MDGs have often been considered as one of the most important set of tangible commitments undertaken by the international community in order to reduce poverty and foster development in vulnerable countries (Sachs 2006). The eight MDGs, as shown in Figure 2 below, which are subsequently broken down in 21 specific targets and 60 indicators⁶ (shown in Figure 3), represent a considerable effort to improve standards of living and basic livelihoods.

⁶ For additional information see <http://www.un.org/millenniumgoals/>











Although a lot of criticism has been made over the fact that the MDGs may appear overly ambitious for many countries (Clemens, Kenny *et al.* 2007), as well as paying little attention to the empowerment of the poor (Vandemoortele 2009)⁷, there is little disagreement over the fact that the MDGs remain a concrete step towards addressing developmental concerns, recognizing the multidimensional nature of poverty (Manning 2010), and track progress over time.

In this respect, an analysis of the developmental progress achieved during the period 1990-2012, reveals a scattered picture, with promising global trends coming from the reduction of extreme poverty, gender equality among children in primary school, access to drinking water, but at the same time with mixed results, if not negative, for some the other goals, particularly access to primary education and improving maternal health. In addition to this, regional differences remain a matter of concern, with Asian and Latin American countries progressing at a faster rate than Sub Saharan African countries, as shown in Figure 3.

⁷ For a review of the critiques refer to Manning, (2010)

Figure 3: Current Progress of the Millennium Development Goals.

Goals & Targets	Africa		Asia				Oceania	Latin America & Caribbean	Caucasus & Central Asia	
	Northern	Sub-Saharan	Eastern	South-Eastern	Southern	Western				
 <p>1 ERADICATE EXTREME POVERTY AND HUNGER</p>	Reduce extreme poverty by half	low poverty	very high poverty	moderate poverty	high poverty	very high poverty	low poverty	very high poverty	moderate poverty	low poverty
	Productive and decent employment	large deficit in decent work	very large deficit in decent work	large deficit in decent work	large deficit in decent work	very large deficit in decent work	large deficit in decent work	very large deficit in decent work	moderate deficit in decent work	moderate deficit in decent work
	Reduce hunger by half	low hunger	very high hunger	moderate hunger	moderate hunger	high hunger	moderate hunger	moderate hunger	moderate hunger	moderate hunger
 <p>2 ACHIEVE UNIVERSAL PRIMARY EDUCATION</p>	Universal primary schooling	high enrollment	moderate enrollment	high enrollment	high enrollment	high enrollment	high enrollment	-	high enrollment	high enrollment
 <p>3 PROMOTE GENDER EQUALITY AND EMPOWER WOMEN</p>	Equal girls' enrollment in primary school	close to parity	close to parity	parity	parity	parity	close to parity	close to parity	parity	parity
	Women's share of paid employment	low share	medium share	high share	medium share	low share	low share	medium share	high share	high share
	Women's equal representation in parliaments	low representation	moderate representation	moderate representation	low representation	low representation	low representation	very low representation	moderate representation	low representation
 <p>4 REDUCE CHILD MORTALITY</p>	Reduce mortality of under-five-year-olds by two thirds	low mortality	high mortality	low mortality	low mortality	moderate mortality	low mortality	moderate mortality	low mortality	moderate mortality
 <p>5 IMPROVE MATERNAL HEALTH</p>	Reduce maternal mortality by three quarters	low mortality	very high mortality	low mortality	moderate mortality	high mortality	low mortality	high mortality	low mortality	low mortality
	Access to reproductive health	moderate access	low access	high access	moderate access	moderate access	moderate access	moderate access	low access	high access
 <p>6 COMBAT HIV/AIDS, MALARIA AND OTHER DISEASES</p>	Halt and begin to reverse the spread of HIV/AIDS	low incidence	high incidence	low incidence	low incidence	low incidence	low incidence	low incidence	low incidence	low incidence
	Halt and reverse the spread of tuberculosis	low mortality	high mortality	low mortality	moderate mortality	moderate mortality	low mortality	high mortality	low mortality	moderate mortality
 <p>7 ENSURE ENVIRONMENTAL SUSTAINABILITY</p>	Halve population without improved drinking water	high coverage	low coverage	high coverage	moderate coverage	high coverage	moderate coverage	low coverage	high coverage	moderate coverage
	Halve proportion population without sanitation	high coverage	very low coverage	low coverage	low coverage	very low coverage	moderate coverage	low coverage	moderate coverage	high coverage
	Improve the lives of slum-dwellers	moderate proportion of slum-dwellers	very high proportion of slum-dwellers	moderate proportion of slum-dwellers	high proportion of slum-dwellers	high proportion of slum-dwellers	moderate proportion of slum-dwellers	moderate proportion of slum-dwellers	moderate proportion of slum-dwellers	moderate proportion of slum-dwellers
 <p>8 A GLOBAL PARTNERSHIP FOR DEVELOPMENT</p>	Internet users	high usage	moderate usage	high usage	moderate usage	low usage	high usage	low usage	high usage	high usage

The words in each box indicate the degree of compliance with the target

Target already met or expected to be met by 2015	Progress insufficient to reach the target if prevailing trends persist	No progress or deterioration	Missing or insufficient data
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Source: UN, 2012

Sub-Saharan African countries have been displaying a different, mostly slower pace towards improving their development levels, particularly in comparison to other regions in the world. In many instances their performance in relation to basic developmental targets, such as productive and decent employment, mortality at under-five-years-old, and the improvement of the lives of slum-dwellers, has hardly increased during the past decades.

Sub-Saharan Africa was seen as a particularly vulnerable area, with the Economic Commission for Africa (1985) highlighting the fact the many issues created a ceiling on the hope for prosperity. A quick review of the MGDs progress report (United Nations, 2012) shows that the percentage of the population in Sub-Saharan African countries living on less than \$1.25 a day still represents 47% total. Sub-Saharan Africa also has a higher ratio of absolute poor people, as well as slower rate of progress than other regions in the world. If one looks at food deprivation, the problem faced in Sub-Saharan African countries becomes even more acute, with the percentage of people who are undernourished still remaining relatively high, standing at 27% of the total. Coupled with this, there is the exacerbated vulnerability of those countries that rely heavily on food imports to feed their population. Such countries saw the percentage of undernourished people increase dramatically in the past years, mostly fuelled by price fluctuations of grains and economic/political instability. As explained in Chapter 3, lower levels of development do not allow countries to react properly to shocks or sudden events, thus showing a weak adaptive capacity and creating a dangerous vicious trap, which is extremely difficult to eradicate. However, lately there are reasons for more optimism at least in terms of economic growth in Ghana, Erithrea, Rwanda, Nigeria and Mozambique, are some of the fastest growing economies of the world.

It must be noted that the development of the Millennium Development Goals (MDGs) has had an effect at least in the way official development aid, called Overseas Development Assistance, is being channelled. Although the process is far from perfect and far from complete, the MDGs have embodied the aims that a successful development project would ideally achieve (Nafzinger, 2006) and have opened the door to push donors to ensure greater effectiveness of their aid as measures by the MDGs.

It has been repeatedly argued that international development, most particularly foreign aid received by developing countries through Overseas Development Assistance (ODA), is an essential element in eradicating the poverty trap. Many billions have been deployed and used

in the developing world, most notably in Sub-Saharan African countries, with sometimes mixed results and difficulties in evaluating their real overall contribution to the well-being of the countries, and the populations assisted. Many scholars and policy makers, starting way back after the end of the second world war, have been debating the effectiveness, or otherwise, of ODA interventions towards countries' economic growth and development (McGillivray, Feeny *et al.* 2006). It is not the intention, nor the scope, of this book to enter into this debate. However, ODA interventions will be taken into account, mostly looking at Sub-Saharan African countries in the field of the fight against poverty and environmental degradation.

Environmental Sustainability

Concerns over the environmental sustainability can be traced back to the work of John Stuart Mill, who, in the middle of the nineteenth century, was one of the first to recognise that with the increase of industrial production the earth would lose its 'pleasantness' due to unlimited increase of wealth and population (Mill, 1848). This reference to population pressure over resources, and wealth, was also recognised by classical economists between the end of the eighteenth and the beginning of the nineteenth century, most notably Malthus (1798) and Ricardo (1817). They both recognised that with population growing the only way to ensure sufficient food production would be the cultivation of marginal and less fertile land, which of course would require additional investments in capital (investments) and labour (workforce), making it very difficult to justify profit. Both Ricardo and Malthus agree that only technological progress can overcome this 'stationary state', allowing increased levels of production, and profit to rise again.

Whilst Malthus and Ricardo were more concerned with population growing and affected availability and the fertility of agricultural land (Ekins, 2000: 34), the first conceptualisation of the problem of exhaustion of natural resources, and the consequent environmental degradation associated with it, was only firstly discussed at the end of the nineteenth century, by Jevons (1865) who outlined the consequences of the exhaustion of British coal stocks. A stronger and deeper analysis of the concepts of environmental scarcity and sustainability came in the second half of the twentieth century, with contribution from Marshall (1920) on the concepts of rents, Georgescu-Roegen (1975) on the relation between technological progress and access to energy, as well as Meadows *et al.*, (1974) on the limits to growth. This

debate, together with increasing evidence from environmental disasters in many parts of the world (chemical explosion of Bophal in India, and the nuclear disaster of Chernobyl in Ukraine) inevitably sparked a renewed activity within the international community.

The interest of the international community in environmental issues, and its links with development, started to take shape in the 1972 Declaration of the United Nations Conference on the Human Environment, in Stockholm. The 1987 Brundtland Report, “Our Common Future”, also, featured an explicit reference to climate change as a key environmental challenge facing development. Following the Brundtland report, the 1992 United Nations Conference on Environment and Development (UNCED) clearly outlined the threats towards successful sustainable development. The 2002 World Summit on Sustainable Development (WSSD), also recognised the strong links between environmental concerns and development, and all the key international conferences that followed seemed to reiterate this concept, as well as attempted to provide answers for the necessary financial resources needed to address the most important environmental issues.

Box 7: What are the Symptoms of Environmental Unsustainability?

During the past decades environmental degradation has been seriously undermining economic growth, as well as posing a growing threat on public health. This scenario is making it increasingly more difficult, and costly, for countries to cope and adapt to new challenges.

The environmental problems listed below constitute a fine representation of the most burning issues that countries are facing in their battle to balance economic growth and sustainability:

PROBLEM	PRINCIPAL AGENTS
Pollution	
Greenhouse effect/ climate change	Emissions of CO ₂ , N ₂ O, CH ₄ , CFCs (and HFCs), O ₃ (low level), PFCs, SF ₆
Ozone depletion	Emissions of CFCs
Acidification	Emissions of SO ₂ , NO _x , NH ₃ , O ₃ (low level)
Toxic contamination	SO ₂ , NO _x , O ₃ , particulates, heavy metals, hydrocarbons, carbon monoxide, agrochemicals, organo-chlorides, eutrophiers, radiation, noise
Renewable resource depletion	
Species extinction	Land use changes (e.g. development, deforestation), population pressure, unsustainable harvest (e.g. overgrazing, poaching), climate change, ozone depletion (in future)
Deforestation	Land use changes, population pressure, unsustainable harvest (e.g. hardwoods), climate change (in future)
Land degradation/loss of soil fertility	Population pressure, unsustainable agriculture, urbanisation, development, climate change
Fishery destruction	Overfishing, destructive technologies, pollution, habitat destruction
Water depletion	Unsustainable use, climate change
Landscape loss	Land use changes (e.g. development), changes in agriculture, population pressure
Non-renewable resource depletion	
Depletion of various resources	Extraction and use of fossil fuels, minerals
Other environmental problems	
Congestion	Waste-disposal, traffic

Source: Ekins, 2000

Chapter 5 will introduce, and discuss the most important concepts surrounding environmental sustainability. It will do so by linking the conceptual development of sustainability with progress taking place on the ground, with a specific focus on the challenges faced by developing countries in the field of climate change, highlighting the active role played by CSOs and NGOs in shaping both the field and the theory.

Conclusion

In this chapter an overview of development was made with some general knowledge on development topics. It traced the desire to understand development back to at least the 16th century, and saw the expansion of multinational organisations that sought to accelerate development in the 1950s.

Some basic terminology that will be recurring in the book was explained, including economic growth, poverty and inequality indicators, and the concept of modern economic growth. Furthermore, the shift to the basic needs approach and the Human Development Index were covered, coupled with the Millennium Development Goals which are the current aims of most aid efforts.

Recent environmental issues have also been presented; it is clear that environmental concerns have re-casted the debates on poverty and economic growth, and re-incited the desire for environmental sustainability.

Chapter 3: Economic Growth

Why is Economic Growth so Important in Development?

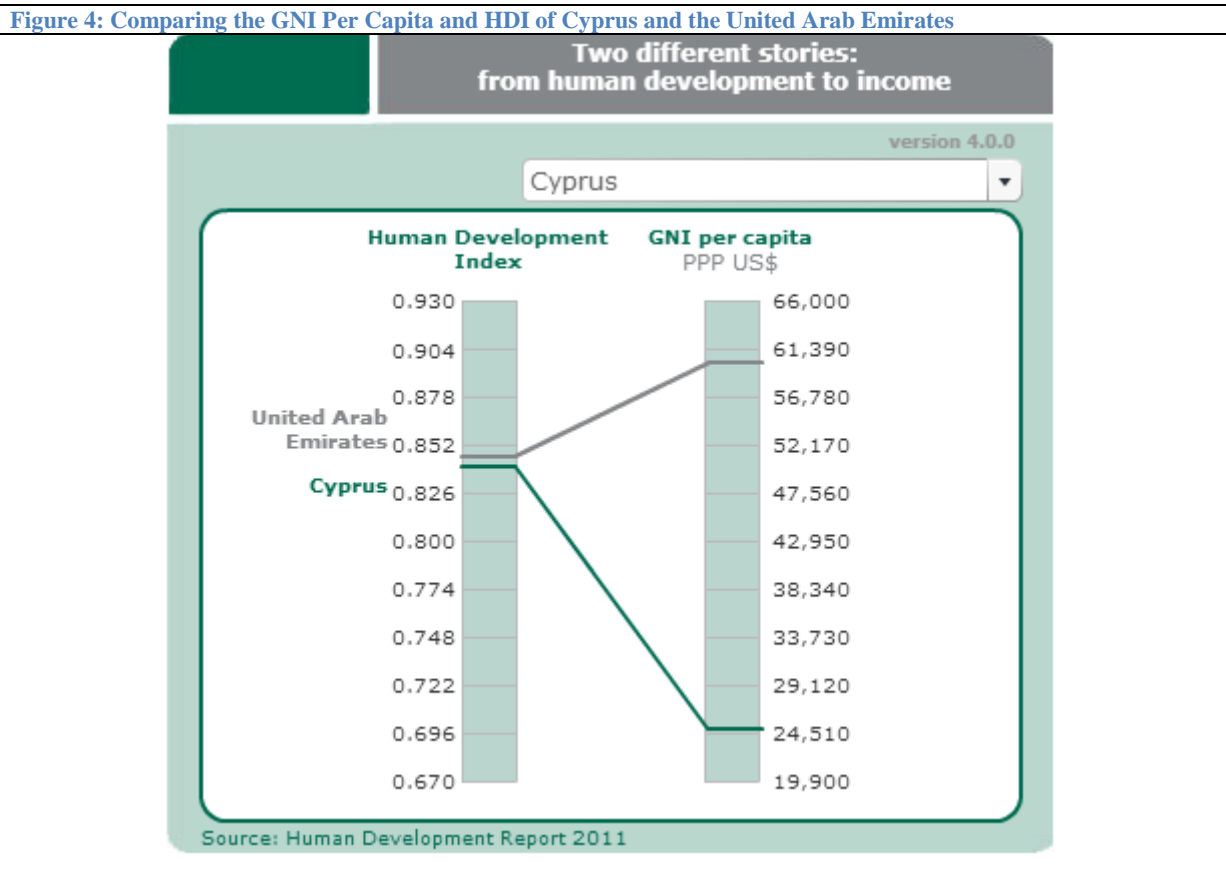
In Chapter 2 we saw that the great emphasis put on economic growth after the Second World War did not lead to the sustainable improvement of the standard of living of the developing nations. As a result, it was understood that economic growth cannot be the only goal in terms of development; for growth to occur, sustainability is also needed, along with general improvements in health, education and the quality of existing institutions.

Yet to argue that economic growth is not important underestimates its significance in the economic history of humanity. Out of all the known methods to reduce poverty, increasing human longevity and promoting education, increasing citizens' average income is still the most effective way to concurrently improve all of the abovementioned issues. Studies also indicate that income growth is still a valid cause. For example, an increase in per capita income does lead to a reduction in poverty with Besley and Burgess (2003) indicating that when income doubles in a country, it tends to reduce poverty by 73% (i.e. the elasticity of poverty with respect to per capita income is -0.73). The United Nations has argued that the main reason for the success in reducing the amount of global poverty below the target of 23%, which was one of the Millennium Development Goals (see Chapter 2), is mainly due to the rapid economic growth of Eastern Asia and the Peoples Republic of China in particular (UN, 2001: 4). Thus, trying to increase the rate of economic growth in developing nations (in a sustainable way) is still important, as it is effective in alleviating poverty. However, we do understand now that a focus on just economic growth can have unintended negative consequences.

Just How Different is a Country's HDI Score from its Per Capita GNI Position?

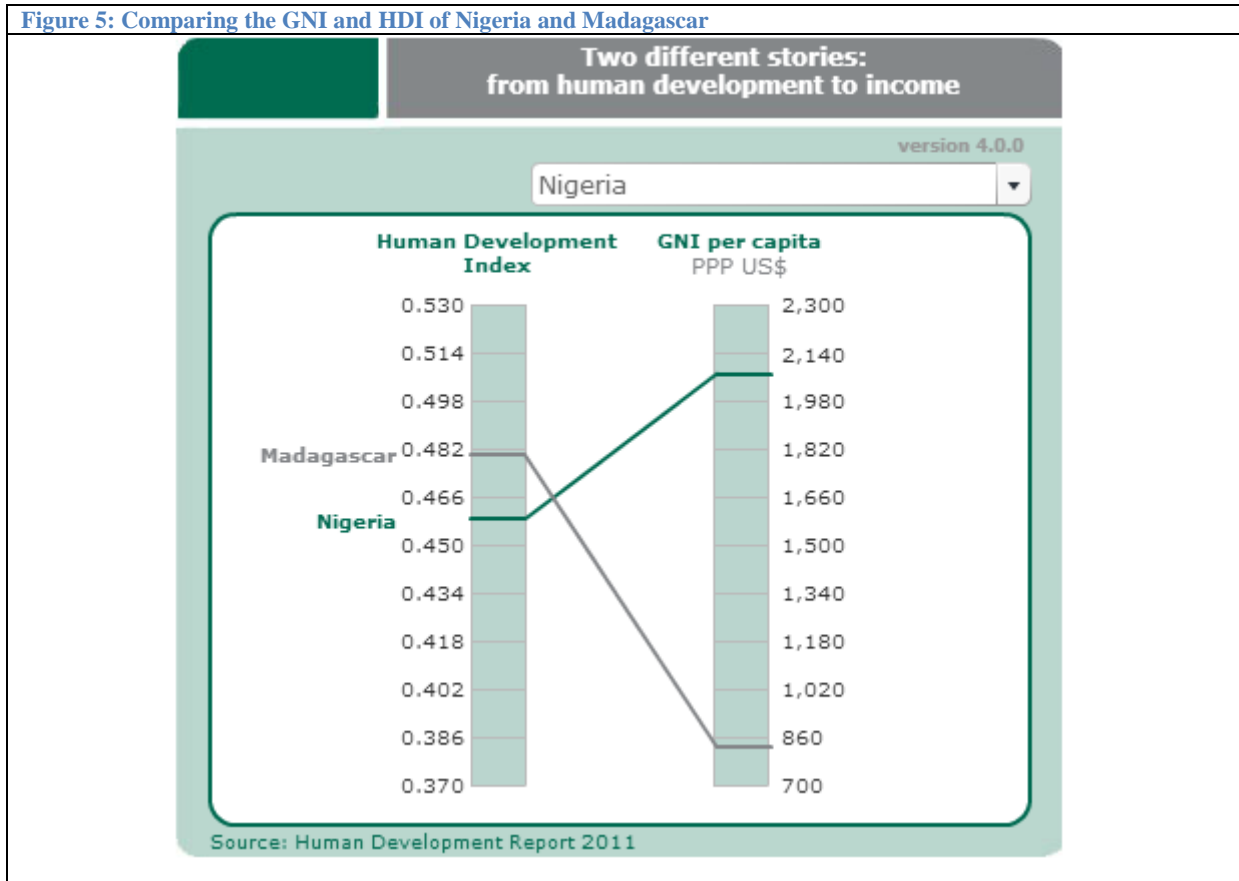
Economic growth and per capita income level used to be the major indicator for development before the creation of the Human Development Index (HDI). The HDI combines indicators of income, education and health and weighs them equally. There is no doubt that the HDI has helped restructure development cooperation, away from the singular need of income growth and towards a greater understanding of the broader needs of development. For example, Cyprus, a country whose growth out of the high middle income classification of the World

Bank occurred in the late 1980s / early 1990s, scores much higher in the Human Development Index than in the per capita GNI, being much closer to the United Arab Emirates in HDI terms than in terms of per capita income. Thus, in the more encompassing notion of development of the HDI, Cyprus performs better than in just a per capita GNI measurement.



It is important to note nevertheless that both nations remain in the same general category of development: in HDI terms both are classed as “Very High Development” and their per capita GNI classification is “High Income”. Thus, despite the fact that the HDI is important in order to highlight the need for broader development, real per capita GNI remains an easily available indicator to indicate the general development level. A country’s HDI might be higher or lower than its rank in per capita, but it usually remains in the general classification of development. A country’s per capita GNI tells us the general level of development, yet it is still worthwhile to look at the HDI to see if the level of income is truly felt by the population in term of better health and education. An increase of economic growth can still lead to a rise of the per capita GNI, without significantly affecting general development.

Figure 5: Comparing the GNI and HDI of Nigeria and Madagascar



In the example above, Nigeria’s per capita GNI ranks the country as middle income, while the HDI rightly points out that the level of citizens’ educational and health attainment is so low that it should be classed as a country of Low Development in HDI terms.

Consequently, per capita GNI does not directly show the specific level of development as exemplified by the Human Development Index (HDI), but it does usually indicate the level of general development of an economy. Hence, as a measure of economic growth, the increase of per capita GDP/GNI is still important: as a result, understanding how to stimulate economic growth has remained a key emphasis in development policy of nations as well as development cooperation projects.

The level of per capita GNI is important, however for the world incomes to converge it is also important to ensure that the rate of economic growth of developing nations is sufficiently soaring. Developed nations have a much lower per capita GNI than developed nations. Therefore, in order to catch up to developed nations they will need to grow at a much faster rate. Let us consider an example: the per capita GDP of the United States of America is more than four times higher than Brazil’s. If the USA is growing at an annual average rate of just

2%, it would take forty eight years for Brazil's income to catch up to that of the USA, and that if it grows at the rapid annual average rate of 5%. Thus, developing nations need a higher growth rate than developed nations and Abramovitz (1986) assures us that this will be the case as they catch up to developed nations. Even so, there are nations such as the Central African Republic, Somalia, Congo and Liberia whose per capita income is sixty to ninety times lower than that of the United States, and thus they need to have consistently high growth rates to close the gap with the developed nations; sadly growth in all of the countries mentioned remains anaemic and volatile.

In order for the world's income not to diverge away whereby the rich become richer and the poor remain at a permanently lower income level, we need to ensure that the poorest countries grow the fastest. Considering that on average developed nations have a long run average annual growth rate ranging from 1.5% to 3% of GDP, a developed nation that wishes to keep up in terms of income level, needs to grow at a faster rate.

Why do we worry about global income divergence? Unless the developing nations can manage to maintain a higher rate of interest, they risk falling further behind in terms of income than the developed nations. This has severe negative effects: poverty alleviation will be dependent on transfers from the developed to the developing world, perhaps distorting incentives and leading to dependency and inequality of power. The dependency theory scenario (see Box 8) will ring true.

Developing economies need to have faster economic growth than their developed counterparts for many other reasons as well. For example, rapid economic growth usually ensures that positive changes in the standard of living of the average citizen to be seen within his lifetime. The Peoples' Republic of China is growing at roughly an annual 8%, meaning that it can double its GDP every 9 years; this means that within a generation, if this income growth is widely distributed and channelled, the quality of life of the average citizen will change for the better in ways that are meaningful to the citizen. Finally, the majority of the world's poor are unsurprisingly concentrated in the poorest of nations; hence an increase in the per capita GNI should reduce the amount of people in poverty. Thus, so long as growth is sustainable, developing nations can and should aim for faster economic growth than developed nations.

The latest economic crisis also indicates that once economic growth slows down, a developing country can run into serious macroeconomic problems, including problems financing of the national debt. This is a lesson that was learnt the hard way in countries of Sub Sahara Africa and Latin America during the 1980s and 1990s. Developing nations do not have high reserves of savings as people are largely poor and use up their income to survive; thus developing nations as frequently borrowing in international markets for the funds to facilitate their investment and to cover their government budget deficit needs. They usually do so in foreign currency which could fluctuate in relation to their own domestic currency, making the cost of the debt rise or fall suddenly. The **debt service**, which is the sum of interest payments and repayment of the **principal** (the original amount of the loan), can vary dramatically due to these currency movements. A reduction of economic growth can quickly set a series of chain events that can lead to a depreciation of the exchange rate of the local currency to the international currencies (such as the dollar). This can lead to financial crises, unsustainable debt, and a failure of government development aims. The high cost of debt service can force government to introduce austerity measures, which can lead to lower income growth, making the debt much more difficult to repay. This can lead to a cycle of debt and default that can be hard to break out from unless economic growth resumes.

The IMF and World Bank admitted that this vicious cycle trapped several countries, and have created a special programme for Heavily Indebted Poor Countries (HIPC) that aims to renegotiate or cancel the debt so it becomes sustainable⁸. The difficulties of Sub Saharan Africa (SSA) are starkly shown in the list of countries that have been aided through the HIPC programme: thirty three out of thirty six countries in the programme are from the SSA area.

The HIPC initiative shows exactly how interaction between CSOs and economists can achieve results. The unbearable burden of the debt was indicated by economic theory, but it was the CSOs who pushed it in the international agenda. Activism by a large group of CSOs and NGOs led to the issue being globally discussed, and pushed the IMF and World Bank to consider debt cancelation and renegotiation as a viable strategy for heavily indebted counties.

⁸ Although the current administrations of these nations might not have a share of the blame for having an unsustainable debt burden, a large number of the HIPC countries did borrow an amount far beyond their capacity to pay.

All of the above indicates that the aim of sustainable economic growth is still important for developing nations. Todaro (2011; 29) sums the up the aim of increasing per capita income by stating that economic “growth is generally necessary, though not sufficient, for achieving development”.

How do we Measure Income? A Short Introduction to the System of National Accounts

Before we know how we can stimulate growth we first have to know how to measure economic growth. Although there were attempts to measure income in many countries around the world prior to the Second World War, it was the collective effort that led to the standardisation of the process under the auspices of the United Nations that allowed a better understanding of what makes up a country’s income. This standardisation of the process is currently embodied in the United Nations’ **System of National Accounts (SNA)** which has been adopted and used by nations as the basis of estimating income indicators.

What are national accounts? Those who created income estimates realised that in order to achieve their goal they first needed to standardise the necessary information and then create a process that would enable that information to be aggregated to a single income estimate, such as GDP. Let us recall that in Chapter 2 we saw that income can be estimated in one of three ways, each of which provides us important piece of information about the state of the economy: through measuring total output, or total income or total expenditure. If GDP is estimated through the output approach then the statistician needs to first count the output of each sector of the economy and to remove the products consumed at each step of the production process (also called intermediate consumption) in order to avoid double counting. Then, since we are more interested in the constant rather than the current price of GDP, the statistical office needs to use several price indexes to deflate the value of the output and the intermediate products to their true, constant price output.

The information that is needed to estimate GDP can in itself be very useful for our understanding of an economy and for shaping economic policy. By estimating income through the SNA principles, statistical offices provide us with information on investment, consumption and the share of the income that is given as wages, which policymakers can use in order to understand the strengths and weaknesses of suggested policy actions.

Before the SNA system was created, key decisions in how to count expenditure, investment and output could affect the final outcome in a way that would make income estimation non-comparable. Although the quality of income estimates varies from country to country the existence of a uniform system provides us with the data to be able to see which policies have the effect of increasing income. The SNA nomenclature is a major step forward in providing data, simplifying the process and expanding income estimation in a global scale.

When Economic Growth was not a Means to an End but the Goal: Early Economic Growth Theory

Economic theory was never a linear process: other theories which often conflict the theories presented here also had an important influence in shaping development policy. Alternative, socialist and what we now call “heterox” economics also influenced development, but here we focus on the main trends in development theory and how they influenced development policy.

The earth-shaking aftermath of the Second World War led to the emergence of a bi-polar world dominated by the superpowers of the United States and the Soviet Union. The uneasy alliance of circumstance against Nazi Germany and Imperial Japan that was forged during the Second World War began to show signs of fracture. As a result nations aligned to the Soviet Union joined the United Nations but mainly remained outside the mechanisms that aimed to restructure Europe. At the same time both powers were committed to different ideological mantras, but in their own way hastened the process of decolonization.

The increase in superpower rivalry had a profound effect on development. This increase of superpower hostility began to dictate global policy as early as 1946, and this affected the perceptions of the superpowers towards the poor of the world. The shift towards hostility in political affairs between the USSR and the United States was expressed by the influential George F. Kennan, who argued that the soviet regime was inherently expansionist and that a general effort to contain its threat was necessary (see his famous “long telegram” as held by the Truman library; Kennan, 1946). Part of that containment was seen as economic: the United States should aid the recovery of Europe, with aid mechanisms such as the Marshall plan, as well as by promoting capitalist development in the poverty stricken ex-colonies.

As decolonization picked up pace in the 1950s, the USSR aimed to expand its global sphere of influence through promoting revolutionary ideology and war material to areas which were struggling against colonialism. Thus, development aid and development economics became one more battleground of the cold war of the two superpowers. This conflict has also created some of the most known (and now largely defunct) terminology in describing and categorising the world, by dividing it into three parts: the first, second and third world.

The **first world** comprised of the advanced capitalist countries such as the United States, Canada, Australia and Western Europe countries. The **second world** comprised of the USSR and its allies who chose an alternative way of socialist development, and the **third world** comprised of the poor nations who attempted to remain largely neutral. Over time, the concept of third world came to encompass countries whose citizens were still suffering in poor conditions, rather than its original political connotations.

At that time, the attempt to stimulate development both in the capitalist sphere and the socialist sphere was underpinned on the idea of modernization. **Modernization Theory**, as defined by Giddens (1991), paid attention to the fact that there were important changes to the way of life from the industrial revolution onwards in the “Western world”, which underpinned the sustainable economic growth in the future. By the 1950s the idea of modernization provided essentially two broad alternatives (although there were many sub-variations): A socialist road to modernisation as supported and proposed by the Soviet Union, and a capitalist modernisation supported and assisted by the developed nations of North America, Western Europe and Oceania⁹.

The theory that was exported around the world was supposed to be based on the plan that led to the recovery of Europe. The success of the recovery of Western Europe after the Second World War under aid programmes such as the Marshall Plan meant that western development circles were encouraged to promote similar economic programming to the recently decolonised and other poor countries. The **Marshall Plan** was part of an ambitious effort lead by the United States to restore Europe’s productive capacity and income. It combined direct aid, technical assistance and the creation of organisations that would encourage pan-European cooperation. It was successful in achieving rapid economic growth in Europe,

⁹ Politically the non aligned movement tried to keep a middle way, but economically they broadly fell either under mixed capitalist economies or mixed socialist systems.

which first recovered and then surpassed its pre-war GDP levels, and enabled the spread of the missed economy model that provided for far more generous welfare than previously. This success made economic historians wonder whether the key to unlocking the growth potential of the poor world existed in the history of the wealthy nations. It led to the idea that development was just a series of steps; hence poor nations could become as prosperous as Europe and the US, so long as they would follow the correct recipe for success.

One of the most influential modernists was Walt Whitman Rostow who saw the development of poorer nations as synonymous to the Cold War aspirations of the Western world. Rostow examined societies over time and published the poignantly named book “The Stages of Economic Growth: A non-Communist Manifesto” (1960). In his book, Rostow combined the concepts that he had developed earlier during the 1940s and 1950s according to which development was seen as a five-stage process through which all developing societies had to pass in order to attain the promised stability, prosperity and democracy, of advanced western nations.

Kuznets (1965), in his breakthrough research in creating GDP estimates, argued that the initiation of modern economic growth changed the economic structure of nations and thus it thoroughly altered societies. Prior to the initiation of Modern Economic Growth (defined in Chapter 2), Kuznets believed that the world was in a **Malthusian Trap**: increases in income would lead to faster increases of population, leading to war, famine and a return to the previously low level of per capita GDP¹⁰. Rostow embraced and advanced the idea that modern economic growth needed changes in economic structure as a precondition of its occurrence. He argued that prior to modern economic growth changes to societies were an essential ingredient for successful development. In effect, development was seen as a linear process, which was often painful, but if followed, a desired outcome would be ensured. The choice of title (“A non Communist Manifesto”) was not a coincidence but the author’s desire to show that capitalism would bring dividends, and countries needed to be patient with the problems created as they moved from one stage of development to another.

¹⁰ We now know that actually the world was moving toward such an event. At least since the reformation growth was slowly accelerating, and as a result, lives in areas of Europe were much better than in the middle ages. In fact, the industrial revolution’s growth was less impressive than the one thought making the progress to what Kuznets called modern economic growth a much smoother and gradual process. (Van Zanden, 2009; Crafts, 2011)

Box 8: Dependency Theory

Not everybody was convinced of the economic assumptions that underlined the growth models that we present here. Many pointed out that far from being a world where trade and aid was freely given, the first world had power over all the arrangements made with the third world. It is suggested that this power made the rich countries richer and the poor countries poorer: this created a **core** of developed and ever prosperous nations who were abusing their political, economic and military power to keep the poor **periphery nations** poor by extracting their mineral and human resources. In return for the expropriated resources the western nations offered aid and intervened in local politics to ensure the periphery nations remain dependent.

The dependency theory which implies a core and a periphery has been more traditionally linked to left wing theorists. One of the first to argue that the core western nations were rich due to the capture of the surplus of Latin America that could have been invested in Latin America, was Gallaher and Robinson (1953). Dependency theory was increasingly linked to the relationships of former colonies and their former overlords; capitalism as imposed to decolonised poor countries resulted in appropriation of their surplus. Leading exponents of such ideas of dependency were Andre Gunder Frank, Walter Rondey and Samir Amin.

The dependency theory is now less in evidence. It was successful in pointing out that development did not occur in a vacuum, and power relations were especially important in the shaping of aid policy. However the theory suffered by the same issues of determinism, i.e. it took as a stated fact that capitalism was exploitative, and that the third world had no power over the first world. But it has been influential in pointing out the power relations of aid and allowing CSOs to spearhead campaigns to depoliticise aid in order to make it more effective.

Ironically, Rostow's view of the history of the world had a determinist quality that was similar to elements of Marxism. Hence, in our view, both Marx's and Rostow's vision of the world share a common characteristic in that "They constitute, in the end, both a theory about economic growth and a more general, if still highly partial, theory about modern history as a whole" (Rostow, 1960: 1). In fact as Nafizinger (2006) points out, many economic historians cotemporary of Rostow, such as Drummond and Cairncross (1961), pointed out that the theory was not based on all facts but stylized anecdotal evidence that fitted a desired pattern, and it seriously underestimated the underlying growth needed prior to a take-off occurring.

Rostow believed that the economies of the world went through five stages:

- 1) The traditional stage: An agricultural economy, with very limited trade and a rigid hierarchical social structure and limited technology.
- 2) The pre-conditions for take-off stage: Demand for raw materials drives trade, the society becomes less self-sufficient, opening up to external impulses, changing social structures.
- 3) The take-off stage: Manufacturing is industrialised, like in Britain's "Industrial Revolution". As a result agriculture loses power in the economy and society; social

order is reshaped. This is the key stage: investment ensures that the Malthusian trap is broken as income grows faster than population: power shifts around those who initiated this growth spurt.

- 4) The drive to maturity stage: development undergoes a consolidation by spreading in other industries. General improvement of the conditions of the population as domestic consumption rises; social infrastructure begins to develop.
- 5) Age of mass consumption stage: the industrial base is established, social rights are conquered and enjoyed; by this state, the westernization process is nearly completed.

Rostow and other similar theorists had important influence in development economics especially since he could advise the democratic party governments of the United States under Kennedy and Lyndon B. Johnson. Rostow was aware and projected his theory as not just a historical explanation but also a blueprint on how development could take place.

Many tried to transform his theory into a series of measures, based on the book's intuitions. For them economic growth was the only acceptable aim for a developing country, as other problems (increasing poverty, environmental degradation, poor working conditions), which accelerated during the take-off stage, would be resolved during the drive and the age of mass consumption.

Development was thus explicitly linked with industrialization. Industrialization, i.e. the strive for rapid increase of manufacturing sometimes with the government even taking the lead, was considered the best approach to development if the pre-conditions outlined by Rostow were present. Since increasing industrial production was the way growth had accelerated for Western countries, a developing country should similarly provide incentives to the industrialising class to increase manufacturing.

The ideas of Rostow were influential both in terms of economic theory and in terms of development policy. It is suggested that the emphasis should be on economic growth, paying little notice to other social issues, until the "take off" stage is achieved. Other issues such as poverty and inequality will exist, but they can be corrected by diverting resources, as the economy will step into the "drive to maturity" stage. The missing ingredient is how to make economies grow from one growth stage to another. The engine of growth that would enable

governments and international organisations to facilitate development was according to Roy Harrod and Evsey Domar the savings of an economy.

The Harrod-Domar Model of Development

The Harrod-Domar model seems to provide an answer of what the focus of the development community should be. It is based on the principle that there is a relationship between output and capital stock. **Capital Stock** is the total amount of physical capital in an economy, in this case machines, buildings, computers and industrial machinery.

The theory combined the ideas surrounding the modernisation approach of Rostow with the new macroeconomic tools that were being developed in Macroeconomics. Disciplines of John Maynard Keynes were building on his ideas at the time and were creating a distinctly different method of approaching the aggregate economy. Keynes surmised that the savings in an economy were transformed into investments through the financial sector. For example, one person's savings will be transformed to another person's investments through the deposits and loans of the banking system. As a result we can say that in an economy Savings (S) will equal Investment (I) so that

$$S = I \quad (1)$$

Keynes' disciplines created a model that tried to understand what affects output. In their model total income (Y) must equal the total consumption (C), investment (I), government expenditure (G) and the net of exports over imports (X-M). This can be shown in a simple calculation where:

$$Y = C + I + G + (X - M) \quad (2)$$

Richard F. Khan (1931) first suggested in this vision of output that investment has a significant **multiplier effect** on the economy, whereby an increase of investment by one euro will lead to the economy growing by more than one euro. It is suggested that an expenditure on any of the above items will increase the economy by more than the amount of the expenditure, but that investment provides the greatest additional boost to income. Thus, increasing investment was considered key to an economy that wanted to increase its income.

The Keynesian revolution in macroeconomics soon found its way in development policy. The idea that investment in capital would provide rapid economic growth through the multiplier effect was firmly placed in developmental theory by the Harrod-Domar model. The model suggested that capital stock creates output and that there is a fixed ratio of this occurring. Consequently, if the **capital output ratio** ($\frac{Y}{K}$) is 0.2, five euro in capital would provide an additional one euro in output. This capital output ratio and the fact that it is fixed is fundamentally important for the model, as it provides the dynamic for economic growth.

Harrod-Domar defined investment as an addition to the existing capital stock of the economy. Assuming an economy with no trade or external aid, the economy can only invest what it saves, and it can only save a proportion of its total income. Hence, the **saving ratio** (s) is equal to the proportion of income (Y) that is saved. However the saving ratio cannot be entirely spent on new machines, but must also take account of the depreciation of existing machines in the economy.

Therefore, under the Harrod-Domar model where an economy is closed (no trade or foreign aid) the growth rate of per capita income ($\frac{\Delta Y}{Y}$) would be linked to the savings rate of the economy (s), the amount of depreciation needed to be set aside for existing capital stock (δ), and the capital output ratio of the economy ($\frac{Y}{K}$).

This can also be shown as:

$$\left(\frac{\Delta Y}{Y}\right) = s \left(\frac{Y}{K}\right) - \delta \quad (3)$$

What is the meaning of the Harrod-Domar model? There are three ways one can make the economy grow faster: by increasing the saving rate of an economy, making capital more productive through increasing the capital output ratio or by reducing the rate of depreciation.

Harrod-Domar substantiated the ideas encapsulated by Rostow by pointing out how the stages of growth occur. In traditional societies the saving rate is very low and hence growth rates are stagnant. The saving rate is slowly changed during the preconditions of take off, whereby also the economy becomes more attuned in using physical capital, increasing the capital output ratio as more and more persons become skilled in using capital. The take off stage is

initiated by an increase in savings rates and the improvement of the productivity of capital. Nonetheless, these rapid growth rates will gradually be eroded as the capital stock grows, making ever larger reductions of investment through depreciation.

How then could the investment in a poor economy be increased? The answer seemed to be the increase of investment and the subsequent increase of the capital stock of the economy. There seemed to be two main ways to increase output per capita: either by donating capital stock (machines, buildings, etc.) or by promoting savings in the economy and therefore increasing investment.

The result of this model was an emphasis of development on capital stock and on savings. A country that was underdeveloped needed to focus on only one issue: picking the desired growth rate and calculating the desired investment rate that it would need. Accordingly donor and underdeveloped countries had a clear objective. One should increase the investment for an increase in the economic growth rate to occur; all other problems to be dealt with after the “drive to maturity” stage of economic development is achieved.

Under the Kennedy and then Johnson administration, the USA significantly stepped up its development aid assistance and other countries followed, either through direct bilateral aid projects or through increased funding for international organisations (Easterly 1997). Vast capital infrastructure projects were funded, while autocratic regimes were praised for suppressing consumption and using forced savings for mass investment projects. Most of these investment projects focused on rationalising and modernising agriculture or building factories in a large scale to kick-start industrialization. Many of these projects were under state owned monopolies and not remotely focused to the needs of the local population, being more conserved with earning foreign exchange and increasing the productivity of industrial workers. Many times these large monolithic aid projects underperformed and displaced the traditional products of the farmers and small industrial units, creating larger needs for food aid and increasing rural and urban poverty.

Suppressing consumption in a wealthy state might mean a reduction in the consumption of luxury products, but in underdeveloped nations such suppression caused serious distress. Nations would undertake several methods in reducing the consumption power of the citizens (for example by buying agricultural products in artificially low prices and exporting them for

a surplus) in order to increase the national savings rate and to finance investment projects. This affected the quality of nutrition of the population, as well as changed the relative payoffs of decision making for rural communities, multiplying the existing problems of rapid urban migration, poverty, lack of education and malnutrition.

The increase in foreign aid during the 1960s was not accompanied with an enhancement in the way the aid was used and disseminated. Political considerations both at the donor country and the host country were often more important than practical issues of aid, leading to several failures. The US agency for international development has cited poor planning and lack of real understanding of infrastructure needs as some of the critical factors of their failure in food production projects in the Sahel countries in 1984 (AID, 1984).

In the end, Domar himself disowned the model and accepted the more advanced Solow growth paradigm, which is presented below. The intuition of the Harrod-Domar model seeped into the increasing development assistance efforts of developed nations and international organisations.

Easterly (1997) has shown that even as the theory of economics moved to better explanations of why economic growth occurs, the Harrod-Domar model was still being used to calculate a “required” investment rate for poor countries and donor countries still rushed to bridge the so called “funding gap” – the difference between the necessary investment and the local ability to raise savings. Easterly was right to point out that this “build it and they will come” approach of economists made no sense to NGO practitioners but seemed ideal to theorists, donor organisations and host countries as the projects’ control was maintained, and was also right to round on organisations whose understanding of development in practise was not integrated in the development theory. In fact, Hussein (2000) suggested that many of the aid programmes initiated by states during that period were doomed to fail even if the world described by the Harrod-Domar model was true due to the fact that many programmes were predestined to help with consumption and not to cover the predicted “financing gap”.

Resistance to the Harrod-Domar model came from the field of development assistance and from theoretical economists. Economics was being transformed by a greater understanding that economic agents change their reactions when incentives change. Thus, many other factors were affecting the growth process. As capital increased, the ability of additional

capital to generate more income was not predetermined as suggested by Harrod-Domar. The ratio of capital to output was not constant but changed as the amount of capital increased in the economy. The theoretical attack came from Robert Solow (1956) who argued that despite all models being simplistic versions of reality, the Harrod-Domar model was not realistic as it was based on the idea that the capital to output ratio was invariable. To be realistic, economic development models needed to be based on solid microeconomic foundations, taking for example, into account the behaviour of economic agents (such as companies, entrepreneurs, employees and consumers).

Others, such as Nobel Laureate Gunnar Myrdal (1974), pointed out that the idea of a single model based on a statistical framework, such as the SNA, but not considering the issues that take place in the developing world, which inherently fall outside the model, was creating aid failures. It is in these issues that fell outside the remit of the model, where no official aid was being given, that NGOs bridged the gap. Many academic commentators from several fields, such as economist Dudley Seers (1979), argued that modernism was effectively describing an Anglo-Saxon model, that more practical on the ground case studies of development success were needed, and that the focus on the aggregate number (per capita GDP) missed the fact that many people might have entered greater poverty. Such economists and social commentators tried to focus development on broader social issues rather than just economic growth.

Today, it is understood that the theoretical weaknesses of the Harrod-Domar model, combined with the practical issues that were not well thought out, made aid in the 1960s and 1970s largely ineffective, despite its large overall increase, and the emergence of non-governmental organisations were in part responsible for the counteractive change. In a self-reflective tone World Bank officials do point out that “during the Cold War, aid allocations were driven by geopolitical aims” and that such aid “failed to have the direct effect of spurring growth” (World Bank, 2002; V) .

The Solow Model: Convergence of Economic Growth for all!

By the mid 1950s Solow developed a new model to describe development as a reaction to what he saw as fundamental weaknesses of the Harrod-Domar model. Solow wanted a model that would describe all stages of economic progress yet the assumptions of the model would

be clear cut. The **Solow Neoclassical Growth Model** (Solow, 1956) describes the economic growth of a nation as a function of technology, labour and capital. It thus adds variables missing from the Harrod-Domar model such as technology and labour. The implications of these additions were profound, as the return to capital in terms of additional output would change over time, which was something considered relatively constant in previous models.

What is technology in the model? In this instance, technology is the current state of how things can be produced given an amount of labour and capital. Imagine a water pump: One labourer with a contemporary machine can produce more output than one labourer with an older technology machine (like an animal pulling the water wheel), but same capital cost. Originally, Solow saw this current state of technology as something exogenous given to all, like “manna from heaven”. It was first considered that the discovery and development of technology was a random event that was not related to the production of an economy. The Solow model also assumed that economies are operating under **constant returns to scale** of production, where in the long run the benefit of doubling all inputs will result in the doubling of output. Both of these assumptions turned out to be very controversial.

The model states that the **production function** of an economy, i.e. the relationship between inputs and outputs, depends on three factors:

- The current state of the production technology.
- The amount of labour hours employed in an economy.
- The amount of capital employed in an economy.

Shown in an equation the above can be summarised as:

$$Y = AL^{(1-\alpha)}K^\alpha \quad (4)$$

Where Y is output (and also income, since total output = GDP), L is the amount of labour, K is the stock of capital and A is the exogenous factor of technology. The superscript α is the elasticity of capital with respect to output, or simply the output change (increase/decrease) in relation to capital changes (increase/decrease).

As we managed to represent an economy with a simple equation, we can now use simple mathematics to derive the intuition behind the above statement. We can divide both sides of equation $(Y = AL^{(1-\alpha)}K^\alpha)$ (4) by L to reach the following result:

$$\frac{Y}{L} = A \frac{L^{(1-\alpha)}}{L} \frac{K^\alpha}{L} \quad (5)$$

Which can be simplified to:

$$\frac{Y}{L} = A \frac{K^\alpha}{L} \quad (6)$$

What does that mean? It means that output per worker $(\frac{Y}{L})$ is going to be affected by the level of technology (A) and the amount of capital available per worker $(\frac{K}{L})$. Hence unlike the Harrod-Domar model where the relationship between output and capital was fixed, here the economic growth is a product of the amount of capital available per worker.

We can mark $(\frac{Y}{L})$ as (y) and $(\frac{K}{L})$ as (k) for convenience, making y the amount of output per worker and k the **capital per labour ratio**. The above equation can be thus re written as:

$$y = Ak^\alpha \quad (7)$$

Box 9: The Washington Consensus

Economic growth models became ever more advanced, yet the reality on the ground did not seem to be getting better. It seemed that aid was still ineffective in raising the income levels of the developing world and many began to consider this as a failure of the developing states themselves.

As market friendly reforms (which included reducing the power of organised labour, liberalising capital markets and privatisations among many other schemes) were made in developed nations under Ronald Regan and others, similar demands for reform in the developing world were voiced in international aid organisations such as the IMF and the World Bank. In simplistic terms, the lack of an efficient market structure was not the symptom but the issue leading to disappointing economic growth.

The idea of the Washington consensus (the general principles agreed by the three organisations based in Washington: the US government, IMF and the World Bank) emphasises deregulation of financial and all other markets, the removal of price controls combined with strict fiscal discipline and trade openness (Williamson 1993, 1994). Such policies met with active support in many developing nations, and new stabilisation programmes were based around these principles. Although many nations entered such programmes willingly, others were pressured into accepting a whole range of economic liberalization measures in order to be aided.

The lack of gradual adjustment led to severe fallout, especially in the new republics that sprung up after the fall of the Soviet Union. The privatisation of state own enterprises led to high unemployment, hyperinflation and wiping out the middle class (Mosley, *et al* 1991), as well as increase of monopoly power and financial crises such as the one in Asia in 1997 and the one in Mexico, known as the Tequila crisis of 1994.

Following almost a decade of such prescriptions, not only were success stories in the countries that were forced to adopt such policies few and fragile, but as Rodrik notes (2006) the market-oriented reforms failed to deal with the growing problems, especially the public health emergency in which the AIDS epidemic caused in Sub Saharan Africa.

In many instances, economic growth in the countries interested by the Washington consensus was much lower than the one experienced in the decades prior to those reforms. This is particularly true in Latin America, where per capita GDP grew at a slower rate in the 1990s (the period of the reforms), than during the period 1950–80. This is also confirmed by Stiglitz (2008), who noticed that growth in Latin America in the 1990s was just half of what it was in the 1960s and 1970s.

How does this relate to the increase of economic growth? Let us assume that labour (L) grows at a rate we will call (n) as population is increasing. The remaining issue is how the economy will manage to increase its capital stock per worker, and hence increase its economic growth.

It can do so by making sure that there is available investment reserve, after taking account of the fact that the capital stock (machines) depreciate over time, and after placing the new entrants in the labour market (n) and providing them with the same amount of capital that the other workers have. The investment left over can be spent to increase the amount of the capital average per worker and hence increase the rate of economic growth.

Two things spur out of the Solow model. The first is that it will become harder and harder to increase the output per worker if the population is increasing rapidly. If (n) is growing rapidly, more and more from the pool available for investment will be needed to just provide new workers with the additional capital they need to be as productive. Secondly, as the capital per worker increases, so will the depreciation of capital increase, meaning that more and more of the pool available for investment will go to replacing existing capital stock. Unlike the Harrod-Domar model, the ability to invest ever greater amounts will decline.

The Solow model still maintains, as in the Harrod-Domar model, the premise that an economy's savings are the principal way of economic growth. That would mean that the amount a country can invest in increasing per worker capital depends on its ability to save. As we have seen in equation $S = I$ (1, the amount that can be invested in capital equals the amount saved in the aggregate economy. Thus, no aid given, the growth of the capital per labour (k), whose increase will promote economic growth, would depend on the total savings of an economy, after taking account of depreciation and the need to equip new workers with the same amount of capital as their peers.

The equation then simply states that a change of the capital per labour ratio (Δk) must equal the amount of savings. Since equation $S = I$ (1 indicates that savings (S) equal investments (I), we can show savings as a proportion of total production (s). Hence the saving rate (s) multiplied by the total production (Y) leads to what is available for investment (sY).

Yet, total output (Y) is produced based on the function shown in equation 4. Thus we can replace Y with another form. We know from equation 7 that Y is a function of k ; thus we can replace (sY) with $sf(k)$, meaning that the total savings of an economy is the saving rate times the total production. But we have seen that although that is the available pool for investment, we must first remove the amount needed to bring new workers (n) to the same level of capital per worker and take account the depreciation of machines (δ). Only what is left can be used to increase the capital per worker in the economy, and hence increase the total output of the economy.

The basic intuitions are what make the Solow model so powerful. It says that all economies will reach a point where the total savings will just cover the depreciation of capital and the capital needed for new workers. At this **steady state equilibrium** the economy will not grow

unless the technology changes or the savings rate increases. The assumption here is that in the future all countries will reach their steady state, i.e. their growth rates will converge to the change of technology (A), which is exogenous. Let us be clear: the convergence here is of economic growth rates not of per capita income levels: per capita income levels can still differ depending on the saving rates of the economies.

An example may help us explain it better. The economy of Country A, with a saving rate of 5%, will reach a point (the steady state equilibrium) where its economic growth rate will equal the growth of the economy of Country B, with a saving rate of 10%, as it would depend only on the growth of technology (A). However their per capita income levels will be different: Country B will have a higher per capita income than Country A. Country A can reach the same per capita level by increasing its saving rate at 10%. This convergence is a very hopeful message to the world economy, as it predicts that in the long run all economies will converge to a certain growth level. It also suggests that poor nations with little capital per worker can grow so much faster than countries with a high capital per worker: as a result developing nations will converge towards the income levels the developed world relatively rapidly.

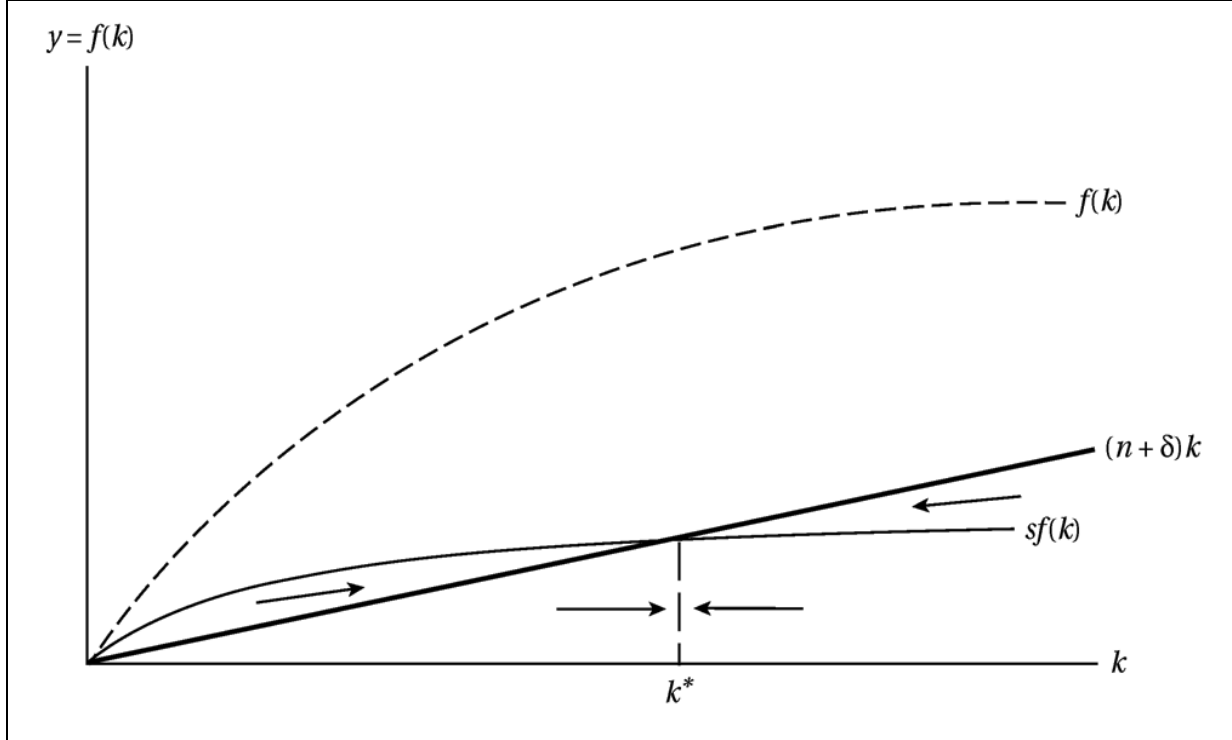
Another useful implication was that unlike other theories (such as the dependency theory and Rostow's stages) the Solow theory was an "empty box": different assumptions with regards to the savings rate, the population increase, depreciation as well as the elasticity of capital would lead to very different results as the model does not presuppose results.

The "empty box" of the theory is named the **Solow equation**, which can be written as:

$$\Delta k = sf(k) - (\delta + n)k \quad (8)$$

Where (Δk) is the change in the capital per labour ratio, $[sf(k)]$ is the total savings of the economy, and $[(\delta + n)k]$ is the amount of savings needed to take account of the depreciation of existing capital and to bring new workers to the same capital per worker level. The Solow equation allows us to graph the output of an economy and consider implications of changing some of the variables that drive growth.

Figure 6: Equilibrium in the Solow Growth Model



Source: (Todaro and & Smith, 2011: 147)

Figure 6 indicates that as we keep the savings rate constant we will have more available savings than what is needed to equip new workers with capital and for depreciation. However once we reach the steady state equilibrium of k^* we will be unable to increase our per capita output unless we increase the savings rate or lower the amount of new workers coming in the economy; at this point the only economic growth will come from technology (A) and not capital accumulation. Notice also that if the capital per worker increases to a point at the right of k^* it will become unsustainable, as the combination of new workers and depreciation will reduce capital per worker (and hence output) back to the level where the capital to worker ratio is k^* . Also note that if the savings rate increases, all we achieve is to have a higher steady state, a higher per capita output, but the growth rate at that steady state will come only from a change in technology.

Is Solow right in suggesting that states will converge towards a single steady state growth rate, and that per capita differences will then be explained by just differences in savings rates? After all we have seen nations that were relatively poor in the 18th century such as Korea and Japan join the ranks of developed nations, and the People's Republic of China and Brazil look set to join the club of high per capita income states in the near future. However had this convergence been true for all, then we should have seen a narrowing of the gap

between the richest countries and the poorest countries during the last 300 years of modern economic growth.

Using Maddison's (2010) Database and taking the difference between the top ten richest with the top ten poorest economies in key benchmark dates, we see an increasing divergence rather than a convergence of income.

1700	About 2 times richer
1870	5 times richer
1914	6.7 times richer
1960	34 times richer
2008	53 times richer

Source: (Madison, 2010), Mills and Crafts (2000)

Thus, we find few countries, such as Japan, converging as suggested by the Solow growth model, while the majority of the world seems to have diverging incomes between the richest and poorest nations. How can we explain this?

The Role of Human Capital and Technology

The fact that convergence did not seem to take place, for most of the nations of the world, led to the modification of the basic Solow economic growth model in two important ways. Firstly, the ability of labour to become more effective through education and on-the-job training, can lead to an increase in what we now call **human capital**. Secondly, technology became part of the growth model, since the generation of technology is a process that has an innate relationship with human and physical capital.

Mankiw, Romer and Weil, (1992) suggested that the Solow model had to distinguish between the capital stock (machines) and human capital stock (knowledge) as they affect the economy in different ways. Expenditures on education, training and research, as well as improvements in health, enhance the productive capacity of an individual. As a result, Mankiw *et al*, argue that the correct representation of the production function of an economy should include technology (A), labour (L), physical capital (K) and human capital (H) with the last three being equally effective in increasing output. This can be described mathematically as

$$Y = AK^{1/3}L^{1/3}H^{1/3} \quad (9)$$

Why is this result an improvement to the Solow growth rate? Because it highlights the fact that humans become more valuable throughout their lives, in terms of increased production, as their human capital increases. Suddenly, just investing in physical capital, as Solow suggested, seemed an insufficient use of resources, further underlying that education, life long training and health care should be in the forefront of efforts to increase income.

CSOs and international organizations' vindicated calls for diversification of aid, away from strictly physical goods and towards creating a better human environment, were thus justified; something Dudley Seers and others who had expressed their difference of opinion with the emphasis of growth were saying for quite some time. The admission of human capital as a vital part of the growth theory turned the arguments of Rostow on its head. Rostow would argue that the main focus of development should be economic growth, since other issues such as health, income equality and poverty and environmental degradation can be dealt with after the "take-off" stage is achieved. The admission that human health and education mattered, since they did affect human capital, meant that ignoring these issues could cause deficient economic growth and a failure to reach the "take-off" stage.

The CSO community, which had insistently argued for a basic needs approach that would ensure the persons could have access to food, water, health care and education was vindicated. Economic growth theory suggested that unless these needs were satisfied, the loss of human capital would be so great that per capita GNI growth would suffer. Aiming at satisfying the basic needs would also ensure that the necessary precondition for economic growth would be met. The economic professionals, observing the inconsistencies between the facts and the theory, listened to the practitioners who argued that the current quality of life of individuals mattered.

When human capital is added to the determinants of economic growth, we appreciate that the biggest loss of capital is not through depreciation of machines, but through the loss of humans and the value they contribute to the society. For example a disease that kills young adults, such as AIDS or malaria, is both a human and a national tragedy: it destroys productive lives and wipes out the human capital invested in those who perish. In fact one of the most efficient uses of aid is combating Malaria and HIV, as well as other epidemics

Box 10: Coordination Theory and the Hausmann-Rodrik-Velasco (HRV) Growth Diagnostics

Let us consider an agricultural area in a developing nation that could use fertilizer to greatly increase food production and productivity. The government is considering building a fertilizer plant, as no private business seems to want to open one. The aim is to provide the community with the input they are lacking: the cost will be repaid through a special levy on the price of the fertilizer.

Even though it sounds like a good policy, it can lead to disaster. The levy may make the fertilizer too expensive for the farmers, meaning that the plant will not have customers, forcing it to close. Even if the plant is built with foreign aid and the fertilizer is cheap, the farmers might not have the education to correctly use it for their own benefit. Even with such problems resolved, there might be institutional factors, such as land ownership and common land, that might reduce the effectiveness of using fertilizer.

These issues are the ones that the coordination theory of development point out (Kramer, 1993). It explains why so many projects went awry in the 1960s and 1970s. Often the project was seen in a narrow way (building a fertilizer plant) with coordination issues being ignored, with poor results.

The Coordination theory, often called the O-ring theory of economic development, suggests that in order for development to work, a general push to resolve age old problems of a “the chicken or the egg” nature is needed. It is supportive of a big push idea where resources are channelled to a nation to tackle all problems of coordination that might crop up in order to stimulate growth, before moving to another nation.

The HRV (Hausman, Rodrick and Velasco 2006) team disagreed with the above analysis. Although they concur with the coordination theory’s principles that several issues are at fault for slow development, they consider that analysing an economy can provide what the main restraints are. By tackling those two or three blockages one can create the conditions for growth. For HRV, trying to solve all the problems as suggested by the coordination theory will dilute resources to the point that nothing is solved, but focusing on the specific needs can release countries from their own binding constraints. In our previous hypothetical example, the HRV would run its diagnostics analysis in the economy and reveal that the issue that stopped both the private market in creating a fertilizer plant and the farmers from taking loans to purchase it was actually the high cost of finance.

(Sachs, 2005). Such diseases affect humans when they are in their productive prime, burdening weak health infrastructure systems and forcing children to reduce their intake of human capital in order to take care of their families. What CSOs knew what to do best, which was to provide for basic needs, had now gained importance in development economics through the effect of human capital to economic growth. Development assistance programmes related to nutrition, family planning, health and education were then on seen as a vital component in the attempts to stimulate economic growth.

The other important alteration to the Solow growth model arose from the work of Romer (1994) who endogenised technology. Solow himself was not very happy with the unrealistic idea that technology was a random process. Romer instead argued that technological innovation was in part a random process, but its invention, adaptation and use were related to

the human and physical capital available for such implementation. Thus Romer created an endogenous growth model, where by technology is related to the amount of capital stock (both human and physical). Consequently, the total capital stock of the economy \bar{K} has also a positive impact to output.

$$Y = AK^\alpha L^{1-\alpha} \bar{K}^\beta \quad (10)$$

The implications of the endogenous growth model are grim, as it predicts that there will be no growth or income convergence between developed and developing nations. The model is not in a world of constant returns to scale, but is an **increasing returns to scale** situation, whereby if the amount of capital and labour doubles, output will more than double as more technology will be exposed and implemented. Thus the model predicts ever greater divergence between the rich and the poor of the world alluding to a mechanism according to which, as new technology becomes ever more dependent on research labs, capital equipment and scientists, the developed nations will pull ahead, i.e. bright young scientists from the developing world will go to work in developed nations, further reducing the human capital stock of the poor, leading them to having an even poorer growth performance.

Institutions Matter

Despite the increasing sophistication of economic growth models, there has been a dimension missing all along, rightly pointed out by development practitioners: the environment that they are called to operate in is often very different than the one implied by all of the models presented above. The production functions that have been the basis of the models presented here assume an economy that has well functioning markets for goods, services and financial products; that is efficiently regulated and that is able to punish and correct negative behaviours, such as corruption, through an efficient and fair administration system.

Yet, in most developing nations the assumptions above are usually not in place: markets are often fragmented or non-competitive, regulation is non-existent or ineffective and the administration is weak due to strife and the lack of empowerment. Indicators of obstacles within markets such as the doing business index (2012) created by the World Bank, the corruption perceptions index of Transparency International (2012) and the index of economic freedom (2012), all show the real problems faced in the poorest nations.

Development practitioners would argue that this has been the greatest weakness of the economists' attempts to understand growth, pointing out that the differing situation of the underlying political economic and social environment from the theoretical led to policies that were ineffective. The variances of the ground conditions mattered. Practitioners would often find that policy agendas drafted in the donor countries were not enforceable in the recipient countries. For example, aid for the creation of additional capital stock (building an agricultural product processing centre) could be jeopardised by the complexities arising from land ownership, the outright need to bribe an interest group, or various other reasons that are outside the framework of the economic growth theory. All this pointed to a research question that the economic profession failed to address: what makes the economic backdrop of these developing nations so different and how can the situation be improved?

The arguments put forward by the Washington consensus (see Box 9:

were that these anomalies in the structure of the economy and society were a hindrance to effective development policy; through structural adjustment programmes there was an emphasis in forcing indebted developed nations to rapidly make changes in order to “look” like successful modern capitalist economies. With very few exceptions (mainly in Eastern Europe) such policies were not successful in stimulating growth, and quite often they reduced the development of nations as income equality increased, and health and education attainments slipped. The political, social and economic backdrop could not forcefully be dismantled overnight, but it needed to be understood.

The answer on how and why the economic background affected development (and vice versa) was provided by Douglass North (1990) who argued that the collective term for all these social and economic phenomena that underpinned an economy were institutions. **Institutions** were the way humanity regulated itself among its political, social and economic interactions, and they could include formal rules, informal constraints and actual institutional bodies such as the law system and the police force. North argued that these bedrocks of the economy mattered for the country's development performance and that unless the right institutions were in place, the development policies devised for western nations could be useless or even perhaps damaging when enforced in the developing world.

North has argued that these institutions are created throughout history, and they are surprisingly resilient to sudden change. He described a situation where institutions were mainly path-dependent. Path dependence is the process how through a gradual chain of events creates laws, governmental bodies and social norms: because they are established over time these might be very difficult to change, even if they are failing the nation. For example, North described how the conquest of the now USA by British settlers rather than by Spanish conquistadors in the fifteenth and sixteenth century meant that the institutions created in the USA were much more conducive to development today than the institutions created by the Spanish and Portuguese in Latin America: he also indicated how difficult it is for Latin America to now adopt the US institutions, as its own were a result of a process that begun hundreds of years previously.

This approach vindicated NGOs who were working on introducing reforms in the political and social life of developing countries. Suddenly, development assistance programmes that aimed to introduce accountability, help bring transparency and promote democracy, became important tools in shifting the negative consequences of institutions, developed in an anaemic way due to a country's (often an ex-colony's) troubled history.

By 2012 it seems that the theory of economic growth has completely changed from its post-Second World War origins. The focus on just economic growth through capital accumulation is now seen as unfeasible and far too simplistic. Development is much more difficult, with issues of population, technology, human capital and institutional factors stacked against the most underdeveloped nations. The role of the CSOs community and of broader development assistance programmes has been well understood and valued by economists, and their work is now supported by economic theory. The current battleground in development economics over the theory of economic growth seems to be whether economists consider institutions as able to change. Acemoglu and Robinson (2012) are convinced that the fact that over a billion people are still under the international poverty line of \$1.25 a day is due to institutions, and William Easterly (2006) argues that the path dependence of their creation means that one can do little to help poor nations, except than support them when positive changes to the nature of their institutions take place from within.

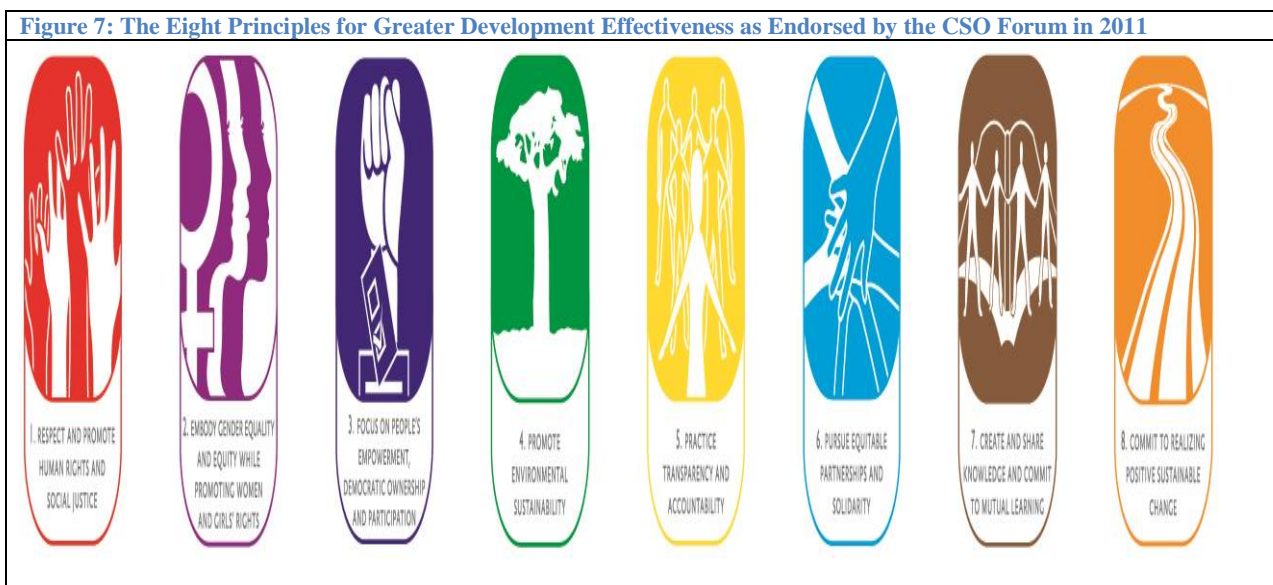
Nonetheless, CSOs and their collective organisations, such as the the Open Forum for CSO Development Effectiveness, are much more confident of the ability to alter institutions

through the civil society of developing nations. They argue that the issue that holds back change is not unwillingness to change or historical precedent, but top down decision making in terms of aid given and the nature of existing development projects. It is argued that civil society and self-organisation by the communities themselves can be promoted, but it needs development aid effectiveness, whereby those who decide aid will do so in cooperation and consultation with those who need it.

Limitations of Economic Growth: a Case Study in the Indian Subcontinent

The chapter focused on economic growth, its theories and the collective efforts to stimulate it in developing nations. Work by North, Acemoglu and Robinson, and others has brought to the attention of economic growth theorists the fact that there are other issues that also matter. The open dialogue between theorists and practitioners has highlighted the importance of the work done by CSOs in developing countries. Development organisations on the ground argued that the ineffectiveness in stimulating economic growth stemmed from the deficiencies of the theory, meaning that theoretical issues had no relation with the real situation faced in the field. It seemed very odd to worry about the amount of capital shortfall of the Democratic Republic of Congo when poverty, as health and education, were in dire need of reform and development. With the help of practitioners, economic theorists have consented that factors that were left out of models really did matter for economic growth to occur. Now economists can provide a general picture of what creates the conditions for economic growth, enabling official and private development organisations to make their aid as effective as possible.

Figure 7: The Eight Principles for Greater Development Effectiveness as Endorsed by the CSO Forum in 2011



Source: Open Forum for CSO Development Effectiveness (2011)

CSOs are putting forward basic principles of participation, and are playing an even greater role in making themselves heard in ODA planning and implementation. Economic theory has highlighted the importance of the work the CSO community is doing on the ground, and suggested that those who expect to see an immediate correlation between effective aid and economic growth do not understand current economic theory. Economic theory suggests that the work done by CSOs creates the necessary preconditions for human capital accumulation and institutional change, both essential preconditions for sustainable economic growth.

At the same time, we understand that there is a bicausal relationship between poverty, education, health and nutrition on one side and economic growth on the other. Where feasible, economic growth is still a worthwhile goal, as it can provide the economic resources for a country or area to tackle other issues of human development.

A case study comparing Pakistan and Bangladesh (Todaro and Smith, 2011; The Economist 2012) can help us understand the equilibrium between striving for economic growth and other development goals and how success in one goal can help all other goals. Both Pakistan and Bangladesh are big aid recipients, although perhaps Bangladesh receives more per capita aid, considering the numerous international, government and CSO organisations. It would seem that in many measurements Pakistan seems to be doing better than Bangladesh. In per capita GNI terms (using 2008 figures to discount the effects of war in and around Pakistan) Bangladesh (\$1450) is still much poorer than Pakistan (\$2,590), and Pakistan has a lower proportion of people living under \$1.25 a day. Yet, the decline rate of people living with less than \$1.25 a day has been greater in Bangladesh and things are getting better faster for Bangladeshis rather than Pakistanis, despite the fact that Bangladesh is starting at a higher poverty level. However, back in the 1970s when aid started for Bangladesh and Pakistan, neither country was synonymous with effective aid programme implementation.

This is in part due to the fact that in Bangladesh the emphasis was put on female empowerment through voluntary family planning. This halved the rate of fertility and placed women in a stronger position in their households, providing cheap and productive labour for the Bangladeshi textile industry. The emphasis on improving farm yields also played a role in reducing rural poverty, and greater female education enlarged the human capital thus enabling faster growth in the future. Literacy improved faster and with greater gender

equality in Bangladesh, which resulted to a higher human capital for the next generation, allowing it to have faster economic growth than in the past. How did Bangladesh finally achieve this change? In part through largely allowing the local civil society (with help from international NGOs) to assume responsibilities which the state's weak institutions could not effectively provide.

Economic growth is not irrelevant; Bangladesh “would surely have done better still if its economy had grown faster”, (Economist, 2011: 13). But what has been set in place in terms of providing for basic needs and creating institutions, supports future economic activity and allows for more possibilities for Bangladesh to have faster and sustainable economic growth in the future. Poverty reduction and economic growth are both worthwhile goals, and efforts to stimulate both have to take place simultaneously.

Conclusion

In this chapter we looked at the history of economic growth and the efforts to stimulate it. Back in the 1960s and 1970s economic progress was seen as synonymous with economic growth for less developed countries. This led to poor results, as growth seemed unsustainable as issues that stymied growth, such as poverty, were ignored in the attempt to promote increase in the per capita GNI of developing nations.

Current theory realises that although economic welfare is assisted by sustainable economic growth, there are other issues of low development that have to be tackled prior and during an economic growth “take-off”. Economic growth should not and cannot be the single aim of a developing nation or the organisations that provide assistance. Our case study of comparing Bangladesh to Pakistan shows the bright future for Bangladesh mainly due to reasons other than current economic growth.

Development theory has caught up with what development practitioners have been seeing on the ground. Economic growth theory now understands that both technology and human capital play a very important role in explaining the differences of growth between nations. As a result, the struggle for achieving growth seems steeper than in the 1960s: careful sustainable steps where all aspects of underdevelopment (not just per capita income) are addressed are needed.

The importance of institutions has also been understood. Institutions interact with the economy in a mutually reinforcing way – they affect it, just as economic conditions affect institutions. The challenge remains as to how to promote institutions that aid in the achievement of positive economic results. Although there is a debate on whether institutions can be subjected to rapid change the role of the civil society in making their existence robust will be catalytic in future efforts to stimulate economic growth. Thus, civil society and attempts to bolster it in developing nations can be very important for the future increase of per capita GNI.

Efforts to safeguard and nurture human capital through nutrition, health, education, etc. are now deemed as important as economic growth. In a way the basic needs approach has now become part of the economic growth theory: by raising people out of poverty, the topic of your next chapter, we can ensure that economic growth will not falter through the lack of sufficient human capital.

Chapter 4: Inequality and Poverty

What is Income Inequality and Why Should we be Concerned?

In Chapter 3 we saw that economic growth is the increase of per capita GNI (or GDP) of an economy. Yet the average income is a statistical artefact: it tells us nothing about how income is divided within the population of a country.

Let us take the example of Mexico. The World Bank estimated the total GNI (in current US dollars) of Mexico at \$1153 billion and its population at 114.8 million (World Bank, 2012d). Thus, the per capita GNI of Mexico (in current US dollars) is \$10,043. Does that mean the average Mexican has an income of ten thousand dollars per year? The answer is no. The richest man in the world (Carlos Slim) is Mexican, and his net worth in 2011 was estimated \$74 billion. If we remove the fortune of Mr. Slim, the per capita income of the remaining Mexicans would only be \$9,399.

Of course the above calculation is full of flaws; GNI is an income estimate while Mr. Slim's fortune is a wealth estimate, and thus they are not directly comparable. But it plain simply demonstrates that if the richest in a society receive a vastly disproportionate share of total income, then the average income has no real relation to the income of the average Mexican, which is much lower. In fact, Mexico is known for its high income inequality, meaning that the upper class of the society receives a far higher share of income than the lower strata, therefore at 0.48 (OECD, 2011; see box Box 5 for relevant explanation) it has one of the highest gini coefficients of income inequality.

Income inequality is a critical detriment to the development of society. As we saw in Chapter 2, high income inequality in a society, where the per capita income is low, condemns those with the smallest share of income to absolute poverty. Even when the number of citizens in absolute poverty is low, high income inequality results in a high proportion of the population to live in relative poverty, with their incomes far lower than the national average.

What Kind of Poverty "Matters"

In Chapter 2 we defined absolute poverty as being lower than the international poverty line, that is defined when taking account the basic needs of humans. The World Bank has two

indicators of extreme poverty, set at \$1.25 and \$2 a day. The number of people who still fail to reach these minimum poverty lines is staggering: at least 20% of the world's population lives with less than \$1.25 a day, while approximately 37% of the world's population, an astounding 2.6 billion, lives on less than \$2 a day. Absolute poverty is geographically concentrated in South Asia and Sub-Saharan Africa, which corresponds to 72% of the population living under \$1.25 a day (World Bank, 2007a).

Yet, to be able to tackle the vast global income inequality and the resulting high levels of absolute poverty, one needs to understand who these people are and what their needs are. The CSO sector successfully argued that poverty exists all over the world under diverse conditions; as a result, in order to be able to attempt any reductions in absolute poverty, one needs to understand the diversity of people undergoing poverty, so as to provide the correct policies.

Low income communities are often characterised by common traits, which are both factors causing poverty and as well as the effects of poverty. Human capital, as measured by the level of education attainment, is low in people living in absolute poverty, while health measurements (such as the mortality rate of those under the age of five) show higher mortality amongst the poor than the general population. These two issues clearly interact with each other to cause even greater negative consequences to those living in absolute poverty. The correlation between child mortality (for children under the age of 5) and low education is very high. In Tanzania mortality for children under the age of 5, born by uneducated women is 150 deaths per one thousand, while for women with complete secondary education (or higher) the same figure is just under half of that amount (World Bank, 2007b: 119).

Economists initially set measuring poverty in ways that would ensure that the poverty levels across each society would be comparable. As such, countries or areas could also be ranked with an index which would enable the international organisations and organised aid agencies to focus on the areas where the greatest incidence of absolute poverty occurs.

The simplest way to rank the occurrences of absolute poverty is the **Headcount Index**, which counts the number of people, in a state or area, who fail to reach the absolute poverty line, divided by the total population. This is a simple method of understanding the per cent of the population that fails to meet its most basic human needs.

However simplistic, it hides great variations of poverty among different areas; for example, take two countries (A and B) that might have an identical headcount index of 20%. In country A however, all those who fall under the international poverty line of \$1.25 a day have an income of one dollar a day, and in country B all those who fall under the poverty line have an income of half a dollar a day. It is clear that poverty in country B is a lot more severe, and the population living in B needs more assistance despite the identical headcount index.

To avoid such issues, social scientists developed the **total poverty gap**, which estimates the amount of income needed to raise all persons above the poverty line. Continuing the example from above, let's assume that both country A and B have the same population of 100 persons. The total poverty gap of country A is five dollars, as the 20 citizens who fall below the poverty line need \$0.25 each to come up to the poverty threshold. However the total poverty gap of country B is far greater at fifteen dollars, since the 20 citizens who fall below the poverty line need \$0.75 each to escape poverty.

The total poverty gap being proportionate to the population, will be very high if the population is large. For a comparable measurement thus, we divide the total poverty gap by the total population in order to create the **average poverty gap**. In our example, the average poverty gap of country A is 0.05 and for country B 0.15. This average poverty gap is often divided by the international poverty line (\$1.25 a day) to create the **normalised poverty gap**. Other times we think that extreme poverty is something that needs to be highlighted. In such cases poverty indicators are constructed so they put a greater emphasis if there are people that are far from reaching the minimum poverty line, to thus indicate that extreme poverty is a far more serious issue and needs to be given a greater weight in policy making

Each different estimate of poverty provides different information that is useful in our efforts to alleviate poverty. Normalised indexes of poverty emphasise the need to bring all persons above an accepted international poverty line, while a headcount index indicates how broad the problem of poverty is within the population of a nation as a whole.

We do not only need to measure poverty: we also need a way to measure how the income of a nation is distributed within its citizens. Income inequality is often counted by comparing the

difference between those who collect the highest share of income and those who collect the lowest share. The Gini coefficient of inequality is just such a measurement.

Alternatively, the **functional distribution of income** can be taken into consideration, whereby the share of total income allocated to each factor of production (rent for land, wages for labour and rates of return for capital) is counted. When measuring the income across the factors of production there is a troubling understanding that globalization has increased the rates of return for capital, leading to relatively greater returns for owners of capital than to the owners of labour¹¹ As capital is not evenly spread among the population, those who are the owners of capital, who most likely belong to the top income bracket, benefit more than the average wage earner, further increasing income inequality within and amongst nations.

Piketty and Saez (2010) argue that the top 1% of US income earners saw the real growth of their revenue, in the period 1993-2010, increase by 58%, while the rest 99% only had a growth of 6.4%, accentuating even more the income inequality in the United States. This relative inequality increase does not only affect the United States but accordingly most other states integrated in the increasingly globalised economic system. This does not necessarily mean that globalisation does not aid the owners of labour (i.e. the workers): in fact the growth of wage earning and the greater probability of employment in countries such as the People's Republic of China was only possible due to the decision to open its borders to global commerce. What we are stating here is that the increase in returns to capital is higher than the returns to labour: despite both being better off than before, income inequality is increasing as the owners of capital gain more. Income inequality within nations has been rising across the world, regardless of whether the economy is part of the developed world, the developing world or the yet to be developed world (Saez, *et al* 2011).

In our analysis of the Millennium Development Goals in Chapter 2, we saw the encouraging signals of absolute poverty being on the decline, and this in part is due to the rapid economic growth of the People's Republic of China and the Indian subcontinent. At the same time though, income inequality is increasing. Nevertheless, rapidly growing developing nations grasp the opportunities offered by globalization reducing absolute poverty on the one hand, but increasing the relative poverty faced within their populations on the other. Thus,

¹¹ For a good suggestion why see Krguman and Venables (1995)

inequality and poverty, both absolute and relative, are interrelated meanings, and this should be taken in consideration when development policies are implemented.

How to measure poverty can be said to have an issue related to what one wants to do with the measure after its creation. Because poverty affects all aspects of life, a measure based on just income will not have the required effect of capturing the full range of negative experiences lived by the poor. For example, poverty indicators only based on income might lead to development policies to focus on increasing food consumption, without improving access to education. This can lead to enhancing the dependency of the poor to handouts rather than allowing them to build their own more prosperous future.

Since we now understand that poverty is multidimensional in character, there is a need to create a measure that will cover all the aspects that make the life of the poor difficult. Such a measure will also denote that poverty is particularly negative because of the interaction between these different types of deprivations the poor feel in all aspects of their lives: for example the lack of income leads to lack of education that contributes to increased social marginalisation.

Thus, our current understanding of poverty is one of multidimensional hardship. To be poor is not just to have a lower income in comparison to others. It also means to be deprived of secure food access and nutritional value of food consumption, to have inadequate clothing and housing, to be of low educational attainment and to lack easy access to health, to have limited command over productive assets and human capital, to lack having a voice in society and to be vulnerable to natural and non natural catastrophes (Tarp, 2000: 223). As a result of this understanding the United Nations Development Programme, which has been in the forefront of the fight against poverty, launched a new **Multidimensional Poverty Index (MPI)** in 2010 to replace its existing Human Poverty Index. As greater data availability is created, the MPI aims to integrate all of the above factors of poverty in its calculations; yet now it mainly focuses on issues of health education and standard of living, for which the data is more readily available.

The index varies from other measures in that it creates a poverty line for all indicators and it measures their interaction through the **dual cut-off method** (Alkire and Foster, 2011): lines analogous to the international poverty line of \$1.25 a day are set for each and every indicator

of poverty. To be below such a line means that a person fails in at least one dimension to meet the minimum basic need. Then we have a second round, which counts the number of dimensions in which that same person falls below the poverty line. The achievement of this indicator means that multidimensional measures are indicated, and if the poor are deprived of all dimensions then the MPI will indicate it through a much higher index of poverty¹²

The success of the MPI is greatly appreciated by the development practitioners who are focused on improving aid effectiveness. As shown in Chapter 2 there are many who argue that aid is not effective, but the lack of success is measured based on income and other traditional poverty data. Yet such data ignores the real character of poverty and its multidimensional and interactive nature. By providing an indicator that can capture the nature of poverty across different aspects of a person's life allows us to highlight the success of effective development cooperation programmes that aim to reduce poverty. Additionally, being able to capture improvements in the multidimensional space of poverty eradication might convince donors to provide longer term funding that is needed in order to break through one of the biggest problems of poverty: the poverty trap.

Rural/Urban Poverty and the Role of Gender

The development cooperation community differentiated itself from aggregate measures of poverty preferred by economists. They argued that although such measures are perhaps indicative of the general environment, poverty indexes do not offer useful information in how to best tackle absolute and relative poverty.

A more important distinction of poverty for a development practitioner is whether the poor are situated in an urban or rural environment. This matters as the policy responses to reduce poverty vary depending on the surrounding environment. For instance, rural poverty could be improved with greater access to production technology, land redistribution and changes to improve agricultural yield, while urban poverty requires a very different range of policies.

The emphasis on poverty eradication in the general media can seem to focus on urban poverty and the hardship within city slums worldwide, yet poverty is a largely rural

¹² The Author of the Measure has an informative site on how the multidimensional index is created: <http://www.ophi.org.uk/alkire-foster-multidimensional-poverty-measure/>

phenomenon. In Bangladesh, where the percentage of the national population under the national poverty line is 40%, just 28.4% of the urban population lives below the national poverty line (World Bank, 2010).

Sachs (2005) gives the example of the village of Sauri in Kenya, to demonstrate the problems faced by rural communities struck by poverty. The area had high incidences of hunger, malaria and AIDS. The International Centre for research in Agroforestry based in the capital (Nairobi) presented to the local community a method of agriculture of that would increase agricultural production yields through the introduction of nitrogen fixing trees (allowing for better nutrition of the soil), but the farmers lacked the access to capital to acquire the trees, and the centre was not able to maintain a support network for those who implemented the changes. Sachs argues that poverty alleviation through a combination of investment in agricultural inputs, credit, basic health and education, will greatly alleviate rural poverty in areas such as Sauri. Others such as Easterly, would not be so sure of such an investment being effective and the majority of the development community argues that in order for the suggested investments to be successful they must take into account the particularities and desires of the local population. Economists may be able to suggest what needs to be done, but unless the community agrees and is granted ownership, by investing time and effort, effective development cannot occur. Development practitioners have been pivotal in broadening our understanding of development as a cooperative practice, stressing the fact that without involving those whose lives are affected, the possibilities of success will be greatly reduced.

Poverty also has a gender bias. Women and children suffer more the threat of being poor, especially if they are in female-headed households. Women in general are earning less than men and have less access to basic needs such as adequate nutrition, healthcare and education. Most often, the lack of access pervades all aspect of one's life, with restricted rights on issues of law, property and job security. At the same time, even in households where men are the principal earners, the inability of women to have any input over the family income leads to higher insidences of malnutrition.

In fact we severely underestimate poverty because of the way we measure it. We do not take account the differences in resources within a household. When we compare the income of a population against an international poverty line, we generally compare the household income, i.e.the total income a household, divided by the persons in the household. Yet, women often

receive less than the average of the household income, as household income is rarely divided in an equal way. As a result, household expenditure on female nutrition, healthcare and education is substantially lower, and incentives need to be put in place by development organizations to reduce expenditure inequalities within the household.

Perhaps the greatest discrimination against women is the fact that there is an increased mortality of female foetuses, infants and children: the missing generations of females especially in Asian countries is for Sen (1999) not just the greatest issue facing women in the developed world, but also a key issue in our fight for enlarged global welfare. For Sen, there should have been a greater focus on eliminating restrictions on the abilities of females. In his opinion the focus has been far too much in ensuring for example sufficient nutrition in a community, rather than in improving the ability of women to run their own lives. It is better to make sure that obstacles preventing women from prospering are lifted, as the effects will be a permanent increase in female welfare.

Although improving female welfare is beneficial to women and their families, only recently has there been a better understanding of gender issues related with poverty being intertwined with access to resources rather than lack of consumption. Sen argues that improving female economic and social freedom can have very positive effects and can influence all other development aims positively. The restriction of access to food, health, education and to the right to life itself means that improving female agency in the developing world, (**agency** is the ability to have access to resources and freedom to make rational decisions) is a powerful tool in not just eliminating poverty but also in improving child mortality and allowing for a reduction of fertility to sustainable levels.

Box 11: The Complex Problems of Absolute Poverty

Nafzinger (2006: 194) in the textbook on economic development aims to highlight the place of those living in absolute poverty by describing the combined problems that they have to face.

- 60% to 80% of their income is spent on food.
- Food is largely carbohydrates, with little fish or meat.
- 50% of those under the absolute poverty line are undernourished.
- Average life expectancy is only 45 years old.
- Despite the low life expectancy, only five children out of ten will live to be that aged.
- 40% of children are not immunized for diseases such as measles and diphtheria.
- 67% lack access to safe and plentiful water.
- Illiteracy in adults runs from 30% to 40%.
- Mostly living in environmental marginal areas.

How does one change this? The initial reaction is to provide for the things that the poor lack: better food, clothes, housing and free school buildings. Yet, this approach of providing the poor with consumption can lead to ambiguous results. Providing the poor with free and better quality food might put the vendors to the poor out of business, while nutrition within the household, especially for women, might not improve.

It is thus increasingly understood that alleviating poverty is about removing restrictions and providing possibilities. A better policy would be to provide good quality food for children going to school. The nutrition goes to those who may be underprivileged within the household budget, as well as providing an incentive for the parent to give his child the capabilities he would need to try and break free from the cycle of absolute poverty. Direct measures of consumption are helpful, but blending consumption with the more indirect measures to instil the poor the capability of integrating socially, politically and economy will lead to better results.

A positive example of cooperation and improving access is the creation and involvement of the Mumbai Railway Slum Dwellers Federation to decisions regarding the future of the slum dwellers. Supported by an NGO (Promotion of Area Resource Centres) that aimed to promote the ability of communities to self-organise (thus similar to the organisation that this book supports, the NGO Support Centre in Cyprus), slum dwellers managed to organise their community and negotiate with the municipality and the Indian railways concerning their needs and interests (Sachs, 2005).

Poverty Traps: National and Personal Vicious Cycles

Let's go back to Chapter 3 and reconsider the Solow neoclassical growth equation that we have shown in a diagram in Figure 6. The logic behind it is that in the beginning the amount of savings available to spend on supplying labour with additional capital, after taking account new workers' capital needs and the depreciation of existing capital, is a positive number: then the economy will have economic growth and move towards its steady state of growth, and its income level will be determined by its national savings rate.

But what if a nation is so poor that it consumes the majority of its income in subsistence, and it also has a high fertility rate? It might happen that at the starting point of very low income there is no savings surplus available; the meagre savings are all used up to bring up the large number of new workers at the existing (low) level of capital per worker.

This creates a **poverty trap**: a bad, “low” income equilibrium from which it is very difficult to break out; a clearly undesirable outcome. In such cases, there could be multiple steady state equilibriums: a “low” income equilibrium where the country just returns to low per capita income levels and a “high” income equilibrium which, once reached, ensures that the country will not fall back to extreme poverty. In the case described, the nation would need substantial aid in order to break the trap. To break the poverty trap the nation will need to maintain a high level of savings (topped up through aid) until the point when the capital per worker ratio (k) reaches the “high” steady state equilibrium; a reduction of savings (and/or aid) before this point will lead to a return to the “low” income level equilibrium. Only then is the poverty trap broken, by reaching the new higher equilibrium level can we ensure that the nation does not return to the “low” income level equilibrium.

The existence of poverty traps is one of the main issues of poverty; its reduction involves commitment of resources over a very long period of time, as the vicious cycles of poverty need to be broken. Poverty can span generations; support in breaking poverty traps requires long-term planning, and sometimes it may need to be sustained for decades. Sadly enough, this long-run approach rarely fits the traditional way development assistance is delivered, since assistance is usually given on a “project-by-project” basis, with the requisite to create achievable results and complete projects within a short period of time.

Poverty traps do not only concern nations but also occur in communities within a nation. We have established that being poor affects all aspects of one’s life and that it can result in the deprivation of one’s capabilities. Thus, poverty can restrict a person’s education and literacy, while poor nutrition can compromise health and productivity. As a result, the growth potential of the economy is reduced by the degradation of the human capital of the population.

Why is eliminating pockets of poverty within a nation so important? Firstly, the inability of the poor to reach their true potential leads to economic inefficiency. Their exclusion from the

credit market, healthcare and education sector hobbles productivity both for them and for their children. Hence, in economic terms, there is inefficiency within the production function of the economy (see Chapter 3) leading to lower economic growth.

This is a phenomenon often seen in urban poverty environments. Work can be insecure and may require long hours; it is often done with very little capital (machinery) at the disposal of the worker. That can lead to very low worker productivity: with just a small improvement in the amount of capital available to the worker, she can rapidly increase her output and thus improve her income. Yet such capital is hard to find. As such work is informal with no real job security the worker will rarely be able to borrow from recognised financial institutions. Meanwhile the informality of the sector causes problems for governments of developing nations, as it makes it difficult for them to know what production takes place; as a result it is hard to tax the production, or at least regulate it in order to have more control over possible physical or environmental degradation.

It is important to note that even if we accept the Solow neoclassical equation for economic growth (see Chapter 3) as an accurate portrayal of a developing economy, income inequality and the associated poverty can have direct negative consequences to economic growth. The lack of a large middle class can affect the national savings rate, as they make a higher rate of marginal savings. Hence, high income inequality can result to lower savings rates, leading to a slower increase of economic growth and reaching at the steady state equilibrium with a lower per capita income level.

Furthermore increases in the relative poverty level can lead to greater political and social instability as well as force economic agents (firms, officials, entrepreneurs and consumers) to make choices that result to a negative outcome for society. High inequality countries usually spend too much of their meagre resources on tertiary education and not enough on basic literacy for the whole population, which has a very inefficient outcome. In addition, those who have the means of production may seek to increase income through **rent seeking** (the motivation to acquire income through manipulation of the political environment) rather than generate new income, and that can result to the degradation of the institutional quality of the nation. Baumol (1990) argues that this is in perfect keeping with economic principles. Once we accept that in developing countries markets are far from the ideal competitive environment as the necessary regulation and information flows are not in place, then

businessmen (entrepreneurs) can act in ways that stop the nation from developing. It might be that the lack of competitive markets and strict regulation leads entrepreneurs to try and use corruption to gain (in economics this is called rent seeking behaviour) because doing so will be easier than actually working hard to increase production.

This is because an entrepreneur's concern is to acquire more income for themselves. Thus, if they can make more profit by bribing for a government contract rather than by establishing a factory and exporting goods abroad, then entrepreneurs will choose the former, retarding economic growth and undermining the institutional framework of the economy.

Poverty Should be Seen as a Restriction of Capability. The Need to Set the Poor Free

Sen (1999: 87) rightly argues that poverty hindering countries and communities from doing better is only instrumentally significant. What really matters is the deprivation of capabilities of persons and not the low levels of consumption and expenditure. Thus we need to refocus on what truly matters, which is increasing their access to resources and their needs that are out of their reach. For Sen, removing restrictions and providing poor communities with the capabilities matters more, as poverty alleviation can occur even when incomes are low, due to the fact that one can generate the capabilities needed for poverty stricken communities to rise out of their deprivation. An example is the Indian state of Kerala. Although Kerala has a rather moderate record in economic growth within India, it has been quite successful in eliminating poverty. The way Kerala has managed to reduce poverty despite having lower economic growth than other Indian states is important, as India has areas with very low levels of development with areas in such as Kishanganj (Bihar) having very similar low adult literacy rates to Burkina Faso [about 10% of females and 31% of males know how to read and write] (Sen 1999: 101).

Sen's contribution has altered the understanding of poverty for the better. He has changed the question that should be asked when trying to tackle poverty. We have thus moved from "how can we give something to those who are poor" to "how we can enable the poor to get what they need". Most economists would agree that increased literacy has an increased social benefit for a society as a whole: it is a **positive externality**, whereby the personal benefit of learning how to read and write is less than the total social benefit of having an additional member of the society with that capacity, (for example the social benefit of all being able to

read road instructions is very high). Economists would squabble on whether the act of increasing one's literacy should take place through public schools or through the provision of vouchers for a private school system. Sen argues that this is a wrong premise, in that the public or private education system should be evaluated on its abilities to improve the capabilities of the poor, making the benefits of the poor the sole priority of eradication programmes. This shifts the focus away from purely statistical targets, such as the amount of persons under a \$1.25 a day and places the emphasis instead on enabling the poor to have the freedom of choice for their actions, regardless of their constraint of poverty.

To paraphrase Maddison (2003), what matters in development issues is to distinguish between proxies of lower living standards such as the headcount index, and focus on the ultimate reasons of why low living standards are being so persistent. In this case income inequality is a proxy for the problems faced by the poorest of society and what matters, what really is the ultimate aim, is to find out whether the persons born poor have the capability to fulfil their potential in all walks of life. If the headcount index is reduced without an improvement to the capabilities of the poor then any change will prove unsustainable.

This was understood during the development of the Human Development Index. Despite being an indicator of income, education and health, the United Nations Development Programme is collecting additional information on environmental sustainability, gender equality, poverty and inequality and enables users to make their own composite indicators of development. These composite indicators usually allow the reader to be in the driver seat and decide for himself the most important issues of development. In fact the indicator for inequality within this "Do it yourself" HDI index is a composite indicator that transforms the constraints to capabilities in terms of health, education and income.

Box 12: Credit and the Poor

One of the biggest restrictions in the capability of the poor to improve their lives is their lack of access to credit. Credit is an exercise of risk, the creditors who provide it want to be sure they will have their investment returned with sufficient interest. Yet the poor often do not have anything to offer as collateral and thus they are either refused credit or they receive it at such a high interest rate that it is not possible to repay it; thus they fall prey to the unequal power relationship between the creditor and the debtor. So what can the poor do?

The answer lies in self-organisation. In the 19th century cooperative credit and banks were established throughout Europe that aimed to pool the meagre savings of a community and provide capital for individuals that aimed to invest for a higher income. The cooperative movement was based mainly (but not exclusively) on the Raiffeisen Principles than emphasise coordination, collective responsibility and sharing of limited savings. This enabled close-knit communities to save and collectively decide who should be allowed to borrow their savings and at what interest. Losses and profits were shared, adding a great incentives: for the creditor- to be careful in their investments and the lender- to be diligent in the loan repayment (or else his whole community will be against him!). The cooperative banking system worked well in many countries and was instrumental in the development of Germany, Holland, Cyprus and the then Mandate of Palestine.

Despite efforts made, the idea did not seem to help those who lived in absolute poverty in the developing nations. A combination of the complete absence of savings and the lack of the ability to self-organise led to the exclusion of those at the bottom of the social pyramid from having any access to credit that was not abusive (an example of abuse is the practises of some loansharks to keep clients permanently in debt).

This lack of finance led Professor Muhammad Yunus, Head of the Rural Economics Program at the University of Chittagong, to launch a research project to examine the possibility of designing a credit delivery system that would provide banking services targeted to the rural poor. The Grameen Bank became very successful and aimed to extend banking facilities to poor men and women; eliminating their exploitation by money lenders and creating opportunities for self-employment for the vast multitude of unemployed people in rural Bangladesh, focusing mainly on women.

The Grameen Bank is still considered the most successful microcredit initiative that explicitly aimed to give people the capability to borrow in order to improve their own lives. It is focused in providing finance for the poor. It works using solidarity units, with each unit consisting of five members. Although a person who borrows has individual responsibility, he/she is part of a solidarity unit, which also can also gain by motivating good credit behaviour; regular repayment increases the credit ceiling for all members of the group. Hence monitoring of the lender is done by the other members of the unit.

The main differences of microcredit initiatives to the cooperative banking system is the fact that the Grameen bank was also actively involved in providing education, establishing networks and focusing on women prior to co-opting their lenders as members in the banking establishment. The focus was also on lending to micro-entrepreneurs, who with a small increase in capital, could greatly increase their output. The success had spawned a range of private and NGO institutions, which provide a range of microfinance services such as banking, insurance and fund transfers.

The solution to alleviating poverty traps is then not necessarily a large increase in aid in order for the capital per worker to be boosted but rather, removing the constraints to participation of the poor in all social, political and economic levels. One of the largest constraints to participation is the lack of access of poor people to credit. Poor people have usually very little collateral, and their lives are perilous as they live near subsistence, thus they are excluded from

formal capital markets. Box 12 indicates how microfinance can have a better result in increasing the capabilities of the poor than direct transfers.

An example of how to help those who have such a hard life comes from Haiti. Yvrose Jean Baptiste was a single mother in Haiti who lived through borrowing informally at a high interest, purchasing goods and selling them in her makeshift stall. The margin of profit was very slim and following the earthquake in Haiti 2010, Yvrose was left with no inventory, crippling debts and no access to borrowing (Kenney 2010). The capability of Yvrose to borrow through CSOs allowed her to rebuild her store and expand her business, with minimal (if not non-existent) government support (Planet Money 2010).

Are we Doing Enough to Eliminate Poverty?

The elimination of poverty is one of the rallying cries of development for which there is little disagreement: ending poverty has large beneficial consequences in economic, political and social terms. As a result the majority of development assistance programmes have as a main objective to either directly or indirectly reduce poverty.

There is presently a better understanding of the negative outcomes that increased poverty leads to. Structural adjustment programmes that aim to place the economy in a viable path can be very austere, yet there is currently an obligation for safety nets so as to avoid pushing the poor below the absolute poverty line. These can include food-for-work projects, family planning workshops, providing food support and increasing health provision.

In principle, international donor organisations have placed failsafe mechanisms to ensure that the amount of citizens in poverty does not increase during implementation of nationwide development programmes. However, in practise these programmes leave a lot to be desired.

What are these programs that purport to “ensure” that poverty elimination is accounted for? The IMF has established the **Poverty Reduction and Growth Facility** to broaden the concessionary element of loans it provides, if such loans have as an aim the alleviation of poverty. In addition, the IMF and the World Bank require the **Poverty Reduction Strategy Papers (PRSPs)** to provide a long term and sustainable strategy for a country to fulfil the Millennium Development Goals (which include the reduction of poverty), before a country

can be considered for debt relief. These can sometimes work complimentary to The World Bank's **Social Dimensions of Adjustment Projects (SDA)**, which aim to fund policies to combine economic growth with poverty reduction, providing safety nets to groups that would be disadvantaged.

These programmes usually focus on issues other than poverty in terms of level of income, such as health provision, potable water and malnourishment, which demonstrates again the fact that poverty is multidimensional. In practise however they are put in place as part of national development packages and can have the opposite effect, since they can increase income inequality, worsen existing environmental issues and fail to achieve sustainable long-term economic growth.

In the recent past many used to argue that economic growth was enough to eliminate poverty. The above policies indicate that even large market oriented organisations now appreciate that despite being desirable, growth is often not enough. Redistribution measures, where the wealthiest in society contribute to programmes that aim to increase the capabilities of the poor should be part of a nation's development strategy. Indirect measures such as microcredit and increasing female access to resources can have better outcomes in combating poverty than direct measures such as subsidies and employment creation.

Donor organisations can now explicitly target poverty by asking development project management to pinpoint how they will contribute for the recipient country to reach one of the Millennium Development Goals, yet there is still a larger "rhetoric-reality gap" (Tapp, 2010: 235). Assessed by the aim of eliminating poverty, only half of the World Bank's structural and sectoral adjustment loans had a poverty reduction as their goal (Ibid). Out of about ninety European donor projects, only twenty one per cent targeted aiding the poor, with very little evidence of positive effects of these interventions (Cox, *et al* 2000). Things are improving, yet bridging the gap between theory and practise is the new focus of poverty alleviation.

Poverty can be eliminated if we can provide to the poor the capability to change their own lives. Ownership of the programmes should belong to those who suffer the most, as they know which elements of the multidimensional problems caused by poverty are most troubling to them. If poverty can be reduced then the positive effects will influence all other desirable

goals, since poverty acts as a catalyst to other social issues that trouble economies, including economic growth and environmental sustainability.

It is here that the CSOs organisations can make a difference in poverty alleviation. NGOs have been very effective in focusing private and official aid in poverty alleviation measures, including raising the ability of the poor to self-organise, promote a greater participation within the civil society on issues of poverty, and removing the stigma of poverty by providing access to the resources needed by the poor to break the cycle of poverty and dependence. The voices of CSOs combined with the change in economic theory brought about by Sen and others are making aid more effective in actually breaking cycles of poverty and despair. With greater dialogue at all levels we can make a difference in reducing poverty.

Conclusion

Income inequality is a fact of the increasingly globalised society affecting all nations; yet increasing income inequality can lead to unstable social outcomes that can damage all developmental efforts.

One of its negative repercussions is the persistent existence of absolute and relative poverty, especially in less developed nations. Poverty was seen as just an issue of low income per capita within some groups, but we now understand it is a highly undesirable outcome at both a personal and a national level.

Poverty is multidimensional in character with vicious feedback loops making the existence of poverty traps, where cycles of repeated poverty is acted out over generations, a very real problem. The focus had been primarily in aiding the poor by raising consumption, yet we now know that it is not the best way to tackle such issues. Regardless of the method used, breaking poverty traps at a personal or national level desires long term support that will transcend in most of the aspects of a poor persons' life, a type of support which is difficult to deliver through the usual aid development projects that demands clear goals and immediate results.

It is also increasingly understood that the poor are very diverse and have very diverse needs. Women are particularly disadvantaged, but traditional attempts to help through increasing

consumption do not always lead to achieving a break out of poverty. It is the removal on the constraints on the lives of the poor that will lead to the breaking of intergenerational poverty traps: giving the poor the capability to participate in the market, the educational system, and society as a whole without stigma is the most effective way to reduce poverty and subsequently erase its multiple, negative, repercussions.

Chapter 5: Environmental Sustainability

Introduction

There is little doubt that the management of natural resources and the environment represents a crucial factor for the sustainable development of nations. Most modern economic development theories, as highlighted in the previous section, tend to place greater importance on the protection of the environment, and in many instances place it at the centre of developmental strategies.

This section introduces the key principles of environmental sustainability, the rationale behind its growing importance within theoretical and applied research in the field of development economics, as well as giving concrete examples of its relevance to the overall development of countries. The importance of Overseas Development Assistance (ODA) to ensure better and more effective environmental sustainability is also discussed, with explicit reference to those interventions that focus on climate change and also promote active involvement of the local communities. The choice to give a more prominent role to climate change in this chapter is supported by its relevance to the overall development of countries but also by the fact that the international donor community identifies climate change as a key issue, with climate change adaptation often featuring as an objective in development policy.

Despite progress, there is still a high degree of uncertainty as to the approach to be implemented in developing countries to fight climate change and how to adapt to it, as well as on the interactions between these issues and ODA.¹³ With this as a backdrop, this chapter looks at examples arising from the development interventions implemented by NGOs and CSOs that often provide useful information and help reshape economic development theories.

Development and the Environment

Economic growth, which degrades the environment can, in the longer term, seriously impact people's livelihoods and the overall level of development (Lopez, Toman 2006: 3). Poor

¹³ ODA, also referred to as foreign aid, can be defined as including all the resources -physical goods, skills and technical know-how, financial grants (gifts), or loans (at concessional rates)- transferred by donors to recipients (Riddell 2007) See Box 2 for more details.

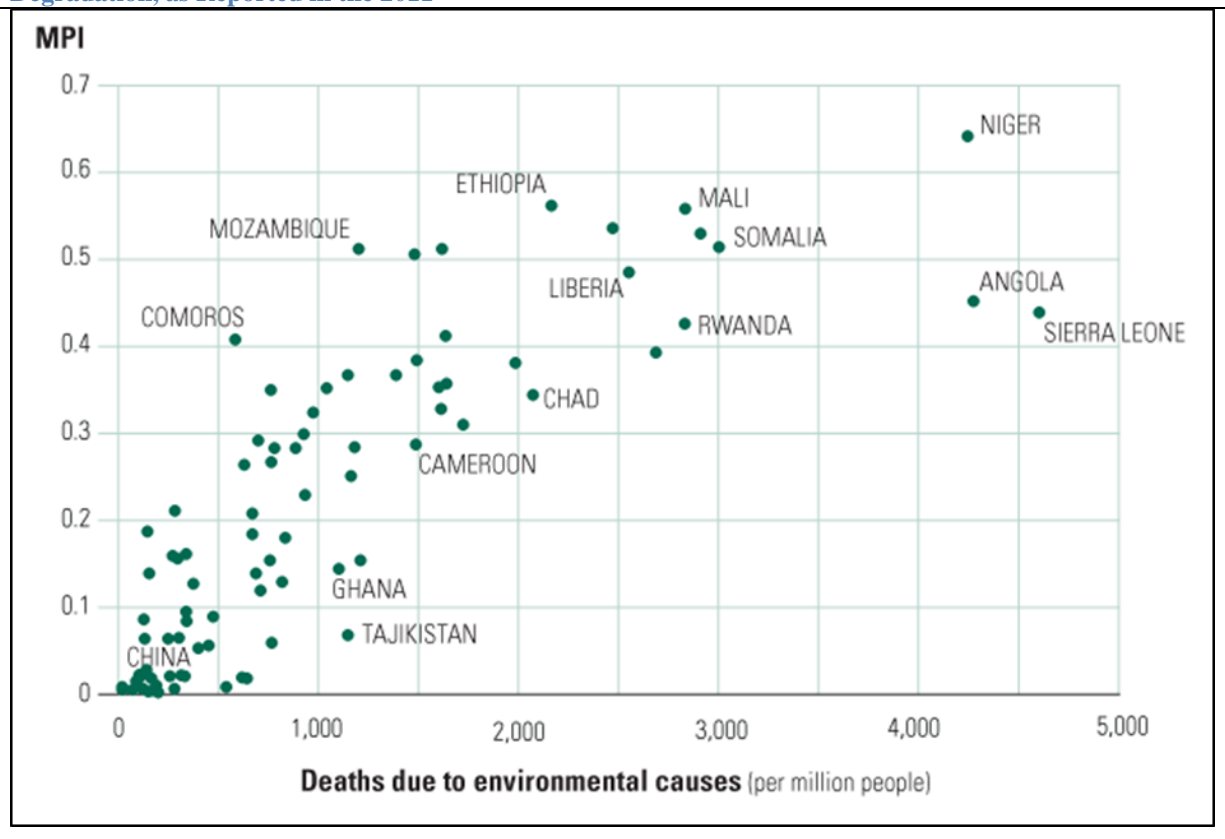
environmental quality also directly affects people's wellbeing (UN 2005). Many developed nations have seen a sharp increase in incidences of respiratory diseases caused by environmental degradation (Laumbach, Kipen 2012), which seriously affects the quality of life of many citizens, as well as heavily impinges on states' budgets in order to cope with the increasing health costs. In several Less Developed Countries (LDCs), a significant number of deaths are attributable to environmental degradation (UNDP, 2012). Increased access to clean water and to sewage connection, for instance, would reduce the burden of diseases and deaths (mostly due to gastrointestinal diseases such as diarrhoea), with a positive effect on saving human lives and increase the economic productivity of the labour force (Ten, Brink, Bassi *et al.* 2011). Premature deaths, in the area of 1.6 million per year, occur in part due to environmental factors, including indoor air pollution, poor water quality and insufficient sanitation and hygiene (Hicks, Parks *et al.* 2008).

The observations of pioneer scientists, such as Georgescu-Roegen (1971) and Meadows, *et al.*, (1972) that economic growth necessitated higher inputs of energy and material and generated higher quantities of waste and by-products, remains largely true today. As a result, a dangerous cycle of "increased extraction of natural resources, accumulation of waste and concentration of pollutants" (Panayotou 2000: 45) continues to impinge on the earth's natural carrying capacity, resulting in a worsening of environmental standards and a decrease of human welfare - in most of the cases irrespective of the level of incomes. However, whilst the negative impacts of pollution harm both rich and poor countries, developed nations tend to have higher adaptive capacities and a better ability to react to shock, that often allows them to use the best available technology to prevent further degradation. Such solutions are often not feasible for developing nations, with subsequent higher casualties due to environmental degradation, (see Figure 8 below). There is in fact a significant correlation between poverty and deaths due to environmental causes, the larger number of casualties happening where poverty is also high. Losses created by environmental degradation, as Dasgupta (1993) shows, are mostly paid for by the poor, whose income is often most (over)dependent on natural resources (Lopez, Toman 2006).

This is possibly due to the lack of importance given to health hazards generated by environmental degradation, most particularly in the context of extreme poverty where considerations such as income generation tend to prevail over health ones. It's a war between ensuring basic livelihood and survival.

One example comes from the sulphur miners in the active volcano of East Java. The collection of the mining material is extremely hazardous due to the inhalation of toxic gases that severely impact, and in many instances kill human beings. However, this represents one of the only sources of secure income for many individuals to ensure basic livelihoods to their families.

Figure 8: Links Between Multi-Dimensional Poverty Index (MPI) and Deaths Due to Environmental Degradation, as Reported in the 2011¹⁴



Source UNDP, 2012; (Prüss-Üstün, Bonjour *et al.* 2008)

This is one of the reasons why the international community in the past decades has been increasing the number of programmes, and funds, in relation to what is known as ‘environmental ODA’. The OECD defines this as “intended to produce an improvement, or something that is diagnosed as an improvement, in the physical and/or biological environment of the recipient country, area or target group concerned; or it includes specific action to integrate environmental concerns with a range of development objectives through institution building and/or capacity development”.

¹⁴ See also HDR 2011 Summary, available online: <http://hdr.undp.org/en/reports/global/hdr2011/summary/links/>

A genuine question would be as to whether there exist policy mechanisms, besides ODA, which are able to correct environmental distortions and to pave the way for more sustainable patterns of development, particularly in developing countries. The majority of the scholars who have studied this important link between environmental sustainability and economic development tend to agree on one fact: there are institutional failures and market imperfections at the root of the problem, and it is the removal of these stumbling blocks that is needed for development to progress along a sustainable path. In many instances the absence of a proper legal and policy framework leads to both an under provision of public goods, such as the environmental quality, as well as an over-supply of activities that degrade the environment, such as pollution. Likewise, the absence of redistribution mechanisms to address market inequalities results in larger burdens being borne by the poor. Hazardous pollution generated by motor vehicles with the burning of fossil fuels, represents one of the main causes of life-threatening diseases. Not only is price not reflective of the external (environmental) cost of pollution, but many nations actively incentivise their use (if by no other means, then by building roads and highways using public funds). Policy response often entails end-of-pipe solutions or remedial actions (often insufficient), again financed through public funds, rather than those that tackle the problem at its roots.

Climate change has been defined as the most serious issue and the biggest negative externality ever produced (Stern 2007). A dramatic example of the impacts of climate change that links coordination and institutional failures comes from the Small Island Developing State (SIDS) of Tuvalu. This pacific island is already battling with existing coastal erosion (at a high cost), however this challenge will inevitably be exacerbated by climate change impacts (with higher and additional costs), mostly due to resulting sea-level rise and more frequent extreme weather events.

When developing one of the infrastructure projects to stop coastal erosion, following the implementation of its National Adaptation Plan of Action (NAPA), funding by international institutions was given only for the part of the project that would tackle the ‘additional’ costs related to climate change impacts, leaving the burden of financing the ‘baseline’ infrastructure of that project to Tuvalu’s poor finances. As a result, the project could not start until the proper co-financing could be found, thus effectively delaying Tuvalu’s climate change adaptation and development needs (Ayers, Huq 2009) .

Box 13: Win-Win Environmental Measures

The complex problems of absolute poverty environmental constraints can be a threat to development, by directly reducing the standards of living and negatively impinging on the quality of life of many. The opportunity for change lies in policies, which promote sustainable development. There exists a number of short-term double-dividend opportunities in the environmental field, particularly in those sectors dealing with energy efficiency, pollution control and solid waste (World Bank 2012) These could also result in the creation of a significant amount of new jobs, so long though as the right array of tools is properly adopted.

How to Intervene?

Market based instruments, i.e. letting the market work for sustainable development. Such examples range from taxing fossil fuels, to payments for ecosystem services, from the use of tradable permits to fully blown environmental tax-reforms. In particular, abandoning harmful subsidies, such as fossil fuel subsidies (which also tend to be a pro-rich type of transfer - see Arze del Granado *et al.*, 2012), harmful food subsidies (which usually target staple food, sugar and edible oil, increasing obesity and health problems, as well as affecting soil conservation and natural fertility) can be an important way to decouple environmental harm from economic growth. Promoting voluntary uptake of corporate social responsibility, ecolabels and environmental certifications can also result in development with less environmental harm.

Where to Intervene?

Key sectors where to intervene may include: energy efficiency, saving whilst reducing green house gasses (GHGs); enhancing public health, reducing air and water pollution to improve development; waste management, reducing negative impacts on the natural environment, improving public health, as well as generating economic development with improved use of the existing resources.

Green Jobs?

Large-scale dissemination of efficient shells for new buildings (insulation, installation of sustainable heating and air-conditioning) is estimated to create 1.3 million new jobs only in the Mediterranean region (World Bank 2012), with the majority created inside the area and with a strong endogenous nature. Thermal renovation of existing buildings (insulation of walls, roofs, and windows) can also contribute towards a more cost-effective use of household energy consumption with the creation of new jobs estimated at 2.9 million only in the Mediterranean region (Plan Bleu 2011).

Furthermore, recent trends in Green House Gases (GHG) emissions (IPCC 2012), as well as increased levels of deforestation and loss of biodiversity (UNEP 2012) show that there is still a long way until aspects of environmental degradation can be effectively integrated into development strategies.

Recent progress towards the achievement of the Millennium Development Goals by 2015, although in many instances at a very slow rate (United Nations 2012), is without any doubt an encouraging signal for many developing nations, as well as donor agencies. Many argue

that the constant increase of environmental ODA in the past two decades has been a key factor for the improved standards of living of many vulnerable communities in the developing world (Hicks, Parks *et al.* 2008). Coupled with this, the importance given to the principle of ownership, particularly with the active involvement of the local communities in the design and implementation of the development interventions, have undoubtedly increased ODA effectiveness.¹⁵ However, most of the ODA has been predominantly directed towards, as well as measured against, the generation of economic growth. This also seems to be reflected by the majority of the scientific and academic debate over ODA and its effectiveness, which only in recent years has started to give more significance to other determining factors of development, such as environmental sustainability and health standards, among others (Sachs, Malaney 2002, Sassen 2005, Hicks, Parks *et al.* 2008).

The following section discusses in more detail the concept of ODA, and argues its importance in the promotion of environmental sustainability in the context of developing countries. It also reviews the flow of funds being allocated by developed nations towards environmental types of interventions.

Overseas Development Assistance: Evolution, Allocation and Environmental Renaissance

The interest of the international community in environmental issues and its links with development, started to take shape in the 1972 Declaration of the United Nations Conference on the Human Environment, in Stockholm. The 1987 Brundtland Report, *Our Common Future*, also featured an explicit reference to climate change as a key environmental challenge facing development (World Commission on Environment and Development 1987).

¹⁵ Aid effectiveness can be defined as the maximisation of the impact of development aid in order to improve standards of living, cut poverty and help achieve the Millennium Development Goals (MDGs).

Box 14: Knocking on GDP's Door? Internalising Environmental Issues

Environmental Accounting

It refers to the incorporation of environmental costs and benefits into the quantitative analysis of economics (Todaro, Smith 2011). This requires that environmental assets, such as forests, water quality, rangelands, be included in the computation of the national wealth, in a way that the diminishing quantities of those environmental assets are considered to be a loss, therefore impinging negatively on the overall economic performance. On the contrary, an increase or enhancement of those assets will induce a rise in the Sustainable Net National Income (NNI), the latter representing a 'reinforced' measure of the traditional Gross National Income (GNI).

Ecosystem Services Valuation

It is evident that humans heavily depend on Earth's ecosystems and the services that they provide, such as food, clean water, disease regulation, climate regulation, spiritual fulfilment, and aesthetic enjoyment. All these ecosystem services provide benefits that enhance economic performance, offer new opportunities for investment and employment, and improve living standards and quality of life (DEFRA 2007). The degradation of ecosystem services poses a significant barrier to the achievement of the Millennium Development Goals by 2015 (UN 2005). Ecosystem Services Valuation (ESV) is a tool that assesses the contributions of ecosystem services to sustainable scale, fair distribution and efficient allocation of resources (Liu, Costanza, *et al.* 2010). This tool allows to compare natural capital to physical and human capital in relation to their input to human welfare; it observes changes over quantity and quality of natural capital vis-à-vis its contribution to human welfare and evaluates projects that will affect natural capital stocks (Liu, Costanza, *et al.* 2010).

Domestic Material Consumption

It represents an essential indicator to capture sustainable production and consumption patterns of nations. This indicator calculates the total quantity of materials consumed by a national economy, showing the dependency that residents have on physical resources and also assesses the use of scarce resources (Moncada, Gazley, *et al.* 2008). The Domestic Material Consumption (DMC) is measured by adding the material directly extracted from national resources and the mass (in kg) of imported goods, also known as Direct Material Input (DMI), minus exports.

Following the Brundtland report, the 1992 United Nations Conference on Environment and Development (UNCED) clearly outlined the links between the threats associated to climate change and the path to achieve a sustainable development. The 2002 World Summit on Sustainable Development (WSSD) also recognised the strong links between climate policy and development, and all the major international conferences that followed reiterate this concept, as well as attempt to provide the necessary financial resources to address some of the most important environmental issues.

However, notwithstanding the 'early warnings' contained in the 1972 Stockholm Declaration, the great majority of endangered species, loss of natural habitats and unsustainable extraction of natural resources is still happening in the poorest countries of the world (Hicks, Parks *et al.* 2008). It would be legitimate to examine whether all the ODA earmarked for environmental

protection during all these decades has been used effectively. It is therefore interesting to look at the evolution of the debate on aid effectiveness over time, in order to understand why environmental concerns have been receiving only marginal attention by the scientific community studying ODA, as well as policy makers, with greater importance given predominantly to economic growth.

The origins of the debate about aid allocation, and the importance of foreign aid to promote economic growth, can be traced back to the time of the Marshall Plan,¹⁶ and the perceived success of this plan following the reconstruction after World War II. Back then, there was much confidence among academics and policy makers about the fact that foreign aid would be beneficial, if not essential, for the economic growth of developing countries. In particular, foreign aid would fill the gap in terms of low levels of domestic savings, insufficient amounts of foreign exchange, or both (McGillivray, Feeny *et al.* 2006: 1032). This would, in turn, increase investments and generate growth, which would eventually become self-sustaining. The early economics literature on aid confirmed this confidence on the use of foreign aid by also providing a conceptual framework that originally rested on the work conducted by Harrod and Domar (1946), which we explain in detail in Chapter 3. The dual-gap model provided the academic and theoretical foundations to justify aid targets and more importantly, it guided most of the aid allocation until the late 1960s and early 1970s, when further studies and empirical evidence showing lack of growth, in spite of high levels of aid inflows, started to question the effectiveness of the model and its theoretical foundations (White 1992). These two opposite views accompanied most of the debate starting soon after the end of Second World War until the late 1990s. Subsequently, one finds aid to be effective in generating economic growth, and a contrasting one that believes in a negative association between aid and growth.

A general agreement on the effectiveness of aid to promote growth could only be reached in 1997, following a seminal publication by Burnside and Dollar and a further one in 1998 by the World Bank (1998), entitled *Assessing Aid: What Works. What Doesn't and Why*. These papers find aid to be conducive to growth, but it makes it dependent on the policy regime and the policy environment of the recipient country. Further work conducted by Collier and

¹⁶ Officially known as the European Recovery Program (ERP), the Marshall Plan is named after the United States Secretary of State George Marshall. It consisted of a large-scale economic program, undertaken from 1947 until 1951 by the United States in order to rebuild and to create a stronger economic foundation in the countries of Europe.

Dollar (2002, 2004) confirmed that aid would be more effectively allocated in countries with high poverty levels and appropriate policy frameworks, such as those suggested in the Country Policy and Institutional Assessment (CPIA) of the World Bank. One of the critiques to the conclusions reached by Burnside and Dollar is that their result turns out to be sensitive to data and model specification, as well as being purposely in line with the 'Washington Consensus' view of development (Hansen, Tarp 2000). Further criticism to the Collier-Dollar model is the fact that according to its provisions, each portion of aid would produce the same benefit, in terms of poverty reduction, equally across all recipient countries. Cogneau and Naudet (2007) recognized that different quantities of aid are to be expected if recipient countries desire to move towards achieving developmental targets, particularly if facing structural disadvantages. There is therefore, an acknowledgment of the diminishing returns to aid, as also suggested by Clemens and Radelet (2003).

Dearden (2009) identifies other scholars who have categorised further criteria that might be relevant to effective aid allocation. These include the level of democracy (Svensson 1999, Kosack 2003) and structural vulnerability (Guillaumont, Chauvet 2001), whilst Hansen and Tarp (2000) recognize the difficulty in identifying reliable indicators of 'good governance' as a basis of allocating aid (Dearden 2009: 2).

Many studies have tried to analyse the pattern of aid allocation, with a primary intention to assess the overall direction, as well as to identify possible influences affecting environmental sustainability. The problem of governance seems to be central even in research conducted in the field of environmental aid. Such work was led by Keohane and Levy (1996). They started to look into the environmental component of the aid allocated by donor agencies, and identified the constraints experienced by the donors-recipient partnership to be strong. There is increasing evidence that environmental projects seem to be more difficult to be successfully implemented, than other traditional types of projects (White 2005). This might be attributable to the diverse challenges associated with the implementation of environmental aid, possibly given the multidimensional nature of the problems, as well as the intrinsic difficulty in dealing with environmental assets that are also the main source for ensuring basic livelihoods to many individuals.

Noticeably, most of the debate on aid allocation was circled around the factors that are conducive to economic growth, giving less importance to environmental factors and their

influences on the overall level of development. As discussed earlier, along with embracing the concept of sustainable development, the international community has shifted the attention towards environmental sustainability as one of the key factors underpinning development. This has been made clear by the emergence of climate change as a topic significantly influencing the debate on current and future developmental strategies.

Development and its Links to Climate Change

Developed countries have pledged to provide developing nations with new and additional funds, on top of those provided for traditional development, in the region of 100 billion dollars per year by 2020. It has been argued that there is an ethical issue to intervene with external assistance in poor countries that are vulnerable to climate change, given the fact that these countries are in most need and those who have contributed the least to the problem of greenhouse gas emissions (Ayers, Dodman 2010). This same argument prompted developed countries to officially commit to, also within the text of the United Nations Framework Convention on Climate Change (UNFCCC), additional assistance, over and above the current development aid pledge, in order to assist vulnerable developing countries to adapt.¹⁷

However, there seems to be a problem with estimating the exact total aggregated costs for adaptation in developing countries, and most importantly, with the willingness of the donor community to commit to such substantial, additional aid (Bouwer, Aerts 2006). Agrawala and Fankouser (2008: 69) summarise the estimated cost of adaptation to climate change ranging from 4 billion dollars to 36 billion per year; Stern (2007) suggests 88 billion dollars to 109 billion per year (United Nations Development Program 2007).

A study by the World Bank underlined that the estimates for the adaptation needs in low-income countries are in the region of 25 billion dollars per year, for the decade 2010-2019, rising to almost 40 billion in 2050 (Kaloga, Berger *et al.* 2010, World Bank 2010). These estimates, although varying, point to the great challenge of achieving the proper level of funding to assist vulnerable developing countries to adapt, especially in light of current trends of financing adaptation being greatly below the most conservative estimates of funds (Bapna, McGray 2008). Coupled with this, the fact is that current annual financial flow for ODA is

¹⁷ Article 4.4 of the Convention

only in the region of 100 billion dollars, with pledged aid often not being delivered.¹⁸ This figure, although falling below the international recognised ODA target of 0.7% of donors' GDP, is unlikely to grow much higher, especially in light of 'new and additional' funding required to finance adaptation in vulnerable countries.

An example of this is the Fast-Start Finance (FSF) climate change initiative, promoted during the 2009 Conference of the Parties of the UNFCCC at the Copenhagen Summit. This initiative, promoted by industrialised countries, has pledged to provide 'new and additional resources' to developing countries for a total of 30 billion dollars for the period 2010-2012. An increased number of climate change related initiatives, such as those of the Fast-Start, demonstrates the higher importance given to environmental sustainability within developmental strategies. However, many doubts still remain on the effective disbursement of those pledged funds (Smith, Dickinson *et al.* 2011), as well as their transformation from pledges to donations, and there are worries that in the end resources that were already allocated to traditional development strategies will be removed (Stasio, Polycarp *et al.* 2011).

Most of the funds pledged for climate change are eventually disbursed by the international donor community and channelled through the Global Environmental Facility (GEF), an intergovernmental organization established in 1991 to assist in the implementation of selected global environmental agreements. From its inception, the GEF has approved projects for a total of almost 10 billion dollars. This is coupled with an increasing number of specific funds, and initiatives, such as the Global Climate Change Alliance (GCCA) promoted by the European Commission (European Commission 2007) whose aim is to create a strong platform from which the EU's external development action can address climate change, particularly for LDCs and SIDS.¹⁹

¹⁸ See the Annual Monitoring Report available at <http://www.thegef.org/gef/RBM>

¹⁹ For a review of these initiatives see Clapp *et al.*, 2012

Box 15- Climate Change Adaptation and its Influence on Development

Climate change adaptation can reduce the undesirable impacts of climate change, by allowing a system to better cope, or manage changing conditions, risks and opportunities related to climate change (Smit, Wandel 2006). Both autonomous and planned adaptation can increase the adaptive capacity of a given system, thus raising the overall level of development. In a study by McGray *et al.*, (2007) the screening of more than 100 projects considered to be adaptation initiatives, undertaken in the context of developing countries, found that their beneficial outcomes had little difference to what can be considered as good development (Klein 2010).

However if adaptation is not properly designed it can negatively affect sustainability (Eriksen, Aldunce *et al.* 2011) and development (Ulsrud, Sygna *et al.* 2008). In this regard, maladaptation can occur when adaptation measures increase the vulnerability of one particular group, usually minority groups or low-income households, putting a disproportional burden on the most vulnerable (Barnett, O'Neill 2010), for example by increasing the costs of utility bills, or by building dams or irrigation systems that impede access to water supplies (Eriksen, Klein *et al.* 2007, Eriksen, OBrien 2007), or by relocating poor communities who find it difficult to re-adapt to a different socio-economic environment.

An additional aspect in which adaptation affects development refers to the financial implications for developing countries to adapt, with external financial and technical assistance needed in order to cope with the impacts of climate change. The fact that the countries most in need of that assistance are those who have contributed the least to the problem of greenhouse gas emissions prompted developed countries to officially commit, for additional assistance over and above current development aid pledged, in order to assist with their adaptation (Bouwer, Aerts 2006).

Many developing countries, with the assistance of the international community, are also enhancing their development strategies by putting environmental sustainability at the centre of their current and future development. Nations like the Maldives, a small island in the Indian Ocean, have recently embarked in a process that would bring their country to be carbon neutral by 2020. The Maldives is a very flat (low-lying) country that is negatively exposed to the impacts of climate change, particularly for sea-level rise. This is threatening to the already scarce landmass of the territory of the Maldives, with evident repercussions including the relocation of human settlements, as well as the viability of economic and social activities on the coast, such as tourism and the provision of water through desalination. Although the action of a single small state like the Maldives might not be so relevant to the reversal of the environmental degradation trends on a global scale, especially when pollution is an interconnected and multidimensional problem, these types of actions can undoubtedly change the way public opinion acquires ownership towards shifting development patterns, setting the example for other governments to take similar commendable actions.

Box 16: Development and its Influence on Climate Change Adaptation

Low levels of development can seriously affect the adaptive capacity of a system, thus undermining adaptation efforts and limiting vulnerability reduction strategies. Therefore, the vulnerability of communities and individuals to climate change also factor into their entitlement of resources (Sen 1999, Cohen, Demeritt *et al.* 1998), and then to their level of development. Consequently, poverty may well undermine adaptation (Schipper 2007: 7). Focusing on the attainment of higher levels of development would inevitably increase the ability of developing countries to adapt to climate change (Ayers, Huq 2009). However, there are cases when poverty reduction strategies can also negatively affect the vulnerability of a system (Eriksen, Klein *et al.* 2007). Klein (2010: 40), for example, notices that the conversion of mangrove forests into shrimp farms may increase economic growth in the short run, however leaving coastal communities more vulnerable to coastal hazards such as storm surges. Moreover, building new infrastructures so as to withstand climate change can be of limited relevance if this attracts new settlers to areas exposed to natural hazards.

The rapid and multiple changes being induced by the warming up of the atmosphere are exacerbating, and dangerously accelerating environmental degradation with serious concerns over the management of even scarcer resources. Most of the best, and worst, practices in the promotion of environmental sustainability can be seen in the area of climate change. An increasing body of literature, as well as applied research, is being created with the aim of both deepening the studying of the impacts of climate change on key socio-economic sectors, as well as understanding how development aid can be employed to increase resilience and induce better adaptation to climate change.

However, some doubts on the effectiveness and efficient use of these funds remain. In fact, claims made by NGOs and CSOs²⁰ show that a significant majority of the funds utilised, or earmarked, for climate change have been favouring multinational corporations, rather than the vulnerable communities of the countries in need. This active role played by the NGOs and CSOs in ensuring higher levels of accountability for donor institutions, as well as redirecting development strategies towards the most vulnerable, is the central theme of the following section.

The Role of NGOs in Environmental Sustainability: Development Interventions to Increase Adaptive Capacity

²⁰ Particularly the World Development Moment (www.wdm.org.uk), as also reported by the press (<http://www.telegraph.co.uk/earth/environment/climatechange/9723731/Climate-change-funds-earmarked-for-Africa-are-going-to-corporations.html>)

Some of the most interesting contributions to the debate of aid effectiveness are being made in the field of climate change. Among the arguments being espoused are those advocating country ownership and the active involvement of local communities in development interventions. It is interesting to note how NGOs have generally been entrusted with this task of integrating indigenous knowledge within the overall process of development, far more successfully than traditional donor agencies.

The majority of the interventions undertaken by the NGOs tend to use the participatory process, which involves the community as a whole, and considers development as people-centred, by using a bottom-up approach. As a result of this, many successful development interventions are participatory by nature, and empower partnerships in a way to produce a more solid degree of ownership within the beneficiaries' communities, which in turn is more likely to yield the expected results. In fact, their role is increasingly considered valuable in steering good practice, and, in some instances, directly feeding development theory. NGOs and CSOs can promote environmental sustainability by trying to understand the importance of local knowledge, meeting the challenge of integrating it within the process of development, and thus improving the chances of successful development interventions, particularly in the field of environmental sustainability.

In recent years, development policies, as well as ODA interventions, have shifted from being analysed and assessed from a one-dimensional point of view to receiving a multidisciplinary and multidimensional approach. It is now clear that key factors such as improved standards of health and education are strictly linked to ensuring environmental sustainability, and in general, longer lasting development. This is particularly true in light of current and future climate change impacts, which are likely to introduce new threats, as well as to require further additional resources to adapt to these changes. This will in turn make the challenges currently faced by many countries even more problematic, thus demanding new solutions and much more integration in the delivery of ODA.

A clear example is the work conducted by the Africa Climate Change Resilience Alliance (ACCRA)²¹ with their investigation on how development interventions can contribute to

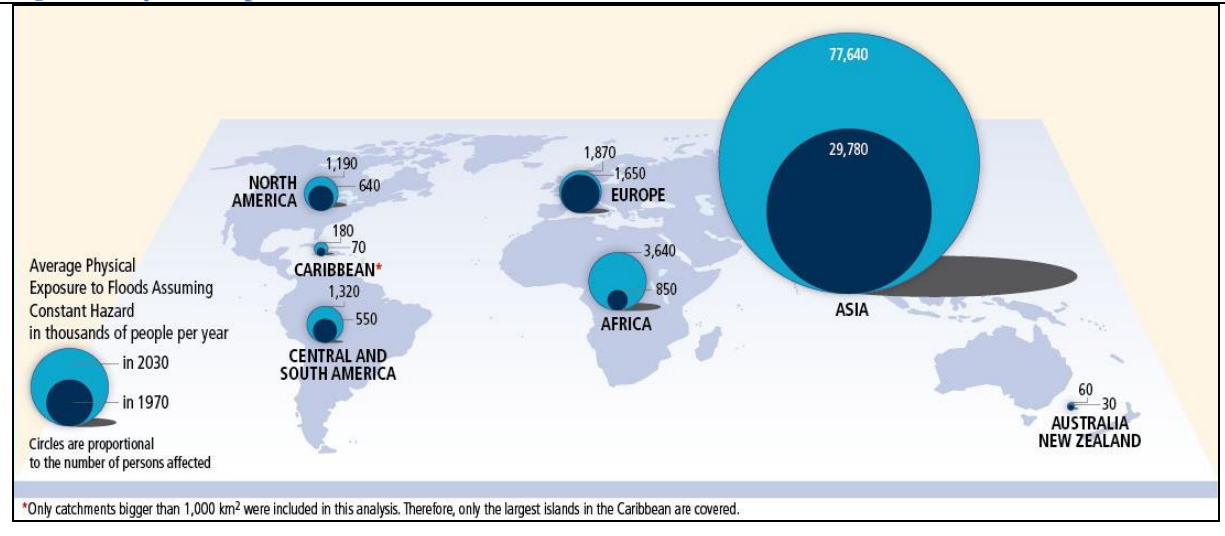
²¹ ACCRA is a research and capacity building consortium composed of Oxfam GB, the Overseas Development Institute (ODI), Care International, Save the Children and World Vision International. Its development interventions are based in Mozambique, Uganda and Ethiopia. See <http://community.eldis.org/.59d66929/>

enhancing local adaptive capacity, considered to be a key factor in the promotion of increased levels of development whilst adapting to climate change. It was research from ACCRA which revealed that the provision of more drought-resilient seeds to farmers in areas where climate change was negatively affecting the quantity of water available for agriculture, was not being properly adopted.

Had the community institutions not been involved in the distribution of the seeds, and most importantly in the explanation of the benefits in planting such new varieties of crops, the take-up level of such initiatives may have been suppressed, and as a result, so would the effectiveness of the development interventions. Of course, one may also question the provision of new seeds in the first place, and wonder whether the training and sharing of information among farmers and the seed suppliers, had constituted the intervention capable to enhance adaptive, sustainable practises. The lesson that comes out of the work of this consortium of NGOs and researchers, echoes that of Levine Ludi *et al*, namely that it is useful to “inform the design and implementation of development planning by governments and non-governmental development partners to support adaptive capacity for climate change and other development pressures” (Levine, Ludi *et al*. 2011: vii) .

Whilst the above is an example of lack of effectiveness of an intervention, certain interventions can also generate negative effects in other areas of development. A clear example is provided by Klein, Eriksen *et al.*, (2007), where specific poverty reduction strategies, particularly in South-East Asia, were directed towards the setting-up of shrimp farms (mostly used as an export commodity) as a fast way to increase income levels. However, the establishment of these farms was undertaken in many coastal areas by removing mangrove trees, as well as other assets that used to provide a natural form of protection to the coast from weather related events. These types of interventions are inevitably exposing already vulnerable communities to the increased number of extreme weather events, such as storm surges and floods, as also represented in Figure 9, as well as jeopardising the initial investments.

Figure 9: Physical Exposure to Floods and the Difference from 1970 to 2030



Source: (IPCC 2012)

One area where NGOs are shaping the way development interventions are being designed is in promoting indigenous knowledge. Some of this work involves creating a network of communication among actors that would otherwise have been distant from each other, or which simply lacked interest/ability to co-operate. For instance, ELDIS²² is promoting initiatives in Kenya where local Indigenous Knowledge (IK) on weather forecasting is being integrated with that of the national authorities of meteorology, in order to assist local communities to adapt to climate change. The trust that many members of the farming communities attribute to the ‘traditional’ weather forecasters is superior to that of the national authorities. Therefore, official early warnings, as well as many of the other weather forecasts are issued by consulting the traditional weather forecasters, who also make use of their networks to disseminate information and provide training. This type of cooperation has delivered a set of positive outcomes including improving the capacity to maximise farming yield, lower the risk of losing assets, as well as minimise losses.²³

Other examples of this cooperation between research and development organisations can be observed in the area of community-based types of initiatives. These initiatives offer a method of adapting to climate change, whilst ensuring a more resilient type of development. By involving local communities through participatory processes one can build on ‘existing

²² ELDIS is an initiative promoted by the Institute of Development Studies and cooperates with the Climate and Development Knowledge Network (CDKN). See <http://www.eldis.org>

²³ For instance, assets could be lost by selling part of them prior to the weather event, so to ensure availability of cash flow for future investments.

cultural norms and address local development concerns that make people vulnerable to the impacts of climate change in the first place (Ayers, Forsyth 2009: 24). The international NGO Practical Action is working closely with flood-prone communities in Bangladesh to create floating platforms to grow vegetables capable to survive extreme weather events, and at the same time to provide subsistence for the periods when there is shortage of food. In addition to this, the floating platforms can provide surplus of food that can be sold on the local market, directly increasing household income. The challenge with these types of initiatives is that it is often difficult to scale them up, given the peculiarity of their application. However, a stronger cooperation between research and development organisation, as well as the involvement of local authorities, is gradually apprising the way development initiatives are being planned and implemented. This increases the chances of extending good practices, irrespective of geographical locations.

A recent publication by the International Institute for Environment and Development (IIED), which focused on Southern Africa, analysed how climate change adaptation can promote development by also building on community experiences, and being informed by the active involvement of NGOs and local actors in the management of natural resources (Chishakwe, Murray *et al.* 2012). After many projects were scrutinised, the study again confirmed the importance of involving stakeholders in the implementation of the interventions, and when possible, in the design of development initiatives. This is of utmost importance if the challenges faced by climate change are to be met, with appropriate solutions grounded in the promotion of sustainable livelihoods, which are also informed by local knowledge and practice.

Another interesting example is reported by Torri and Laplante (2009), where a partnership created in South India by two NGOs, the Foundation for the Revitalization of Local Health Traditions (FRLHT) and the Covenant Centre for Development (CCD), managed to involve local communities and actors in an effort to regenerate local health traditions by also creating “innovative processes centred on traditional knowledge” (Torri, Laplante 2009: 38). These efforts seemed to have paid off, even in terms of increased levels of income, with the creation of a community-based company, which collects and commercialises medicinal plants obtained by indigenous knowledge.

Consequently, the role of the NGOs was central in three aspects:

- Revitalisation of a local-based sector.
- Facilitation in the creation of networks among local actors.
- Enhancement of the local capacity to innovate.

Strictly related to this is the work that the Maltese NGO KOPIN and its Ethiopian partner, the Women and Children Development Organisation (WCDO), have been doing in the city of Shashemene, 250 km south of the capital Addis Ababa²⁴. The installation of a biogas generator for the production of a cleaner and renewable form of energy was undertaken by these two NGOs with the full involvement of the community. The fact that local representatives from the two hundred household beneficiaries of the project had to be elected, and made responsible for the dialogue with the NGOs, as well as for the maintenance of the project itself, increased the level of ownership by the community, enhancing the sustainability of the intervention and mutual trust between partners.

Building on local knowledge appears to be very significant in the context of Least Developed Countries (LDCs), where the urgency of taking actions to adapt to climate change tally up with the existing vulnerabilities. In addition to this, given the uncertainties of selected climate change models of making impact scenarios for a country and community level approaches that tackle community involvement, appear to be more relevant, as well as more solid from a methodological stand point (Adger, Agrawala *et al.* 2007, Smit 2005, Ebi, Semenza 2008). Many communities in LDCs have widespread indigenous knowledge, and long-established skills that have contributed to successful adaptation throughout the centuries (Kelman, Mercer *et al.* 2009). Climate and development practitioners can explore this knowledge and expertise when developing ODA projects as a way to ensure more effective adaptation and development outcomes. In the context of LDCs and SIDS however, the overwhelming majority of the funding, both coming through ODA and from climate funds, still tends to provide technological-based solutions, often with little local involvement²⁵.

This said, the number of projects implementing community-based adaptation initiatives is steadily increasing (Gero, Méheux *et al.* 2011, IISD 2011, Dumaru 2010, Rasmussen, May *et al.* 2009), and in recent years global and local efforts have prompted for the creation of a growing network of research centres dealing with climate change vulnerability and

²⁴ More information can be found at <http://www.kopin.org/> and <http://www.wcdo.org.et/>

²⁵ More information from <http://www.climatefundsupdate.org/graphs-statistics/adaptation-projects>

adaptation, which started to enhance the local implementation of projects and initiatives.²⁶ A consistent body of literature has also been producing evidence about the effectiveness of a development based view of adaptation, highlighting the benefits of community-based adaptation as a central tool to promote good adaptation and development (Ayers, Forsyth 2009, Kelman, Mercer *et al.* 2009, Mustelin, Klein *et al.* 2010).

Notwithstanding the fact that community-based adaptation is crucial to address the vulnerabilities of communities (Huq, Reid 2007), it also faces several challenges that might undermine its success. Difficulties can range from the type of the methodology used, to data availability and applicability of findings. In fact, Rasmussen *et al.*, (2009), highlight a methodological difficulty in distinguishing adaptive actions directly related to climate change and more general livelihood strategies, which naturally take climatic variability into account. This is even more relevant in LDCs, where livelihoods have generally been very dependent on climate and weather. Many community based adaptation initiatives tend to ignore, or not comprehensively include, scientific data on climate change predictions and impacts (Leopold, Mead 2009).

However, it has been argued that this material available for developing nations has a preponderant component of ‘top-down’ data collection, as well as a ‘technocratic application’ (Kelman, West 2009) that, de facto, rarely integrates local knowledge, thus making the use of this data very difficult. Finally, there is an open discussion, particularly within representatives of the civil society and academics, on whether successful methods of community-based adaptation could be applied to different communities, or even countries. There seems to be a problem of transferability of such best practices, since the same nature of community-based adaptation makes it very difficult to adopt a ‘one-fits-all’ model, with the risk of reducing the clarity of the findings and jeopardising climate change and development investments (Ayers, Forsyth 2009).

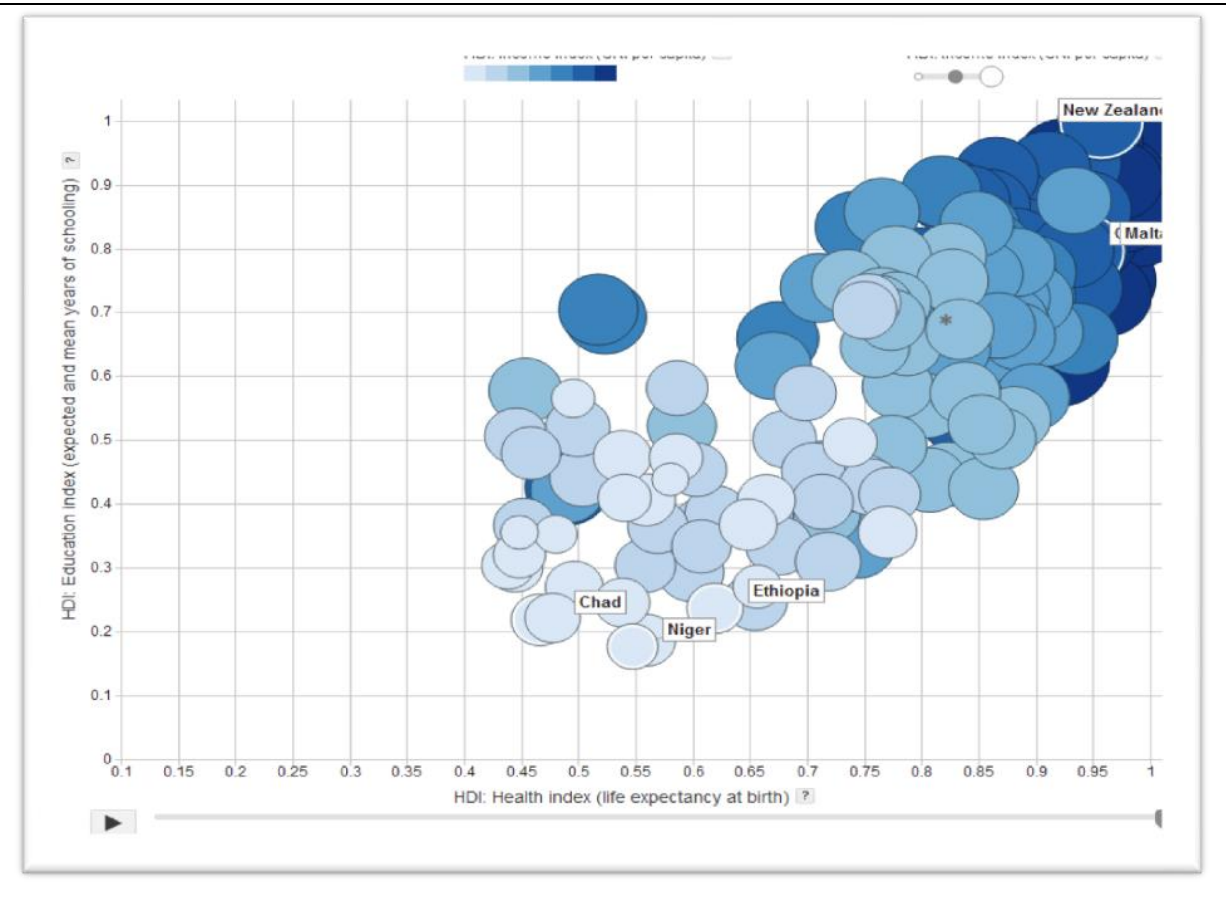
Health and Education: Key Drivers of Environmental Sustainability

²⁶ Notable examples include The Caribbean Community Climate Change Center (CCCCC) established in 2004 in Belize; The Caribbean Disaster Emergency Response Agency (CDERA) based in Barbados; The Pacific Regional Environment Programme (SPREP); The Pacific Islands Applied Geoscience Commission (SOPAC); The Small States Network for Economic Development (SSNED) established in 2006.

How does the improvement of health and education standards link with the environment and development?

Essentially, to achieve higher standards in environmental sustainability it is generally understood that the overall health and education levels should also be improved (Lutz, Cuaresma *et al.* 2008), as is also shown in Figure 10. What follows is an attempt to summarise some of the most recent contributions to this debate, particularly by looking at the applied work conducted by NGOs and researchers, in order to improve the understanding on the mechanisms that could be utilised to unblock development at community level.

Figure 10: The Lower the Education Level, the Higher the Chances of Short Life Expectancy at Birth



Source: (UNDP, 2012)²⁷

In their recent acclaimed book “Poor Economics”, Banerjee and Duflo (2011) provide many examples of how the effectiveness of development interventions can strongly be linked to the

²⁷ Data acquired through <http://hdr.undp.org/en/statistics/>

capacity of understanding local perceptions, as well as involving local communities in the planning and implementation phases.

A clear example can be seen with the results of the experiment carried out by a NGO called Together Against Malaria (TAMTAM), established in Kenya by Jessica Cohen and Pascaline Dupas. They found that distributing free mosquito nets to prevent malaria did not automatically have a full take-up of this measure by all the population involved in such activity, a puzzling fact, given the fact that using these nets meant improved health standards, as well as higher productivity, which could lead to an increased annual income of up to 15 per cent, on average (Banerjee, Duflo 2011: 49).

It is estimated that around 50 per cent of the population will not know how to make use of such opportunities, or simply will appear indifferent to the whole exercise. In order to improve the take-up of such initiatives, thus increasing the effectiveness of development interventions, it would be very important to explore parallel initiatives. These could be directed towards creating awareness campaigns and training local community institutions, both formal and informal, on the overall benefits of preventing the disease, in our example malaria, through the acceptance of such initiatives.

The work of NGOs has often been crucial also in identifying gaps in the quality of vital services being provided, as well as in the way information is collected and interpreted. The NGO Pratham with its annual publication entitled the Annual State of Education Report (ASER) has highlighted how an astonishingly high percentage, around 35 per cent, of children in India (seven-to-fourteen years old), could not read a whole paragraph or carry out a simple math division²⁸. These surprising results seem to find confirmation in independent studies run by government entities, as well as extending their validity to other countries such as Pakistan and Kenya (Banerjee, Duflo 2011: 75). Although the results of the ASER report, which is published every year, do not seem to suggest any major improvement in the educational achievements of the average Indian school for these children, the work of the NGO Pratham has been extremely useful in sparking the debate over the quality of education and how to improve its standard.

²⁸ For more information see <http://www.pratham.org/>

In recent years, stronger emphasis has been placed on programmes that tackle Water, Sanitation and Hygiene (WASH). Many are small-scale projects, as they appear to be more effective and sustainable in the long run (Fewtrell, Kaufmann *et al.* 2005). A concrete example comes from Ethiopia, where the NGO WCDO has been implementing community-led biogas generator projects in many parts of the country, obtaining excellent results in terms of improved levels of sanitation of the communities involved, and sustainability of the projects throughout the years. These types of interventions generally require a small budget, in the region of \$15,000, take up relatively little space for the construction, and provide a renewable source of energy free of charge while sanitising the area. They appear to be a win-win type of development intervention, with mostly positive outcomes. Taking up these programmes is, for many international agencies, also the result of the work conducted throughout the years by local NGOs, in some cases assisted by local universities and research centres, which denote the relatively little investment and the importance in the involvement of the local communities in the active design and management of the intervention.

Conclusion

The concept of environmental sustainability has taken centre stage within current development theory, as well as representing a key driver for many ODA programmes and funds being promoted by the donors' community.

We have seen how the contribution of ODA to developing nations has mostly been seen only in terms of stimulus for economic growth, thinking that this would eventually transfer its benefits to improved environmental standards. Not only has this not materialised, but many developing nations have embraced the goal of economic growth as an exclusive objective to achieve higher standards of development, neglecting environmental problems as a natural by-product of their process of industrialisation. This has resulted in an increased number of deaths associated to environmental degradation, in most of the cases accelerated by the low capacity to adapt to changes and being impacted by shocks.

During the past decades the international community has embraced the concept of sustainable development within many developmental strategies, and also re-directed its ODA towards an environmentally conscious assistance. We have seen how environmental concerns such as improved levels of sanitation, as well as support to countries to adapt to climate change are

increasingly being put at the centre of development interventions. We have also seen that these types of interventions tend to be more effective when there is a direct involvement of the local communities in the design, as well as the implementation of the activities. In addition, making use of local knowledge should be taken into account as an asset, in order to build more resilient development, as well as long lasting strategies of development that with a bottom-up type of approach help towards higher degrees of sustainability of the development interventions.

Finally, the important link between research and work on the ground was highlighted, pointing at the importance of NGOs and CSOs contribution,, with their solid commitment to improve the standards of living, which at the same time provides researchers and practitioners with vital data and facts, that constitute a key factor for the identification, structuring and improvement of development strategies.

In conclusion, donor institutions and development agents can generally achieve better outcomes in terms of aid effectiveness if their responsiveness is geared towards the principle of country ownership, whereby wider participation in the design of the development policy, as well as a stronger leadership from country partners promotes better aid coordination, and capitalizing on the strengths of the beneficiaries maximises the impact of development aid. If these actions are coupled with a relevant involvement of the local communities and local actors (mostly NGOs) in the planning and implementation of the development interventions, improved levels of effectiveness can be achieved.

Chapter 6: Conclusion

Aid Matters and We are Better in Making it Effective

This book set out to show that in order for development cooperation to be more effective, an active dialogue between economists and development practitioners must take place. Too many practitioners consider current economic theory as irrelevant in their everyday activities; on the other hand not enough economists understand the difficulties that practitioners face on the ground, and the flexibility required when applying economic theories in a local context. Theory and practise of development should positively interact with each other so as to avoid mistakes of the past. Doing so will improve the aims, allocation and effectiveness of development aid.

Two persons, who have always been aware that this gap between theory and practice of development exists, but are working to reduce it, wrote this book. Its central idea was to have a dialogue between the theory and practise of development, as successful economic principles and effective development cooperation have emerged when the gap narrowed between theory and practise.

We began by putting forward the argument made by some, that development aid is at best ineffective and at worse damaging to the efforts of developing countries. We do not believe that this is true. There are many reasons why we think such a belief is held by some: the counterfactual world of no aid does not exist for us to compare, economic theory in the past misunderstood development needs, and the need for greater development effectiveness has only recently gained traction due to the greater involvement of Civil Society Organisations in development planning.

There are many reasons to be hopeful in the future. Despite the economic crisis in the European Union and most of the developed world, and the repercussions that this has had in the developing world, the desire is still ardent to continue providing support for those who face hardship in developing nations. In addition, there is a greater understanding in development theory of the issues that developing countries face, while the focus on basic

needs through the MDGs has shaped policy into achievable goals. Finally, the push for greater aid effectiveness limits the type of aid that for various other reasons (political in nature, based on erroneous economic premises) has been ineffective in the past.

The fact that NGOs and CSOs are gaining a voice on what is happening with regards to national and international development policy can only be positive. With initiatives such as the Open Forum of CSOs for development effectiveness and other initiatives, development is leaving the narrow confines of economic growth theory; this change is also supported by many development economists, who saw that development aims, even narrowly defined, cannot be achieved unless social and institutional problems are also addressed.

The Nobel Peace Prize Winner Aung San Suu Kyi perhaps points the way forward for development cooperation. It is increasingly clear that some economists now understand the complexity of issues facing developing nations, and the difficulty in addressing them in a piecemeal fashion. Aung Sang Su Chi (Open Forum CSO, 2011) suggested that the focus in the future should not just be about aid effectiveness, as defined in delivering value-for-money, but development should also be considered effective so long as it nurtures a strong civil society, which in turn will enable stronger cooperation between host and donor societies to tackle all economic, environmental, social and institutional problems in parallel.

Since the aftermath of the Second World War, the most industrialised nations have been providing large amounts of funds to low-income countries in order to stimulate their economic growth. In recent years, thanks to the evolution and advancement of new theories within the discipline of economics, the international donor community has provided assistance to low-income countries in order to fill the gaps in their generally poor finances and to increase access and quality to crucial services, thus not only focusing on stimulating economic growth.

The debate over the effectiveness, and the overall utility, of ODA has been characterising the policy and economic debate for decades. Many have questioned the cost-effectiveness and strategic choice of using such large amounts of public money to nudge economic growth, and more comprehensively development. The search for better indicators of the plight of the poor, such as the multidimensional poverty index, arises from the need to understand what being

effective really is in eliminating poverty. However, ODA needs to be accompanied by specific levels of governance from all stakeholders involved, in order to make a difference.

It is also encouraging that the dialogue between development practitioners and academics has been initiated in the popular press and the new platforms of communication, and there is an emerging debate (still focused on the main donor countries rather than the world as a whole) as to how to achieve the aspirations of the underprivileged where ever they are in the world. It is clear that within the issues pertaining to economic growth, environmental sustainability and poverty reduction an effective policy would involve a combination of everything we presented here. Both authors currently reside in countries that managed to break the vicious cycle of underdevelopment and to become part of the developed world. This transformation, from a recipient to a donor country, brings its own challenges, particularly in the way ODA funds are allocated and administered. In fact, there is still a lot of work to be done in terms of ODA effectiveness, transparency, and in the overall importance given to current developmental issues.

The basic needs approach that focuses on the needs of the poor and it sets to eliminate deficiencies under a predefined threshold, which is in many ways reflected in the United Nations MDGs, has actually made aid focus a little more on what the poor need, rather than what others think the poor need. Still, there could be much improvement brought about by refining the participation in the ODA decision making of all stakeholders, i.e. the donor, the host and the global civil society. Furthermore, there seems to be a shift of aims; the aim now being more towards providing greater capabilities for the poor to help themselves. The direction ODA should be taking also became clearer: it should aim to provide an environmentally sustainable framework of improvement (defined broadly), which would also enable the development projects to be owned by those being helped in order to reap better results.

We also know that, although it is still important for developing nations to aim for economic growth, focusing on just growth is often unsustainable. Just after the Second World War, some economists argued that economic growth was the single most important goal for a developing nation. We now know that an increase in GDP, also known as the process of economic growth, might not be necessarily linked to an increase in human welfare and to the overall level of the wellbeing of a country. A rise in the level of income cannot be detached

from other important determinants of development, such as the distribution of wealth, as well as access to crucial services like education, health and environmental sustainability. In fact many of the aforementioned factors have a direct influence in the ability of a population to initiate sustainable economic growth, and hence tackling poverty, illiteracy and poor health is also a prerequisite for growth.

In addition, the underlying social institutions matter. In order for economic growth to have the desired effects in reducing all issues of underdevelopment, the institutional background should be improved to ensure that the result in practise will match those of the economic growth literature. It is here that the dialogue between practitioners and theorists can bear fruit. The economists have placed the effects on institutions in a context of development, and with discussion with practitioners, policies to promote effective change can take place. It is hard to change the institutional set up of an economy, yet there are reasons to be optimistic: increased democratisation, promotion of civil interaction and battling the ability to get away with corruption can change institutions for the better, but there will need to be patience as these improvements are hard to quantify in the short term.

Chapter 4 pointed out that income inequality could create significant social problems but also retard economic growth. Thus, income inequality is an issue that needs to be addressed as it can stifle all other developmental goals; no country can delay addressing it. Globalization is raising millions out of poverty, but at the same time it is increasing disparities in income distribution in emerging economies, such as India and China. Although economic growth has resumed in parts of Sub-Saharan Africa the large inequalities in relation to access to basic needs are still affecting a large amount of the population.

Furthermore, we are ever more concerned about the state of the environment both in the world as whole and specifically in developing countries. Economic growth targets do not always take into account the degradation of the environment, leading to unsustainable results. The emergence of environmental degradation as a serious cause of deaths and diseases, as well as severe impediments to development among low-income countries, has contributed to a growing proportion of funds being allocated as environmental ODA.

Developing nations often bare the brunt of issues such as climate change, while at the same time emitting less than developed nations. The pledge to increase ODA in order to mitigate

environmental problems facing developing nations should be carried through to action. A good share of these funds has been employed to improve water, hygiene and sanitation of many low-income countries, which has positively contributed toward an increase in life expectancy and labour productivity. Another significant part of environmental ODA has been increasingly directed towards climate change adaptation types of projects. In this regard, we have seen the important role that CSOs play, as they have significantly contributed to raising awareness on these new emerging concerns, as well as calling for a holistic approach to tackle all the aspects of development.

More precisely, the role of CSOs has been crucial in showing that access to those important determinants of development is at the base of the overall well being of individuals, while it also shows that without them it would be very difficult to reach self-sustaining levels of growth. In addition, CSOs have often been at the forefront of voicing concerns over the lack of environmental sustainability, such as pollution and poor sanitation, as well as clearly calling for the international community to assist countries to adapt to climate change. Thanks also to their efforts, these themes are increasingly being put at the centre of development interventions, driving a significant number of programmes.

Furthermore, CSOs have been particularly active in demonstrating that any type of intervention can increase its effectiveness when the direct involvement of the local communities is achieved, both in the design phase, as well as the implementation phase of the activities. Therefore, community participation, as well as making use of local knowledge, are crucial in the efforts to improve the effectiveness of development cooperation projects, building a more resilient development. It is hoped that effectiveness will increase with the aforementioned tactics, which in turn will mean that in twenty years time, the sceptics of the effectiveness of aid will see the results on a macro level analysis as well, and will be completely convinced of its usefulness.

We would like to close the book by highlighting three important new issues in development. These issues have gained significant attention and are very promising in providing even greater understanding in how to aid those in need across the world.

New Research and Fundamental Trends

1) Involvement of Local Communities (Community Based)

There has been an increasing shift of looking at development planning as a two way process, where those to be helped are also contributing to the process with their knowledge and expertise. It is exactly by involving local beneficiaries, and in general the local community, in the planning and implementation of development interventions that can result to more effective ODA. These types of interventions can also take the form of Community-Based (CB) projects.

This type of development project has been positively regarded since it is able to deliver effective aid and practical solutions to developmental issues. CB projects operate at the local level in communities that are vulnerable and with generally low levels of development. It identifies, assists and implements community-based development activities that strengthen the capacity of local people to adapt, and cope with shocks, hence it is particularly relevant to issues of the environment and climate change (Ayers and Forsyth, 2009). In addition to this, CB generates adaptation strategies through participatory processes, involving local stakeholders and development and disaster risk-reduction practitioners.

The fact that CB builds on existing cultural norms and addresses local development concerns reduces the possibility of local resistance and involves those who are to be helped, reducing dependency and a “hand-out culture” that had made aid ineffective in the past. In terms of climate change, CB projects are becoming increasingly common. The international community encourages the design and implementation of this type of projects, specifically by international organisations such as the United Nations Framework Convention on Climate Change (UNFCCC), the Food and Agriculture Organisation (FAO), the United Nations Development Programme (UNDP) and the European Union (EU). The EU is giving increasingly more importance to CB, as shown by an increasing number of EuropeAid funded projects.

Two very important components of CB projects are research and evaluation. These elements are central to the overall success of the project, and more distinctively to a better understanding of the dynamics governing specific aspects linked to project implementation, which in many cases are also able to correct any inaccuracies of the project in due course.

Without the research and evaluation important local lessons of knowledge on climate change adaptation can be lost, and the replication of the most successful practises would not be possible. An additional benefit arising out of research is the dissemination of the work undertaken within the project, which can target relevant research/academia and policy fora.

2) Aid Effectiveness

A renewed area of research is without any doubt looking at improving the overall effectiveness of development interventions. This has been pushed at the forefront by CSOs, who would want to see official assistance to be less politically or ideologically motivated. The basic principle is that aid should be made to be effective, meaning that it achieves the aimed results with the smallest amount possible.

In making aid effective there is a triple benefit:

- resources are not wasted, rather they are potentially used for other aid projects;
- the world as a whole focuses on the areas that can get results, immediately improving the lives of the poor;
- taxpayers in donor countries are likely to encourage greater provision of aid to developing nations

The way to promote aid effectiveness is a topic of current discussion, with opinions coalescing around some basic “codes” of good practise. These include improved levels of accountability as demanded by a far more attentive public opinion and a consistent involvement of local populations in the design and implementation of ODA. Within this framework, the role of CSOs will continue to be crucial, both in driving the change from within donor countries, by for example requesting more access to public data and transparency of ODA activities, as well as with a constant and direct monitoring of the development interventions in partner countries. In this regard, a further important aspect is whether developing countries will still be allowed to get away with calling as “aid” actions that have little to do with developing nations (for example some developed countries will continue to report their assistance to refugees as part of ODA commitments), which enables them to dodge their full commitment. This practice contrasts with the constant calls for commitment by developing nations to the principle of aid effectiveness, yet it is still ongoing and NGOs are in the vanguard calling for change.

Finally, CSOs can also act as a catalyst for a new direction to be given to the way public international ODA is allocated and spent. CSOs have often argued about the necessity to downscale big and onerous projects, particularly those in relation to climate change, which seem to be favouring more the big multinational companies, rather than addressing the needs of the most vulnerable. CSOs usually favour smaller and more locally driven interventions would improve ODA's cost-effectiveness, thus responding to taxpayers' claims of higher accountability, as well as propelling more indigenous forms of development.

3) Randomized Controlled Trials in Development Cooperation

The economics is mostly concerned in how and why development takes place, as well as what the impediments to progress are. As a social science developed out of philosophy, economics is keenly aware of the basic questions of economic life and is attempting to answer them; in fact economics has made great leaps of progress in theoretical explanations of our everyday life during the last two hundred years.

But is that the best way to approach development? The more we learn about development, the more we understand how complicated and difficult it is for nations to enter the still small club of developed nations. The focus in creating one theory to explain development both in the developed and the developing world ignored the differences in the institutional background. By looking at the institutional background we understand that the relationship it has with other issues of underdevelopment and their mutually reinforcing nature, i.e. it feeds on the problems of underdevelopment and in turn causes problems of further underdevelopment.

Perhaps an even better tactic would be to approach the problem of underdevelopment and poverty in a similar way as drug companies approach disease: through Randomised Control Trials (RCT). This sees development similar to how pharmaceutical companies see a disease. It focuses less on the causes of underdevelopment and test on practical measures to stop underdevelopment for their effectiveness. This RCT emulated the idea of clinical trials for medicines, but instead tests policy measures and aid programmes.

In these development trials, communities are chosen at random and are given a range of options, this emulating the testing of medicines where patients chosen at random, are given

differing doses of a medication and are compared to a control group which is given a placebo. The medication is proved effective if there is a statistically significant improvement to the health (and no serious adverse side-effects) of those receiving the medication relative to the control group. In development the programme that is most effective in improving peoples' lives is chosen to be scaled up and implemented in a wider scale.

Why is RCT promising? Duflo (2010) argues that even without exactly knowing how the medication works, we can measure its impact: if the impact is significant then we go ahead and focus in making it available to the public. Thus, we can use our knowledge of development theory to suggest policies, and then we can run RCT trials to see whether the theory is valid in practise. Thus we might not know the causes of poverty, but we will know the best policies to help us eradicate it. Duflo and others such as Miguel and Kremer (2004) suggest that this RCT approach might be the way forward in bridging the gap between development theory and development in practise.

A famous RCT example was the attempt to find the best policy to encourage children to go to school. Miguel and Kremer (2004) argued that a RCT of combating hookworms in Kenya proved that this policy was very effective, as with limited resources, school absenteeism was reduced and general health improved dramatically within the school population. Before the RCT no-one would have thought that the most effective way to help the children to stay in school was combating hookworms. Yet, by building schools or by subsidizing school uniforms and keeping thus a child in school would cost more than \$100 per student, while by deworming kids, the effect was greater and the cost was just \$3.50 per student (Kristoff, 2011).

Still, not everybody was convinced that the RCT is the way forward. Many are worried about how these effects "scale up". For example RCT achieved hookworm elimination but perhaps due to the great prevalence of the hookworm in the area. If anti-hookworm campaigns were ramped up with resources to fight a worldwide campaign many doubt if it would be as effective, as the RCT trials suggest (Deaton 2010, Ravallion 2009). Others worry that this is not providing with a general development policy, and the results could be unsustainable (Barret and Carter 2010).

More valid constructive criticism seems to point out that we are still unsure what RCT is measuring. Is RCT measuring the success of hookworm prevention or the fact that the programme was run by an NGO that worked involving the local community and chosen by implementing the key principles of aid effectiveness? We still do not know (Bellemare, 2011). It is clear that all three trends proposed here would be an important part of the future of development, hopefully narrowing the gap between theory and practise and proving that aid can change the world for the better.

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