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Validity and Necessity of Development Indices – A Critical Analysis

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List of Abbreviations

EF	Ecological Footprint
EU	European Union
G8	The Group of Eight
GEP	Gente Entintada y Parlante [The Inky and Talking people]
GDP	Gross Domestic Product
GNH	Gross National Happiness
GNI	Gross National Income
ICP	International Comparison Project
ILO	International Labour Organization
IMF	International Monetary Fund
HDI	Human Development Index
HDR	Human Development Report
HLY	Happy Life Years
HPI	Happy Planet Index
MDGs	Millennium Development Goals
NEF	New Economics Foundation
NGO	Non-Governmental Organisation
Nom.	Nominal
p.a.	Per annum
PD	Paris Declaration on Aid Effectiveness
PPP	Purchasing Power Parity
OECD	Organization for Economic Co-operation and Development
SAP	Structural Adjustment Programme
UN	United Nations
UNDP	United Nations Development Programme
US	United States
WWII	World War II

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1. Introduction

1.1 *Introductory Words & Motivation for the Topic*

Measuring development is an issue of particular importance for several reasons: What is measured sheds light on how development is defined. For instance, if a given country is evaluated mainly according to GDP per Capita, development there will be seen as mainly economic and priority will be given to pursue progress in economic terms.

What is measured will thus have a higher chance of getting done: If educational and health levels of a population are measured and countries compared accordingly, this will draw attention to these sectors.

What is measured will usually be subject to a certain degree of simplification and arbitrariness: Lines need to be drawn as to which dimensions an index includes and what data will and will not flow into these dimensions. This decision will influence the definition of a given country as developed or underdeveloped, it might impact aid flows and debt relief, investment ratings and special trade agreements (see sections 3.2. and 4.2.2 for further elaboration on these points).

Development indices hence are not a neutral tool, rather they shape our notion of what needs to be done to ensure what kind of development to do as well as how and where to do it. They are flashlights highlighting certain sectors while leaving others in the dark.

The data and numbers arising from them suggest objectivity but this is not necessarily given because at the beginning of forming an index stands a selection process. The many different indices that exist as well as the process of continuously refining data for those indices can give different results for one and the same country in the same year.

The name given to these indices –*Development Indices* – suggests that they are able to grasp the development of an entire region or nation in all its complexity. However, I argue that the notion of development is too large and complex to be forced into a simple tool. It has philosophical, economic, cultural, political, social, ecological and possibly many more dimensions. And it may differ from region to region, from theoretical context to theoretical context.

Yet, an index inherently needs to be limited and remain relatively simple in order to be able to serve as a tool for decision makers. It needs to be something that serves current institutions

such as schools, households and formal economic units as easy and consistent measuring and assessment tool. The seemingly simple numbers and rankings a development index produces suggest that development is something homogenous of similar simplicity to be handled in a technocratic way – more economic growth, more investment in education and health, increased income.

On the other hand, indices help to shed light on areas of particular problems or particular improvement. They may aid in breaking down the overwhelming aim of development that is so difficult to be grasped into partial goals in the short and in the long run. This may be helpful to development research and development politics but only if treated with the necessary caution. This caution often appears to be lacking in development practice.

Indices appear to be the backbone of development cooperation. They serve as benchmark, justification and standardization. How development is seen is reflected and enforced in and by them. I aim to analyse this backbone critically.

Focusing on the potential and limits of developing indices, on their validity and necessity in this paper, I aim to argue that development is something that needs to be defined differentially over time and within different regions of the world and that with each notion and index the theoretical and historical context within which it emerged needs to be considered. This is highlighted by evaluating indices in the light of one particular approach to development, namely Post Development Theory.

The scientific contribution of the study at hand lies in it being, to the best knowledge of the author, the first to not only evaluate indices according to the quality of their data or the indicators they include, but to analyse the idea of attempting to measure development from a particular theoretical standpoint. It is also the first research to evaluate development indices in the light of a specific development theory framework, namely Post Development Theory, and thus the first one to argue that the value and quality of an index does not only depend upon the quality of its data or dimensions included, but can also depend upon the theoretical viewpoint one takes. Furthermore, it is the first attempt to compare three development indices from different ‘development eras’ with one another according to their aims and the notion of

development they stand for¹. Finally, it is the first serious attempt to look at the potential of the Happy Planet Index (hereafter HPI) in terms of its notion of development and what it can mean for the development debate.

Before beginning I would like to call the attention of the reader to the terms with which I write. I decided consciously to use the terms ‘developing world’, and some other generalising and stereotyping idioms. All of these concepts may well be regarded as an unjustified homogenization, even discrimination. I will use them none the less when criticizing instruments which enforce these very terms in order to highlight the strength of them and the dynamic quality of the development discourse, as Escobar puts it (Escobar, 1995, p. 42), from which it appears it is difficult to escape even when criticizing its ways and tools.

1.2 *Research Question & Research Methodology*

1.2.1 Research Questions

The overall aim of this thesis is to look into and critically assess the necessity and validity of development indices, their potential and their limits.

Research questions centre on this aim and are as follows:

- a) To what extent are development indices and indicators tools of power casting some countries into a state of backwardness and taking away their power of defining how they may wish to develop?
- b) Under which conditions can a development index be regarded as being valid and necessary?

1.2.2 Research Hypothesis

Indices are not neutral or objective tools. They emerge from a particular ‘era’ of development thought. They hence have ideologies and political dimensions attached to them which are visible if one looks at them through the lens of one specific theory. They may contribute to creating development and underdevelopment. They are thus valid and necessary only to a limited extent, depending on the theoretical context, its own claims as well as policy aims, and only when treated with the necessary caution. Development in all its complexity and

¹ Marks et al and Canoy make comparisons between GDP per capita, HDI and HPI in NEF’s Happy Planet Reports (see Marks et al 2006, p. 22f & 27 and Canoy, 2007, p. 8), however not in the light of a particular theoretical framework and not analysing each in depth according to strength and weaknesses both in data and dimensions included as well as development idea.

uniqueness cannot be grasped with a tool that inherently needs to be simple in order to be usable.

1.2.3 Research Methodology

This thesis is theoretically embedded into the critical discussion of the definition and notion of development by the Post Development Theory, in particular by the theorists Arturo Escobar and Wolfgang Sachs.

I chose Arturo Escobar and Wolfgang Sachs due to their critical attitude towards the use and general acceptance of the term development.

Arturo Escobar was chosen since it might be insightful to rely on a theorist that is not from a Western background in order to critically assess 'development', a Western concept as I will argue.

Wolfgang Sachs on the other hand has a strong ecological background and analyses the concept of 'development' partially on the grounds of the ecological predicaments often coming along with it. This may prove to be useful as it sheds light on power relations incorporated in development and its tools – the question of using resources sustainably is directly linked to the question of who is using how much, with richer countries commonly overexploiting resources. And in this regard it may be interesting to note that the most commonly referred to development indices do not incorporate any environmental criteria.

How their theories may aid in assessing development indices' validity and necessity is described in this section, further below (see p. 6).

As the tool of analysis, a case study design is chosen: While a non-exhaustive overview of existing development indices will be given, an in-depth description and analysis of three development indices that each has distinct profiles as to what they aim to measure is carried out.

The three indices analysed in depth are selected according to the difference of their profile in order to account for the diversity of development aims and definitions reflected in indices. Furthermore, the selection may partially reflect the 'evolution of development' since its introduction in 1949. They may also represent an evolution towards increased empowerment, as will be shown later.

The three indices selected are as follows: Firstly the measure used when the term ‘developed’ and ‘underdeveloped’ was first introduced and which despite many criticisms continues to count considerably towards the development/progress status of a given country: The measure of GDP per Capita.

The second index that is to be analysed in depth was one of the first serious attempts to go beyond the notion of income/GDP per Capita augmentation as progress, or even to replace it and to include development dimensions that may lead to more empowerment if they are enhanced: The Human Development Index.

The third and final case is an index that differs considerably in several respects from the two above mentioned one: It does not include income as a factor; instead it includes ecology as well as personal life satisfaction, the latter being a concept which gained recognition only in recent years. It furthermore differs from other indices in that it was developed not by a multilateral development institution as is the case with the HDI and to some extent also the GDP per Capital via the System of National Accounts (SNA), but by a non-governmental ‘think-and do’ tank (nef, 2011), the New Economics Foundation (nef) in London. It is the so-called Happy Planet Index (HPI, not to be confounded with the Human Poverty Index which has the same abbreviation).

In order to determine the question of validity of the chosen indices, it is vital to define what “valid” means in this context. Validity may be regarded as follows:

“(…) die Gültigkeit eines wissenschaftlichen Versuchs oder eines Messverfahrens, z. B. eines (psychologischen) Tests. Die Validität gibt den Grad der Genauigkeit an, mit dem ein Verfahren das misst, was es zu messen vorgibt (…).” (Brockhaus Enzyklopädie, 2005).

[(…) the validity of a scientific attempt or a measurement method, for instance a (psychological) test. Validity gives the degree of accuracy with which a given method measures what it pretends to measure]²

Hence, the three cases are evaluated according to what they claim to measure and with which accuracy they do so. The indices are not only evaluated according to conceptual criticism (data validity, dimensions included, for instance health, education and income to measure ‘human development’), to see if they ‘live up’ to their own claims here, but also and especially according to the theoretical viewpoints regarding development and development cooperation expressed in the second chapter by the two development theorists Arturo Escobar and Wolfgang Sachs. This second step aims to highlight that their validity, if at all, can probably only be given if they are evaluated within their own appropriate theoretical

² The translation has been done by the author.

framework or conceptual understanding of development. For instance, GDP per capita may obtain validity if development is seen as economic progress. The HDI may have validity within the framework of 'development as freedom' as explained by A. Sen and especially as going beyond mere economic development. The HPI may have validity in the light of development incorporating broader, new dimensions (see also section 2.2.) and among those questioning 'Western' development due to its ecological problems.

Their validity may be questioned however if a framework is applied that looks upon a generalising notion of development more critically, and aims more for diversity and/or participatory development forms. Furthermore, a theory which is as critical towards development as Post Development Theory may be particularly sensitive to all the possible shortcomings of such 'tools' of development, both in terms of their general conception as well as in terms of the dimensions (indicators) they incorporate.

The indices' necessity is assessed according to whether or to which degree they are necessary to attain development/progress and to define what development may mean, possibly highlighting that their 'necessity' depends upon whose/which interests they are necessary for and what type of development a nation aims at.

Giving an overview over how indices came into being, i.e. when, where and by whom they were developed and what their outcomes and their receptions were may help indicate what and for whom they are necessary.

Assessing them in the light of Post Development Theory may help to highlight that the necessity of these indices depends on who claims they are necessary for what. For instance, GDP per capita may be necessary to strengthen the notion of development as economic development to ensure hegemony of certain countries; indices may be necessary in terms of their ranking, possibly making them important tools to ensure a certain order of 'social evolution' in the world.

This step may hence question the indices' neutrality in terms of being numbers, free of any particular interest.

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The second chapter deals with the notion of development critically. It gives a brief overview of the state of 'development' in the world, the history of development thought and shows why it may be difficult to pin down a concrete definition, what dangers come along with speaking

in the name of development (and underdevelopment) and what reasons there might be for letting go of the concept altogether. It then introduces Post Development Theory and the theoretical approaches by Escobar and Sachs in particular.

The third chapter looks at the general requirements of an index, such as simplicity and understandability as well as policy implications a development index may have.

The fourth and main chapter analyses the mentioned three indices in depth according to data, dimensions and in the Light of Post Development Theory.

The fifth chapter presents the conclusion and outlook of this dissertation.

2. Theoretical Framework: A Critical Analysis of the Concept ‘Development’ with particular Emphasis on Post Development Theory

Before taking a closer look at the measuring tools, this chapter takes a closer look at what is to be measured, namely at development.

In the first step, the state of development is considered. An overview of the most common development dimensions like child mortality and life expectancy is provided, to give a non-comprehensive overview of common components comprising the concept of development.

The second step consists in a brief history of development thought giving an overview over the diverse definitions of and paths towards development. Overlooking over development thought aims at, on the one hand, showing the many-sidedness of development. On the other hand, it also provides an insight into the difficulty of finding an objective, universally accepted definition of the term ‘development’, since its notion, and the index used to measure it, depends upon the theoretical and historical context.

2.1 *The State of Development in the World in Numbers*

By giving an overview over different dimensions commonly considered part of development in this section, I aim to show that the state of development in the world, for different regions and different aspects can be read and presented in different lights: The most positive, as well as the most negative tendencies can be chosen, particularly when talking about development in more generic terms, not specifying a particular country or time period. It is therefore important to handle numbers carefully, especially since they may often indicate objectivity.

According to Roth, 2010, the result of development cooperation is at best mixed so far.

In terms of *poverty*, as of 2006, 85% in South East Asia and 75% in Sub-Saharan Africa are poor (have less than two dollars per day) (Nuscheler, 2006, p. 146). It is highly improbable, that Sub-Saharan Africa will reach the first Millennium Development Goal (hereafter MDG, see p. 13 for more elaboration on the concept) of halving poverty by 2015 (Roth, 2010, p. 161).

On the other hand improvement in development can be seen in several regions in the world, especially in China and East Asia. Depending on the statistics which are applied, poverty has been reduced there considerably since 1990. The MDG which consists in halving extreme poverty by 2015 may thus still be reachable (Roth, 2010, p. 160).

In terms of *Food Security*, as of 2006, over 800 million people are chronically malnourished, 1 billion are nourished poorly. Every day, 24,000 people, three quarters of which are children, die due to the consequences of chronic malnourishment (Nuscheler, 2006, p. 152). Due to a considerable price increase in staple foods through 2008, the number of people suffering from lack of food has increased by 75 million to a total number of 923 million in 2007 (Roth, 2010, p. 163).

Life expectancy at Birth remained static or has fallen in 32 countries, mostly in Africa and Eastern Europe. Collapse can be observed in countries like Zimbabwe, Lesotho and Swaziland mainly due to epidemics such as HIV/AIDS. Within a few years, life expectancy has fallen here by more than 10 years. In 9 countries (in Sub Sahara Africa and the former Soviet Union), as of 2010 life expectancy fell below the levels of 1970 due to HIV/AIDS and increased adult mortality (UNDP, 2010c, p.3). The distance between average life expectancy in low income and in OECD countries could therefore thus not be reduced between 1990 and 2005.

But also within nations and regions the state of health increasingly diverges (Heßelmann, 2010, p. 224f).

However, life expectancy has increased globally by 14 years on average, from 53 years in 1960 to 67 years in 2006 (Heßelmann, 2010, p. 224) and UNDP points out that improvements

in both longevity and education have been considerable: The average HDI in 2010 has increased by 18% compared to the HDI 1990 (UNDP, 2010c, p.3).

In terms of *health*, 80% of the world's illnesses can be traced back to drinking dirty water and to a lack of hygiene. In 2003, over one billion people still had no access to clean drinking water, 2 billion lacked sanitary facilities.

The most common transmittable disease is Malaria. Every year, 300 million people get infected. In the countries that are most heavily affected, it dampens economic growth by up to 1% (Nuscheler, 2006, p. 153f).

Every year, 1.8 million people die of indoor air pollution due to using biomasses as their main source of energy.

Furthermore, every year, 3 million children die of illnesses like measles, pertussis, pneumonia, diarrhoea and dehydration (Nuscheler, 2006, p. 153f).

Slightly more people died of tuberculosis in developing countries in 2006 (151 per 100000 inhabitants) than in 2000 (150 per 100000 inhabitants). In Sub-Saharan Africa it has increased considerably (291 per 100000 in 2006 and 253 per 100000 in 2000). In many regions, especially in Sub-Saharan Africa and South East Asia it may already be assumed that the health related MDGs will most likely not be reached (Heßelmann, 2010, p. 227), Southern Africa and some countries in the former Soviet Union have experienced the deteriorating health of their populations (UNDP, 2010c, p.1).

Yet, the number of deaths due to measles has been decreased. Also, since 1990, the number of people with access to clean drinking water has increased by 1,6 billion (Roth, 2010, p. 160). Overall, in terms of health and education, poor nations are coming closer to catching up with wealthier nations (UNDP, 2010c, p.3).

The trends in *Maternal Death Rates* are still critical: Every year, more than 500,000 mothers die of complications during birth in developing countries. While in developed nations, 9 mothers in 100,000 live births die, in developing nations 450 in 100,000 and in Sub-Saharan Africa 900 in 100,000 die (Roth, 2010, p. 161f).

Child mortality in developing regions remains high with 80 deaths in 1000 births compared to 6 deaths in 1000 births in developed regions. It is highest in Sub-Saharan Africa, with 157 deaths in 1000 live births (Heßelmann, 2010, p. 226; Roth, 2010, p. 160f).

However, child mortality has been reduced by half since 1960 (Nuscheler, 2006, p. 155).

In terms of *education*, the absolute number of people who are illiterate has risen to 855 million of which two thirds are women. Often, however, literacy only means 'half' literate. One third of children abort their education before intended completion due to child labour (Nuscheler, 2006, p. 156f).

Still, on average, countries have reduced their illiteracy rate from 44% to 21% from 1956 to 1998 (Nuscheler 2006: 156). Primary school enrolment has increased considerably (Roth, 2010, p. 160): From 25% to 57% in Sub-Saharan Africa, from 45% to 80% in South Asia, from 55% to 96% in East Asia and from 60% to 91% in Latin America (Nuscheler, 2006, p. 157).

There are mixed developments in terms of *Rural- and Urban Development* as well as *Inequality*. Since 2007, more people live in cities than in the country side. Two thirds of all mega cities are found in developing countries, most of them in East and South Asia. In the majority of cities in developing countries, more than 60% of the people live below the poverty line. More than 50% of the city buildings have come into existence informally (Frauke Kraas, 2010, p. 181 & 184 & 193).

An urban - rural gradient can be identified: In rural areas, provision with educational and health goods is worse than in urban areas and there is a bias of development cooperation being more abundant in cities. However, problems in cities prevail as well. In 1996 half of all city dwellers in developing countries lived in slums or spontaneous settlements (Nuscheler, 2006, p. 157). Overall, inequality has widened over the last years both within as well as across nations (UNDP 2010c, p.6).

However, according to Kraas and Nitschke (2006, p. 22), an increase in dwelling in cities offers various benefits like a lower land consumption per capita, increased intercultural diversity, interaction and exchange, and a rising participation in political decision making processes.

2.2 Different Notions of Development: A Brief History of Thought

This section attempts to go deeper than merely presenting numbers, by putting ‘development’ and the different dimensions it encompassed over time in a brief historical context, giving an overview over the development of development theory. This also serves to put the chosen theoretical approach for this thesis, Post Development Theory, into context and highlight what sets it apart from other development theories. While it is attempted to provide a linear historical overview, this is not always possible, since the history of development thought was not at all times linear, with different concepts and theories overlapping, as will be seen.

Development as a broader scheme applied to large regions in the world became important as an enterprise and academic discipline in the Post WW II period (Rapley, 2007, p. 1). Major development institutions came into being: What is known today as the World Bank was created as the International Bank for Reconstruction and Development to manage the process of rebuilding Europe after the War (Rapley, 2007, p. 1). Together with the International Monetary Fund (IMF), those organizations were known as the ‘Bretton Woods System’ (Leys, 1996, p. 6). Development consisted in industrialization and income gain, or, in short, economic development, to elevate the poor from their misery: Such a notion was dominant mainly due to (formerly) rich countries’ experience of development as industrialization (Nederveen Pieterse, 2001; Rapley, 2007, p. 1).

Industrialization was furthermore deemed important by the former colonies that came to independence and often poverty. Many were looking for ways to catch up (Leys, 1996, p. 7), while many industrialized nations looked for ways to transform the new independent countries into becoming more productive and being open for potential investment. Furthermore, they needed to be developed in order to not fall prey to communism, being thus a part of the Cold War (Rapley, 2007, p. 2; Leys, 1996, p. 5). Academic ideas centred on the idea of raising incomes and modernizing society.

In the 1950s, with the idea of development as economic progress, emerged the so-called Modernization theory and the Stages of Growth Theory by W.W. Rostow, where development culminated in the era of mass consumption (Nederveen, 2001, p. 6). His main work on this topic was sub-titled as ‘An Anti-Communist Manifesto’ (Leys, 1996, p. 6).

Development ideas came more from the left than from the right, but both sides focused on the state government as the main development agent, while being suspicious of pure market forces as privileging only a few elites. However, industrialization needed more resources than

foreseen and growth rates slowed down. The end of the post WWII boom in the 1970s hence revealed apparent inefficiencies in many third world states, which called for alternative developments (Rapley, 2007, p. 2f; Nederveen, 2001, p. 6).

This may have opened the door for views of poverty as the non-fulfilment of basic needs which resulted in the basic needs approach, introduced by the ILO in 1976. Basic needs were regarded as having sufficient food, clean water, clothing, shelter and other conditions important for a life in dignity which may be specific to different cultures. The approach was increasingly discredited in the 1980s, with rising neoclassicism and structural adjustment policies (Hoadley, 1981, p. 149 & 158). Its greatest sceptics came from the Third World itself. There was a concern that the engagement of the poor would distract from the development priorities like building infrastructure and industrialization. Besides, the claim for more participation questioned the position of power of their governments (Nuscheler, 2006, p. 233).

Despite the apparent failure of the state-led development modes, in the 1960s, new left wing models appeared, claiming the market to be the major problem and calling for an even stronger role of the state. Their theories were commonly known as dependency theory, blaming the dependence of the Third World economies upon the First World and looking for a solution by capital accumulation through protecting their economies through state led measures (Nederveen, 2001, p. 6; Rapley p. 3).

After the dependency approach had not brought the boom and solutions hoped for, mainly due to lack of social reforms within nations and failure to open markets gradually, state led development models increasingly lost credibility, while neoclassical economic models that called for more market and less state rose in the 1980s, questioning that developing nations were a special case and claiming their development model as a remedy for all (Nederveen, 2001, p. 6; Rapley, 2007, p. 3). New development experts as well as donor agencies pressured Third World governments to push back the state and with it unions and other organizations hindering progress and adjusting their policies accordingly to achieve higher economic growth rates. This resulted in so called 'structural adjustment' which most Third World countries were pressured to take on despite their weak state due to their debt crisis in the 1980s. In many countries this worsened the condition particularly of poor and vulnerable groups, weakening the credibility of these right wings theories (Rapley, 2007, p. 3).

This development may have influenced the emergence of a conception of development as social justice, a notion that the *Nord-Süd-Bericht* [North-South-Report] in 1980 highlighted:

“[Entwicklung ist] nicht nur die Idee des materiellen Wohlstandes, sondern auch die von mehr menschlicher Würde, der Sicherheit, Gerechtigkeit und Gleichheit.” (Brandt Commission, cited according to Andersen, n.d).

[[Development is] not only the idea of material wealth, but also the idea of more human dignity, security, justice and equality].³

Development is seen here as the augmentation and fairer allocation of the societal surplus, also due to political and economic reasons, for extreme differences in income lead to luxury consumption, non-productive accumulation of wealth and capital flight. Justice demands for changing structures in contrast to charitable emergency assistance in order to alleviate the consequences of unjust structures. In order to achieve this, a profound change in ownership- and power structures is of fundamental importance, since inequality where access to rights and resources is concerned is part of the root of poverty (Nuscheler, 2006, p. 238)..

The removal of national and international barriers to capital movement weakened the role of the state as development agent in the long run (Leys, 1996, p. 7). A new academic debate catering more around leftist theories emerged in the 1990s, consequently no longer focusing on state led development, but on criticizing globalization and development itself (Nederveen, 2001, p. 6f). This new approach was known as Post Development Theory (for further elaboration on this theoretical approach see chapter 3). From initial hostility, they gained increasing recognition and influence, also since some of its ideas such as more decentralization and participation fit in with other theoretical approaches (Rapley, 2007, p. 4).

While the Asian boom led to a short renaissance of state-led development theories, it came to an end with the Asian financial crisis in 1997/1998, which gave the IMF the power to enforce further neoliberal measures upon these economies. Management of the Asian Financial crisis was, however increasingly criticized, even from within the field of economics, for instance by World Bank's chief economist Josef Stiglitz, shaking the confidence of institutions that had formerly firmly believed in neoclassical development measures (Rapley, 2007, p. 5ff).

The Asian case also revealed that there was not one single development model fitting all, and today theories are less concerned with more or less, but instead with 'better', with good governance and localized approaches. This was in line with Post Development Theory, calling

³ The translation was done by the author of this paper.

for people as the agents of development, while the theory's rejection of development was less popular (Rapley, 2007, p. 5).

Indices reflecting such calls for good governance emerged as well, such as the Corruption Perception Index, developed by Transparency International in 1995 (Transparency International, 2009, p. 1).

With the recognition of the failure of one-fits-all development models, radical development approaches, where peoples' rights and freedom could at time be sacrificed for economic development came to an end (Rapley, 2007, p. 7).

Individual well-being and capabilities became increasingly important on the development agenda with Amartya Sen's concept and book *Development as Freedom*, where people instead of economic development were to be the centre (UNDP, 2010c, p. 2): He saw development as enlarging freedoms according to individual preferences as well as participation in political and societal decisions. In short, he states "development can be seen [...] as a process of expanding real freedoms that people enjoy" (Sen, 2001, p. 3). He differentiates clearly between means and ends of development, stating that such a view "directs attention to the ends that make development important [...]" (Sen, 2001, p. 3). For instance, he identifies growth in GNP as a possibly important means, but not an end in itself. Sen identifies freedoms that are conducive to development like liberty and political participation and establishes them as being constituent to development and thus an end in themselves (Sen, 2001, p. 5). Taking these ideas into account, he developed the so called '*capability approach*' towards development (Sen, 1999). Such capabilities are linked to freedom, they are the "substantive freedoms he or she enjoys to lead the kind of life he or she has reason to value" (Sen, 2001, p. 87).

Sen's ideas influenced the UNDP in developing the so-called Human Development Index (hereafter HDI), measuring education, life expectancy and income (Nederveen, 2001, p. 6).

Due to the many failed ideological approaches, Rapley states that development theory today is increasingly flexible and adaptive, using pragmatic approaches and tools (Rapley, 2007, p. 5). One such tool may be the so-called Millennium Development Goals (MDGs): The UN Millennium Declaration committed heads of states in 2000 to do to all they can to reach 18 targets in 8 different dimensions of development: "Eradicate extreme poverty and hunger" (reducing the number of people living on less than \$1 Dollar a day, halving the number of those suffering from hunger), "Achieve universal primary education", "promote gender

equality” (raise the female ratio of school enrolments at all levels and other gender gaps), “reduce child mortality” (5.5% of annual decline, a two thirds decline overall), “improve maternal health” (reduce mortality by 75%), “combat HIV/AIDS, malaria and other diseases” (halt or reverse trends), “ensure environmental sustainability” (integrate sustainability principles into politics, ensure access to clean water for all, improve livelihoods of slum dwellers) and finally “develop a global partnership for everyone” (for instance address special needs of LDCs, raise ODA to 0.7% of GDP). Goals are to be reached by 2015, compared to 1990 levels (UNDP, 2003b, p. 1ff).

Another consequence of this flexibility and adaptability may also be the attempt of development theory and cooperation to take up any new trend and/or newly discovered marginalized groups into its agenda. Thus, UNDO released not only general human development indices such as the HDI or the Human Poverty Index (focussing particularly on circumstance of the very poor, such as the probability of not surviving to age 40), but also specific ones, such as the Gender related Development Index, (GDI), which is similar to the HDI, but focuses specifically of women’s development (UNDP, 2008, p. 355). Furthermore, in its broader HDR’s, UNDP addresses issues such as inequality and good governance (UNDP, 2010c, p. 5f).

Today, power balance between both worlds increasingly shifts, particularly through the increasing economic importance of China and India, while the power of the World Bank and IMF diminishes, with China becoming increasingly active in the field of development cooperation. The Western model of development is progressively questioned with many of its development approaches to the Third World being regarded as failed (Rapley, 2007, p. 8f).

Furthermore, environmental degradation emerged as a new challenge as well as consequence of economic development. This made environmental problems become central to the development debate (Rapley, 2007, p. 9). Ecological problems may also question traditional notions of modernity and economic development (Nederveen, 2001, p. 1).

An early pioneer of this tendency was the Club of Rome with its Report *Limits to Growth*, issued for the first time in 1972. It showed how problematic it was to generalize the Western style of life. This report called for a return to an ethics of sufficiency regarding development, for a ‘sufficiency revolution’. They insisted that quality of life is not a dependent variable of consumption. The report calls for the end of growth as the limits of it have been reached

(Meadows & Club of Rome., 1972). The Club of Rome issued a 30 year update in 2005 in which they show that their pessimistic projections in terms of resource use have come true for the most part (Meadows, Randers, & Meadows, 2004, see for instance p. 105 & 135).

New indices looking at environmental pollution and degradation caused by economic growth emerge, and the Happy Planet Index, combining ecological and well-being criteria, released in 2006, may be regarded as an index of this time. Other indices dealing with development and the environment are for instance the Water Poverty Index (WPI) (Oxford Centre for Water Research, n.d.-b, p. p. 1) or the Climate Vulnerability Index (CVI) (Oxford Centre for Water Research, n.d.-a, p. 1).

The meaning and aims of development and development cooperation thus changed with changing historical circumstances, mirroring changing economic, social and environmental circumstances and often reinforcing them (Nederveen, 2001, p. 7).

On a final note for this chapter, it may be interesting to look at a philosophical definition of development: according to Brockhaus Enzyklopädie development in philosophy can be defined as

“Auswicklung, Entfaltung und Ausgestaltung des im Grunde einer Einheit Eingefalteten, z. B. als Entfaltung eines Gedankens, einer Vorstellung, einer Definition oder auch des Lebendigen, z. B. einer Pflanze aus dem Samen.” (Encyclopaedia Britannica, 2010).

[Unwrapping, unfolding and embodiment of something wrapped within the bottom of a unit, for instance the unfolding of a thought, an association, a definition or life itself, for instance the unfolding of a plant from a seed].⁴

It is interesting to see how development in the philosophical sense is here defined as something already waiting inside the unit to be developed and not something to be brought upon from the outside, as may often be the case with development treated for instance in development cooperation (as mentioned for instance by Sachs, see section 2.3.4).

The development indices mentioned within this overview provide an (non-comprehensive, for there are many more) insight into the large number and diversity of development indices. It

⁴ The translation was done by the author of this paper.

appears as though every time another aspect is added to development (basic needs, human development instead of pure economic development, good governance), a new index follows. They are supposed to serve as a help for decision makers, providing seemingly clear, objective and simple numbers representing how development is progressing.

The question put forth by Post Development Theory is whether it is really the wrong theory [or, possibly connected to that, an insufficient index] which is the problem, or whether it is instead development itself – and the attempt to quantify, simplify, standardize and measure it. The next chapter (sections 2.3, 2.3.3 and 2.3.4) delves deeper into this question.

2.3 Critical Voices of ‘Development’: Post Development Theory

The previous section gave a brief overview over the history of development thought and the different meanings the term had with the emergence of different theories. This chapter takes a closer look at one of them, namely Post Development Theory, which appeared in the 1990s as a response to failed ‘grand’ development strategies (see section 2.2).

This section thus looks at development more critically: When was it introduced with the meaning it has today, to ‘develop’ ‘developing’ nations? Does it have a historical dimension? What power relations go along with it and why? What problems arise with using this concept? Why is seemingly the entire world, a myriad of diverse nations, drawn in by this concept?

It is important to understand that this chapter is a summary of ideas. The author does not make her own statements or draw her own conclusions here, but merely presents thoughts from the main theoretical approach of this paper. For application of this theory regarding development indices, see chapter 4.

2.3.1 An Introduction to ‘Development’ in Post-Development Theory

After having given more ‘general’ reasons for handling the term development critically with the help of Nuscheler, this and the following sections deal more specifically with the reasoning of Post Development Theory, which is later used to assess validity and necessity of development indices (see sections 4.1.3, 4.2.3 and 4.3.3)

As mentioned in section 2.2, Post Development Theory is highly critical of the term ‘development’. It is not seen as neutral but as a particular ideology forming the Third World through the so called development discourse. This discourse is of Western origin and is a

powerful tool for creating spaces and knowledge of the Third World, of in fact *creating* the Third World and is continuously replicated. People, governments and countries are defined as underdeveloped and treated accordingly (Fischer, 2008, p. 265).

Post development theories question the very idea of development (Escobar, 2008, p. 170f).

Central to Post Development Theory is the understanding and analysis of development as a discourse shaped from the outside by experts and interests foreign to the Third World. The aim of the critical analysis of development discourse is to investigate the basic principles how the Third World comes into being through representation and power. Economists, planners, demographers and many more shape the reality of the Third World and make it difficult for its people to formulate their own interests in their own language. Origin of this development was the invention of the abnormal, like *the poor, the illiterate*, etc... which need to be normalized. Such an invention was necessary in order to make it possible to establish the necessity of reforms and treatment (meaning development) of the Third World (Fischer, 2008, p. 268).

Through the development discourse, new symbols and vocabularies are formed, power relations replicated, practices of knowing and doing are changed and the plurality of discourses in different communities is suppressed (Escobar, 2008, p. 172f).

The approach of Post Development Theory differs fundamentally from all forms of alternative development theories as these usually deal with suggestions to improve development (planning and projects), but do not question the discourse, the idea of development itself. In contrast, Post Development Theory attempts to show how difficult this reality shaping, all-encompassing discourse makes it to imagine something different, something new, beyond the idea of development. A central point of Post Development Theory is that development is currently, but should no longer be, the central organizing principle of social life in the world (Escobar, 2008, p. 172f). Thus, post development approaches to 'development' are not about looking for alternative development methods, but for alternatives to development. Representatives of this approach share a critical attitude towards established knowledge, an interest in local autonomy and culture and the advocacy of local grass root movements (Fischer, 2008, p. 170f).

In sum, Post Development Theory aims at a transformation of the political, economic and institutional regime of truth production which forms the development arena. Such a transformation calls for an institutional change, a change in societal relations and a movement

for new forms of participation, more autonomy for local communities of production of norms and discourse (Fischer, 2008, p. 173).

Being perceived as radical when emerging, Post Development Theory is subject to a number of criticisms. Thus, it is accused of being destructive and offering no constructive solutions to the problems it highlights (Matthews, 2004, p. 373f). Storper states that Post Development theorists advocate interests of particular groups and vouch for decentralization without offering solutions as to how these groups can manage to live together. Furthermore, the increased autonomy and decentralization Post Development Theory calls for may serve as an excuse for a retreat of the state from necessary duties such as the provision of public goods (Storper, 2001, p. 36f). Critics also claim that the alternatives to development mentioned as vital by the theory are not clearly explained. Furthermore, stopping 'development' or development aid altogether would worsen the situation in most developing countries (Matthews, 2004, p. 373f). The theory is furthermore criticised for not acknowledging any possibly positive changes that development may have brought, such as improvements in literacy or mortality rates (Matthews, 2004, p. 378).

Also, Western modernism/modernity may not be a singular historical experience in its tendency of colonization (Storper, 2001, p. 20). Storper claims that other civilizations before it, such as the Romans had similar tendencies of conquest and subordination:

“Unfortunately, virtually every society, whatever its principles of social organization, has found a way to invent most of these horrors, and has usually used some form of instrumental rationality to carry them out.” (Storper, 2001, p. 21).

There may be a difference in scale, however, with modernity today reaching most parts of the globe (Storper, 2001, p. 21).

Another point of criticism regards that simply because the grand development strategies in the name of ideologies have failed, this must not necessarily mean that development in total has failed or should be abandoned and that improvements are possible (Simon, 2007, p. 207).

Furthermore, there may be regions where people do demand 'development' in the standard sense, namely infrastructure, schools, dams etc. If development is rejected, their desires and demands might then be rejected as well (De Vries, 2007, p. 25). Also, criticism arose as to Post Development Theory arguing mainly on the macro level, and overlooking dynamics on the micro level such as individual action as well as complex interaction of macro- and micro level in a society (Storper, 2001, p. 38 & 42f).

While some of these points of criticism may be valid, Post Development Theory may still be regarded as important in its criticism of the universalism of Western development claims, its frequent failure to acknowledge a diversity of aspirations (Matthews, 2004, p. 379), its creation of new desires (De Vries, 2007, p. 25) and its tendency to subject parts of the world to a generalizing state of being ‘in development’ or even ‘underdeveloped’. These points are dealt with in depth by the two theorists chosen for this paper.

The theories by Arturo Escobar, a Colombian anthropologist and development theorist, deal distinctly with the colonial nature of development, the power asymmetries that go along with it, the reasons for its emergence and persistence as well as with the concepts and tools that are used in and for its name. His particular approach is explained more in depth in the following section 2.3.3.

Wolfgang Sachs, a German ecologist and development theorist, shares a similar attitude towards development with Arturo Escobar. However, he particularly brings in the ecological predicaments that come along with ‘development’. His theories deal with the ecological disaster which according to him was brought about by development (a notion first highlighted by the Club of Rome and increasingly recognised in development thought today, though possibly less so put in practice, see section 2.2) as well as its historical process. He also highlights the normalizing nature of development and the dangers which arise from such a homogenization to the world at large. Similar to Arturo Escobar, he aims at finding reasons for development’s allure. He discusses what strengthens and what might weaken ‘development’ and why the latter might be important. His approach is explained more in depth in section 2.3.4.

2.3.2 Arturo Escobar’s Thoughts on ‘Development’

This section introduces and explains thought Arturo Escobar’s regarding development.

Arturo Escobar is an Anthropologist of Colombian origin. Escobar deals not so much with the material side of development as many theoreticians before him have done (for instance in dependency theory or modernist theory), but with the development discourse itself. He analyzes how the hegemony of development as a central tool of force directed towards the Third World came into being, using Michel Foucault’s theories of power. For him, the consequence of this analysis is his rejection of any form of ‘development’ (Fischer, 2008, p. 163). Important parts of his analysis are the historicizing of development (highlighting the

historical circumstances that formed it – as opposed to seeing it as neutrally given), where he looks at development as part of the history of Western modernity, the power relations that nourish ‘development’ and the colonial nature of the ‘development’ concept.

The History and Invention of Development

Escobar proposes to speak of development as a historically singular experience, a creation of a domain of thought and action, giving it a distinct historical perspective, which may be justified given the overview of development thought as bound to historical contexts shown in section 2.2. Development is thus not a neutral concept, but a historically produced discourse. In order to understand development as discourse, the question of how the process of ‘to develop’ became such a fundamental problem for many countries and how they strove to ‘un-underdevelop’, subjecting themselves to systematic interventions, needs to be analyzed (Escobar, 1995, p. 6; Fischer, 2008, p. 266).

According to Escobar, history about development is relatively young. Notions of underdevelopment and the Third World were discursive products of the post-World War II climate, they didn’t exist before 1945. ‘Development’ began in the early post World-War II period with the establishment of apparatuses of knowledge production and intervention (for instance the World Bank and United Nations). The concept is tied to Western Economy with its systems of production and power (Fischer, 2008, p. 264ff). Thus it was in the early post war era that mass poverty in Asia, Africa, and Latin America was ‘discovered’. The discourse of war was displaced onto the social domain as well as on a new geographical terrain: The Third World. The “War on Poverty” began to occupy a prominent place (Escobar, 1995, p. 21).

After 1945, a transformation in world affairs occurred: along with the end of the war, the colonial system of exploitation and control was over. A reorganization of world power was taking place with a consolidation of US hegemony. This went along with a need for the USA to deepen the market for US products, to find new investment sites for US surplus capital and gain access to raw material (Escobar, 1995, p. 32).

One of the most important factors forming the discourse of development was the Cold War (Escobar, 1995, p. 33). Fear of communism was a main driver for this concept: If poor countries were not rescued from their misery, they would fall to communism. The US and the

West in general saw 'Development' as a strategy to advance the rivalry with the former USSR and to promote the designs of industrial civilization (Escobar, 1995, p. 34).

Escobar uses Foucault's ideas of power to state that the invention of 'development' was a new problematization, and with new problematizations new discourses and practices that shape the reality to which they refer emerge. The reality formed here was that the essential trait of the third world was its poverty; the solution was development through economic growth, all of which became self-evident, universal, necessary truths (Escobar, 1995, p. 25).

Science, Technology and New "Objective" Knowledge about the Third World

Science and technology were regarded as markers of civilization since the 19th century by Western countries; this idea was rekindled with development age, but knowledge now centred on North American institutions and ideas. Once this system of knowledge, consisting of international institutions and universities was finished, it determined what was to be said, thought and imagined. It defined the space of development with its basic truth that any strategy of development has: Development is the path towards becoming like the rich societies: Industrialized, modern and urban (Fischer, 2008, p. 267). Development relied on the production of knowledge that could provide a scientific picture of a country's social and economic problems and resources. Since empirical social science was thought to be objective and days of scientific prejudice and error were gone, problems were to be evaluated 'objectively' by the new scientific means. Older ways of thinking would yield to this new spirit. These new 'neutral' approaches created new knowledge capabilities and further loss of autonomy. But most importantly, they contributed to blocking different modes of knowing (Escobar, 1995, p. 37).

Rich countries had the financial and technological capacity to secure their own progress. Looking into their own past seemed to confirm to them that their path was the only inevitable one. Sooner or later the underdeveloped world would follow and become developed. The new type of economic knowledge and experience with design and management of social systems made this goal look even more plausible. It was only a matter of strategy to set in motion the right forces to ensure progress and world happiness.

But new forms of power and control, more subtle, were put into operation as well and poor people's ability to define and take care of their own lives was eroded profoundly.(Escobar, 1995, p. 40).

Development as the Colonization of Reality

According to Escobar, the organizing premise for the development discourse is the role of modernization as the only force able to destroy archaic superstitions and relations, whatever the social, cultural and political cost. Closely related to this organizing principle are industrialization and urbanization as necessary roads to modernization and thus material advancement as a means for social, cultural and political progress (Escobar, 1995, p. 39).

The discourse of development is all encompassing and thus the examination of any given object within it should be done within the context of the discourse as a whole. In order to explain capital accumulation for instance, technology and new financial institutions as well as systems of classification such as GNP/capita, decision making systems and international factors all need to be taken into consideration (Escobar, 1995, p. 39).

The development discourse was the result of an establishment of a set of relations. Thus, it systematically formed the objects of which it spoke, grouped and arranged them in certain ways and gave them a unity of their own (Escobar, 1995, p. 40). It established relations between institutions, socioeconomic processes, forms of knowledge and technological factors which defined conditions under which objects, concepts, theories and strategies can be incorporated into the discourse. Such a system of relations establishes a discursive practice that sets the rules of the game: Who can speak, from what point of view, with what authority and according to what criteria of expertise. It sets the rules for the solutions of problems and the formation of a policy (Escobar, 1995, p. 43). Escobar refers to Foucault in order to show the dynamics of discourse and power: A certain order within a discourse produces permissible modes of thinking and being and disqualifies others. He calls this the *colonization of reality*: Certain representations become dominant and shape the ways in which reality is perceived (Escobar, 1995, p. 5). The rise of development discourse and following production of the Third World and the previously explained colonization of reality is what Escobar calls *coloniality*. It incorporates colonialism and imperialism but goes beyond them. Coloniality didn't end with colonialism but was rearticulated in terms of the post-World War II imaginary of three worlds and replaced previous articulations of Occidentalism and Orientalism (Escobar, 2004, p. 219).

Due to the relations within the discourse it is determined what is legitimate as development practice. For instances what experts say and what international politics deem feasible may be legitimate practice, as relations allow for it to be so, but local knowledge and practice may be disregarded. Practices thus reproduce the same relations between elements as the ones making them possible.

Development is omnipresent. It has the status of certainty. Governments, institutions and experts all study underdevelopment, create development plans and produce theories (Escobar, 1995, p. 10). Development furthermore becomes naturalized through globalization because everyone desires the same things, namely commodities and markets (Escobar, 2008, p. 167). People themselves come to recognize themselves as developed or underdeveloped (Escobar, 1995, p. 10). Thus, Non-European/Non-Western areas are systematically transformed according to European constructs. They are represented as part of the Third World and as underdeveloped. European/Western technocrats and development experts are detached and objective yet can immerse themselves in local life. They observe the world as object from an invisible position, being set apart themselves (Escobar, 1995, p. 7). The world is divided into copies and the original. A regime of order and truth is being set up, which is a quintessential aspect of modernity and deepened by economics and development. People of the Third World exist out there, to be known through theories and intervened upon from the outside. However, such an image makes sense only from the Western perspective. That it exists is more a sign of power over the Third World than truth about it and shows that the development discourse has created an efficient apparatus for producing knowledge about and exercising power over the Third World (Escobar, 1995, p. 9).

Change is not seen as a process rooted in the interpretation of each society's history and cultural tradition. Instead, professionals attempt to devise mechanisms and procedures to make societies fit a pre-existing model that embodies the structures and functions of modernity (Escobar, 1995, p. 52). Development is related to the ideas and expectations of the West, to its judgement of a normal course of evolution and progress. Such a conceptualization led to development being a powerful instrument for normalizing the world (Escobar, 1995, p. 26).

Development and Modernity

Escobar sees modernity as an essentially European phenomenon. This means that modernity can be explained by reference to factors internal to Europe in terms of history, sociology, culture and philosophy. Modernity has its origins in 18th century Northern Europe around the processes of reformation, enlightenment, and the French Revolution (Fischer, 2008, p. 264). Man saw himself as the foundation of all knowledge and order of the world, he separated himself from the natural and the divine (Escobar, 2004, p. 211). All the world cultures and societies are reduced to being a manifestation of European history. Modernities are always a reflection of a Eurocentred social order, modernity is a ubiquitous, ineluctable social fact. Euro-modernity has produced global designs which allowed it to subordinate other local histories and their designs. The modern practices of reason and rationality appear to be naturally given due to their universalization (Escobar, 2008, p. 167). Thus most people find it difficult to think about the Third World in other terms than those provided by development discourse, which are overpopulation, hunger, poverty and illiteracy. These terms are stereotyped and burdened signifiers, media images are an example of such signifiers. In order to move beyond them it is necessary to examine development in relation to the modern experiences of knowing, seeing, counting and economizing (Escobar, 1995, p. 12).

Modernity cannot be understood without reference to coloniality. It is coloniality that entails the marginalization of cultures and knowledge of subaltern groups. Within coloniality of power, local histories of European modernity have produced global designs within which subaltern groups have had to live (Escobar, 2008, p. 162).

However, through the lens of anthropological criticism, it is possible to regard development and modernity as a specific collection of practices with a historical nature. This anthropologization is to form the basis for the critical analysis of development, in order to disclose the constructed, even exotic character of many of 'our' 'reasonable' practices (Fischer, 2008, p. 264).

Going beyond Development

In order to go beyond development, it is important to single it out its encompassing cultural space and to separate oneself from it by perceiving it in a new form (Escobar, 1995, p. 6).

On the road to going beyond development, Escobar distinguished between *alternative development*, referring to "new" strategies like the basic needs approach or food security but which still are firmly rooted inside the development discourse; *alternative modernities*, referring to a higher participatory level and countertendencies by local cultures; and

alternatives to modernity, which refers to questioning the unanimous agreement on the universalization of modernity. Only the last option opens the possibility of going beyond the development discourse (Escobar, 2008, p. 162).

For alternatives to modernity and thus to development, Escobar points to a Latin American research group which moves inside the framework of modernity/coloniality/decoloniality. The theorists within this group refract modernity through the lens of coloniality. Their main aim is to re-read the 'myth of modernity' and to denunciate the assumption that Europe's development must be followed unilaterally by every culture. The conceptual corpus of the research program among others refers to coloniality of power, seeing the global hegemonic model as articulating race, labour, space and peoples according to the needs of capital and the benefit of white people; to global difference and global coloniality, which means analyzing knowledge and cultural dimension of subalternisation processes effected by colonial power; to coloniality of being; to address critically the effectiveness of discourse with which others respond to suppression as a result of an encounter; and finally to Eurocentrism: The knowledge model of European historical experience, as having become globally hegemonic since the 17th century (Escobar, 2004, p. 217f; Escobar, 2008, p. 167f).

There is a need to move beyond the paradigm of modernity in which the Third World has functioned. Modernity must no longer be treated as a great singularity. Instead, modernities and exteriorities (places and cultures outside of modernity) should be treated as true multiplicity where trajectories are multiple and can lead to multiple states. Furthermore, new classifications should be emerging which are not based on a division of the world into three [or two, as is more the case nowadays].

Furthermore, Escobar mentions several measures that would make sense of how we think about the role of the state, national economic policy and development policy and that would help to counter act it.

New coalitions that draw on cultural-ecological considerations, rather than traditional geopolitical concerns, should be formed. They would be new in that they complicate the nation state and regional economies. The former Third World might be better off without states, creating new forms of protection and negotiation.

Secondly, Escobar mentions the necessity of selective delinking and re-engagement, and the down-stepping from too much market integration (Escobar, 2004, p. 226).

Finally, while social conditions could indicate thinking of the Third World as useful, new ways of thinking without using ‘pathologised idioms’ like ‘warlords’, or ‘the absolute poor’, need to be found. Peoples from the Third World are central to making the world a better place as they are the majority of the world. The logic coming out of these worlds needs to be understood in its own terms, not constructed by modernity (Escobar, 2004, p. 224ff).

2.3.3 Wolfgang Sachs’ Thoughts on ‘Development’

“In the light of development all peoples on the globe appear to move along one single road. The lead-runners show the way, they are at the forefront of social evolution, indicating a common destination even for countries with highly diverse trajectories in the past. Many different histories merge into one ‘master history’, many different time scales merge into one master time scale. The imagined time is linear, only allowing for progressing or regressing; and it is global, drawing all communities worldwide into its purview.” (Sachs, 2000, p. 4).

Wolfgang Sachs is a development theorist who, in distinction to Arturo Escobar, has an environmental background. His approach towards development critique is often via the ecological predicaments that go along with the Western model of ‘development’. This is precisely why his theories were chosen – to the author of this paper, the environmental predicament appears to be one of the strongest arguments against universalizing ‘development’ in the Western and modern sense and thus against any tool fostering it.

The Age of Development

According to Sachs, the word ‘underdeveloped’ was first used 20th January 1949 in a speech by Harry S. Truman. In his speech, he identified more than half the world’s people as living in ‘underdeveloped areas’ (Sachs, 2000, p. 4). ‘Underdevelopment’ served as one category for all non-industrialized countries (Sachs, 1993, p. 4). Similar to Escobar in this sense, Sachs calls this a new model of power which is anti-colonial imperialism (Sachs, 2000, p. 4).

The power vacuum opening up after colonial times were over and the Second World War had ended was filled by the US launching self-determination, free trade, democracy and international cooperation as core values of future order. The world was to be held together by economic dependence, not by political dominion; economic strength had taken the place of military power; the conquest of markets replaced the conquest of states. Economic development was thus the overarching goal, development was a conceptual vehicle for American dominance with a liberal face. It urged for national independence while expanding a new form of dominance. Development was proclaimed as the primary aspiration of countries after being free from colonial subordination. According to Sachs, even today, every effort and every sacrifice is worth it in order to reach this goal (Sachs, 2010d, p. xv).

The hegemonic needs of the North as well as the emancipatory needs of the South converged upon the prospect of development (Sachs, 2000, p. 8). However, the development conceptualization as growth remained blind to unequal power relations: Access to resources is determined by power and thus growth enabled the powerful at the cost of the powerless (Sachs, 2000, p. 14).

Similar to Escobar's notion of the development discourse consisting of a certain set of relations, according to Sachs it favors certain actors and certain actions, for instance technology transfer, while marginalizing others. It highlights certain solutions while others are forgotten (i.e. local knowledge). Development links knowledge to power. All of these factors have contributed to the development syndrome surviving until today (Sachs, 1993, p. 9).

According to Sachs (and to some extent Escobar as well), the idea of universal progress and a converging, universal history originated in the European enlightenment. Human dignity was universal. External or internal differences were irrelevant. As people moved along the path of progress getting rid of authority and superstition, opting for autonomy and reason, they strove for common progress. Men were disconnected from their past and bond of community. Neither social roots nor religious commitments mattered as history moved towards the universal rule of reason. Enlightenment envisioned savages as living outside civilization; they inhabited an infant stage of history being children and needing guidance by a father (Sachs, 2010c, p. 112ff).

Development as Identity

Similar to Escobar's envisioning of development's discursive power, Sachs sees development as a particular cast of mind, "a perception which models reality, [...] comforts societies and [...] unleashes passions" (Sachs, 2010d, p. xvi). Different aid packages like 'social development', 'rural development', 'basic needs approach' were tied, different strategies used, but the overall validity of development remained, even in drastically changed historical situations. This is what Sachs calls "The tragic greatness of development [which] consists in its monumental emptiness." (Sachs, 1993, p. 9).

The development idea was legitimization, particularly for emerging states. The perspective of catching up restored the humiliated former colonies' self-respect, it promised equal standing (Sachs, 2000, p. 8). Development has thus turned into a basis for identity. Political and

economic decolonization has occurred but not a decolonization of the mind. Instead, hopes for the future are fixed on the rich man's pattern of production and consumption (Sachs, 2010d, p. viiif). However, along with development, often also social polarization prevails: The old ways have been smashed, the new ways are not viable, which leads to a loss of identity in the course of development (Sachs, 2010d, p. xvii). The right to cultural self-identity has been compromised by accepting the development world-view. Thus, through development, living spaces and cultural traditions of, for instance, indigenous people are put under pressure (Sachs, 2010d, p. viiif). Development policy sought to replace traditional man by modern man. Since that has not happened, many people lived and continue to live in 'no-man's land' (Sachs, 2000, p. 15).

Development as Homogenization and Loss of Creativity

The development discourse is made up of a number of concepts which reinforce the occidental world-view (Sachs, 2010d, p. xix). Each development concept filters perception; it highlights certain aspects of reality while excluding others (Sachs, 2010d, p. xx).

The view of history as the royal road to progress, a never ending process of improvement upon which all people converge is central to development as the homogenization of the world. Development constructed history as a process of maturation, like a flower with inner laws leading to the final stage of blooming, a universal process; the peak was to be rationalization or liberation. Thus it is the task of planners and engineers of development to set out to remodel societies and accelerate maturation (Sachs, 2000, p. 5). World society has to be achieved by the improvement of the backward. As development spreads, indigenous people are to put aside their chronographies and join the perspective of progress (Sachs, 2000, p. 20). This one world thought calls for absorbing differences in the world into an ahistorical and delocalized universalism of European origin. Unity is thus realized through the Westernization of the world. Homogenization implies peace, diversity implies violence (Sachs, 2010c, p. 114).

Development implies chronopolitics (all people move along the same road, following those at the forefront of social evolution) and geopolitics (a diversity of nations turns into a ranking order with the GDP-rich countries at the top) (Sachs, 2010d, p. xf). It furthermore implies predominance. Through development, the diversity of countries appears in a clear ranking; it shapes the orientation of the powerful and the less powerful. Underdeveloped countries can

only be recognized as such by displaying others as examples of maturity. Assigning positions of leaders and followers is part of the developmentalists' construction of history (Sachs, 2000, p. 6).

Many cultures are linked to particular places with their own memories and cosmologies (localism), while development calls for universalism.

Places hence have special significances for peoples as they are imbued with experiences of the past and present, ancestors walked the earth and the web of social bonds is tied there. Language, habit and the particular style of being in the world are located there. Places are thus not just the intersection of a map but a concentration of meaningful human activity which gives it a distinct quality, a distinct aura. Such cultures are vulnerable to a concept which is not linked to any place, but rests instead on the concept of space (universalism). According to Escobar, Eurocentrism is ravaging place centred cultures and imposing on them space centred knowledge as it spreads science, state and market throughout the world (Sachs, 2010c, p. 120f). After the Second World War, space trained eyes identified numerous cultures as backward and deficient. The globe was a homogenous space, waiting to be organized by universally applicable programmes and technologies.

Science, state and market as based on a system of knowledge claimed validity everywhere and for everyone. It has no official origin and can thus penetrate everywhere. Since they are disembodied from any broader context of order and meaning, they are powerful in remodelling any social reality according to their specific logic. They can thus unsettle all kinds of different cultures (Sachs, 2010c, p. 120).

Development in Times of Globalization

Globalization can be understood as development without nation-states, as the formation of a global middle class alongside the spread of a transnational economic complex. It no longer resides within nation states but produces a transnational class of winners, half of which resides in the North, half in the South (Sachs, 2010d, p. viiif). Social groups are no longer specific to one nation but begin resembling one another more and more in behaviour and lifestyle.

Globalization tends to undercut social solidarity, nationally and internationally, since societies are less contained within nation states. Thus the reciprocal links between social classes which

constitute a policy becomes weaker (Sachs, 2000, p. 20). The elite's sense of responsibility for the disadvantaged lessens as they themselves feel insecure with respect to their global reference group. Those who cannot compete (the social majority) are a liability. Globalization thus removes barriers between nations and at the same time erects barriers within nations.

The transnational space more and more encompasses larger or smaller sections of a country instead of entire countries. Thus, the North-South division becomes to a certain degree obsolete. The dividing line runs between the global middle class and the excluded social majority, "the globalized rich and the localized poor" (Sachs, 2000, p. 21f); the North-South divide runs through each society (Sachs, 2000, p. 21f).

The Ecological Predicaments of Development

The reason that Europe was able to leap ahead of the rest of the world in the 19th century was its ability to overcome its limits by tapping into new resources. This model was available under exceptional conditions (resource availability) and thus can't be generalized to the world at large. It requires social exclusion by its very structure (such amounts of resources are not available to everyone because they are limited) and the conditions are no longer available (Sachs, 2010d, p. xi).

Environment arrived on the international agenda with the UN Conference on the Human Environment in Stockholm in June 1972. It was proposed by Sweden due to worries about pollution in the Baltic, for instance in the form of heavy metals in fish and birds, etc.

This conference was the precursor to a series of large UN conferences in the 1970s which altered the post-war perception of an open global space where nations may individually strive for maximizing economic growth. The world view of an interrelated world system with a number of common constraints, took hold (Sachs, 2010a, p. 26).

In environmental negotiations, the claims to greater economic space were bargained against environmental demands (Sachs, 2000, p. 12). This process began in 1987 when the Brundtland Report announced the marriage between the craving for development and the concern for the environment. From this marriage of environment and development the 'ecocratic' discourse emerged which aimed at new levels of intervention, administrative monitoring and control for the sake of the environment (Sachs, 2010a, p. 35).

The ailing concept of development thus gained new life. What has happened before is repeated:

“Every time in the last thirty years when the destructive effects of development were recognized, the concept [of development] was stretched in such a way as to include both injury and therapy.” (Sachs, 2010a, p. 28).

While development experts need to widen their attention, development remains what it always comes down to, even in the light of environment: Interventions for boosting the GNP/GDP (Sachs, 2010a, p. 28). An alliance of development enthusiasts in the South and growth fatalists in the North formed, highlighting the importance of growth and at the same time the hegemony of the Northern development model; “for development without hegemony is like a race without a direction” (Sachs, 1993, p. 7). Such an adherence to development and thus to northern hegemony led to a position of structural weakness which made the absurd situation possible of the North being the cause as well as the provider of solutions for the global ecological crisis.

But according to Sachs, it is the Northern model of development with its over use of the world’s resources which has changed the face of the earth (Sachs, 2010d, p. xvii). We consume in one year what it took the earth a million years to store up, whereas this consumption mainly takes place in the West (Sachs, 2010d, p. xvi). Five of six planets would be needed if everyone consumed like this region (Sachs, 2010d, p. xvii). Humanity consumes in one year what it took the earth a million years to store up, whereas this consumption mainly takes place in the West (Sachs, 2010d, p. xvi). Five or six planets would be needed if everyone consumed like the West (Sachs, 2010d, p. xvii). Hence, Sachs argues that Western countries can no longer be regarded as being on top of the social evolution scale, as this position is shattered by the ecological predicament. The entire direction the scale seems to be wrong (Sachs, 2010b, p. xii).

Environmental degradation arises from two contradictory settings: One of success and domination and the other of marginality and powerlessness. In the second instance, after the global plunder, poor people degrade their habitats after having lost their traditional rights to secure sufficient sources of livelihood. According to Sachs, both of these processes, the degradation by the affluent as well as the degradation by the poor can be considered the outcome of one and the same process of economic development (Sachs, 2000, p. 18).

Sustainable Development

In 1970s with the oil crisis it appeared for the first time that growth also depended on the long-term availability of natural resources. Development planners became worried about the

conservation of inputs for future growth (Sachs, 2010a, p. 26). With incorporating environment into development, the Brundtland report gave birth to ‘sustainable development’ as the conceptual roof for both violating and healing the environment. Due to the ‘discovery’ of biophysical limits, development underwent another round of conceptual inflation. It had to be reworked to allow for both infinite growth and preservation of nature. The Brundtland-Report defined sustainable development as follows: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”⁵

The concept highlighted social justice in time but missed social justice in space (Sachs, 2000, p. 12): Whose needs and what needs are supposed to be met? The needs for survival (for instance water) or the needs for luxury (for instance air travel)? The concept of sustainable development shifted the locus of sustainability from nature to development. Sustainability now referred to development instead of referring to renewable resources. It slid from conservation of nature to conservation of development. It asked the questions which services of nature are indispensable to development and which could be substituted. Nature became a variable (Sachs, 1993, p. 10).

Thus even those in favour of economic growth could argue in the name of sustainable development. The cure of environmental ills was to be found in an efficiency revolution: More should be achieved with less. Thus, sustainable development once more reaffirmed the Northern model of development in the first place (Sachs, 1993, p. 26).

Breaking the One-Way Development

According to Sachs, the development age is gone, but the core agenda as it should be is still unfinished: Justice as redistribution of opportunities and recognition of otherness has not made much progress. Development also faces new constraints with the arising of biophysical limits: justice can no longer be associated or achieved with growth. The question of justice needs to be decoupled from the pursuit of development (Sachs, 2000, p. 25). Ecology and poverty both call for limits of development. Peace with nature requires peace in economic warfare (Sachs, 1993, p. 7).

⁵ (Brundtland, 1987. Our Common Future: Report of the World Commission on Environment and Development. Chapter 2: Towards Sustainable Development).

According to Sachs, Western hegemony leaves its imprint not only on economy and ecology, but on minds as well. In order to decolonize minds, it is vital to break with ‘development’ as a habit of thought. The development discourse is an outcome of the post-war era, of a fossil-fuel based economy, colonial perceptions and the legacy of Western rationalism. These discourse elements are present in the development concepts as well:

“[...]Poverty includes a materialistic prejudice, equality [includes] sameness, and standard of living reduces the diversity of happiness, needs [includes] dependency [...]” (Sachs, 2010d, p. xiif)..

A reconceptualization is vital. Thus, for instance, it will not be possible to reconceptualize equity without recovering the diversity of prosperity. Equity needs to be delinked from economic growth and relinked to community- and culture-based notions of well-being. Also, a search for less material notions of prosperity that make room for dimensions of self-reliance, community, art and spirituality are needed (Sachs, 2010d, p. xiif).

Since Columbus, the consequences of exploitation have been borne by others. This is changing now as Northern countries have to face the consequences of worldwide colonization, for instance environmental destruction (Sachs, 1993, p. 20). Nowadays, a global form of ecology can be understood in two ways: Either as a technocratic effort in favour of development, which results in the management of biophysical limits to growth or as a cultural effort to shake of the hegemony of Western values and retire from the development race. This implies designing cultural and political limits to development and finding indigenous models of prosperity (Sachs, 1993, p. 11f).

After having given an overview of Post Development Theory and its approach to ‘development’ in this section, the following chapter returns to looking at development indices: It assesses general demands an index faces as well as challenges due to political significance and potential for arbitrariness. Chapter 4 will then combine the topic of development indices with Post Development Theory, assessing them in the light of this particular theoretical approach.

3. Development Indicators – An Overview over Requirements and Challenges

According to Stiglitz et al, statistics are an important part of information systems, a frame through which we perceive the world (Stiglitz, Sen, & Fitoussi, 2010, p. xxi).

Development, as shown in section 2.2, has numerous definitions and facets – and consequently, numerous development indices exist, using different indicators and falling back on different data. All of them face, however, similar requirements and challenges.

This section aims at providing a non-exhaustive overview of the demands and challenges that are common to development indices in general, before critically analysing three development indices in depth in the next chapter.

3.1 *Requirements for a Development Indicator*

For the purpose of the paper, the author has chosen a number of criteria that an index or indicator must fulfil to qualify as a development indicator, since I have found it impossible to find a comprehensive definition of a development index in contemporary literature. I have developed the definition according to my observation and research about different development indices and indicators. I have come to the conclusion that the criteria mentioned below are the main characteristics that define development indices.

In order to qualify as a development index, an index must at least include one factor focussing directly on the physical, mental, social or economic condition of humans (for example life expectancy). It must furthermore have been officially claimed as measuring development in countries by an international, bilateral or non-governmental organisation or foundation dealing explicitly with development and/or claiming for the index to measure development or to measure an important part of development.

In order to be more than a development *indicator*, a development *index* must combine at least two different factors (often themselves indices or indicators) via a calculation and provide a ranking of outcomes in numerical order generating an ordinal scale.

Development indices, relying on statistics seem to have a difficult task – they need to measure something inherently complex but are themselves inherently simple and need to remain so. This difficulty is further explored in this chapter

According to Goossens et al (p. 7), there are three main ways of combining indicators/indices to form a global picture: using a single composite measure, consisting of various indicators; using a framework accounting approach; or using an approach where many disaggregate indicators are taken into account.

According to Klingebiel, indicators appeared and began to be used in the 1970s in the hope of providing a basis for planning and control by the state. The interest in development indicators has risen in the 1990s because the donor countries aimed at rationalizing development cooperation after the Cold War had ended and for this, transparent criteria were needed. Further reasons were the Structural Adjustment Programmes (SAP) implemented by IMF and World Bank: Tools were searched for to measure the social consequences of these programmes (Klingebiel, 1992, p. 4f).

Goossens et al state that the conditions an indicator needs to fulfil depend on the situation it is to be used for. They call this “fitness for purpose” (Goossens et al., 2007, p. 6)⁶. Stiglitz adds to this that in general the applicability of a metric may vary depending on different purposes (Stiglitz, et al., 2010, p. xxiv). Thus, one index or indicator may not be able to grasp all necessary aspects of a matter.

According to Klingebiel who analysed the then recently developed Human Development Index in 1992, indicators in general are a methodological approach that attempt to assess the complexity of an object of investigation.

An indicator (of which an index is usually made up) should fulfil the following tasks:

- It should indicate something which otherwise is not observable and enable a quantification.
- It should serve as an instrument to make an actual situation measurable (Klingebiel, 1992, p. 3).
- It is not a replacement, but an instrument of research (McGranahan, Pizarro, & Richard, 1985, p. 220).

However, Klingebiel also points out that not everything is quantifiable. Many objects of investigation like political systems and human rights are highly complex. According to him, it is beyond dispute that an index cannot be sufficient for a detailed analysis as the complex development challenges can’t be grasped via a pre-determined grid (Klingebiel, 1992, p. 24). However, this has been challenged by recent developments in measuring empowerment by combining qualitative and quantitative methods (Chambers, 2010, p. 9f).

⁶The study conducted by Goossens et al refers to sustainability indicators, not to development indicators. Yet, their insights as to the quality of indices and indicators may apply to development indices and indicators as well.

Stiglitz et al point out that there is no single indicator that can capture something as complex as our society. Using a set of numbers too small for that purpose might be misleading. However, through disaggregate indicators, certain factors might be highlighted (for instance inequality) which might or even must be forgotten in aggregate indices (Stiglitz, et al., 2010, p. xxv).

In development research and among decision makers, there appears to be a considerable need for orientation in the form of indicators. They are to serve as tools to measure the success of a development strategy, to compare different countries and to point out to deficits in certain areas (Klingebiel, 1992, p. 24). Thus, results of an indicator or index should be simple, sending out clear messages. They can be presented in the form of rankings, monetary units or a score (“good” or “bad”). However, an important pre-condition for indicators being usable is their comparability, internationally and regionally. As there is no international standard on data gathering methodology, this may pose a problem when data is gathered according to different models, data availability and when thresholds differ as well (Goossens, et al., 2007, p. 7).

Thus, for example the UNDP states in its Human Development Report in 2003:

“The concepts and criteria used to define poverty lines also differ across countries, making national poverty lines problematic when the analytical purpose is to make international poverty comparisons” (UNDP, 2003a, p. 42).

Marks et al add to this that any index can only be as good as the quality of its data. According to them, all indices and indicators, even those used by international institutions and decision makers have their shortcomings in this respect (Marks, et al., 2006, p. 3).

An index which is made up of several indicators (a composite index) is usually more complex and has more claims imbedded in it. Its weaknesses tend to grow the more dimensions it tries to incorporate, therefore and in order to remain meaningful, an index should describe one clearly defined dimension of the development process. An increase in dimensions (for instance a combination of political and cultural dimensions) may add to coming closer to the complex notion of development but may at the same time lead to a loss in contour and validity (Klingebiel, 1992, p. 25). Stiglitz et al add to this that composite indicators may be better regarded as invitations to take a closer look at its various components. They also emphasize that a general and important criticism regarding composite indices is their arbitrary character due to the different ways of weighting their various components. For an aggregation always means putting relative weights on its factors (Stiglitz, et al., 2010, p. 103f).

A fairly comprehensive list of requirements to a development indicator or index is given in the Caracas Report issued in 1989 (see Table 1 below), which also comments and provides an overview of a number of alternative development indicators that had already been issued back then (see for instance Henderson & Mailman, 1994, pp. 17-50).

Some points in the below given table are difficult to combine or even implement, such as ‘holistic’ (that would probably mean aggregation of many factors) and ‘simple’. Yet, it provides interesting insights into the many demands to a development index and the general dilemma between completeness and simplicity it faces.

Table 1: Prerequisites an Index Must Satisfy

Requisites that an Ideal Index Must Satisfy	
An Index must be:	
Simple	The index should be easy to interpret and its compilation and handling should not require a very sophisticated statistical base or methodology.
Dynamic	The index should be flexible so it can reflect changing social realities and new statistical possibilities.
Sensitive	The index must be capable of rapidly detecting social changes. Given the need to define priorities in the formulation of the Index, initially indicators that are sensitive enough to be able to evaluate changes in social conditions in the short and medium term should be selected.
Holistic	The indicators chosen must be harmoniously interrelated to strengthen and complement one another.
Reliable [also <i>valid</i> , addition by author]	The index must have a serious, adequate statistical base and count on autonomous professional handling and monitoring, free from any circumstantial distortion or manipulation.
Capable of combining globality with specificity	The set of general indicators selected must allow for the subsequent use of specific indicators adapted to specific situations such as differing geographical areas within a country.
Participatory and promoter of self-reliance in the population	That is to say, it should enable the population to participate in its validation or modification and encourage the population’s capacity for self-reliance versus its dependence on external factors.

Source: (Pérez, 1994, p. 92).

The list mentions the criteria “simplicity” on top of the list which points to one of the main challenges a development index faces: How to measure something complicated and remain easily comprehensible and understandable. This often goes along with a simplification of complex matters, hiding local and regional trends and thus giving a distorted picture of reality (Goossens, et al., 2007, p. 7).

Goossens et al highlight another point of importance for indicators and indices: The way they are being communicated and presented, using graphs, dashboards and world maps. An index’s influence depends on its quality as well as its understandability (Goossens, et al., 2007, p. 7).

To provide an example of ‘fitness of purpose’ mentioned by Goossens et al, Stammel assessed how the standard measurement GDP/capita was able to capture wealth in traditional communities in Western Samoa. His result was that this type of measurement was unfit to measure notions of prosperity in indigenous communities due to different notions of wealth and many activities being conducted outside the market (Stammel, 1996, p. 12) (for a more in-depth analysis of GDP per Capita as development indicator see section 4.1).

Already in 1992, Klingebiel pointed out that while indicators and indices gained increasing importance for development cooperation several dangers were associated with this kind of indicator fixation. Thus he mentioned the problem of strong faith in the objectivity of data and belief in statistics in general which would need to be considered carefully when handling and using indicators and indices in development cooperation (Klingebiel, 1992, p. 32). While these points are further discussed in chapter 4, when assessing three indices in depth, the next section discusses the political dimension of development indices, which may also be increasingly important due to this mentioned faith in data objectivity.

3.2 Development Indices’ Significance for Policy Making

As much as the concept of ‘development’ may influence policies by shaping the particular development discourse as seen in section 2.3, indicators may do something similar through enforcing, justifying or challenging a particular notion of development.

Indicator outcomes, particularly for the HDI get considerable attention from media and governments, with governments watching out for their position (Mehrotra, 2010, p. 1), or receiving aid flows due to their ‘development status’ (Wolff, et al., 2011, p. 862). Outcomes may also serve as justification for governments’ achievements (or presented as such by the media), in both the case of the HDI (Wolff et al 2011, p. 843f) and the HPI (Seager, 2009; Winterman, 2006) (for a more in-depth analysis of the HDI and its impact see Chapter 4.2. For the HPI see Chapter 4.3).

Three major ways for an indicator or an index to be used in political processes can be listed: “Backward looking”, which implies evaluating what does and does not work; “forward looking”, implying putting emphasis on new policy proposals as well as doing ex ante

assessments; and finally “practical politics”, providing a common language in debate, consistency in policy package and accountability (Canoy, 2007, p. 3). Thus, it could be said that policies use indices for being accountable and less arbitrary.

However, the construction of any index entails selecting certain indicators while leaving others out. Such a selection allows for manipulation or at least arbitrariness. Hence, according to Klingebiel, an indicator provides and shows more than mere facts. By choosing one over the other (and there are many to choose from as shown in section 2.2), a certain view of development is displayed. If GDP per Capita is chosen over the HDI in national or international statistics to present a country’s progress, the view of development is probably more economic than social (Klingebiel, 1992, p. 4):

“Ein Indikator steht explizit oder implizit in einem theoretischen Zusammenhang. Wird der Entwicklungsstand eines Landes beispielsweise ausschließlich mit dem Indikator Bruttosozialprodukt pro Kopf gemessen, so ist dieses Vorgehen wiederum ein Indiz dafür, dass der Entwicklungsbegriff vorrangig ökonomistisch definiert wird. Bei der Diskussion um geeignete Indikatoren handelt es sich deshalb nicht allein um Datenfragen und statistische Probleme. Vielmehr spiegeln sich in ihr oftmals die zentralen Themen der gesamten entwicklungspolitischen Debatte wider.” (Klingebiel, 1992, p. 4).

[An indicator has theoretical implications and connections. If the state of development of a country is measured only through GNP, this is evidence that the notion of development there is defined mainly in economic terms. Discussing appropriate indicators thus does not merely concern questions of data and statistical problems. Rather, central themes of the entire debate around development politics are mirrored in it.]⁷

Similarly, Klingebiel claims that the significance of indicator research has risen since for some donors they serve as orientation for decision making such as aid allocation. Indicators thus are not purely academic but have political relevance. Indeed, the notion of development they display as well as their results are often explosive and may lead to fierce discussion in UN panels (Klingebiel, 1992, p. 6).

Klingebiel highlights this political sphere of a development index via the discussion around the then recently established HDI: Many countries from the Third World feared that the HDI would become a new criterion for allocation of development cooperation. This led to the discussion around the HDI and HDR centring mainly on their political function and implication. Thus, particularly Latin American countries which tended to have higher positions within the ranking, worried to be of less priority for development aid (today development cooperation) (Klingebiel, 1992, p. 14).

⁷ The translation was done by the author of this paper.

Today, the Paris Declaration on Aid Effectiveness (hereafter PD), having come into effect in 2005, may have contributed to the significance of indices measuring development to provide tangible 'evidence' for development success. The PD attempts to set international targets where the effectiveness and coordination of aid is concerned (Blunt, Turner, & Hertz, 2011, p. 178) and envisions development primarily as economic development (Monye, Ansah, & Orakwue, 2010, p. 754). It was launched, among others, as a consequence of perceived past aid ineffectiveness (Hyden, 2008, p. 160). Furthermore, it may have been intended so the debate on aid effectiveness could be resolved (if it succeeded and made aid more effective). A further reason was its potential contribution to reaching the MDGs, combating perceived bottlenecks in aid management (Monye et al, 2010, p. 749f).

The PD commits donors as well as partners to harmonisation (support is based on the partner countries' development strategies, aid efforts are coordinated), alignment, increasing national ownership (partner countries take leadership where development strategies, funds and policies are concerned), increasing accountability and overall improved aid management (Blunt et al, 2011, p. 179).

However, the document also states that it is not to interfere with individual targets of countries and that each commitment needs to be seen in the light of the specific country's situation. Hence, while there is a call for more standardisation and harmonisation on the one hand, on the other hand, there is room for choice and individual interpretation according to different situations. The PD may consequently be considered to be internally inconsistent, asking for more stringent aid coordination, while being vague enough to allow for *laissez-faire* and the most comfortable interpretation (Blunt et al, 2011, p. 179).

In Indonesia and Cambodia for instance, both those development organizations and donor countries that were in favour of using existing government structures and pooling aid as well as those favouring traditional bilateral agreements used the PD as justification for their approach.

Donor countries wish to be seen as complying with the PD, while being able to pursue old ways of doing aid, insisting on their own targets and measuring ways. Such permissiveness is likely to maintain the status quo (Blunt et al, 2011, p. 180f).

Such permissiveness may be conducive to strengthening the common development discourse where

“[E]ven the catastrophic possibilities associated with climate change may not be enough to beach the defences of paradigms of conventional development discourse and entrenched economic and financial self-interest” (Blunt et al, 2011, p. 184).

There are however also voices claiming that the PD has a positive purpose in that it contributes to development progress and really makes aid more effective (Armon, 2007, p. 653).

In the light of an emerging importance and recognition of the PD (Hyden, 2008, 259; Armon, 2007, p. 653), the role of indices may become increasingly important: On the one hand, not adhering to the PD may be possible not only through its own inconsistencies, but also since indices may justify development efforts. On the other hand, donor countries and development agencies may be losing influence if adhering to the PD: Increasing ownership of national governments means increasing allocation of funds directly to them and thus decreasing control (Blunt et al, 2011, 173 & 180ff), and moving upwards in spheres of more policy and less direct project management. Pressuring receiving governments is also more difficult due to new competitors such as China (which is particularly active in the African continent), often offering [officially] non-conditional development aid (Hyden, 2008, p. 260). This consequently means that a justification for aid distribution may be even more important. Such a justification may be possible through the use of development indices, as mentioned in the beginning of this section (see p. 37).

Furthermore, the PD requires better aid management, focussing on outcomes and set objectives as well as mutual accountability (Blunt et al, 2011, p. 179). Whether or not such objectives are met and accountability is given needs to be assessed. Some partner countries are required to establish assessment frameworks and donor countries are to rely mainly on such frameworks (Monye et al, 2010, p. 765), on indicators agreed to by all parties involved and on *post-hoc* evaluation applied by them (Armon, 2007, p. 653, Hyden, 2008, p. 268). Also, development indices may be necessary to establish whether or not to work with such a government in the first place and whether to continue to do so. Such a decision may depend on previous results and the focus on them may require “the setting up of independent monitoring groups with clear measurable performance indicators.” (Monye et al, 2010, p. 766). This is especially the case, as donor countries may be expected, under the PD, to make more long term commitments (Hyden, 2008, p. 268).

Consequently, good governance gains in importance (Armon, 2007, p. 653). This is particularly the case for institutions with a high disbursement volume such as the EU or the World Bank but also in general since there is an intention by the OECD to increase development aid (Hyden, 2008, p. 270).

This may be one reason why the HDR 2010, for instance, is so careful to elaborate extensively on the importance of good governance (UNDP, 2010c, p. 5f) (see section 4.2.2 for further information on this issue).

At the same time, the PD lacks concreteness in terms of precise methods and drivers (Armon, 2007, p. 264) and consequently may require ‘assistance’. Indices may possibly provide such assistance, indicating what does and does not work. As Klingebiel and Wolff et al mentioned (see p. 37-38), indices may thus increasingly become a tool for aid allocation and gain more and more political relevance.

Of course, such relevance may still not ensure that development aid is specific to the local context (Monye et al, 2010, p. 769) or whether a country is truly progressing in the chosen indices’ dimensions. This is the case since first of all, common indices such as GDP per capita or the HDI are usually not sensitive enough to capture this; secondly indices may be used to measure progress that is ‘necessary’, for instance Tanzania is a grateful aid recipient due to its reputation of relative stability, despite only mediocre performance where poverty reduction or governance is concerned (Hyden, 2008, p. 271). And finally because indices may have data shortcomings where progress reported by them may be due to data improvements/limitations instead of actual improvements (this issue is further elaborated chapter 4, in particular in 4.2. on the HDI).

After having highlighted the political dimension of development indices, the following chapter focuses on three indices in particular. It highlights strengths and weakness of each one in general through a literature review of current criticisms which apply to them, as well as in the light of Post Development Theory in particular, assessing their validity and necessity for measuring development/progress.

4. Case Study Analysis: An In-Depth Evaluation of Three Development Indicators and Indices

4.1 *Economic Growth and GDP per Capita as Development Indicators*

“In an increasingly performance-oriented society, metrics matter. What we measure affects what we do. If we have the wrong metrics, we will strive for the wrong things. In the quest to increase GDP we may end up with a society in which citizens are worse off” (Stiglitz, et al., 2010, p. xvii).

4.1.1 Description, Definition and History of GDP per Capita and Economic Growth

Composition and Importance Gross Domestic Product

According to Stiglitz et al, Gross Domestic Product (hereafter GDP) is the most widely used measure of economic activity. It was intended as measure of market activity and production (Stiglitz, et al., 2010, p. 23). It is an indicator of economic situation and economic growth, albeit not designed as a general measure of welfare (Krämer, 2009, p. 1).

According to the United Nations System of National Accounts (hereafter SNA), “GDP is the total unduplicated output of economic goods and services produced within a country as measured in monetary terms.” (United Nations Statistical Division, 2010).

Goossens et al explain the three word ‘gross’, ‘domestic’, and ‘product’ in the following way: Gross refers to the fact that depreciation of the value of capital used in the production of goods and services is not deducted from the total value of GDP; domestic since the measure only relates to activities within a domestic economy regardless of ownership. If it refers to nation trade balances, the GDP becomes the Gross National Product (GNP); and finally product which refers to the goods and services, meaning the economy’s output being produced. GDP derives its value from the quantity and the quality (via prices) of products. If either increases, GDP will rise (Goossens, et al., 2007, p. 10).

The Gross Domestic Product is hence composed of all goods and services which are produced within a given country. It differs from a range of other measures to define a country’s economic progress: The real Domestic Product measures the changes in production results at constant prices, thus attempting to make a statement on how a society’s living standards are evolving in real terms via controlling for inflation. Nominal Domestic Product on the other hand measures them in prices of the given period (Stiglitz, et al., 2010, p. 23f).

In order to measure GDP, it has to be determined which types of goods and services do and which do not count towards it in order to avoid double counting: Final goods are distinguished from intermediate goods. As the latter are necessary for the production of final goods, they are not counted towards domestic product (Goossens, et al., 2007). In order to determine which products qualify as such, a production boundary has to be determined, which is not always without ambiguity. All products which are beyond this limit can then be counted as final products. GDP thus measures all final goods, whether consumed by households, firms or the government (Stiglitz, et al., 2010, p. 23).

Furthermore, productive activities are distinguished from non-productive ones: An exchange in goods and services, accompanied by capital flow is regarded as productive activity as they influence growth and stability of domestic product. Redistribution of already produced goods on the other hand is regarded as non-productive (Stammel, 1996, p. 29).

GDP may be calculated via three different methods: The effective demand side which looks at consumption and investment, the production side which measure the added value of each sector of the economy and the income side which looks at the capital, state and labour income (Goossens, et al., 2007, p. 11).

The standard method of national accounts/GDP is calculated according to the SNA. The common currency is the US Dollar, other currencies are converted accordingly. National accounts were originally used for gathering information concerning problems of employment and economic policy (United Nations Statistical Division, 2011). For real purchasing power (hereafter PPP), the International Comparison Programme by the World Bank has to be consulted (The World Bank, 2011b).

Increase in GDP continues to be a primary aim of economic policy, since an elevation of living standard and well-being is assumed with its augmentation (Krämer, 2009, p. 1). GDP is at the heart of defining progress in the Western world and a key indicator for government decisions in many nations. The logic behind this is that if GDP per capita is rising, this implies that economic activity increases and thus that people are spending money, improving their quality of life (Marks, et al., 2006, p. 9).

History of GDP and Economic Growth

According to Stammel, before 1879 economic growth was unimportant. Instead, the economy of a nation was dependent on the relation of humans to land (Stammel, 1996, p. 6). Finiteness of natural resources was not a question of concern. Alfred Marshall discovered in the beginning of the 20th century that valuation by individual consumers for the goods being produced needed to be taken into account in order to measure production (Goossens, et al., 2007, p. 11).

It was only after the WW II that economic development was associated with economic growth. First official estimates of GDP and GNI were made between the two world wars (Stiglitz, et al., 2010, p. xxiv). GDP was intended to provide a measure of the level of market-based economic activity, which by its very nature excluded home production. The work was pioneered by John Maynard Keynes, Simon Kuznets and Richard Stone, with Keynes theories of the government's active role in the economy making national accounting tools necessary. It was his work which, due to its emphasis on consumption, shaped the notion of citizens not as farmers or workers but as consumers. Simon Kuznets and Richard Stone received the Nobel Prize also for contributing to creating such instruments: The system of national income accounts (Stiglitz, et al., 2010, p. xxiv & 23). Western industrial nations agreed about the later called System of National Accounts becoming the standard in the light of a lack of alternatives (Stammel, 1996, p. 19). Economists, being rarely even quoted before the Second World War, rose to become one of the most important political authorities.

Today, although being a mere measure of market activity, GDP per capita is regarded as a measure of societal progress and well-being (Stiglitz, et al., 2010, p. xxv).

In order to enhance comparability between nations, the National Comparison Project (ICP), today administered by the World Bank came into being, using purchasing power parities. The ICP method made use of an internationally compatible basket of commodities; GDP was now called ICP-GDP (today also GDP PPP) (Stammel, 1996, p. 25; The World Bank, 2011b). The difference between nominal GDP per capita and real purchasing power is much larger the poorer a given country is, thus applying PPP means that the income gap between rich and poor nations usually becomes smaller (Goossens, et al., 2007, p. 14). The gap between rich and poor nations was thus not as big anymore. However, conceptual problems concerning the calculation of GDP remain: Thus for instance it is difficult to compare countries with fundamentally different consumption behaviour: baskets of commodities vary across the

world as for instance poor people may spend more on food and rich on entertainment, making comparisons again difficult (Stammel, 1996, p. 26; Stiglitz, et al., 2010, p. 48). For a ranking of top and bottom five nations comparing GDP and GDP PPP, see Table 2 and 3 below. There are differences among the rankings, but some similarities remain: There is an overlap of 2 countries among the top 5 and an overlap of 3 among the bottom 5 countries.

Table 2 & 3: GDP per Capita (nom.) & GDP per capita (PPP)

Top & Bottom 5 countries according to GDP/Capita in \$US	GDP/ Capita in \$US
Monaco	186,175
Liechtenstein	134,392
Luxembourg	108,706
Bermuda	101,346
Norway	78,674
...	...
Malawi	278
Somalia	220
Liberia	216
Democratic Republic of the Congo	170
Burundi	151

Table 2: GDP per Capita in \$US, 2009. Source: (United Nations Statistics Division, 2011).

Top & Bottom 5 countries according to GDP/Capita in \$US PPP	GDP/Capita in \$US PPP
Luxemburg	83,978
United Arab Emirates	57,821
Norway	55,672
Singapore	50,701
Brunei Darussalam	48,995
...	...
Niger	676
Eritrea	624
Liberia	396
Burundi	393
Democratic Republic of Congo	320

Table 3: GDP per Capita in \$US according to Purchasing Power Parities, 2009. Source: (The World Bank, 2010).

4.1.2 Evaluating GDP per Capita and Economic Growth as Development Indicator

With GDP per Capita, the distinction between validity and necessity of data, indicators and the index in total is not as easy, as this is in fact more an indicator than an index. Also, the data feeds directly into the criticism of the indicator in total. Thus, this section is organized according to different types of criticism (for instance, reasons for and against using it as a development indicator) instead of according to data and indicators.

Evaluating GDP per Capita according to Data

Shortcomings

GDP per capita has a number of conceptual difficulties, one being the *production limit*: Services provided by the government for instance are usually not included in GDP, but account for about 30% of all services in France and Sweden but only 20% in the US (which may imply that simply by this measure, the US inherently has a higher GDP) (Stiglitz, et al., 2010, p. 27). Thus, economic activity of governments is not properly accounted for (Krämer,

2009, p. 2). Furthermore, the potentially different interpretation of where the production boundary is to be drawn makes international comparison difficult (Stammel, 1996, p. f). The production boundary additionally causes the exclusion of certain types of goods and services: Thus GDP per Capita as it is calculated currently rewards exchange values compared to utility value. Luxury goods enhance GDP while needs for the masses tend to do so less and consequently are more likely to be ignored. Nuscheler gives the example of luxury clinics in developing nations when basic health centres would be needed on a large scale (Nuscheler, 2006, p. 188f).

Another important issue with GDP is the systematic *non-observance of subsistence, informal, voluntary and home based activity*, in sum, every activity that does not occur via the formal market (Krämer, 2009, p. 2; Stiglitz, et al., 2010, p. xxv). Wherever a high share of self-supporters (that is, people who live in a subsistence economy) exists, GDP per Capita can at best be a rough estimation. The same is true for economies where the informal sector plays an important role. This is problematic since according to Nuscheler, the informal sector ensures survival of more people than the formal sector (Nuscheler, 2006, p. 187).

In Western Samoa, for instance, an appraisal via capital flow is generally problematic as not the entire production reaches an external market. Many parts do not reach an exporter as they are sold in small weekly markets.

Particularly where subsistence economy and luxury goods are concerned, such issues with GDP are, according to Stammel, greater in developing than in industrial nations (Stammel, 1996, p. 39).

In conclusion, all goods and services that have no monetary price attached to them, as well as all informal activity are not captured by GDP and may be undervalued by a society using it as a measure of well-being (Stiglitz, et al., 2010, p. 24). This is also problematic the other way around: Service people used to receive from family are now purchased on the market, adding to GDP, when living-standard has not necessarily been improved (Stiglitz, et al., 2010, p. 49).

Stammel illustrates some of these problems by means of formal and informal gift exchange in Western Samoa: Gift exchange is not accounted for in GDP but is an integral part of the indigenous status system in Samoa. The exchange of gifts is a vital investment in kinsman relationships and prestige (Stammel, 1996, p. 73). Stammel makes a similar case for transfer payments paid by migrant workers to their family and friends. According to him, these are

advance payments and investments for an unknown future: The presentee is in one's debt (Stammel, 1996, p. 73).

Next to certain goods and services being excluded from GDP, another difficulty is the correct *assessment of products' quality*. Some products are difficult to assess in monetary terms as their quality level is too complex, like education or health products and services. Measuring quality is thus a great challenge, but important for well-being. According to Stiglitz et al, underestimating quality is like overestimating inflation. Hence, Measuring GDP per Capita may take away attention from other, possibly more crucial aspects of development (Stiglitz, et al., 2010, p. 24f)⁸.

Merits

According to Stiglitz, monetary valuation of goods and services makes it *easy to add up quantities of different natures*. This is one reason for GDP per capita having gained such importance (Stiglitz, et al., 2010, p. 23). Stammel adds to this that economic wealth is that part of wealth which remains measurable, with money being the measuring unit (Stammel, 1996, p. 19f). The reason for the dominance of GDP per Capita is thus according to Stammel that it is the measure with the lesser evil: Monetary values are measurable and generally accepted (Stammel, 1996, p. 37). Furthermore, according to economic theory, prices are always to be seen in relation to other prices – and are thus an expression of the valuation of a given good or service. GDP is thus an attempt of a way to measure appreciation. However, a lack in transparency and comparability, added to a high complexity of many products (for instance in the finance sector) make such a reflection difficult (Stiglitz, et al., 2010, p. 23 & 25).

Klingebiel too gives the conviction of the *lack of a real alternative* to GDP per Capita as reason that it is still in use. He lists two major rationales for not replacing it: Indicator research does not aim at replacing it but instead looks for methods and concepts to measure further concrete circumstances like health, nutrition and education. However, the lack of data is often problematic. The second reason is the deficits where a theoretical and methodical consensus in other potential areas of indicator research are concerned, for instance indicators concerning the environment, subjective wellbeing, culture, and aggregated indices that attempt to measure complicated circumstances or development as a whole. Here, often neither

⁸ Stiglitz et al state that in the 1990s an underestimation of quality had led to an overestimation of inflation by 0.6% in the US, leading to several changes to the U.S. consumer price index (Stiglitz, et al., 2010, p. 24f).

a clear conceptual dimension nor the necessary quality and availability of data is given (Klingebiel, 1992, p. 6ff).

According to Stammel, alternatives cannot compete with the systematic, exchangeable and inwardly consistent characteristics of the national accounts calculation. It also alleviates the study of single factors and sectors and their influence upon the entire economy (Stammel, 1996, p. 19ff).

According to Stiglitz et al the success of GDP lies in its attraction as a *single headline figure allowing comparisons* of socioeconomic performance over time and between countries (Stiglitz, et al., 2010, p. 102). Therefore, in the economy, GDP per Capita still serves as an important benchmark. The same is true for the political sphere, the main reason being that circumstances which are not precisely measurable do not hold the promise of clear successes. They cannot be used to show progress (Stammel, 1996, p. 29). Hence, political leaders continue to be often graded according to economic success (Stiglitz, et al., 2010, p. xx).

Evaluating GDP per Capita according to Content

GDP per capita *excludes* ‘external costs’: A price someone pays for a given good may exclude costs to society and environment at large. Hence all costs not reflected in market terms are disregarded by GDP per capita (Stiglitz, et al., 2010, p. 24). An increase in crime for instance may entail an increase in GDP, for example via increased costs of police and other security measures – however, social costs have risen at the same time (Stammel, 1996, p. 28). The same may be true for the effects of natural disasters like hurricanes (Marks, et al., 2006, p. 9).

Negative aspects of economic growth like environmental degradation (or environmental costs) are not accounted for: With rising production, environmental degradation is rising as well; however, it is not deducted from production, instead consumption of resources is added to the GDP (Nuscheler, 2006, p. 146). Thus for instance driving by car will add more to the GDP than driving by bike. Environmental protection measures on the other hand may decrease GDP: Money used for investment in such measures is not available for other outputs any longer and thus GDP is lowered (Stammel, 1996, p. 28).

Thus GDP per capita suggests there is a trade-off between economic growth and the environment. However, Stiglitz et al wonder whether with a comprehensive measure of well-

being this would be seen as a false choice as an improvement in environment may increase well-being even though GDP per capita goes down (Stiglitz, et al., 2010, p. xx).

However, the UN Committee of Experts on Environmental-Economic Accounting is attempting to mainstream System of Environmental Economic Accounting (SEEA) and to elevate it to an international statistical standard by 2010 and to advance its implementation in countries (Stiglitz, et al., 2010, p. 106). So far however, ecological and social consequences of economic activity are not properly accounted for in GDP (Krämer, 2009, p. 2).

GDP hides income inequalities: It measures average income but gives no indication of the distribution of available resources for instance between urban and rural areas, between sexes and between social strata (Stiglitz, et al., 2010, p. 44). This is particularly relevant for developing nations: Nuscheler claims that in most developing nations, two thirds of people have less than the official GDP per Capita (Nuscheler, 2006, p. 146). There may be an increasing inequality in most countries in the world, a trend which is not captured by GDP (Stiglitz, et al., 2010, p. xxi).

Nuscheler claims that measuring monetary income and consumption ability *disregards the circumstances of the poor*, as poverty has much to do with legal discrimination and a lack in political participation.

Also, using GDP per Capita as a development measure *constricts the perception of development*, as societal and cultural diversity are not accounted for. Furthermore, an increase in quality of life and self-determination may not necessarily be correlated with an increase in GDP per Capita (Krämer, 2009, p. 1). Using GDP per Capita as a welfare measure may lead to confusing means with ends: The end is to increase wellbeing, not to enhance economic growth. As Stiglitz et al (2010, p. xxii) put it, “Our economy is supposed to increase well-being. It [too] is not an end in itself.” While a relationship does exist, it ceases to do so at a surprisingly low level of average income (Abdallah et al 2006: 9) (for further elaboration regarding this point see section 4.3.2).

Comparison of GDP per Capita produces a ranking of nations and highlights gaps between them. It encourages an economic catch-up race and thus consolidates the definition of development as economic development. Economic development appears to be so all-encompassing that even non-economic factors seem to be affected by it (Stiglitz, et al., 2010,

p. xxiv). Development may have different meanings in different countries, yet industrial nations are taken as the model. But it may be that their archetype is not as desirable and a repetition of their path impossible. The aim of development should be according to national preferences, not according to GDP per capita and thus according to a measure which is imposed from outside as the case may be (Stammel, 1996, p. 39).

Criticism concerning GDP per Capita increases from many parts, especially civil society. Questions are raised whether the assumptions made in the past are still appropriate in the present. The threat of global warming in particular contributed to this criticism (Stiglitz, et al., 2010, p. xxiii). Already in 1954, a UN expert group recommended the use of other indicators from the areas health, education, employment and living. Almost all institutions recognized the major points of criticism regarding GDP which are given above (Nuscheler, 2006, p. 146). However, according to Stammel, international competition as well as belief in economic growth as being most effective in combating poverty appears to leave no alternative than to pursue this path of 'development'. Therefore, problems with data and measuring may be answerable, while the problems which refer to the content of GDP per Capita go much deeper and are harder to resolve (Stammel, 1996, p. 29).

Revisions of GDP per Capita

There have been a number of attempts to revise GDP per capita. Those can be distinguished according to complement/adjustments of GDP or finding alternatives (Goossens, et al., 2007, p. 21 & 31; Marks, et al., 2006, p. 10). The revisions presented here are not exhaustive but highlight some of the mentioned main issues and attempts of dealing with them. They focus on complementing and adjusting instead of replacing GDP, as the next two cases will deal with alternatives/possible replacements of GDP.

Median income would be a conceptually simple way of capturing distribution aspects. The difference between average income and median income⁹ widens with rising inequality. Thus, if the top 10% receive all income gain, median income remains unchanged while average income rises (Stiglitz, et al., 2010, p. 44).

A further important revision might be the *invariance principle*. This means that the value of what is measured should not be dependent upon institutional arrangements as is currently the

⁹ Median income is the central income data point such that half of the population are above and half below it (Stiglitz, et al., 2010, p. 44).

case. A health service which is provided privately currently adds more to GDP than if it were provided by the government. However, the latter might serve larger shares of the population (Stiglitz, et al., 2010, p. 27).

The *Index of Sustainable Measure of Economic Welfare* (SMEW) by Tobin and Nordhaus is an attempt to deduct so called “Regrettable Necessities”, meaning social costs from GDP, subtracting components that don’t contribute positively to welfare and adding monetary estimates of activities that do (Nordhaus & Tobin, 1972). Total public and private wealth are estimated, including educational and health capital. In Western Samoa for instance, costs for driving to work, for police as well as negative environmental impacts do not apply while values for spare time and own production are higher (Stammel, 1996, p. 78).¹⁰ However, problematic about the SMEW is its lack of unanimity as to which products qualify as defensive expenditure and what do not. Furthermore, estimates for environmental damage or natural resource depletion are not included (Stiglitz, et al., 2010, p. 37 & 104).

Green GDP refers to an adjusted Net Domestic Product, taking into account consumption of natural capital which comprises resource depletion and environmental degradation (Stiglitz, et al., 2010, p. 30f).

Refinements of SMEW are the *Index of Sustainable Economic Welfare* (ISEW) and the *Genuine Progress Indicator* (GPI) which deduct evaluations of the costs of water, air and noise pollution and try to account for the loss of wetlands, farmland and primary forests, CO2 damage and ozone depletion (Daly, 1996, p. 5ff). ISEW was developed by Herman Daly and John Cobb and belonged to a group of approaches from the 1980s and 1990s which attempted to highlight the forms of economic growth which are detrimental to human well-being (Stiglitz, et al., 2010, p. 104).

According to Stiglitz et al, values for ISEW and GPI start diverging from GDP at some point in time leading to the so-called threshold hypothesis according to which from the point of diversion with GDP growth no longer improves well-being (Stiglitz, et al., 2010, p. 104).

The World Resources Institute created the so called *Natural Resource Account* in 1989 and recalculated Indonesia’s average GDP from 1971 to 1986. The result was that Indonesia’s

¹⁰ It should be considered that these data are from 1996. However, they may still point out to general difficulties of GDP per capita to measure welfare in societies that may have non-economic or non-market priorities.

GDP would decrease considerably from roughly 7% to 4% if the depletion of its natural resource was taken into account (Klingebiel, 1992, p. 29).

Stiglitz et al point out to the difficulty of defining and characterizing sustainability. Charging GDP for the depletion of natural resources may not be sufficient to really measure sustainability. They continue to stress that we need measures of overconsumption or underinvestment (Stiglitz, et al., 2010, p. 107f). These issues are according to them reflected in the measure of for instance the *Ecological Footprints*, the latter of which will be explained in the next case study (Stiglitz, et al., 2010, p. 108ff).

While environmental depletion may be given a monetary value, hurdles to attempts to measure and thus appreciate the quality of the natural environment (and consequently reasons why they are not being applied much more) are the lack of reliable measurement and monetary valuation of changes in environmental quality (Stiglitz, et al., 2010, p. 29).

According to Stiglitz et al (Stiglitz, et al., 2010, p. xxvi), the aim must be to construct a simple index (unlike, for instance, the mentioned index by Prescott-Allen) including metrics that capture what is of most concern. GDP per capita may remain as a measure, but it should be more clearly identified as a measure of market activity, not of well-being.

Stiglitz et al however also draw the attention to the explicit political dimension of GDP and the resulting difficulty to revise it. Thus, Stiglitz claims that while attempts for supplementing or even replacing GDP are generally met favourably nowadays, his attempt while being Chief Economist at the World Bank and government adviser to improve the GDP's calculation, a reform which he claims was not very ambitious was met with great political resistance. For, he states "there were those who were afraid of the light that better information systems might shed." (Stiglitz, et al., 2010, p. xxii).

In summary GDP may not be a sufficient criterion for assessing a country's development. Stiglitz et al in 2010 state that in theory, advances in research would enable societies to develop broader, more all-encompassing measures of well-being (Klingebiel, 1992, p. 32; Stiglitz, et al., 2010, p. xxiii). Krämer agrees when stating that dynamic development in modern economic happiness research in the last years is due to the existence of methods with which it is possible to measure human wellbeing (Krämer, 2009, p. 2).

It should be noted that the list of revisions to GDP is non-exhaustive. There are many attempts to replace or at least complement it. However, the examples above show that GDP is in fact viewed as flawed by many institutions, alternatives are searched for and are available.

Revising and/or replacing GDP may today be more a question of political coordination and political will especially, or, to use Sachs' and Escobar's terms, of breaking the power of the discourse of economic development. This notion is explored further in the next section.

4.1.3 Evaluating GDP per Capita in the light of Post-Development Theory

GDP per Capita as a development indicator depicts an economic definition of development narrowing a complex and diverse concept to one of its possible dimensions. The previous section has attempted to summarize reasons why making use of such a notion of development may be critical: GDP per capita/economic development is not able to grasp alternative definitions of wealth and or quality of life. It does not incorporate goods and services which are not traded via a (monetary) market (for instance in economies relying on subsistence). Furthermore, it hides social and environmental costs and may add them positively to the GDP of a given country thus painting a biased image of progress.

This constriction of development as expressed in GDP per Capita and the fact that despite many critical voices it continues to be widely applied in order to evaluate whether a country classifies as developed or underdeveloped highlights one potential, and at the same time limitation, of an index: It not only reflects but reinforces a previously existing definition of development. It may be regarded as one of the concepts Sachs (2010d, p. xix) mentions, that make up the development discourse and reinforce the occidental world-view, filtering perception, highlighting certain aspects of reality while excluding others (Sachs, 2010d, p. xx). Any index or indicator claiming to measure development represents a given development concept, filters perception and consolidates its definition of development. Stiglitz gives the example of perceiving the world through a lens as a metaphor for indices.

Applying GDP per Capita as development index highlights the importance of economic development in order to "un-underdevelop". The perception of development is filtered as to the importance of economic growth rates and the apparent ways towards it: capital accumulation, savings rates, and international trade. All other aspects of development and in particular all *alternatives* to development or modernity are excluded (Escobar, 2008, p. 162).

The continuing importance of GDP may show that the degree of civilization in a country can still be measured by its economic performance level. Statistical toolkits and GDP per capita are ready made indicators for assessing a country's position on the road of development (Sachs, 2000, p. 5f). Poor countries and their peoples are lacking what the rich have; they were defined according to standards of wealth by the more economically advantaged nations and thus also by an economic conception of poverty. The yardstick that was applied was the annual per capita income (Escobar, 1995, p. 23). Thus, according to Sachs (1999, p. 8), the perception of poverty "was nothing more than the result of a comparative statistical operation [...]".

When Sachs (Sachs, 1993, p. 17) points out that it is the development creed introduced in 1948 by the World Bank and in 1940 by President Harry S. Truman which impedes serious debates about economic growth, it might be said that this causality also works the other way around: It is the idea of economic growth which defines who is poor and who is rich, who is to become like whom, and thus enforces the development creed, hindering any serious debates about this concept. Thus development, functioning as a discourse, means that it creates a space in which only certain things can be said and even imagined, a space for systematic creation of concepts, theories and practices (Escobar, 1995, p. 39).

Sachs points out that such a constriction of imagination did not only happen in the First, but in particular in the Third World when stating that the development idea was legitimization; it was *raison d'être* for emerging states. The perspective of catching up restored the humiliated former colonies' self-respect, it promised equal standing (Sachs, 2000, p. 8). Hopes for the future are fixed on the rich man's pattern of production and consumption and thus development and the hope for catching up are linked to an increase in GDP per Capita (Sachs, 2010d, p. viiiif). Being a developed society, meaning an urban-based civilization characterized by growth, political stability and increasing standards of living, became important in the Third World itself (Escobar, 2010, p. 149f). Sachs emphasises this by analyzing the struggle to reconcile ecology with economy. Thus, he claims, in environmental negotiations, the claims to greater economic space are often bargained against environmental demands (Sachs, 2000, p. 12). At the UNCED in Rio de Janeiro in 1992, for instance, environmental concessions were used as diplomatic weapons to more development. There, a continuing commitment by Southern countries to run the development race could be observed. For the South, the Northern model was considered Utopia. The blessings of development justified the rushing

ahead on the economic race track, but development is like a race without a finish line: Societies which settle at the accomplished stage of technical capacity are unthinkable. Already at the Stockholm Conference, all no-growth positions were rejected by the Third World countries. An alliance of development enthusiasts in the South and growth fatalists in the North was formed (Sachs, 1993, p. 7). The compulsion to drive up GNP had turned them into enemies of nature (Sachs, 2010b, p. 26).

The North sees an infinite economic future, while the South cannot free itself of this mimicry. Other, for instance indigenous models, seem impossible, as they would be at the expense of the wealthy (Sachs, 1993, p. 17). According to Sachs, different cultures had over time developed complex and ingenious systems of institutions and rules regulating use of resources in a way so that equilibrium between resource extraction and resource preservation remained. But through global consumer class, their livelihoods have been undermined (Sachs, 2000, p. 26).

Instead of highlighting the progressiveness of Western nations, it could also be highlighted how they tap into nature and draw on the environment far beyond their national boundaries. As of 2000, the wealthy 25% of humanity occupy an Ecological footprint as large as the entire biologically productive surface area on earth (for an explanation of the Ecological Footprint see section 4.3.1). 20% of the world's population consume 80% of the world's resources. They eat 45% of all meat and fish, consume 68% of electricity, 84% of all paper and drive 87% of all cars. In short, they are cornering environmental resources to their benefit at the cost of other groups and should thus not be regarded to be on top of the social evolution scale (Sachs, 2000, p. 18).

While Sachs' analysis may highlight the destructive potential of GDP per capita and economic growth, it also points to another aspect: Equality. Resource consumption is highly unequal in the world with most of it being consumed by the West¹¹. This is hidden by a development measure like GDP per capita. Given, however, that it is a discursive product of the Post World War II era, constructed and applied by the West, this may not be surprising. Furthermore, as Sachs (2010d, p. xiv) points out, economic growth, while completely disregarding relations of power or income distribution, held within itself the promise of no sacrifices for anyone: The rich needed not give up anything, for as long as growth would be

¹¹ While a global consumer class is also rising in many parts of the Third World, aspiring to the development model of the First World.

sustained, the situation would eventually get better for the poor as well. GDP thus worked as a tool for streamlining the world to follow the West and thus putting it in a position of structural power while at the same not asking for any sacrifices from the Western side.

Thus, not to lose grounds in economic markets has become an obsession by governments. There no longer appeared to be space for a policy of self-determination or to organize societies creatively and differently, hence controlling their own destiny became difficult for countries. Streamlining for competition is everything, diversity regarded as an obstacle (Sachs, 2010a, p. 116). Economic growth according to Sachs fed and feeds on nature and communities and unpaid costs are shifted back to them like, for instance, displacement, dispossession and social polarization, which have been on the rise along with growth rates (Sachs, 2010d, p. ix). A subordination of social life under the rule economy follows. According to Sachs, these factors undermine a society's capacity for well-being and limit their space for manoeuvre. The best examples are the Northern countries that seem incapable of doing anything but running the economic race (Sachs, 1993, p. 5).

The historization which Escobar and Sachs carry out highlights that GDP per capita is not neutral and no natural truth. It has been produced under certain historic circumstances and is connected to the interests, claims and ideologies of its time. This displays its arbitrary parts and the power aspirations as well as asymmetries linked to and caused by it. GDP co-invented poverty and characterized the Third World as problem-laden and may have contributed to economic progress and development becoming natural, universal truths and paths that must be followed. From a market activity measuring tool to a tool measuring welfare. GDP has become a benchmark according to which it is determined who is at the forefront and who at the backend of social evolution.

Escobar links the rise of development to the rise of US hegemony: When the US arose as the new hegemonic power after the World War II this rise to hegemony implied a need for the US to deepen the market for US products and to find new investment sites for US surplus capital (Escobar, 1995, p. 32). Furthermore, access to cheap raw material to support the growing US industry was required. Contrary to the Marshall Plan for Europe, the so called *Four Point Programme* was intended for the Third World. It was similar to the Marshall Plan but much smaller, since the Third World was supposed to look for private capital. In order to be able to do this, the Third World had to create "the right climate", including a commitment to capital

development, curbing of nationalism and the control of the left, the working class and the peasantry (Escobar, 1995, p. 33f).

Consequently, in order for the US to expand its hegemony other nations needed to follow its path and notion of development. Colonial times had ended and could not be restored due to the threat of communism. Tools were needed to make the rest of the world follow without military submission. GDP per capita, a benchmark against which nations were evaluated and later came to appraise themselves as Sachs (2000, p. 8) points out, could be regarded as a tool towards the US development model, a tool to submit to economic development concepts mentioned above by Escobar: The search for private capital to help US investments, the opening of markets to enhance trade and the general commitment to capital development.

In the light of economic development being linked so strongly to interests of a certain country, the ideological nature of its core indicator GDP per capita is further highlighted. It might no longer seem astonishing that a tool is used for measuring welfare that only measures 'official' exchanges of goods and services, but not social aspects or well-being.

GDP per Capita hence appears to have been the first development indicator since the concept of development and underdevelopment was introduced. It may be regarded as one of the first development tools to reinforce with seemingly objective data the idea of the developed and the underdeveloped. It appears to be a good example of the power knowledge and statistics have for shaping and creating our reality: In the beginning it meant to measure the level of the market-based economy in a given country. Thus it was clear that many important parts of development of a given nation would be excluded. Over time however, it became a more general benchmark: Through monetary means and statistics, people were defined as being poor or rich, countries were seen as being developed or underdeveloped. GDP per Capita was to help find the solution. It helped in creating a reality where three worlds existed. Stiglitz et al highlight this by mentioning that the GDP measure needs to be *supplemented* by other measures of well-being and environmental sustainability (Stiglitz, et al., 2010, p. xxvi): GDP needs to be *supplemented*, not replaced. It needs to remain, it has become a part too important for our reality to let go. Furthermore, even where mere supplementation of GDP is concerned it might be interesting to note that, while indicators and indices have been developed which either adjust GDP for environmental damage (ISEW and GPI), or "simply" attempt to measure environmental sustainability (for instance the Ecological Footprint described in one

of the following case studies), they do not appear to be widely applied either by political decision makers, media or international organisations to measure progress of countries.

GDP per capita continues to be at the heart of national and international decisions despite the fact that it was not designed for measuring society's ends.

The fact book published by the OECD as well as the many indicators displayed in the Human Development Report and further indicators of progress and development published by other institutions (see section 3.3.) equally demonstrate that there are many attempts to supplement, correct or even replace GDP. Consequently, not only what we measure appears to matter, as Stiglitz claims. Possibly, the attention an index or indicator of development receives and whether or not it is applied on a large scale does not only depend on the way it is communicated as Goossens et al mention (see section 3.3) or on the availability, precision and quality of data as Stiglitz et al state (see section 4.1.2.3). Rather, it might be important who is communicating where and with what interests at heart. The selection of which indices and thus which benchmarks are being heard and applied might be reflected in Escobar's analysis of a set of relations that systematically produce interrelated objects, concepts, theories and strategies making up the development discourse: Due to these relations it is determined what is legitimate as development practice. Certain actors and power relations decide what is to be problematized, which problems are considered (and thus which come into existence) and which are not. Such a tendency may also be mirrored in Stiglitz' back then unsuccessful attempts to criticize and warn the World Bank where handling of the Asian crisis and structural adjustment measures were concerned (see also section 2.2).

It should be mentioned that the broad application of GDP per capita as a development measure had not only an implicit, but an explicit political dimension: Applying GDP had direct political consequences especially for developing nations, as Stiglitz et al (2010, p. xxix) points out: Capital investment and privatization of natural resource extraction all added to GDP and hence were to be fostered by governments and all development institutions. Yet, due to social, health related and environmental costs, they might in fact be worse off than before.

GDP per capita as a measure of progress may be regarded as a tool of imperial globality, as described by Escobar: A form of global coloniality which includes a heightened marginalization and suppression of the knowledge and culture of subaltern groups (Escobar, 2004, p. 207). According to Escobar, imperial globality spreads a Eurocentric way of life that

has historically privileged white/Western people at the expense of non-Westerns world-wide. Included in this concept is a type of social and political fascism which marginalizes large parts of people in the world and helps maintaining a pattern of capital accumulation that benefits a minority of the world population (Escobar, 2004, p. 217). GDP per Capita may thus help to impose norms like free-markets and cultural notions of consumption.

Coloniality of power can be seen as operating via the imposition of a normative economic system and the aim of economic growth. The more the knowledge of the workings of such an economic system spread, the more the hope of bringing material prosperity to the rest of the world was strengthened. Economic growth was regarded as the continuum between rich and poor countries and would allow the latter to replicate conditions in mature capitalist economies like industrialization, high levels of literacy, etc. Development was seen as the process of transition from one situation to the other, a view that culminated in the stages of growth theories by Rostow in the 1960s (Escobar, 1995, p. 38).

The aim of a developed society was to be reached with the assistance of ambitious plans, executed by development experts (Escobar, 2010, p. 149f). Planning relied upon practices regarded as rational and objective. However, Escobar emphasizes, determining local realities by non-local institutional practices is already highly ideological and political. Project planning and implementation gives the impression that policy is the result of discrete, rational acts. Instead, it is a process of coming to terms with conflicting interests where choices are made, exclusions effected and world-views imposed. Identifying people as a problem for instance, seems neutral, when in fact this identification has been an act of choice already. Furthermore, these problems are presented in such a way that some kind of development programme has to be accepted as a legitimate solution (Escobar, 2010, p. 154f).

While planning may not be put on a level with development indices and indicators in general, a development index and possibly GDP per Capita in particular is a tool to foster the planning process, to lead the direction it takes. It is at the root of making a choice: Results of an index may serve as justification for commencing the planning in the first place and it may justify it by showing its 'success'. Furthermore, by deciding which index to apply, a decision is made what is to be planned and who is going to be problematized. Thus if GDP per capita has risen in a given region by a given percentage, this may be taken as proof of success of a given project. If GDP per capita is particularly low in particular regions in the world, this may serve

as the justification for intervention via project planning or similar types of aid (see also section 3.2). It serves as the justification for planning in the first place. And, like planning, it fragments the world in which people live. Not the overall enhancement of quality of life, but economic progress is being planned and measured. If planning is a choice to identify something as a problem and in need of change, a development index enhances this choice by lining it with numbers of progress, regress, development or underdevelopment. And such an index represents a choice in itself – a choice as to which indicators are used, which data is incorporated and which left out. In the case of GDP per capita, the economic dimension is being measured, while all other dimensions and, more importantly all other views of quality of life are left out.

Escobar sees development and in particular economic development as the anthropology of modernity, as a non-neutral, but instead culturally and historically specific, phenomenon. Thus, the West can and should be anthropologized, which means rendering its cultural products (and thus also development), its constitution of reality exotic (Escobar, 1995, p. 11). Modern practices of reason and rationality may appear to be naturally given due to their universalization. However, through the lens of anthropological criticism they can be regarded as a specific collection of practices with a historical nature (Fischer, 2008, p. 264). Such an anthropologization appears reasonable given that a tool which originally was not designed for measuring welfare but mere market activity was and is applied as one of the major benchmarks of modernity to measure progress, despite its very serious shortcomings where data as well as concepts of progress are concerned. That it fosters the notion of progress even, or rather particularly when environmental degradation (a fundamental part of human life) and social cost are rising.

Seeing development not as a natural coercion but anthropologizing it as a cultural product, takes away the apparent neutrality of data produced by GDP per Capita and of GDP per capita in total. Instead, it renders it exotic. And as an exotic tool, GDP per capita may well be arbitrary, include cultural markers and disregard characteristics of other cultures when assessing their “progress”. It may be one-dimensional in its measurement, since it is designed to fit a particular culture and a particular time. GDP per capita may consequently be seen as a tool fostering the process of replication of the poor nations to become like to rich nations. Progress in that way could be measured by it.

The next sections summarize findings for GDP per capita and economic growth as development indicators and address the original research question posed at the beginning of this paper – the question of the validity and necessity of this development index.

4.1.4 Validity and Necessity of GDP per Capita

Development was invented after the Second World War with the rise of US hegemony. This ascent was connected to the search for new markets and new forms of domination especially in the light of fighting communism. Development received an economic impregnation still visible today – and GDP per Capita as the benchmark against which countries were assessed was a tool to drive this type of development. It thus may be regarded as neither neutral nor naturally given just as the development discourse itself. Instead, it may be seen as a tool of domination, of standardization and homogenization: A tool which produces a ranking with the countries on top being ahead of the others and needing to be followed in an evolutionary, coercive way which fosters environmental and social destruction along with economic development. This destructive power in itself speaks against the indicator's neutrality.

Besides, just as with planning, a choice is being made whether or not this particular indicator is used for evaluating progress. Furthermore, the indicator itself displays signs of arbitrariness at least as a welfare measure: It does not include non-Western forms of exchange and production, for instance subsistence driven economies. It enhances the development discourse and was at the forefront of creating the Third World – as a monetary indicator, defining poverty and states of development of non-monetary based societies by monetary means and an arbitrary, monetary poverty line. It appears to be of vital importance to anthropologize it – to refrain from seeing it as neutral data objectively assessing the world's progress, but as a historically produced tool of a particular (Western) culture.

As said in section 2.3.3.4, Escobar distinguished between alternative development, alternative modernities and alternatives to modernity. Only the last option opens the possibility of going beyond the development discourse (Escobar, 2008, p. 162).

Here, the question is to be raised whether the indicator or index which is evaluated fits into any of these categories. The author argues that GDP per capita does not. It certainly does not open the way to alternatives to modernity. But even alternative development is a notion which does not seem to be reflected in this indicator. Its dimension is purely economic, while alternative development refers to going precisely beyond such a one dimensional notion of

development. Thus, GDP per capita not only remains part of the development discourse but can be regarded as a founder and pillar of it.

The question remains whether this indicator may be regarded as valid and whether it is necessary. In accordance with the definition of validity and necessity in the beginning (see section 1.2.3), the answer as to whether GDP per Capita is a valid development indicator depends on whether it meets general indicator demands (see section 3.1), what it aims to measure, which particular theoretical context it is evaluated in (see section 2.2), what political process it is involved in (see section 3.2) and whether it is necessary as a measuring tool for assessing development/progress.

If the political aim is to measure average augmentation of monetary income or mere market activity (which is what it was intended for in the first place) the answer might be a yes, particularly if looked at from the angle of the era of economic growth and industrialization, since GDP per capita is a self-contained, coherent indicator which is all-encompassing in measuring currents of (market) exchanged goods and services.

If the claim of GDP per capita is to measure long term monetary income gains (disregarding its distribution) the answer must be no: Environmental costs (degradation) are added to GDP per capita and these may transform into tremendous monetary losses in the middle and long run. Adding to this is the lifestyle which appears to overburden the earth's resources as it is, being even more problematic as it represents itself as being the peak of quality of life for other nations and cultures. This may incur heightened environmental and later monetary costs as well.

If the aim is to measure what every person in a given country gains, the answer must be no as income distribution is completely disregarded (according to Nuscheler, two thirds of people in Third World countries have less than the average GDP per capita).

If the aim is to measure economic progress, the answer cannot be yes, although care needs to be taken with answering with a clear no. A rise in GDP per capita might indicate a higher rate of industrialization in a given country. Just as well however, it might indicate higher prices of raw material (for instance oil) in a given country which are unstable and short term, having nothing to do with a stable economy (Stiglitz, et al., 2010).

If the aim is to measure a societies progress overall, the answer must clearly be no. Reasons are manifold and have mostly been given above: Monetary income is not equal with quality of life. Social indicators are disregarded, environmental destruction influences GDP per capita positively, progress needs to be defined from the inside and not imposed from the outside. GDP per capita as a benchmark may serve as a tool of power to foster a style of development and life imposed on from the outside. It is not a valid indicator for measuring societal progress for it does not contain the right data to do so, and, at least as important, it produces a ranking which makes it seem that there is only one road to progress: Enhanced monetary income, not matter who has it, who wishes for it and who does not and what else is enhanced or hindered with or by it. Furthermore, it is difficult to regard the index as sufficiently simple, understandable or well communicated, given common misunderstandings and misapplications, thus not meeting general indicator claims (see section 3.1).

The question of necessity is a bit more difficult to answer. For it cannot be answered before asking: Necessary for what and for whom? GDP per Capita is necessary to measure market activity and monetary gains in income and to some extent to measure economic progress. Is it also necessary to objectively evaluate development? Looking at the development discourse as Escobar presents it, it appears to be a highly necessary tool for imposing upon the world a Western notion of development. It coincided with the invention of development and underdevelopment. It served as proof for the World Bank's discovery of poverty and Truman's invention of underdevelopment. It may be necessary for standardizing and homogenizing what development means anywhere. It may be necessary as a tool of dominion without military conquest. It may be necessary as a pillar for the development discourse, for dividing the world into developed and underdeveloped. That power and profit is attached to it might be reflected by the fact that it seems surprisingly hard for decision makers in any sphere (political and economic) to let go of it as a tool to assess the world, despite manifold alternatives and great improvements in data availability and statistical measuring. Its historic dimension and the notion of development it depicts which appears to be clearly correlated to interests of power disqualify it as a tool neutrally assessing development or progress.

GDP per capita may not be necessary for objectively assessing progress if the aim is to go beyond a standardized notion of development, to find, as Escobar puts it alternatives to modernity. It may not be necessary to foster a type of development which may be less standardized and more defined individually. In fact, it may not only not be necessary, but hindering this process. This is true even for finding alternative developments, for in order to reach such an aim, different indices focussing more on social progress would be necessary.

A clear answer as to validity and necessity of GDP per capita as a development indicator thus cannot be given, for it depends on the aim and notion of progress and of the institutions, countries, persons and intentions behind it when this indicator is applied. However, in the author's opinion, it is not necessary, but harmful for assessing progress towards sustainable, diverse forms of development.

The next section looks at an index which aims to go beyond economic development, to even possibly replace it by addressing its particular shortcomings and possibly remedying them.

4.2 Development - More than Augmentation of Income: The Human Development Index

“Human Development is a process of enlarging people's choices. The most critical of these wide-ranging choices are to live a long and healthy life, to be educated and to have access to resources needed for a decent standard of living.” (UNDP, 1990, p. 1).

4.2.1 Description, Definition and History of the HDI

The Human Development Index was the first attempt to merge economic with social data and measure progress beyond economic means (Stammel, 1996, p. 15). The Human Development Report was developed and issued for the first time in 1990 by the UNDP. The background to its development may have been, as Klingebiel (1992, p. 4f) points out, an enlarged interest in development indicators in order to rationalize the development debate and measure progress after the Cold War was over.

A further reason for its development was, according to statements in the first Human Development Report in 1990, to provide an indicator that goes beyond a purely monetary definition of development:

“This Report is about people - and about how development enlarges their choices. It is about more than GNP growth, more than income and wealth and more than producing commodities and accumulating capital. A person's access to income may be one of the choices, but it is not the sum total of human endeavour.” (UNDP, 1990, p. 1).

The first report in 1990 features a ranking for 130 nations with data from 1987 (Hess, 2010, p. 544). The HDI has since been published every year as part of the Human Development Report by the UNDP (Wolff et al, 2011, 846). It was an attempt to put humans and the human dimension of development in the centre and was seen as a complement to other development reports which highlighted mainly economic aspects of development (Anand & Sen, 1993, p. 1f). The crucial elements of life were to be measured (Nuscheler, 2006, p. 149). The HDR described itself as a “forceful case for a new approach to thinking about development” (UNDP, 2010c, p. 1).

Not the level of income of a country but the way this income is used was decisive: It is possible for a country to display a high GDP per Capita and a low level of development and vice versa. A high GDP per Capita is not automatically comparable with human progress as it does not reflect many human problems and does not display investments that only pay off in the long run, for instance in education (Stammel 1996, p. 14f). As shown in the first quotation above, Human Development in the HDR is defined as enlarging people's choices. The indicators used within the index are seen as a means towards this end (UNDP, 1990, p. 1).

In this notion of development Amartya Sen's ideas are reflected who shaped the idea of development as freedom and as enlarging choices (see also section 2.2.1) (Anand & Sen, 1993, p. 1f; Fischer, 2008, p. 280). It was developed by Mahbub ul Haq, a Pakistani economist together with Sen and other scholars to express their dissatisfaction with GDP per Capita as measure of progress (Klugman, Rodriguez, & Choi, 2011, p. 249). Ul Haq commented on the GDP per Capita as a measure of progress with “[a]ny measure that values a gun several hundred times more than a bottle of milk is bound to raise serious questions about its relevance for human progress.” (Haq, 1995, p. 46).

According to Klingebiel, HDR experts were of the opinion that ideally a large number of indicators should be used in order to make Human Development measurable. However, they also recognized the lack of relevant data as well as the increasing complexity of indices when too many indicators are used. Therefore, three indicators that they identified as most critical to enlarging people's capabilities (as cited in the first quotation above) were chosen: Average Life Expectancy at Birth, a literacy indicator (from 1991 onwards a combination of

alphabetisation of adults and average school enrolment years with a weighting of 2:1) and the availability of sufficient resources for a decent standard of living: The GDP per Capita in real purchasing power, chosen, according to Klingebiel, due to a lack of alternatives (Klingebiel 1992, p. 10f). Originally, these three areas were given the same weight (Mehrotra, 2010, p. 1).

The results were originally divided into three sections: Countries with a high level of human development with a score of $> 0,800$; countries with a medium level of human development with a score of $0,500-0,799$; and finally countries with a low level of human development with a score below $0,500$ (Morse, 2003a, p. 283; Nuscheler, 2006, p. 149). Minimum and maximum values were defined which took as orientation the worst (42 years, 12% of alphabetisation and \$220 as yearly real purchasing power income) and best results of 130 nations covered in the report. In 1996, the goal where income was concerned was defined as the average official poverty line of the nine industrial nations. In 1991, the method to calculate literacy was reformed: Next to the adult literacy rate, the average length of school enrolment was added. The level of income to be attained was changed as well (Stammel, 1996, p. 15). When the HDI and the HDR were first issued, UNDP intended to create further indices measuring political freedom, personal security, international relations, physical environment, and equality and gender aspects. As they could not be included into the HDI due to methodological and conceptual problems but should not be left out of analysis, additional indices were created and include into the HDI as of 1991: A gender sensitive HDI, the Gender Related Index (See section 3.3.5.) was added as well as a distribution-adjusted HDI and a Human Freedom Index (Klingebiel, 1992, p. 11).

The next section assesses the HDI as development index through a literature review, giving an overview of current criticisms regarding data as well as dimensions included in the index

4.2.2 Evaluating the HDI as Development Index

Evaluating Data

The UNDP calculates values for the HDI for a given country against a maximum and minimum value and assigned a value between 0 and 1. Calculation for each individual dimension (Life Expectancy, Education and Income) is as follows (Morse, 2003a, p. 283):

$$(1) \quad HDI = (Real\ value\ for\ country - minimum\ value) / (Range\ (maximum - minimum))$$

From 1994 till 2009, the three indicators were added up and divided by three, making them substitutable amongst each other. Several authors criticized this approach since in this way it

would be possible to offset a decline in one dimension with a rise in another (Sagar & Najam, 1998, p. 263).

In 2010, UNDP addressed this criticism: The formula was revised from arithmetic to geometric form (Klugman, et al., 2011, p. 253):

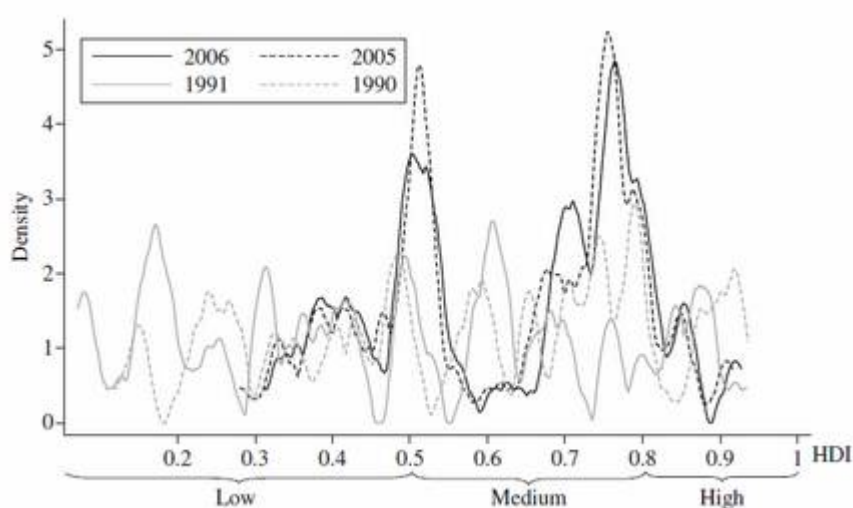
$$(2) \quad HDI = \sqrt[3]{(Life\ Expectancy \times Education \times Income)}$$

This formula leads to lower values particularly for countries whose development across the three dimensions is uneven (Lazar & Lazar, 2011, p. 146f). When recalculating previous values for Romania with this new method, including new thresholds and data revisions (see paragraphs below), Lazar et al find considerable difference in HDI values for the past 20 years. This might be the case for a number of other countries, particularly those of low and medium development (Lazar & Lazar, 2011, p. 148f).

Wolff et al come to the conclusion that due to the mentioned statistical changes such as revision of formula but also changing of thresholds for assigning the status of most to least developed to a country, 34% of nations in the HDI of 2010/2011 may be wrongly classified (Wolff et al, 2011, p. 845).

Evidence for this may be that developing nations' classifications have varied considerably over the years around the thresholds (see Figure 1 below).

Figure 1: HDI Differences in countries' classification from 1990 to 2006



Source: Wolff et al, 2011, p. 844.

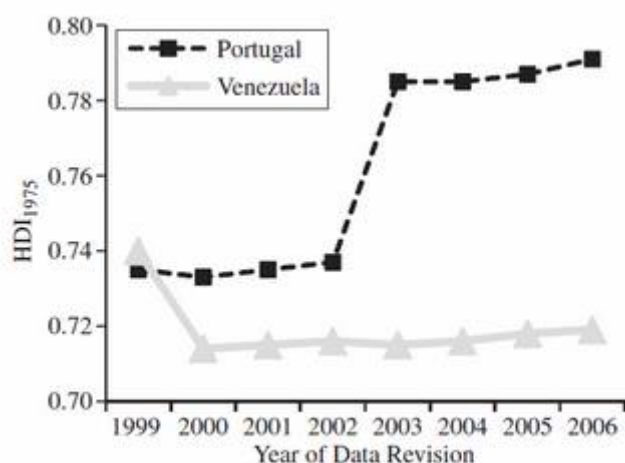
Figure 1 shows that the distribution used to be relatively uniformly distributed in the 1990s, but looking rather “twin peaked” in recent years and spiking around the values that serve as

cut off from a particular category (Wolff, et al., 2011, p. 844).

Wolff et al find that HDI statistics contain “substantial amount of noise on the order of 0.01–0.11 standard deviations” (Wolff, et al., 2011, p. 867). While formula revision may be partially responsible, data precision and availability tends to be another problem, since UNDP draws its data in part from domestic sources. Data precision tends to be lower among countries with low development status due to less inclusive data and worse data availability (Grimm, Harttgen, Klasen, & Misselhorn, 2008, p. 2533 & 2538). Furthermore, data gaps are filled by data from other organizations, such that data from different sources, relying on different surveys but for the same purpose are mixed. Such shortcomings make continuous data revision necessary.

Wolff et al illustrate the problem of data revision by comparing Venezuela and Portugal for their 1975 HDI value, calculated in retrospect by the UNDP. In 1999, Portugal’s HDI for 1975 was below Venezuela’s, but with the yearly data revisions, in 2006, Portugal’s HDI for 1975 climbed significantly above that of Venezuela (see Figure 2 below) (Wolff et al, 2011, p. 849f).

Figure 2: HDI from 1975 for Portugal and Venezuela, with data revisions from 1999 till 2006



Source: Wolff et al, 2011, p. 849.

The weaker data for developing countries leads to a higher probability of them being misclassified and assigned the wrong cut off value. This is particularly the case if many are close to those cut off values, as has been the case for the last HDR’s and rankings: Up to 45% of so called developing countries could be affected (Wolff et al, 2011, p. 858 & 867).

There has been relatively little change for the so-called developed countries on the other hand, with the top places being occupied by similar nations throughout the years (for instance Netherlands, Canada, Japan, Iceland, Norway, Sweden, Switzerland, France and the United States) as well as for the countries on the very bottom (Niger, Congo, Somalia, Sierra Leone, Mali) (Lazar & Lazar, 2011, p. 149f; UNDP, 2010b, p. 143ff).

The changes among many developing countries are particularly problematic, since many NGO's and international organizations use the HDI and in particular its cut off values to determine how much development aid countries in a particular category (i.e. 'low development' when under the threshold of 0.49 compared to 0.51 in 2006) are entitled to (Wolff et al, 2011, p. 862f). The high data variance especially around those threshold values may give rise to strategic behaviour in order to be able to receive more development aid (Neumayer, 2003, p. 113f) or pay less for instance where environmental negotiations are concerned (nef, 2011). Changes by the UNDP where such thresholds are concerned may add to the problem.

Table 4 below summarizes all threshold revision from 1990 to 2010:

Table 4: HDI Threshold Revisions 1990-2010

Groups of countries	before 2009	2009 - 2010
Very high human development	-	0,788 – 1
High human development	0,800 – 1	0,677 – 0,784
Medium human development	0,500 – 0,799	0,488 – 0,669
Low human development	0 – 0,499	0 – 0,470

Source: Lazar & Lazar, 2011, p. 146.

Statements such as a certain number of countries having moved up or down the HDI may be misleading since data revision makes comparison over time so difficult (Habermeier, 2007, p. 60; Morse, 2003a, p. 292ff). Thus, movement of a particular country by a few steps up or down may be attributable to mere data updates (see for instance Cuba which fell by 30 places from 1990 to 1991 due to data revision). This is especially true among poorer countries where there might be ample room for manipulation due to such drastic changes (Klingebiel, 1992, p. 16f).

A country may also move up or down because new countries with a higher or lower ranking have been added to the table (Morse 2003a, p. 291).

While setting maxima and minima as indicated by formula (1) above avoids a country doing badly solely on the basis of other countries' performance and makes temporal comparison

easier (Morse, 2003a, p. 268), these values were changed several times, especially during the 1990s, for all three indicators, leading to changes in the resulting ranking (Wolff, et al., 2011, p. 853).

All the mentioned points are considered below in more detail for all three dimensions of the HDI.

Income

Despite having looked at GDP per capita already in chapter 4.1 above, one point of data criticism specific to the way GDP per capita is used in the HDI is concerning the many changes of those maximum and minimum values due to methodological discussions. In the 1990s, UNDP changed values from \$47,860 as maximum to \$40,000 and from \$200 to \$100 as minimum (Klugman, et al., 2011, p. 252). In the late 1990s, UNDP attempted to lessen the impact of income on rankings due to diminishing returns of high income upon development by using a new formula (the Atkins Formula). However, since this new method severely penalized high and middle income countries, this method was let go again (Sagar & Najam, 1998, p. 253). In 2010, UNDP took up GNP (Gross National Income) per Capita instead of GDP per capita, since the former measures output by enterprises of a given country's citizens regardless of where those enterprises are located, taking into consideration increasing globalisation of money and trade flows. This changed minimum and maximum values again to \$163 (min. for Zimbabwe) and \$108211 (max. for United Arab Emirates) (Lazar & Lazar, 2011, p. 143f).

Income has thus undergone a number of changes where data is concerned, making it necessary to handle the respective outcomes with care.

Education

Education is possibly the dimension that has undergone most data changes: The first HDI in 1990 measured Education solely by looking at the adult literacy rate. 1991 to 1995 looked at mean years of school enrolment (1/3) as well as adult literacy rate (2/3) (Narayana, 2009). Later editions all measure Education by taking the percentages of the relevant age groups of the population for primary, secondary and tertiary education (1/3) as well as the adult literacy rate (2/3) into consideration (Lind, 2010, p. 304ff). In 2010, this changed again: Next to adult literacy rate, mean years of schooling and expected years of schooling were taken into consideration (Lazar & Lazar, 2011, p. 143f). Furthermore, the calculation method changed from weighted, arithmetic means to geometric means (see Figure 3 below):

Figure 3: HDI New Revised Formula for Education, 2010

$$\text{Education index} = \frac{\sqrt{\text{Mean years of schooling index} \times \text{Expected years of schooling index}} - 0}{0.951 - 0}$$

Source: Lazar & Lazar, 2011, p.146.

0 represents the minimum value for years of schooling and literacy rate respectively while 0.951 represents the best combined value, found in New Zealand (Lazar & Lazar, 2011, p. 146).

Changing the formula for education can change countries' ranking position considerably. Samoa for instance suddenly became a country of medium development when it had been classified as highly developed in the first HDI with education now including average school enrolment. As school enrolment in Samoa tended to last no as long as in many Western nations, it fell several places despite the conditions in the country remaining the same, and results for life expectancy continuing to be 66 years, while alphabetisation remained at 98% (Stammel, 1996, p. 76).

As mentioned with the other two dimensions, these changes may mean that the HDI is not comparable over time (Klingebiel, 1992, p. 23). Narayana shows this by comparing Education outcomes over time in India: India's HDI fell from 0.439 in 1990 to 0.308 in 1991 due to the mentioned methodological changes where measuring Education is concerned. Apart from this, similar to many other poorer nations, India also struggles with data availability, making its outcomes from the HDI possibly less precise (Narayana, 2009, p. 284).

Yet, overall authors are in favour of measuring education since it is recognized as a driver of economic progress and investment climate (Habermeier, 2007, p. 65f; Narayana, 2009, p. 279f).

Life Expectancy

For Life Expectancy at Birth, UNDP changed maximum and minimum values between 1990 and 1994, and again from 1995 to 2009 (25 and 85 years taken as 'reasonable values' and

saturation points) (Klugman et al, 2011, p. 252f). In 2010, after 30 years of observations values of 20 and 83.2 years were chosen (Lazar & Lazar 2011, p. 144). Again, this may make inter-temporal comparison, at least for those years, difficult (Morse, 2003a, p. 281 & 291). Contrary to the other two components, the formula for Life Expectancy at Birth is the only one that has not changed throughout the years (Lazar & Lazar, 2011, p. 143).

Table 4 below summarizes for all three indicators, for which years data revision took place:

Table 5: HDI Data Revisions from 1990 to 2010

Variables	UM	1990	1991-1994	1995-2009	2010
Life expectancy of birth	years	●	●	●	●
Adult literacy rate	%	●	●	●	
Gross enrolment ratio	%			●	
Mean years of schooling	years		●		●
Expected years of schooling	years				●
Gross Domestic Product (GDP) per capita	\$PPP	●	●	●	
Gross national Income (GNI)per capita	\$PPP				●

Source: Lazar & Lazar, 2011, p. 143.

A common criticism was that life expectancy and literacy were “cheap” indicators: The poor as well may live longer and enjoy schooling, but that may not necessarily enhance their quality of life (Nuscheler, 2006, p. 149). Furthermore, income, albeit now measured in terms of purchasing power, was still a part of the HDI meaning that for instance activities fostering environmental degradation were incorporated as well (Klingebiel, 1992, p. 21). Below, Life Expectancy and Birth and Education will be evaluated in detail. For a detailed evaluation of GDP per Capita (income) see chapter 4.1 above.

Life Expectancy at Birth

Life Expectancy at birth looks at the average years a person born in a given country can be expected to live. Data relies on mortality rates at different ages. Life expectancy is regarded as a good measure of progress since it depends on a number of conditions which are expected to influence quality of life, for instance infant mortality which relates back to access to healthcare and sanitation (Marks, et al., 2006, p. 11).

However, there are a number of important points of criticism to take into account: Life Expectancy measures merely length, but not necessarily all aspects of quality of life. It is only an “indirect measure of healthy years lived” (Engineer, Roy, & Fink, 2010, p. 61). While it takes into account life shortening diseases (in many poor countries) such as tuberculosis,

cholera, etc., it does not take into account the new form of illnesses often found in wealthier society, such as increasing mental illness (for instance depression or eating disorders), which do affect quality of life (Schimmel, 2009, p. 101). Engineer et al attempt to remedy this in part by including “expected lost healthy years” into the HDI (Engineer, et al., 2010, p. 61).

Veenhoven on the other hand suggests combining Life Expectancy with Happiness and thus measuring how long and happy people live (‘Happy Life Years’), a concept taken up by the Happy Planet Index (see section chapter 4.3 below). In his study, economically affluent nations with high degrees of freedom and justice are found on top with such variables explaining 66% of the variance, while social security and income equality seem to have little influence. However, the author also emphasizes that living long and living happy are separate and mentions countries such as Bangladesh, where happiness levels are relatively high compared to Life Expectancy, while the opposite is true for many former Soviet Union member countries such as Azerbaijan (Veenhoven, 2005, p. 61 & 79).

A further point of concern may be that it is questionable to measure Life Expectancy in terms of units, where each unit counts the same: An decrease in Life Expectancy from 40 to 39 possibly should not count the same as from 60 to 59 (de la Escosura, 2010, p. 845). An increase from 45 to 50 years seems more important than one from 80 to 85 years (Dasgupta & Weale, 1992, p. 125).

Additionally, average Life Expectancy at Birth may hide considerable differences of Life Expectancy within a country. This is the case for instance in many Arab countries where health access differs considerably between rural and urban areas (Boutayeb & Serghini, 2006, p. 12). A particularly interesting and concerning example may be countries that are at the top of the HDI and enjoy high degrees of Life Expectancy, but who have minority indigenous populations whose Life Expectancy is significantly worse than the average. Examples are Australia, the USA, Canada and New Zealand. Indigenous populations in those countries enjoy only a medium level of development, compared to the high overall level. Cooke et al create an HDI for indigenous people to show (lack of) progress where human development for this particular group is concerned (Cooke, Mitrou, Lawrence, Guimond, & Beavon, 2007, p. 1). Grimm et al on the other hand attempt to remedy such inequalities by measuring Life Expectancy for income quintiles (Grimm, et al., 2008).

Overall however, most authors agree on the importance of Life Expectancy for measuring human development while recognizing its shortcomings (see for instance Boutayeb & Serghini, 2006, p. 1).

Education

Education has received considerable attention within the HDR's, with many of them focussing on some other educational aspect apart of what is included in the HDI, such as education expenditure of governments (Mehrotra 2010, p. 1).

Considering the HDI only, measuring education in terms of school enrolment and alphabetisation rate may say little about the quality of that education, which varies considerably across nations (Hicks, 1997, p. 1289). This may be particularly true in cases where the literacy- and school enrolment rate is close to 100% and differences across those countries would be measured primarily in terms of quality (de la Escosura, 2010, p. 843). However, including mean years of schooling partially addresses this problem (Engineer, et al., 2010, p. 62).

Measuring education by giving weight to school enrolment and the literacy rate may be narrowing the concept of education too much: alphabetisation is not necessarily the same as actual education. Both concepts disregard knowledge passed on orally for instance, which may, however, form an important part of education in the relevant country/community (Schimmel, 2009, p. 96; Stammel 1996, p. 76).

Furthermore, when looking at education as enhancement of well-being, it contributes only significantly to it once a basic need is met. Higher levels may even cause unhappiness since it increases one's aspirations and thus the potential for not reaching them and being unhappy (Schimmel, 2009, p. 102). While Schimmel considers including education into the measurement of human development, he calls for inclusion of well-being studies into the HDI to complement it (Schimmel, 2009, p. 109f).

Similar to Life Expectancy in this sense, average literacy rate and school enrolment may hide inequalities in terms of educational access within a country. Grimm et al attempt to calculate Education by income quintiles (Grimm et al, 2008, p. 2531).

However, several authors recognize the importance of the components the HDI uses, particularly Education (formation of human capital, higher quality of life) and Life Expectancy to measure human development (Hess, 2010, p. 542; Lind, 2010, p. 301; Muller

& Trannoy, 2011, p. 1; Narayana, 2009, p. 279). In particular, education is seen as a driver to economic development (if this is a valid point of achievement) in countries with an HDI of under 0.7 (Habermeier 2007, p. 65).

Evaluating the Index in Total

At its initial release, a strong point of criticism from developing countries as well as some development experts concerned the omission of problems which were specific to industrialized countries (Klingebiel, 1992, p. 16f). Further criticism referred to dimensions like the distribution of income, regional and gender differences, cultural factors and political freedom not being considered. However, when including all these factors, comprehensive data collection as well as transparency for decision makers and the general public would be difficult to ensure (Stammel, 1996, p. 16f).

Furthermore, decision makers from the realm of development politics, government representatives and the media discussed the political function and implications of the HDR and HDI: Did the UN have the mandate to do indicator research and would this influence the allocation processes of UNDP resources and other multi- and bilateral donors? May the UN give out grades for development politics and political freedom? (Klingebiel, 1992, p. 14).

Developing nations insisted that they had a right to an independent allocation of resources, reasoning that the UNDP, as a special organ of the UN had to remain a universal and neutral institution. Since they helped with financing the UNDP and thus understood it as also their programme. They felt that the HDI were contrary to this self-conception and feared that the emphasis on human development of the HDR would entail a promotion of a discussion around a “grand strategy” of the UNDP which might lead to a sectoral and regional concentration of financial means. While the majority of development experts embraced the stronger emphasis of the human dimension in the HDI, the majority of developing countries were thus against the inclusion of the HDI in the criteria check list for allocation of UNDP means regarding the development programmes.

Western industrialized nations on the other hand saw the HDR as basically a right step for the UNDP to choose focal points. They were in favour of the UNDP having a regional (poorest nations) as well as a sectoral concentration. While some points of criticism of the HDI were shared with the developing nations, they held on to furthering the development of the HDI. Some donor states were even in favour of the HDI being used as criteria for the allocation of

development aid. Thus, a low ranking position within the HDI was to indicate a high need for means of development aid (Klingebiel, 1992, p. 18f). Considering that this is the case today (Wolff, et al., 2011), it appears that the apprehensions of developing nations were at least partially justified.

Industrialized nations were overall much less critical of the HDI, although the reasons for supporting it differed. Some, like the Scandinavian nations wished to replace the GDP per Capita indicator with social indicators. The USA, while supporting the HDI, primarily wished to measure “political and economic openness“, and to generally take into account political freedom by way of the HDI (Klingebiel, 1992, p. 18f).

Development experts focussed more on the methodological criticism and asked whether the construction of an aggregate index was reasonable or whether disaggregated indices were not better in reflecting a nation’s reality. They feared that the attempt to find a globally valid measure for assessing living conditions had failed already in the 1970s due to methodological constraints in social indicator research. A replacement of GP per capital with such a global measure could hence present the same weaknesses as the GDP per Capita itself (Klingebiel, 1992, p. 19ff).

Such attempts highlight the political importance development indices may have.

Current points of criticism relate to the HDI being overall arbitrary in its choice of indicators, its weighting of those indicators as well as being too complex (see for instance Lind, 2010, p. 301f ; Sagar & Najam, 1998, p. 251f). Further points regard the omission of environmental and further social criteria, similar to the initial criticism mentioned above (Hess, 2010, p. 544).

Some consider the HDI’s disregard of equality dimensions a particularly serious omission (Hicks, 1997, p. 1283; Grimm et al, 2008, p. 1257): The HDI hides inequalities between countries, particularly where income variation is concerned (Morse, 2003a). Grimm et al find that, if inequality were included, the lowest quintile of industrialized countries would be below middle income countries (Grimm et al, 2010, p. 2534ff).

However, it should be noted that the Human Development Report 2010 addressed this issue and does calculate loss of human development (HDI) due to inequality in general as well as

gender equality in particular. Furthermore, users can build their own Development Index choosing among nine dimensions on the website of the HDR 2010. Thus, while the HDI's components remain unchanged, the HDR addressed some of the points of criticisms by enlarging its concept of human development by other dimensions (UNDP, 2010c, p. 3ff).

Environmental sustainability, despite gaining increasing importance remains underrepresented (Morse, 2003b, p. 183). However, Jha et al find a significant negative relationship between the rate of deforestation and the HDI rank, with low rates of deforestation when the HDI rank was high despite possibly high levels of population growth (Jha & Bawa, 2006, p. 906). It might hence be said that HDI partially addresses one sustainability concern indirectly. Overall, its willingness to change and respond to criticism (even if slowly) may be regarded as a point of merit.

While problems of data, formula and threshold revisions make over time comparison difficult, the HDR 2010 includes a hybrid HDI, which shows progress for many countries over the last 20 years, highlighting that there may be methods in place to make inter temporal comparison possible (Lazar & Lazar, 2011, p. 147).

The most important point of merit for the HDI is possibly that it remains the first serious attempt to include social next to economic criteria to measure human progress (Anand & Sen, 1993, p. 1f). Furthermore, it has gained considerable attention and weight in doing so in politics, academia and even the business world for purposes of international pricing, for instance where medication is concerned (countries classified as 'poor' may receive up to 90% discounts), up to today (Wolff et al, 2011, p. 843). It has gained attention in the media with countries watching for their position, media commenting on it and governments justifying their efforts through it (Mehrotra, 2010, p. 1).

It is a considerable achievement to gain such wide recognition over time. In terms of environmental obligations, for instance under the Kyoto protocol, there have been proposals to link costs of abatement to status in the HDI (Hu, 2009). Such recognition may be owed in part to the HDI's relative simplicity as well as to its transparency (every HDR contains calculation methods and explanation of steps taken) and open availability (Klugman, et al, 2011, p. 251).

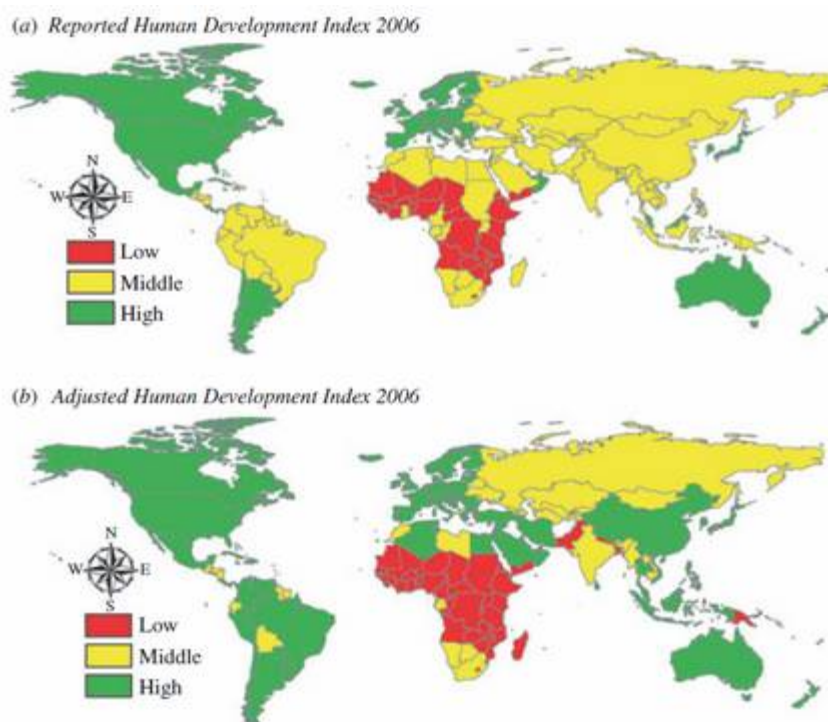
Furthermore, the HDR frequently looks at the different dimensions that the HDI composes and is able to highlight that, for instance, convergence in longevity and education (in its narrow definition here) is happening, while no convergence can be observed where income is concerned. UNDP furthermore highlights in its report the lack of a significant correlation

between economic growth and educational as well as health attainment. UNDP also states that development in other important dimensions such as democracy may be possible without having a high rank in the HDI and that is possible to have a high HDI rank and fail in other dimensions such as ecological sustainability (UNDP, 2010c, p. 6). It might be said, then, that the HDR makes an effort to handle the HDI with care and consider all its dimensions, or, that it attempts to go with current trends and include new dimensions development though has discovered (see section 2.2.).

There are a number of attempts to ‘rectify’ or complement the HDI calculations in order to meet such broader concepts as well as criteria of policy use and equality. Many of these also produce an alternative ranking (de la Escosura, 2010, p. 841ff; Lind, 2010, p. 301ff; Wolff, et al, 2011, p. 843ff). See (D'Acci, 2011, p. 47) and (Schimmel, 2009, p. 93) for substitutes and complements in terms of well-being and happiness.

Wolff et al (2011, p. 864) are especially interesting since they attempt to address the three classes of error formula-, data- and cut off value revision and show that with recalculating the HDI 2006, taking the current data knowledge, formula and cut-off values into account, the world map would look differently (see Figure 4 below).

Figure 4: Revised HDI according to Data-, Formula- and Cut-Off Value Revision



Source: (Wolff, Chong, & Auffhammer, 2011, p. 864).

Apart from its data quality and indicator omission there are also critical voices where the HDI's overall approach is concerned: Thus Schimmel criticizes the HDI's approach as arbitrary and its definition of poverty as a lack of 'having' contrary to wealth and 'having' found in Western nations. Thus, progress would be defined as finding a path towards such material abundance instead of recognizing broader aspects of well-being and progress. He compares the HDI to happiness studies and recommends complementing findings from the HDI with outcomes of such studies to include individual people's perspectives on their lives (Schimmel, 2009, 95ff).

Stammel claims that prosperity cannot be reduced to single aspects of life, which according to him is the main limitation of the HDI (compared to the Human Development Report which incorporates a much more extensive development analysis of the world) (Stammel, 1996, p. 77).

Klingebiel criticizes that the HDI, being an aggregate index, incorporates the corresponding structural weaknesses (selection of indicators allows for manipulation, as does the weighting of the different parts). In order to be able to remain valid nevertheless, the HDI should continue to measure merely one, namely the social dimension (Klingebiel, 1992, p. 32f).

Another point of criticism is the HDI's impersonality: It works with averages, does not consider individual needs or causes of injustices and poverty (Schimmel, 2009, p. 105f). Yet, this is probably inherent to any index since its task is to work with averages and to quantify in order to point out trends on a larger scale. It is thus not a problem specific to or caused by the HDI. An index needs to retain a certain level of simplicity to remain understandable and usable for the public and decision makers and to be able to highlight what it focuses on. Therefore, it may be difficult for the HDI to incorporate for instance indices of sustainability of equality. Different indices may need to be consulted to obtain relevant information here.

Overall, while HDI is an important complement and in some cases almost supplement of GDP per Capita as a measure of progress, comparability over time and among countries need to be handled with care due to data limitations (Morse 2003a, p. 281ff). Broader issues such as the notion of Quality of Life, how Education and Life Expectancy are viewed and presented and the role income plays and should play for development also need to be kept in mind when using the HDI to assess a given country's status of development.

The following section combines the particular theoretical approach chosen for this paper with the HDI and assesses this index in the light of this development critical theory.

4.2.3 Evaluating the HDI in the Light of Post-Development Theory

The Human Development Report was the first serious and partially successful attempt to replace GDP per capita as a development indicator. One of its attempts was to measure important parameters for enlarging people's choices. It attempts to include the social dimension by claiming to measure education and life expectancy alongside income and to measure income not in nominal GDP per capita but in GDP per capita – PPP terms. It may be regarded as an important step to taking away the notion of measuring welfare and development from GDP, also by showing the differences in ranking when those two metrics are applied: There is only one overlap when comparing the top 5 and bottom 5 countries according to both rankings, and that is Norway (No. 5 according to nominal GDP and No. 1 according to the HDI 2010) (see Table 5 & 6 below).

Table 6 & 7: Comparing nominal GDP per Capita and HDI

Top & Bottom 5 countries according to GDP/Capita 2009	GDP/ Capita in \$US	Top & Bottom 5 countries according to HDI 2009	Rank #
Monaco	186,175	Norway	1
Liechtenstein	134,392	Australia	2
Luxembourg	108,706	Iceland	3
Bermuda	101,346	Canada	4
Norway	78,674	Ireland	5
...	...	...	
Malawi	278	Mali	178
Somalia	220	Central African Republic	179
Liberia	216	Sierra Leone	180
Democratic Republic of the Congo	170	Afghanistan	181
Burundi	151	Niger	182

Source: UN Statistical Division, 2011. n development Source: UNDP, 2009. ; the shortcomings of income as an indicator have already been discussed in the previous case study, criticism won't be taken up again as regards income. However, it is noteworthy, that even this index which claims to measure *human* development, going beyond GDP, deems it necessary to include income as one of its parameters.

Similar to GDP per capita, the Human Development Index may be regarded as a development index of its time: It too has a historical dimension, as Sachs points out and as section 2.2 highlighted. Thus Sachs claims that in the 1970s, when the failure of growth to benefit the majority of people was exposed, development was redefined as transcending growth. It was

economic growth plus redistribution, plus participation, plus human development in the 1990s. Areas like employment, equality, poverty eradication, basic needs, the informal sector and women were established as development fields, each brought new tools and new tribes of experts. This led to a conceptual inflation setting in, which was, however, not detrimental to development's political importance: All camps could now claim to promote development; the struggle over meaning reflected the struggle over policy (Sachs, 2000, p. 9). This is consistent with the notion described in section 2.2, that development thought has become flexible and adaptive, incorporating new trends, groups and areas into itself whenever they appear.

Sachs continues to explicitly refer to the Human Development Index. According to him, growth sceptics have redefined development as enlarging people's choices; the formula developed by them provided the basis for the Human Development Concept with its emphasis on literacy, health and participation. Development with them should be at the service of people's well-being rather than people at the service of development. But, according to Sachs, this view can't escape the development creed either:

"[T]he Human Development Index is, much like the GNIP, a deficit index: It ranks countries hierarchically, assuming that there is only one best way of social evolution." (Sachs, 2000, p. 11).

Sachs' argument is thus that this index is deficient not so much where its indicators or the data it relies on are concerned, but that it is yet another index which, just as the GDP per capita, produces a ranking with some countries on the top and others on the bottom which are supposed at the forefront of social evolution. Just like the GDP per Capita, the HDI may thus be regarded as a tool within the development creed, not one to go beyond it. A tool which fosters the homogenization of the world, defining what education (or what education is composed of: School enrolment and literacy) and what health is and what prosperity means. And having those nations and cultures which do not fulfil this definition claim to be underdeveloped and follow those that do.

Sachs criticises the development creed and all parts of it on the grounds of its homogenizing nature. He compares the collapse of ecosystems through environmental degradation with the breakdown of cultures through development imposed on them through supposedly universal norms. The image he uses is the extinction of languages: Each tongue has its own way of perceiving the world and find meaning. When species disappear, ecosystems break down. When languages die, cultures do the same thing. The dying of the languages indicates that a homogenization of the world is going on (Sachs, 2010a, p. 112). Consequently, for Sachs

development is to be compared to a global monoculture: No matter what ideals and goals societies had, for the sake of development they are all crammed into a single category: The underdeveloped. They were defined according to what they lack and are expected to become, not according to what they are and want to be (Sachs, 2000, p. 6). Escobar adds to this that societies were perceived not in racial terms anymore (as they were during colonial times), but as diseased, underfed, uneducated and physiologically weak masses, calling for unprecedented social action (Escobar, 1995, p. 30). As development spreads, indigenous people are to put aside their chronographies and pulled into the perspective of progress (Sachs, 2000, p. 5).

The question arises whether the HDI, as described above does not as well function as an instrument of homogenization. This has been discussed above in the light of the ranking produced by the HDI. However, given that both Sachs and Escobar emphasize the different world views, languages and characteristics lost in the development creed, it might be interesting to take a look at the indicators the HDI is made of. Thus, literacy, being measured by the HDI in the beginning as the percentage of adult literacy and later by weighting adult literacy and average time of school enrolment, might not be equal to education. Maybe an important part of education would be to learn about one's own view of perceiving the world and to learn to treasure them in one's own language. By predefining what education, what knowledge means and by designating that a long life enhances human development, a choice is made to define all those which do not adhere to this definition but maybe have their own view and system of education or quality of life/health as deficient.

Thus, according to Sachs, there is a –previously explained- fundamental difference between universalism and localism, seen in the dichotomy of space (Universalism) and place (Localism). Cultures linked to a particular place with their own memories and cosmologies are vulnerable to a concept which claims universality, but rests instead on the concept of space (Sachs, 2010c, p. 122). Space concepts as might be incorporated in the HDI may thus be dangerous to place-linked cultures.

Escobar gives an example for a project which attempted to avoid such an imposition and instead attempted to achieve a strengthening of this 'place linkage' while enhancing literacy and education: The "Gente Entintada y Parlante"¹² from 1985 (see Box below).

¹² Translated into English this would roughly mean „The Inky and Talking People“.

Gente Entintada y Parlante (GEP). A Project Representing "Alternative Modernities"

According to Escobar, the Colombian Pacific coast is rich in oral traditions and literature, springing from colonial times, adapted by local and the African Heritage. The oral traditions are permeated by modern forms from state, economy, education, migrants and urbanization such that oral literature is subject to change and innovation. Adding to this is modern media which brings new challenges and possibilities. According to Escobar, development and modernity involve literacy and in the 1980s when a continental literacy program was planned for this region, the fear was that such a program would uproot people from their cultures for the sake of modernity. The project was embedded into the time of the post-Freire-, popular education- and popular education movement. This led to the formulation of an approach to a literacy project based on appropriation of communication media by local groups. Thus technologies were to be adapted to local cultures and the general aim was to strengthen local of communities. The result of this attempt was a powerful communications movement whose effect according to Escobar can still be felt today.

The starting point of "Gente Entintada y Parlante" was the belief that "marginal and incipiently lettered cultures" (Escobar, 2008, p. 181) are capable of assuming control with the appropriate support. The approach was to be incorporated into daily life in order to overcome the traditional subject-object relation of conventional literacy projects in development. The support entailed the following: Ready made supply of communications material like paper and ink and a basic information technology infrastructure for planning and self-management of circulation of recorded and printed material. The idea behind the project was that the availability of materials would challenge local artists and activists to assume responsibility for their literacy and to produce and spread their own communications material. Results at first were poor but became increasingly strong and vibrant: Numerous groups appeared in many parts of the South Pacific, producing all kinds of material. Artists of all kinds established relations with local farmers and other workers, depicting their lives and day-to-day realities. The movement widened, it began to include radio and later video and an international festival. Placing the project in the middle of communities enabled the construction of a literary culture specific to the Pacific. GEP's products often dealt with valorisation and a more realistic representation of blackness and an important part of the project was that locals for the first time produced their own representation of themselves. Thus the project became a space for the construction of their proper identity and of promoting a more endogenous self image. GEP at the same time enabled development via the spreading of literacy and the communications that questioned it through cultural appropriation for the project by cultural activists and locals. The movement pressured institutions to communicate differently with their target population. GEP enabled expression of cultural autonomy and alternative vision of development. It is an example of what Escobar calls "alternative modernities" (see chapter 4.1.4). Such projects need not be linked to a political project in order to have a political character (Escobar, 2008, p. 180ff).

The success of this project would possibly only be grasped by the HDI partially, if the index was used to assess progress of this particular region: Literacy has risen through it, but school enrolment may not have done so. Yet, the project has contributed to education in a broader sense, empowering the people to represent themselves.

While a broad view of what education would probably hardly be measurable anymore (and the same goes for a broader view of health), it also has to be emphasized that such a notion of education to which, even at the beginning when the HDI was first issued, only Western nations adhered on a large scale may be regarded as being not a neutral tool. Next to measuring it, the HDI defines who is developed and who is not. It should be noted that the HDI divides the world into four parts, as previously mentioned: Countries with a very high level of human development with a score of > 0.787 ; countries with a high level of human development with a score of > 0.669 , countries of medium level of human development with a score of > 0.487 ; and finally countries with a low level of human development with a score < 0.487 (UNDP, 2010c, p. 143ff).

While the shortcoming of the measure of income have been discussed in the previous case study (namely that it completely disregards other forms and views of prosperity and, as we will see in the case study which follows, that life satisfaction is only correlated with income to a limited degree), it is interesting that this index which proposes to go beyond income seems to be unable to free itself from this. If we suppose that the benchmark of income was at the root of defining underdevelopment, poverty and backwardness, by this way discriminating against two thirds of the people worldwide, HDI must be confronted with a similar criticism. It still continues to bear this mark of ideology and discrimination that income is a way to evaluate progress and to define who is 'free' and who is not if the intention of the HDI is really to enlarge people's freedom. While it may be true that in an increasingly monetarized world (where globalization adds to its spreading), an adequate income does enlarge individual freedom, it may also be true that an index which professes this, measures it and claims that by way of this indicator some are freer, better off, more developed than others, may enhance this process. This process of self-reinforcement serves as a quality example of the strength of the development discourse and the difficulty of going beyond it.

As Escobar puts it, the development discourse is a perceptual field structured by grids of observation, modes of inquiry, registration of problems and forms of intervention. It is defined by a set of relations and discursive practice that systematically produced interrelated objects, concepts, theories and strategies. New objects and modes of operations have been included, but the same set of relations continues. This set of relations ensures that even seemingly opposed options can coexist, such as, in case of the HDI, claiming to go beyond GDP per capita as a measure of progress and yet including income as one of its dimensions.

According to Escobar, this systematization of relations gives the development discourse and thus development a great dynamic quality: It is able to adapt to changes and thus survived up to today (Escobar, 1995, p. 42).

Furthermore, Sachs' statement about science and data as seemingly neutral appears to be interesting for evaluating the HDI: Data has, according to him the aura of neutrality and can penetrate everywhere. But it does not display actors, victims or causes. This description appears to fit well to the HDI. Its data appears to be neutrally describing societies' progress, not displaying its people, actors behind this progress, causes or effects of it. Drawbacks may be highlighted, but the question remains as to who is to be blamed for them. However, an index cannot necessarily be blamed for not showing such causalities, since it is a simplifying tool, almost 'by nature'.

By explaining the dynamic quality of the development discourse and the power relations which it incorporates, Escobar explains how even opposed positions might survive within and strengthen the development discourse. More importantly however is his point that choices are being made. The development discourse is made up of a set of power relations which allow for certain people, institutions and possibly countries to be heard and for others to be excluded. Such an analysis might explain why, in the case of the HDI, the indicators which define it are incorporated while others are left out. Such a choice is necessary for any index. However, in the light of Escobar's theories, it appears vital to highlight that such choice is even happening. In case of the HDI the question needs to be raised why these particular indicators are included. Even if one were to accept that broader notions of development or health or even wealth cannot be included into this or any other index due to their complexity and subsequent immeasurability, the question still remains why other indicators are not included into the HDI. Why are only indicators that highlight the seeming high status of development in Western countries included while others are excluded that might at least shed light on challenges in the Western world? Examples would be almost any indicator from the ecological field. As Sachs has pointed out (see previous case study), it was and continues to be the Western part of the World and its style of consumption which brings the world on the border of ecological collapse – where climate change, loss of biodiversity or overfishing are concerned. Ecology being at the basis of human life might justify including it as an indicator in an index which attempts to measure human development. Further examples of indicators

which might not necessarily reflect well on developed nations are notions of feeling healthy, mental illnesses or stress related diseases, sense of belonging and community coherence and treatment of the elderly. However, it is important to bear in mind that, if sound data were given, including these dimensions might not only reflect poorly on developed nations, but also on developing nations, since one reason why developing nations do not flag up as much may be lack of good data there where mental health is concerned.

Overall, this is not to say that in any of these cases any country of the Western world or any particular underdeveloped country may not perform well or poorly. But it is to highlight that a choice made in case of the HDI, meaning on the one hand which *index* to apply and on the other which *indicators* to incorporate into a composite index, may not be a coincidence or come naturally.

Sachs and Escobar stress that the Western model must not be followed universally. In the light of ecology as well as equity Sachs emphasizes that it is about changing the wealthy much more than changing the poor, in other words to alleviate wealth at least as much as to alleviate poverty (Sachs, 2000). All of these issues point in the direction of finding ways to criticize the West as well as the rest. This sheds light on the problem of development indicators moving inside the space of development and reinforcing a view of one part of the world being on top of the ladder and the other being defined only according to that. On the other hand it also calls for refraining from defining this other part of the world continuously from the outside and in the light of a benchmark invented by those who fulfil it.

The HDI does not include power relations or (global) equality. It defines the Third World as problematic and the First World as model. One might say that it adds to ecological destruction instead of shedding light upon or alleviating it. If alleviating wealth is more important than alleviating poverty as Sachs says, its ranking might point in the wrong direction.

The next sections summarize findings for the HDI and addresses the original research question posed at the beginning of this paper – the question of the validity and necessity of this development index.

4.2.4 Validity and Necessity of the Human Development Index

The Human Development Index was developed and issued in 1990 by the UNDP with the intention to create an index that went beyond GDP and that would be at the service of people's well-being rather than placing people at the service of development. It furthermore

professed to measure the enlargement of people's choices being to a limited extent a reflection of Amartya Sen's notion of development as freedom. It incorporates the indicators income (GDP per Capita purchasing power adjusted), education (by now a weighted average of adult literacy and years of school enrolment) and life expectancy at birth.

By way of the post-development discourse theories by Escobar and Sachs a comprehensive analysis as to the index's neutrality, validity and necessity has been attempted.

An important issue is the choice of its indicators: As said before, any index which aims at remaining one needs to make a choice as to its indicators. An index is a lens through which the world is perceived. It would cease to be an index if it tried to incorporate every aspect in the world, in the case of development, every aspect regarded as crucial for development, from human rights to child mortality to income. Thus, the HDI cannot be criticised for omitting aspects. Still, the selection it makes is interesting and may reflect Escobar's theories on the dynamic quality of the development discourse and particularly the power relations which define it. For the question arises why these particularly indicators have been depicted as reflecting to be at the service of people's wellbeing. The fact that no indicator is included which reflect poorly on developed nations (and there do exist many, particularly where ecology is concerned) and three where they indeed do appear to be on top of the resulting ranking may highlight Escobar's theories of power asymmetries, of a colonization of reality and a set of relations shaping the development course and Sachs' ideas of development being a global monoculture.

A further critical issue regarding the HDI arises when asking what prosperity, education and health actually are and whether or not income, literacy and school enrolment as well as life expectancy are adequate reflections on three inherently complex concepts. While this complexity may prove difficult to measure, it reflects that also here, a choice is made: One of many definitions of wealth is used, one of many of education and one of many of health. It might just as well have been others. This choice may highlight the importance and consequences of having the power of definition, in this case of these concepts: For those that do shape the perception of the world we live in. Furthermore, simply because something is easy to measure doesn't mean that it is worthwhile to do so; for knowledge is often connected to power and measuring (or rather results of measuring) may reinforce previously existing power relations.

Data and weighting are other issues with the HDI: Depending on the way the three indicators (or indicators for those three indicators as in the case of education) are weighted against each other, outcomes for several countries may vary widely. This is reflected by the examples of Tanzania and Cuba who switched up to 30 places in the HDI ranking when weighting was changed. The importance of weighting and data quality for the results of an index thus highlights its arbitrary parts as well as the potential for manipulation. The HDI is political, even possibly ideological in several ways: Where the choice of its indicators, the weighting of these indicators and the produced ranking are concerned.

It remains to be summarized whether the HDI is valid and necessary in the light of these criticisms. As for validity, like with GDP per Capita, the answer depends on whether it meets general claims to a development indicator, what the policy aim is, what the HDI claims to measure and from which theoretical angle it is assessed (see also sections 2.2, 3.1 and 3.2).

The HDI's relative simplicity and understandability may make it valid in terms of general indicator claims. The other questions may be answered differently depending on whether we look at the single indicators or at the claims of the index in total: If the aim of GDP per Capita adjusted to purchasing power is to measure monetary income, the answer as to its validity would be that it is valid. Adult literacy and average school enrolment may be adequate to measure literacy overall, although the validity of its inherent assumption that those schools are teaching literacy successfully by x years may be questioned. Whether a population on average may enjoy a long or short life may be adequately measured with life expectancy at birth. However, an index is more than the compilation of disaggregated indicators. It aggregates them for a reason. In the case of the HDI it claims to measure human development by aggregating three indicators. Where this claim is concerned the answer as to the HDI's validity can hardly be yes. The reasons have mainly been given above: Who defines what human development is, can and should it be defined from outside? And even if so, the index is much too simple and not many-dimensional enough in order to measure human development. It might need to be considered at this point that for an index to gain attention, it may need to be communicated well as Goossens 2007 points out; and one important step for doing that is the index' name – in the case of the Human Development Index, the name may have been well chosen at the time because it indicated that it went beyond mere economic development. Yet, the claim associated with this name may need to be reconsidered today.

As it is an index it is maybe not desirable for it to become more complicated but in the light of this should reduce its claim. Furthermore, if the separate indicators claim to measure wealth, education and health it might be difficult as well to answer the question of their validity with yes, as these concepts are too broad to be covered by income, literacy and life expectancy. However, it is important to point out that the Human development report in 2010 stated that “human development is an evolving idea” (UNDP 2010c, p.2), and that it is important to adjust development concepts according to the local context thus not claiming ideas to be fixed, but flexible and adaptive, as indeed, the whole idea of development seems to have become (see section 2.2).

The answer as to the necessity of the HDI again depends upon further questions: Necessary for whom and for what? In order to reinforce a world view, or in Escobar’s words, a development discourse, where the West appears on top of the social evolution and the rest is to follow and where large parts of the world appear as backwards, deficient and underdeveloped, the HDI is certainly necessary. It highlights even more dimensions of backwardness than GDP per capita. Of course, it also highlights parts of non-monetary progress which might contribute to a “de-monetarization” in the world. In this respect, it can also be regarded as necessary especially when taking into consideration the attention it has received where differences in ranking between mere GDP per capita and the HDI are concerned. The HDI might thus contribute to alternative development.

Care should possibly be taken when it comes to the HDI’s necessity for enlarging people’s choices and development being at the service of people rather than the other way round. The index might not be necessary for this. For with the power relations visible also in this index and the narrowing of several concepts as well as with the ranking it produces it may just as well be the other way round and people still be at the service of one particular type of development. However, this may also depend on the way the HDI is used and interpreted: Whether its outcomes are taken as measuring development in total and all that do not adhere to the definitions and concepts presented in are seen as underdeveloped and hence are pressured to do so or whether it is seen as one possible way among many.

The following section looks at the third, most recently released index of this case study. The Happy Planet Index (HPI) will be assessed according to current criticisms regarding data and dimensions found through a literature review before assessing it in the light of Post Development Theory.

4.3 *Happiness, Ecology, Efficiency: The Happy Planet Index as a new Index for Measuring Development?*

4.3.1 Description, Definition and History of the Happy Planet Index

The Happy Planet Index was developed by the New Economics Foundation (NEF) in London. The first report and consequently the first ranking were issued in 2006 with a second report and an updated ranking being released in 2009 (Abdallah, et al., 2009, p. 1).

The NEF did not newly collect the data for the first report, nor did they develop new indicators to compose this index. Instead, the thought behind this index was to create an instrument that would measure ends and not means (Marks, et al., 2006, p. 2). Contrary to many media reactions to the release of the HPI (see for instance BBC News, 2006), it does not rank countries according to where people are happiest. Instead, as the name indicates, it attempts to measure the ‘happiness of the planet’ overall: How can people live well without over using the planet’s resources (Ng, 2008, p. 425)?

The HPI is composed of three indicators: *Life Expectancy at Birth*, individual *Life Satisfaction* and the *Ecological Footprint*. The formula which leads to the final outcome, a number, is as follows:

$$(1) \quad \frac{\text{Life Expectancy at Birth} \times \text{Life Satisfaction}}{\text{Ecological Footprint}}$$

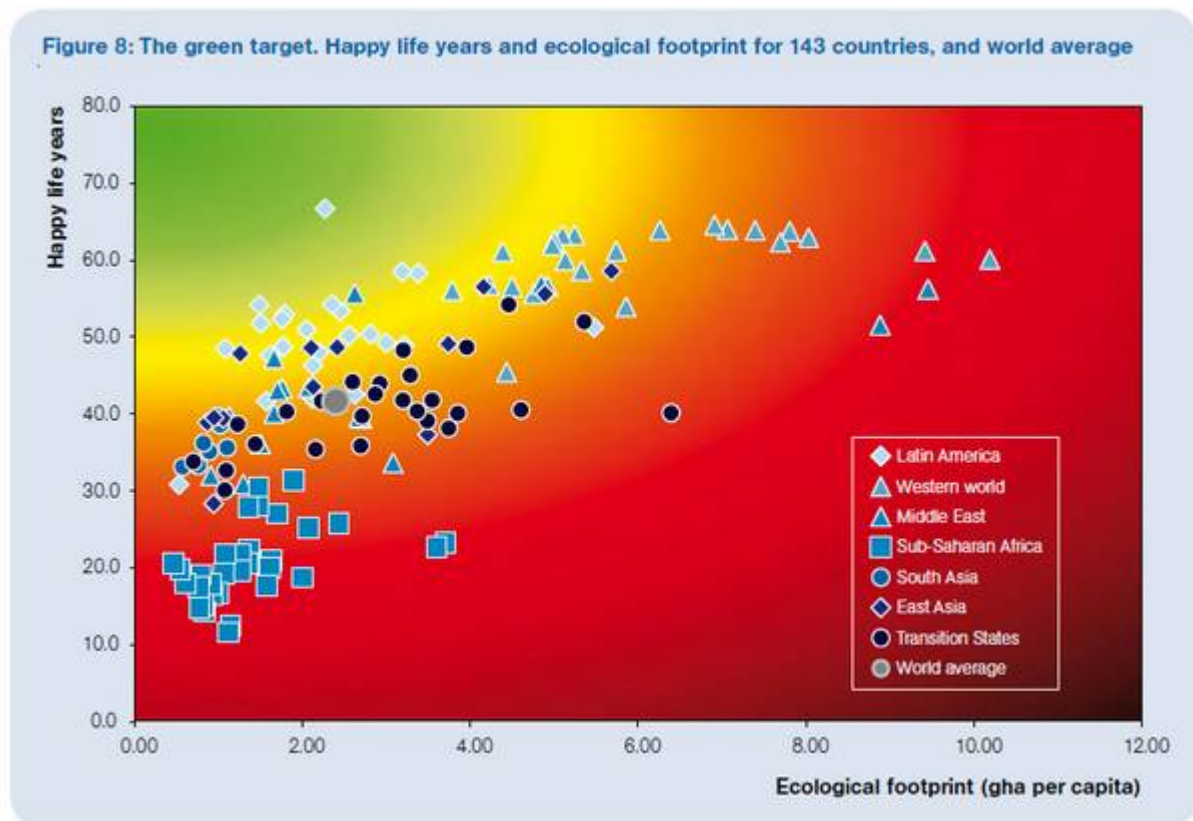
Or

$$(2) \quad \frac{\text{Happy Life Years (HLY)}}{\text{Ecological Footprint}}$$

(Marks et al, 2006, p. 8ff). It attempts to measure what output countries are able to produce with how much input: The length and quality of life a country is able to provide its citizens with and the amount of natural resources it uses to do that. In other words, it tries to measure if a country is able to provide its citizens with a decent standard of living while not stepping over the carrying capacity of the planet (Ng, 2008, p. 426).

The HPI might thus be called a measure of efficiency (Marks, et al, 2006, p. 7). This is depicted by Figure 5 below, where Happy Life Years (HLY) are plotted against the Ecological Footprint for the 143 countries included in the 2009 ranking.

Figure 5: HLY & EF for 143 countries, HPI 2009



Source: Abdallah et al., 2009, p.26.

Table 8 and 9 show the top and bottom 5 nations, for the rankings of 2006 and 2009.

Table 8 & 9: Top & Bottom 5 countries according to HPI 2006 & 2009

Top & Bottom 5 countries HPI 2006	Life S.	Life E.	EF	Outcome
Vanuatu	7.4	68.6	1.1	68.2
Colombia	7.2	72.4	1.3	67.2
Costa Rica	7.5	78.2	2.1	66.0
Dominica	7.3	75.6	1.8	64.5
Panama	7.2	74.8	1.8	63.5
...				
Ukraine	3.6	66.1	3.3	22.2
Democratic Republic of the Congo	3.3	43.1	0.7	20.7
Burundi	3.0	43.6	0.7	19.0
Swaziland	4.2	32.5	1.1	18.4
Zimbabwe	3.3	36.9	1.0	16.6

Source: (Marks et al, 2006, P. 56).

Top & Bottom 5 countries HPI 2009	Life S.	Life E.	EF	Outcome
Costa Rica	8.5	78.5	2.3	76.1
Dominican Republic	7.6	71.5	1.5	71.8
Jamaica	6.7	72.2	1.1	70.1
Guatemala	7.4	69.7	1.5	68.4
Vietnam	6.5	73.7	1.3	66.5
...				
Burundi	2.9	48.5	0.8	22.2
Namibia	4.5	51.6	3.7	20.7
Botswana	4.7	48.1	3.6	19.0
Tanzania	2.4	51.0	1.1	18.4
Zimbabwe	2.8	40.9	1.1	16.6

Source: (Abdallah et al, 2009, p. 61.)

While the indicator *Life Expectancy at Birth* has already been explained above in the section about the HDI, *Life Satisfaction* and particularly the *Ecological Footprint* may be less evident and will be briefly described there. An evaluation as to their validity and necessity will follow in the sections below.

The indicator of *Life Satisfaction* attempts to measure how satisfied an individual person is with his or her life. Its outcomes are mainly based on large surveys for different countries, in which the participant is asked to answer a question similar to the following one (this one is mainly used as a basis for the HPI): “*All things considered, how satisfied are you with your life these days?*” by ranking their happiness from 0 to 10. Data is taken from World Values Survey (WVS) from the openly accessible World Database of Happiness, comprised by Ruut Veenhoven, University of Rotterdam (Marks, et al., 2006; Veenhoven, 2011, p. 48). Answers are collected for one city/region/country and an average is taken. In general, so called developed countries (according to income as well as the HDI) perform well, scoring around 7 on the scale, while countries with poor social performance such as some countries in Sub-Saharan Africa score lowest with 3 or 4 on the scale. There are, however, also countries which do not fall into this pattern, particularly in Central America (Marks, et al., 2006, p. 32). For a complete ranking of the 2006 and 2009 outcomes, see Appendix B.

As mentioned before, problems and merits as to data as well as to the idea of measuring happiness will follow below.

The *Ecological Footprint* is an attempt to measure (un-)sustainable consumption patterns in the world. It compares demand for natural capitals with the earth's ability to (re-) generate natural resources (Ewing, Reed, Galli, Kitzes, & Wackernagel, 2010, p. 1f). Matthias Wackernagel developed it as part of his PhD at the University of British Columbia, Canada in the early 1990s (M. Wackernagel, 1994, p. 1ff). The earliest academic publication appeared in 1992, by William Rees, Wackernagel's supervisor (Rees, 1992, p. 121ff).

The Ecological Footprint measures biological productive land and sea area and the use of the resulting resources by humans, while considering the relevant area's ability to regenerate the used up resources. For a given country, resources produced for export to another country (i.e. bananas) are not added to the producing, but the consuming, or importing nation, since this indicator attempts to measure end-consumption (Monfreda, Wackernagel, & Deumling, 2004, p. 232).

If all productive land and sea areas in the world were taken together, as well as their regenerative capacity and divided by the number of humans, not considering space for non-human life such as mammals, every human being would be allocated 1.8 hectares of fertile land/sea area. As of 2010, the average space needed by humans exceeds this number already with an average person needing 2.7 hectares, or 1.51 planets (Ewing, et al, 2010, p. 1). This average is not taking into consideration the unequal distribution among regions: As of 2009, the average US American requires 9.4 hectares or ca. 5.2 planets, while the average Austrian requires 5 hectares or ca. 2.8 planets and the average Jamaican requires 1.1 hectares or ca. 0.6 planets (Abdallah et al, 2009, p. 61). Humanity first started overusing earth's biocapacity in the 1970s (Ewing, et al, 2010, p. 12).

An evaluation as to problems and merits where data and the idea of measuring environmental performance this way is concerned follows in the sections below.

4.3.2 Evaluating the HPI as a Development Index

Evaluating Data

Since Life Expectancy at Birth has already been evaluated above, when analysing the HDI, I will only look at *Life Satisfaction* and the *Ecological Footprint* here.

Life Satisfaction

While in this paper happiness, life satisfaction and well-being are to some degree used synonymously, in current literature the first two concepts are often distinguished, although there is a certain correlation between the two (R. Di Tella, MacCulloch, & Oswald, 2003, p. 5). Happiness is seen as an affective state, where the positive affect outweighs the negative affect. Life Satisfaction is a cognitive state, thus considering life overall. It is the latter concept which if at all, should be used for indices and policy making (Samman, 2007, p. 15f). This concept is evaluated here and used in the HPI.

The Life Satisfaction data relies on large representative surveys of > 1000 participants. A survey for a given region typically asks the above mentioned question, aiming to obtain a representative sample of the population in question (Marks, et al, 2006, p. 48; Veenhoven, 2011).

The HPI takes the outcome of such surveys and converts it into numbers from 0-1.

In order to assess how good the data for measuring life satisfaction is, it is important to look at the criteria reliability (or stability: Do outcomes stay the same if the individual is asked the same question later), validity (“Does the measure reflect the concept intended?”), consistency (“Do outcomes correspond to other observed criteria related to the subject?”) and comparability across nations (Frey & Stutzer, 2002, p. 31). These criteria are assessed below both for measuring happiness in general as well as for the data used by the HPI in 2006 and 2009.

Reliability

Happiness surveys, much like other surveys, generally rely on the judgement of those involved. When inquiring about life satisfaction, the answers given by participants usually are not random and spontaneous, but result from a conscious cognitive process, assessing one’s past and comparing one’s situation to others (Frey & Stutzer, 2002, p. 4; Schimmel, 2009, p. 98).

Still, particularly economists are sceptical on relying purely on what people say (also called ‘cheap talk’), instead only believing a person’s preference if they are willing to pay accordingly for it (Ng, 2008, p. 428).

However, physiological approaches such as brain imaging, as well as health measures such as heart rate and rates for depression and third party reports correspond to the subjective happiness outcomes (Ng, 2008, p. 429; Samman, 2007, p. 17). Such correlations appear to be consistent across countries (Frey & Stutzer, 2002, p. 32).

There are a number of biases to consider such as distorted appraisal, where people are influenced by available information (i.e. they perceive the interviewer to be obviously worse off than themselves) or distorted response, where the wording or sequence of questions may influence results (Frey & Stutzer, 2002, p. 32).

Validity

While careful survey design may ensure that people answer reflecting their true feelings, there are some biases to consider, mainly due to distorted reporting: Due to ego-defence mechanisms or due to social desirability people may tend to over- or understate their actual level of life satisfaction (Frey & Stutzer, 2002, p. 32).

Consistency

Life satisfaction is consistent with a number of more objective measures such as, for instance, levels of democracy and decentralization, (loss of) employment or income, serious illness or marital status. People that state they are satisfied with their lives furthermore are also perceived to be happy by those close to them, are smiling more, are more socially outgoing, more helpful to others, less often involved in conflicts, less often absent from work, optimistic, energetic and more creative, tend to remember more positive than negative life events, have a higher level of tolerance for frustration, are less likely to commit suicide, more healthy (since have a more effective immune system) and need less psychological counselling (Frey & Stutzer, 2002, p. 32).

Comparability across nations & Intertemporal Comparability

Cultural biases may make comparability difficult: The average US American may tend to report higher levels of happiness, since optimism is highly valued, while the average Japanese may report lower levels, since modesty is highly valued.

While according to Frey et al, cross cultural differences are not that strong that they make cross country comparison meaningless, survey outcomes may need to be validated by alternative measures of wellbeing (Frey & Stutzer, 2002, p. 33f).

There are a number of further biases to consider when looking at survey outcomes: People tend to not be able to recall past suffering correctly. When recalling past pain, people are often wrong about the length of time they suffered, but right about the maximum pain they endured (Frey & Stutzer, 2002, p. 33f). Also, people misjudge the speed with which they adjust to new circumstances, one reason why the income effect goes away so soon (P. R. G. Layard, 2003, p. 7). This adaptation effect may also make intertemporal comparability difficult: It is not clear whether having a higher standard of living, more social protection, rights, freedom, democracy and health than 100 years ago makes people report themselves significantly happier than back then (Ng, 2008, p. 430).

Another problem may be that happiness is not measurable across the full cardinal scale: A very unhappy person may respond may rating their life with a 3, but a 0 might be rare. This is also, since people may consider 5 as neutral or 50% as a bare passing grade (taking this from grading at school for instance), and hence take 5 or 4 instead of zero when they attempt to rate themselves as very unhappy (Ng, 2008, p. 430). While there are thus some problems to be taken into consideration when measuring happiness, it is important to remember, that other, more common measurements of wellbeing have problems possibly of larger proportions, such as the GDP per capita (see above) (Ng, 2008, p. 429)..

Below, the specific data for the HPI 2006 and 2009 is assessed, taking into consideration the above mentioned criteria.

HPI 2006

For the HPI in 2006, the majority of data comes from the World database of Happiness (Veenhoven, 2011). The HPI requires data for as many countries as possible, ideally for all. However, in the case of the first report and ranking released in 2006, the relevant survey had not been conducted for all countries. Thus, the authors of the HPI 2006 used other surveys also related to inquiring about happiness, but asking slightly different questions such as “*How often have you felt that you were unable to control the important things in your life?*” from the World health organization Survey, or “*In general would you say that you are satisfied with your life? Would you say that you are 1. Very satisfied, 2. Fairly satisfied, 3. Not very satisfied, 4. Not satisfied at all?*” from the Latino Barometer (Marks, et al, 2006, p. 48f). Asking a question, even with the intended same meaning in a different way or with different

wording and different answer possibilities (a score of 0 to 10 versus a score of 1 to 4) can, however, bias outcomes due to the above mentioned distorted response bias (Frey & Stutzer, 2002, p. 32).

Furthermore, for 62 countries, no data was available at all, and instead proxies such as life expectancy were used, running regressions with those (Marks, et al, 2006, p. 49f). While estimates were statistically validated, and authors used all available data on life satisfaction, NEF states themselves in their 2006 report the “need for more and better data” (Marks, et al., 2006, p. 45).

Thus, the HPI’s reliability may be at stake due to different wording in the surveys and the use of proxies.

HPI 2009

Life Satisfaction data for the HPI released in 2009 is considerably better: Authors used the same question (*All things considered, how satisfied are you with your life these days?*) for 112 countries. This was possible due to Gallup having included this question in their surveys over the last two years.

84 countries were surveyed by the World Values Survey (WVS) as in 2006, using the exact same question. While there was an overlap among both surveys for 68 countries, 16 additional countries could be taken from the WVS. Since outcomes were, however, not exactly the same (due to differences in samples reached and a different order of questions, since Gallup asks respondents a series of questions), NEF ran a linear regression with the WVS and 4 further variables as the independent variable, predicting 91% of Gallup’s life satisfaction. Thus, the relationship between the two was approximated which made the outcomes for the 16 countries from the WVS and the 112 countries from Gallup comparable (Abdallah, et al, 2009, p. 52).

A different question was used for 14 further countries, taken also from Gallup:

“Please imagine a ladder with steps numbered from 0 at the bottom to 10 at the top. Suppose we say that the top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time, assuming that the higher the step the better you feel

about your life, and the lower the step the worse you feel about it? Which step comes closest to the way you feel?" (Abdallah, et al., 2009, p. 53).

While this question correlates highly with the standard one above with $r = 0.83$, the authors also here ran a stepwise regression using additional variables and being able to predict 90% of the variance (Abdallah, et al, 2009, p. 53).

A ranking for 143 countries with better, but not perfect data, since distorted response bias may still be given to some extent, is thus available in the Happy Planet Report 2009.

While in the HPI 2009 consistency, validity and reliability are thus to some extent given (but important limitations remain due to approximation via post-hoc regression), issues with the comparability across nations may need to be considered. Since the HPI relies on a raking, biases here might distort it, and alternative measures of wellbeing may need to be applied to validate HPI outcomes.

The Ecological Footprint

In order to measure the Ecological Footprint (EF) of a country, the Global Footprint Network establishes so called *Ecological Footprint Accounts*. They use over 4000 data points to assess the given country's EF (Mathis Wackernagel et al., 2004, p. 2). The accounts consist of two parts: Ecological supply on the one hand and demand on nature on the other hand. The ecological supply is the biologically productive area which is needed for a nation's consumption and waste disposal. Existing technology and resource management are taken into account, when biologically productive area is measured (Wiedmann, Minx, Barrett, & Wackernagel, 2006, p. 29).

Overall, there are ca. 11.4 billion hectares productive areas covering ca. one quarter of the earth. 2.3 of those are of marine nature while 8.8 are land. Each of these hectares is standardized as to productivity, and thus becoming so called 'global hectares' (Monfreda, et al., 2004, p. 234f).

There are two techniques to calculate the EF of a nation: The component based method and the compound based method. The component based method sums up all relevant components of a population's resource consumption as well as waste production. There are inaccuracies to take into account for this method, such as lack of accurate and complete information about each product or the problem of double counting

The compound method on the other hand uses the aggregate national data, for instance the total amount of paper that is being used. This method may lack detail as it does not account for which type of paper is used for what (Mathis Wackernagel et al., 2005, p. 5f).

There are a number of important shortcomings to take into consideration. Possibly the greatest shortcoming is that there is a lack of data for some of humanity's demand upon natural resources. This may underestimate the true strain it puts on resources and/or overestimate biocapacity. Such errors can come, for instance, from underestimating long term effects on nature such as soil erosion or toxic releases into ecosystems (Schaefer, Luksch, Steinbach, Cabeca, & Hanauer, 2006, p. 8f). Due to the difficulty of calculating exact impacts, they are completely left out of EF calculations (Wackernagel, et al, 2005, p. 25f).

Such shortcomings may be classified as 'systematic errors'. It may be said that the EF thus does not calculate true impacts of consumption correctly, which may be particularly true for the difficult to measure overall energy consumption (Feng, 2002, p. 53).

Further possible shortcomings may be that the EF does not allocate responsibilities correctly, due to its complexity especially where trade is concerned, and thus may allocate EF's between producing and consuming countries incorrectly. For instance, bananas grown for export are counted as part of the importing country's EF, but river pollution may be more difficult to include (Herendeen, 2000, p. 358).

Data weaknesses may be a source of error as well. Thus, in local or regional areas, different calculation methods are often applied, questioning the comparability of the EF's on a local basis (Wiedmann, et al, 2006, p. 29f). Additionally, data may be less available or reliable, especially when considering data from poor countries. On the other hand, some environmental pressures may also not be accurately documented within the UN, which may distort the EF, relying partially on UN data (Monfreda, et al, 2004, p. 243).

Another point of concern is that the EF's use for policy makers is limited; one reason being that it does not provide a breakdown for different consumption goods or economic sectors (Wiedmann, et al, 2006, p. 29).

The above list is only an approximation of data problems and merits of the EF. Giving a full account would be out of the scope of this study. For a more comprehensive approach, see for example Wiedmann, et al, 2006, p. 28ff or Herendeen, 2000, p. 357ff.

Evaluating Indicators

Life Satisfaction

In this section, the question as to whether attempting to measure happiness makes sense on the broad scheme shall be explored.

Setting aside the data issues when measuring life satisfaction, as they have been dealt within the previous section, attempting to measure happiness may be important, since, as mentioned in chapter 3 already, what gets measured may get more attention from decision makers. It may make it easier to deal with it politically; to invest in it or to avoid it, depending on what it is that is being measured.

Measuring happiness may, in comparison to other indicators such as GDP per capita, be regarded as an attempt to measure ends – that is quality of life – and not merely potential means towards such an end. Measuring it may be able to set such an end on the political agenda. Of course, no citizen's happiness may be directly determined by policy makers, yet, a couple of interesting insights might be given to them from measuring it, for instance what does and what does not contribute to such an end (Frey & Stutzer, 2002, p. 12; Layard, 2003, p. 15f).

For instance, since income satisfaction depends largely on comparison, a world where everyone is poor may be preferable to many people to a world where they are less poor overall, but poorer in comparison to everyone else. This may also mean that an unequal raise in income may mean higher happiness for some, but only for a short time and lower happiness for many, possibly permanently. Overall utility in the given country may thus decrease, despite average income increasing (Rafael Di Tella & MacCulloch, 2008, p. 3).

Furthermore, measuring happiness may reveal important insights such as income increase not necessarily increasing happiness (R. Layard, 2010, p. 534). As of 2003, the World Values Survey (WVS) estimates that increasing average income raises happiness only in countries with low to medium average income levels (Helliwell, Huang, & Harris, 2009, p. 5). In fact, there is evidence that income gains only further life satisfaction for incomes up to \$15.000 per capita in PPP (Layard, 2003, p. 17). This is in part because aspirations rise with income gain and people adapt to their new circumstances (Samman, 2007, 29f).

If it is a goal of decision makers to raise the standard of living of individuals, a focus on raising income and/or economic growth rates alone may need to be rethought given such insights. They may raise question of efficiency of political efforts focussing on increasing income alone. It may also raise the question of what really matters: being able to afford the next round of new products presented in advertisement, whose effect wears off quickly or considering longer lasting issues such as hobbies, family, etc. (Layard, 2010, p. 535). On a broader scale, issues such as the level of direct democracy or social cohesion may need to be addressed (Frey & Stutzer, 2002, p. 139).

Furthermore, measuring happiness may highlight what economic performance, particularly GDP per capita is not able to capture, for instance: Satisfaction as well as benefit to society from non-monetary reciprocity and work sectors such as voluntary work (Schimmel, 2009, p. 100).

One possible argument against measuring happiness may be that happiness or rather a disposition for happiness is, in part dependent on one's genes, or other set factors, such as personality traits or cultural factors. Such explanations can be summarized in the so called *set point theory* (Veenhoven, 2009, p. 9). While this is true to a certain extent, the level of happiness does also depend on one's context, which may be influenced. To illustrate by analogy: Body height is a question of heredity, yet, on average, people nowadays are taller than 200 years ago, due to differing circumstances such as secure nutrition (Layard, 2003, p. 20).

Additionally, humans may compare themselves against a socially constructed standard of the good life. This is the so called '*comparison theory*', arguing against measuring happiness (Veenhoven, 2009, p. 12). However, empirical studies show, as mentioned above, that material success/income augmentation is relatively weakly correlated with life satisfaction. Although this may be due to context shift, such a weak correlation is not true for achievements with family for instance. Also, married people are on average happier than single people despite their new frame of comparison, and this difference holds over time (Veenhoven, 2009, p. 13f).

There are a number of serious points of criticism concerning measuring Life Satisfaction for policy making purposes. One serious issue with the idea of measuring happiness may be that

measuring happiness may conflict with other values such as justice, duty, or equality (Samman, 2007, p. 33).

It may therefore be used to cover up other serious policy issues. Thus for instance, it has been claimed that Bhutan introduced its measuring programme *Gross National Happiness (GNH)*, a scheme attempting to measure progress in different dimensions, such as environmental sustainability, education, health, living standards, governance, community vitality and psychological wellbeing (Bates, 2009, p. 11) in a time of economic decline and high youth employment, to demonstrate the country's healthy state and cover up such problems (Whitecross, 2011, pc). It may be important to bear in mind however, that GNH is a relatively broad set of indicators such that in the case of this measurement, covering up negative developments may not be as easy.

Britain's conservative Tory party considered the HPI for their country, possibly to cover hard social security cuts (see for instance Sky News, 2008) and so did Sarkozy in France (see for instance The Ecologist, 2009). Veenhoven finds no correlation between income inequality, state welfare and happiness (Veenhoven 2005, p. 61) – this may again point towards happiness indices covering up important questions of justice. It may need to be considered that careful survey design is particularly important with a topic as sensitive as happiness (see the section on data above) – research that is not conducted rigorously may easily be 'pushed' towards desired results.

While ca. 75% of happiness variance among nations may be explained by objective quality of life factors (Veenhoven, 2009, p. 14), it may not be possible to cover up very serious problems a country may have such as severe and constant human rights violation, war, very poor health care or constant persecution. An unpopular decision or more minor crisis may be covered up, however, especially when using a survey that had been conducted prior or just after that measure so that it did not yet take into account its full effect. In short, measuring happiness could undermine democratic processes, especially, if ideologies from which a part of the population derives satisfaction but which is harmful to other parts are at the forefront (i.e. fascism) (Samman, 2007, p.33).

Samman argues to use Life Satisfaction happiness indices mainly as complementing and informative indices of what constitutes a good life, but should not play the decisive policy role. On a micro level however, it can be indicative of what matters to people. It may not be government's role to make citizens happy, but they can influence things like the level of

direct democracy and further social cohesion, both of which are positively correlated with life satisfaction. In those respects, Life Satisfaction research could complement particular anti-poverty policies (Samman, 2007, p.36ff).

A further important issue to take into consideration when looking at the question of happiness is Layard's point that competitiveness and rankings are unhealthy (Layard, 2003, p. 12). If that is indeed so, should another ranking according to happiness really be created? Or might this spark an unhealthy competition for the happiest nation, motivating people to state they are happy when their competition for happiness actually makes them unhappy or when circumstances are in fact worsening, just to move up in the ranking?

There are more issues to be considered when assessing how happy a nation or an individual is as this is an arguably complex topic. Due to scope limitations, not all important dimensions and issues can be given here. For a relatively comprehensive overview see for instance Frey & Stutzer 2002, p. 1ff, Layard 2010, p. 534f, Veenhoven 2009, p. 1ff or Samman 2007, p. 4ff.

The Ecological Footprint

Since it does not have as many philosophical implications as the question of (measuring) happiness, most of the EF's strengths and weaknesses have already been mentioned in the section assessing data the EF relies on.

Its core weakness is probably its tendency to underreport humanity's demand on the earth's biocapacity as well as general data weaknesses.

Its core strength on the other hand, may be its relatively illustrative approach: Measuring resource demand in global hectares allows for the image of the 'number of earths' required for sustaining current consumption patterns.

Its other core strength, especially when looking at individual nations' EF's is its illustration of the inequality of resource consumption on the earth, as shown in the country example above in the section describing the EF. This may link back to questions of poverty, fairness and finally to distribution and thus to the question of who has the power to decide who consumes what as well as the implications this has for the survival of a majority of people: Practically all so called developed nations have a footprint which, if all nations acquired it, would call for between two and five earths instead of one (Malta is the Western country with the lowest EF,

‘only’ needing two earths), while most countries of the so called developing world would need less than one earth or maximum two earths (Abdallah, et al, p. 61). And this has not yet touched upon the question of leaving space for non-human life on earth.

Evaluating the Index in Total

In order to assess the validity and necessity of the HPI (while not considering the Post-Development Discourse yet) all points of criticism as well as merit from the individual indicators comprising the index need to be taken into account.

Measuring life satisfaction to a certain extend meets criteria of validity, reliability and consistency if surveys are designed carefully and data is available for all nations. To a limited extent this is the case for the HPI in 2009, although the effect of post-hoc regressions need to be considered. Data availability should however be extended to having the same survey question for all nations included in the ranking. The main issues life satisfaction faces are the intercomparability across nations, respondents’ bias due to different wording as well the abuse of happiness measures to cover up current problems a country may have: despite alleged correlation with other objective criteria it should be validated taking other measures into account.

The main issue with the Ecological Footprint is its tendency to overrate the availability of the biocapacity on earth, along with problems of data availability, especially for poor countries. On the other hand, it is illustrative in measuring resource demand in terms of global hectares and it sheds light on the inequality of resource use across nations.

While Life Expectancy is regarded as a good measure of progress since it depends on a number of conditions which are expected to influence quality of life, its main issue is its omission of quality of life which is remedied by the Life Satisfaction component.

In order to evaluate the HPI over all, taking the individual points of criticism and merit into account may not be enough. It is also important to assess whether mixing those three indicators together to form a composite index is valid and necessary.

As mentioned in the description, the merit of the HPI lies in including an environmental criterion as part of the index, making it in a sense more holistic, since social and economic development may in the end rely upon resources available. Furthermore, instead of including an economic criterion such as income, it looks at one which considers ends and not means, namely Life Satisfaction as well as Life Expectancy.

However, Life Satisfaction and particularly the Ecological Footprint are in themselves quite complex, either through the philosophical implications (Life Satisfaction) or due to their calculation methods and what they take into account (EF). Each brings with itself certain imprecision, data shortcomings and other concerns mentioned above.

Including them in one composite index may make this one index particularly complex. While the ranking and thoughts behind it are relatively easy to understand, going deeper and attempting to unravel problems and merits is relatively complicated.

Furthermore, the problems each single indicator brings with it may be multiplied due to their combination. It is therefore particularly important to look for sources of uncertainty, imprecision and data problems when considering the HPI, as well as bearing in mind some of the broader issues such as overreporting of biocapacity, intercomparability among nations or using Life Satisfaction to cover up other problematic policy fields or decisions. In fact, authors of the Ecological Footprint mention particularly that each parameter for a sustainable, good life should be considered separately so that one is not achieved at the expense of another:

“There are many important parameters for building a sustainable world, each of which need to be illuminated separately since there is no magic formula that defines ‘optimal trade-offs’ among them. For sustainability, we need to achieve both ecological health as well as social well-being, and achieving one at the expense of the other is inherently unsustainable” (Mathis Wackernagel, et al., 2005, p. 28).

This is an important point of criticism in my mind. Yet, the very idea of the HPI is to show in a single index, whether a country is capable of providing a good life for its citizens without requiring more resources than available. This idea may have considerable validity and be also quite necessary in a world where income augmentation still seems to have priority. It may be vital to consider the outcomes of each of the HPI’s components and not merely the number arising from combining all three. This is particularly important when comparing outcomes for the top and bottom 5 countries between the HPI in 2006 and 2009 (see table 7 & 8 below). Results vary somewhat (there is an overlap of 3 countries) and it may be assumed that this is in part due to the improved data quality where Life Satisfaction is concerned (see section 4.3.2 above).

On another note, it might be worthwhile considering what would happen if a country, especially one with economic importance such as the UK, would consider only the HPI as a measure of progress and not the GDP per Capita anymore. While this might be highly

beneficial for happiness and ecology, the country might lose influence on the international agenda, where a nation's importance is still mainly assessed according to its economic performance. Thus, implementing an alternative measure of progress faces the social dilemma that no single country, especially if it is economically strong, will implement it on its own, if it cannot be sure that the others will follow.

After having given an overview over current criticism regarding the HPI and its dimensions, the following section will evaluate this index in the light of the particular theoretical approach chosen for this paper, the Post Development Theory.

4.3.3 Evaluating the HPI in the Light Post-Development Theory

Sachs argues that the promises that economic development will spread across global space, improve human destiny and continue for ever in time have turned stale. The aspiration of catching up with the rich has ended in a blunder of planetary proportions. Economic growth has often failed to reach its objective which was to alleviate the burden of the poor, the wealth generated rarely trickled down to the poor (Sachs, 2000, p. 13f).

Ecology and poverty both call for limits of development. Peace with nature requires peace in economic warfare (Sachs, 1993, p. 7).

According to Sachs, models of well-being that leave only a light footprint on earth are needed. There will be no equity without ecology in the 21st century (Sachs, 2010d, p. xii).

However, the root of ecological problems is, according to Sachs, the Western competitive productivism. Environmental problems are a civilizational problem – namely that the current level of productive performance in the North is not viable, especially if repeated by the rest of the world. Yet these problems are treated as technical issues. Rather, what would be needed are fundamental debates on how society should live and what, how much and in what way it should produce and consume. Instead, Western aspirations are taken for granted in the entire world. This notion of development refers to Escobar's description of the development discourse which becomes self-enforcing and so all-encompassing that alternatives become unimaginable.

It could be argued that the HPI is attempting to do this: It goes beyond the notion of economic development and started a debate about the way society should live, how and what to consume, by showing that if this aspect was considered, Western countries would not necessarily lead ranking tables any longer.

It includes an ecological criterion, thus challenging common notions of development and the criterion of Life Satisfaction, thus aiming to let people speak for themselves about their quality of life, allowing for a certain degree of diversity of livelihoods, as Sachs mentioned.

It is an index, however, composed of indicators. Thus, also with the HPI, choices as to which aspects to include and which to leave out are made. For instance, instead of the Ecological Footprint, the Genuine Progress Indicator may have been used, thereby including an economic component. Thus, simply by being what it is, the HPI does display a certain degree of arbitrariness and suggests a way to live a life and to form a society.

Furthermore, it does produce a ranking. Hence, it does suggest that some countries overall fare better than others, possibly assuming one way towards progress and thus a form of coloniality, as Sachs and Escobar have pointed out.

Yet, it includes a subjective criterion where the people themselves may express their views to a certain extent instead of being subjected to seemingly neutral measurement. This may qualify for the index to go beyond development, in Escobar's sense:

In order to go beyond development, it is important to single it out as encompassing cultural space and to separate oneself from it by perceiving in it in new form (Escobar, 1995, p. 6).

In a way, the HPI may lead to perceiving development in a new form, namely through including an ecological criterion, highlighting the environmentally destructive potential of 'Western' development.

To go not only beyond alternative modernities but to alternatives to modernity may be possible by a network of local histories. Furthermore it is vital to refract modernity through the lens of coloniality, thus unfreezing the potential for thinking about the constitution of alternative local and regional worlds (Escobar, 2008, p. 167f).

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the lense of coloniality, thus unfreezing the potential for thinking about the constitution of alternative local and regional worlds (Escobar, 2008, p. 167f).

Including Life Satisfaction may be an indicator, that this index is seeking what Escobar would call alternatives to modernities. However, the ranking it produces may be evidence that this is not the case. It may, however, be safe to say, that the HPI at least goes beyond development through its original approach, the inclusion of Life Satisfaction and the Ecological Footprint as well as through challenging the common notion of development where Western nations are found on top.

Western hegemony leaves its imprint not only on economy and ecology, but on minds as well. In order to decolonize minds, it is vital to break with 'development' as a habit of thought.

A reconceptualization is vital. Thus, for instance, it will not be possible to reconceptualize equity without recovering the diversity of prosperity. Equity needs to be delinked from economic growth and relinked to community- and culture-based notions of well-being. Also, according to Sachs, a search for less material notions of prosperity that make room for dimensions of self-reliance, community, art and spirituality are needed (Sachs, 2010d).

It could be argued that through including Life Satisfaction as a criterion, the HPI includes less material and more diverse notions of prosperity and helps 'decolonizing the mind' in Sachs' sense.

Sachs gives three ideas for a politics that advances: Regeneration, which calls for actualising the particular image of good society which is present in each culture, instead of an ideal progress and a common direction; unilateral self-restraint, which means that each country chooses their own path without economic or environmental burdens being pushed onto others, instead of interdependent growth; and the dialogue of civilizations, which refers to a search of peaceful and sustainable coexistence along with self-examination for each culture (Sachs, 1993, p. 17).

While the HPI does include different images of the good society through Life Satisfaction and includes the call for self-restraint through the Ecological Footprint, it does point to a common direction through the produced ranking. However, at the same time it is this ranking which questions traditional notions of development by showing that with different criteria, different nations come out as being on top.

The next sections summarize findings for the HPI and address the original research question posed at the beginning of this paper – the question of the validity and necessity of this index.

4.3.4 Validity and Necessity of the Happy Planet Index

As with the two previous indices studied, the validity of the HPI depends upon whether it meets general claims to an indicator (see section 3.1), what theoretical context it is evaluated within (see section 2.2), what the policy aim (see section 3.2) is and what it claims to measure and be.

The Index is superficially simple and understandable, but once looked at from a closer angle, it is relatively complex, including a dimension with many philosophical implications and another one which is a relatively complex index itself (the EF). It thus meets the general indicator criteria only to a limited extent.

If looked at from the theoretical angle of enhancing economic growth, it is probably not valid since it does not include any income or other economic dimension. If it is evaluated from the angle of development thought needing to be flexible and include many dimensions, it is more likely to be so, since Life Satisfaction correlates with many other dimensions.

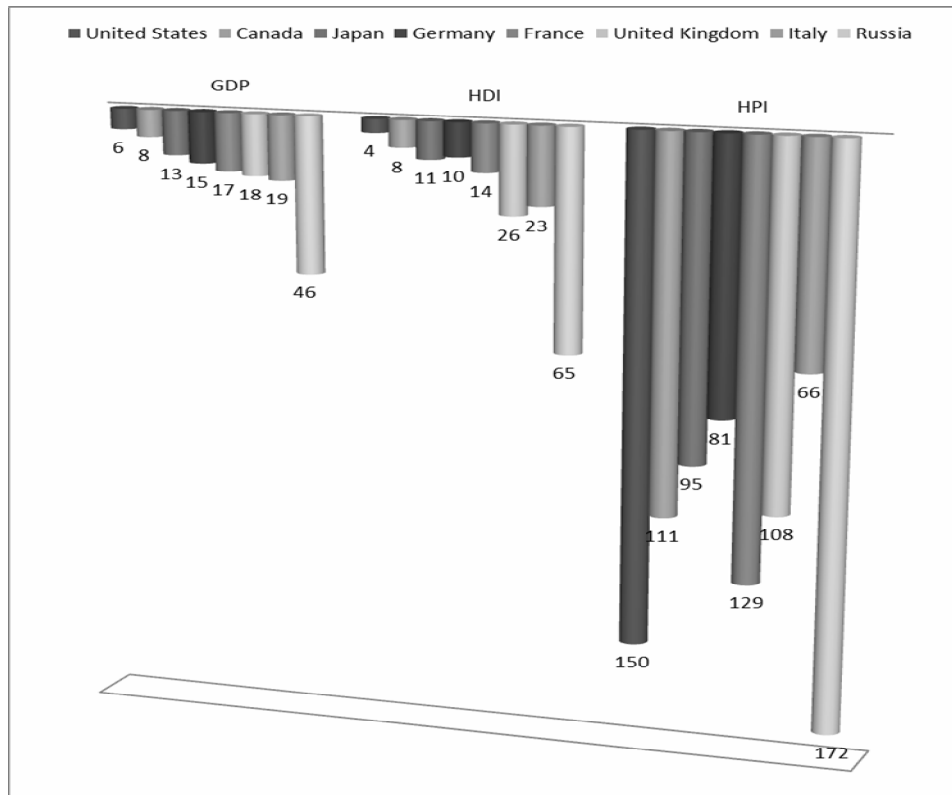
If it is to measure whether the planet is happy, the answer may be partially yes, since Life Satisfaction as well as an ecological criterion is included. However, the EF is, as mentioned before, a rather conservative index in that it omits long term damage to ecosystems such as soil erosion or permanent biodiversity loss. Furthermore, its notion of ‘one earth’ for use excludes leaving space for non-human life on earth.

If its claim is to measure happiness, the answer is, again, partially yes, if data limitations and international comparison limitations of measuring happiness are taken into account.

If its claim is to measure development, it faces similar problems as the other two indices, albeit to a lesser extent, in the author’s opinion: Even when including an individual and broad notion such as Life Satisfaction, the index does not cover all dimensions development may have, particularly when taking in account the diversity of development called upon by Escobar and Sachs. Life Satisfaction does not correlate with everything and consequently is not a substitute for everything. Additionally, correlation must not be confused with causation.

Of course, as mentioned before, no index can cover all different dimensions of development and the diversity this concept possesses and remain an index. Thus, it might be said that the HPI faces these challenges not because of the way it is composed but simply because it exists. If its claim is to start a debate about what development is and where humanity is headed to if following the Western path, it is the author's opinion, that the index is fully successful. It sparked initial debate and continues to do so: Whenever reading reports or rankings, one can hardly escape the question of whether our 'development' is really a positive one. The graph below highlights this: G8 countries are compared according to their rank in GDP per capita (nom.), HDI, and HPI. The shorter the bars are, the higher is the given country's rank. While G8 countries do well in GDP per capita and, with the exception of the Russian Federation, also in HDI, this is far from true in the HPI, mainly due to their high EF.

Figure 6: G8 countries compared for GDP 2010 (nom.), HDI 2010 & HPI 2009



Source: Design by author, according to data from World Bank 2011a; UNDP 2010, p. 143ff; Abdallah et al 2009, p. 61.

As to the necessity, as with the two cases before, this depends upon who it might be necessary for: For decision makers it might be an interesting and highly necessary warning, however, apart from some country considering it as an additional index, it does not seem to be taken up on a grand scale to re-consider development.

For reconsidering development as well as for including the peoples' voice, it may be highly necessary. Yet, it is not the first attempt to do so, and if considering that current notions of development do not seem to change radically, it is not certain whether the index succeeded – this does, however, not unconditionally question its necessity. Rather, it may highlight the strength of the development discourse as pointed out by Escobar and Sachs.

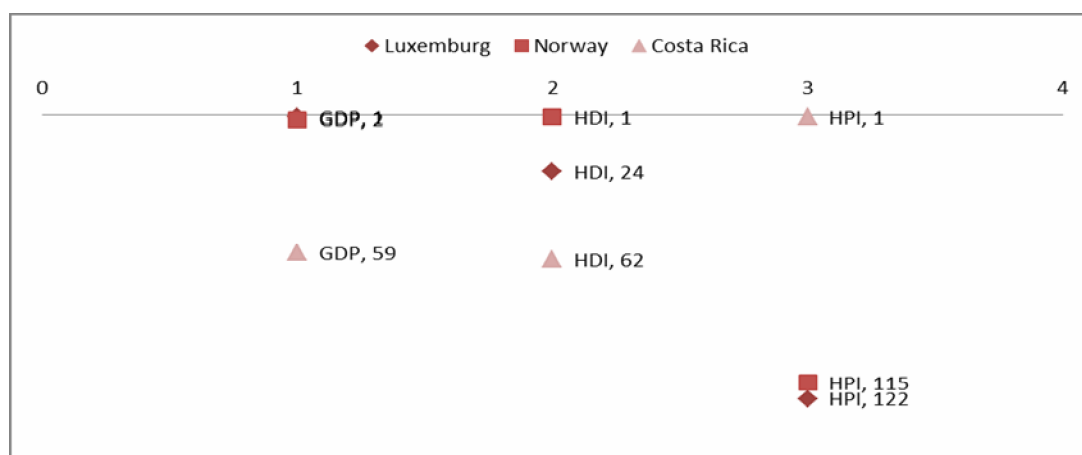
5. Conclusion

This paper evaluated indices according to their data and dimensions, but specifically in the light of Post Development Theory. The theoretical approach chosen highlighted that the legitimacy, the validity and necessity of an index can vary depending on the theory within which it is seen. Post Development Theory would probably look very critical upon both GDP per Capita and even the HDI, although the latter is viewed as legitimate among public, media and policy makers and other theoretical approaches such as the one by Jeffrey Sachs with his book on 'The End of Poverty' may view it as highly necessary. But even the HPI, simply by being an index and producing a ranking may be viewed as critical by representatives of Post Development Theory. Such an approach hence highlighted that indices are not necessarily neutral having validity at all times, but do so only within particular mind sets.

This theoretical approach also highlighted the arbitrariness indices can have through the inclusion of certain dimensions, exclusion of others and their tendency to standardize, equalize and homogenize, to produce 'the norm' and make it necessary for everyone who differs from it to be 'normalized'. Some of this is highlighted by the fact that different countries have different outcomes for different indices; hence their status of developed or developing may change. This is particularly true for the inclusion or exclusion of an ecological dimension into an index. Due to unsustainable consumption patterns particularly in many Western countries, such a criterion may change notions of developed and underdeveloped.

In the graph below for instance the three countries that are number one in one of the three indices analysed in depth in this paper are compared as to their ranks in the other two indices. While the difference between GDP per capita (nom.) and HDI are given but rather moderate, the differences between GDP per capita and HPI and even between HDI and HPI are relatively big: Costa Rica would move from a country of medium development to the top of the ladder and the opposite is true for Norway and Luxemburg.

Figure 7: 3 countries compared for GDP 2010 (nom.), HDI 2010 & HPI



Source: Design by author, according to data from World Bank 2011a; UNDP 2010, p. 143ff; Abdallah et al 2009, p. 61.

Indices' potential for arbitrariness is further highlighted by their political dimensions: As shown in chapter 3, indices may be used as tools and justification for aid allocation and choice of partner countries. Such a role may have been increased through pressure for aid effectiveness and increased ownership by partner countries by the PD.

Development is complex. As has been shown throughout the dissertation, in particular through approaches by Escobar and Sachs, it has been and continues to be used, standardized and pressed into frameworks, theories, indices and numbers. And yet, it continues to mean different things throughout the world. Indices that simplify, standardize, homogenize, appear neutral and objective and yet have more arbitrary elements within them than is immediately visible (which may make them dangerous tools of power), do not help with that. Even, if they go beyond pure economic development, even if they claim to advance development as freedom, and even if they include indicators that have the West appear in a critical light and give the world a chance to express its subjective feeling of what it means to lead a satisfying life. The dilemma a development index faces here is the requirement for it to be inherently simple (otherwise, it might cease to be an index) and thus to work with averages and quantifications on the one hand, while at the same time attempting to measure and grasp something highly complex successfully on the other hand. Such a dilemma may be almost impossible to overcome for any index and its developers may need to choose between the two.

Yet, the last mentioned index, the Happy Planet Index, can be regarded as the one most likely to have the potential to go beyond development, to show not only alternative developments (as the HDI may do), but alternatives to development – due to the subjectivity included in it and due to its potentially explosive results – the West is no longer on top of the ranking.

Development indices – Are they valid and necessary?

Development indices may be valid where we adhere to their respective ‘era of development thought’ well as within the general development discourse – development of a large part of the world is needed: GDP per capita at the emergence of ‘development’ where it was economic growth and industrialization, HDI as the attempt to go beyond this and to incorporate more dimensions when the great, often generalizing development approaches that called for sacrifice of freedom etc. in the name of development had failed and the HPI as an index of a new era, attempting to focus on ends, not means, to include well-being as well as ecological sustainability, as new concepts to be included into development thought.

Some indices may paint alternative ways of development from the perspective of the time of its emergence– for instance the HDI, contrary to GDP per Capita. Some may even show alternatives to development – such as the HPI with its emphasis on ecology and subjective well-being, moving away from standardized, seemingly objective criteria with which a country is to be assessed.

Validity when remaining within the development discourse of deeming development necessary depends strongly on data quality and on the quality of indicators chosen, as well as on whether or not the claim meets the potential and outcome of the index. Validity is achieved only to a very limited extent for GDP per capita (where income augmentation, but not where general progress is concerned).

It is achieved to a certain extent for the HDI if its claim is to go beyond GDP per capita measurement and to measure certain social aspects, but not if its claim is indeed to measure human development. Furthermore, a number of data limitations and formula revisions need to be taken into account.

It is achieved for the HPI if its claim is to spark a debate about what development means and where we are headed to if continuing along the path of Western development, but only to a certain extent if its claim is to measure ‘development’ in its complexity. Furthermore, several data and other issues when measuring happiness and the EF need to be considered.

Once outside the development discourse as painted by the Post Development Theory, it is difficult for any index that produces a ranking, to lead the way to alternatives to development – for the ranking indicates an evolutionary scale – countries on the top (with most development indices and indicators these are Western countries) show the way, the rest are to follow.

Are development indices necessary to measure development and progress? This depends upon which kind of development they aim to measure. Since trends seem to indicate that statistics and numbers may gain importance for decision making, it is certainly necessary to carefully choose and assess relevant indicators, or even to choose a ‘lesser evil’ or a ‘better’ index – the HDI over GDP for capita for instance. Moving within the development framework, these tools are also necessary for aiding decision making.

Development indices and indicators are necessary if we continue in the tradition of believing in data and statistics as neutral tools – for then they may show failure or success of a certain development measure such as literacy rate, may serve as helpful tool when deciding upon aid allocation and indicate what notion of development is in use in a given country or region. They are furthermore necessary because only what matters gets measures – and what gets measured matters as long as we believe in the neutrality of the measurement. They may highlight success of certain policy measures and point towards problematic areas and unsuccessful policies. Thus, it may be satisfying to a certain extent that Zimbabwe, having been ruled by a dictator for decades, comes out at the bottom of both HDI and HPI.

Once we try to move beyond the idea of development, to find alternatives to development as Escobar and Sachs suggest, the question remains whether development indices are necessary, useful or rather are harmful to this process. Indices are tools for standardization and streamlining – even the HPI produces a ranking, although it falls out of line and may not be regarded as such a strong tool of strengthening the development discourse as GDP per Capita or even the HDI.

Thus, the original question of whether development indices are valid and necessary or tools of power (asymmetries) and homogenization can be answered with yes and no: Yes, if we remain inside the development discourse, adhere to the development idea, to the idea of some parts of the world having to catch up in one way or the other and others leading the way, if we

believe in the explanatory power of data and statistics. Yes, also, since there may be a genuine need to measure single aspects of development such as Life Expectancy, to highlight the effects of such problems as HIV/AIDS. Yes also, since what gets measured does have a higher chance of getting addressed and thus what measures matters.

Yes even to a certain extent if we move outside the development discourse if the index in question questions this very discourse as the HPI may be doing with its extraordinary ranking outcomes.

No, if the aim is to move beyond the idea of development as an evolutionary, inevitable and identical process that all have to follow – for the idea behind this concept is to have many forms of development, many forms of beliefs, cultures, languages, ways of perceiving the world and ideas of what a good life is.

6. Outlook

Further study would be necessary regarding the impact of development indices on development cooperation. What power does each index have over the allocation of funds? There are some studies available, but it would be interesting to see how, for instance, aid flows changed/did not change with data revisions and thus differences in ranking outcomes of the HDI.

Very interesting and necessary would be a media and meta-synthesis of the reflection about development indices. During my research, I encountered many studies on indices, development of new, ultimate indices, and sophisticated statistical measures. The handling of these indices by academia but also media should provide interesting insights into the trust placed in them. Of particular interest would be to implement a study on the reactions to the release of the Happy Planet Index in 2006 – many forms of media, newspapers, radio and Blogs in particular commented on it. The surprise, sometimes it even seemed, the scandal was great given that the common pattern of Western nations at top places seemed to be broken, and that instead countries like Vanuatu (of which barely anyone seemed to have ever heard), Colombia or Costa Rica inhabited the top places. It might reveal the self-image of the West as on top of the social evolution and the difficulty to let go of this idea.

A media analysis might also provide interesting insights where the importance of the different development indices and indicators in relation to one another is concerned: For a long time

there have been many critical voices concerning, for instances, economic growth and GDP per capita as a development measure. Yet they continue to play a vital role where political decisions in the national as well as international sphere are concerned. This was last visible during the world financial crisis where governments appeared to be obsessed with getting economic growth rates up again. It would be interesting to study the trends of media and political attention to GDP per Capita and other indices and how they correlate/do not correlate with current events in society.

Furthermore, it might be interesting to assess whether in a globalized world where national governments appear to have less and less steering power, indices have any function left at all. How are they to be put to use if one main function is to compare nations with one another and these very nations continue to lose importance?

Finally, it might be important to see a study critically reflect on the positive potential of development indices. For instance that indices may be able to measure parts of development, may be able to measure whether a framework for a decent life is given. Most things have two sides. Thus, indices may have a potential, they may be able to benefit humankind, particularly if used with caution and the recognition that they are not neutral tools but have emerged within a particular theoretical and historical context.

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Appendix A

Abstract in English

Background: Measuring development or progress is increasingly important: Problems that get measured have a higher chance of getting attention and thus getting addressed.

Development Indices are tools with which development efforts are justified, and through which development itself is defined.

To the best knowledge of the author, the particular scientific contribution of this paper lies in it being the first attempt to look at the validity and necessity of the idea of measuring development and the neutrality of the chosen indices both through a literature review criticizing data and dimensions included as well as a specific theory lense, namely Post Development Theory. Additionally, it is the first attempt to compare the three chosen different development indices with one another through this theoretical approach and highlight through this the different development notion each represent as well as their potential for arbitrariness by having included different development dimensions and the different development statuses of nations that follows from such a choice.

Method: This research is purely theoretical. It relies on literature analysis combined with a case study approach. Following a general overview over the history of development thought, and –indices as well as claims and ways for using them, three development indices are chosen and evaluated in depth: GDP per Capita, the Human Development Index (HDI) and the Happy Planet Index (HPI). They are assessed according to the quality of their data, according to the dimensions/indicators they consist of as well as an indicator in total. Especially, they are assessed within the theoretical framework chosen for this paper.

This theoretical framework consists in Post Development Theory and the theories of Arturo Escobar and Wolfgang Sachs in particular. This theoretical approach has been chosen due to its particularly critical attitude towards the concept of ‘development’. Exposing core tools of this concept to such scrutiny may therefore highlight their shortcomings but also there strengths, if even such a critical theoretical approach should find little fault with them.

Results: Validity and necessity of the indices evaluated in general depend upon the theoretical lens, their claim and upon who and what they are supposed to be necessary for. When evaluated within the theoretical framework, particularly GDP per Capita is found to

fortify development as homogenization. Additionally, if looking at the index' claim of measuring progress in general, this index has only very limited validity or necessity. When evaluated within the theoretical framework, the HDI has some degree of validity and necessity since it helped shape a broader notion of development. It does, however, have homogenizing elements to it in that it is composed of indicators which standardize what health, education and wealth are. Furthermore, it produces a ranking, indicating, there is one 'evolutionary' way towards progress. Its validity is also questioned by data quality shortcomings.

The HPI also has some degree of validity and particularly necessity as it kindled a debate about notions of development and questioned the 'Western' path of development. There are some data limitations where Life Satisfaction and the Ecological Footprint are concerned.

Conclusion: Development indices by and large move within and fortify the 'development discourse' as described by Escobar. There are, however, differences as to their validity and necessity between them, which depend on theoretical approach and policy aims among others. Measuring development in its entirety may not be valid as it is too diverse and complex to measure with a single index, but measuring a part of it may have a certain degree of validity if the results are treated with the necessary caution. Development indices which highlight problematic aspects throughout the world, not merely in so called developing nations are especially necessary.

Abstract in German

Hintergrund: Entwicklung oder Fortschritt zu messen gewinnt zunehmend an Bedeutung. Problemgebiete die gemessen werden haben eine höhere Wahrscheinlichkeit, Aufmerksamkeit auf sich zu ziehen und gelöst zu werden. Entwicklungsindizes sind Werkzeuge, durch welche Entwicklungsbemühungen gerechtfertigt werden und durch welche Entwicklung selbst definiert wird.

Nach bestem Wissen der Autorin liegt der besondere wissenschaftliche Beitrag der vorliegenden Arbeit darin, dass sie den erste Versuch darstellt, nicht nur das Datenmaterial von Entwicklungsindizes zu evaluieren, sondern die Idee Entwicklung zu messen an sich durch die Sichtweise der Post Development Theory zu evaluieren und in Frage zu stellen. Es ist der erste Versuch, Entwicklungsindikatoren durch die spezifisch Sichtweise der Post Development Theory zu betrachten und hierdurch hervorzuheben das Validität und Notwendigkeit von Entwicklungsindizes auch von dem jeweiligen theoretischen Standpunkt

abhängt. Außerdem ist es weiterhin der erste Versuch, drei unterschiedliche Entwicklungsindizes durch den Blickwinkel dieser Theorie zu betrachten und miteinander zu vergleichen und hierdurch deren Potential für Willkürlichkeit hervorzuheben, aufgrund der Wahlmöglichkeiten was das Einbeziehen oder Ausschließen unterschiedlicher Entwicklungsdimensionen angeht und der daraus folgenden unterschiedlichen Entwicklungsstadien verschiedener Länder.

Methodik: Die vorliegende Arbeit basiert auf rein theoretischer Forschung. Sie stützt sich auf eine Literaturanalyse sowie Fallstudien. Nach einem allgemeinen Überblick über Ideengeschichte der Entwicklungstheorie, sowie Ansprüche und Verwendung von diesen werden drei Entwicklungsindizes ausgewählt und tiefer gehend evaluiert: das BIP pro Kopf, der sog. ‚Human Development Index‘ (HDI) und der sog. ‚Happy Planet Index‘ (HDIPI). Diese Indizes werden beurteilt anhand der Qualität ihres Datenmaterials, der Dimensionen/Indikatoren welche sie beinhalten, sowie als Index insgesamt. Vor allen Dingen aber werden sie evaluiert anhand des für diese Arbeit ausgewählten theoretischen Rahmens. Der theoretische Rahmen besteht in der sog. ‚Post Development Theory‘ und speziell den Theorien von Arturo Escobar und Wolfgang Sachs. Dieser theoretische Ansatz wurde ausgewählt, da er eine besonders kritische Haltung zu dem Konzept ‚Entwicklung‘ beinhaltet. Wenn Kernwerkzeuge dieses Konzepts einem solch kritischen Ansatz ausgesetzt werden, können deren Schwächen, sowie Stärken evtl. besonders gut hervorgehoben werden.

Resultate: Validität und Notwendigkeit der hier evaluierten Indizes hängen von der spezifischen theoretischen Sichtweise, deren eigenem Anspruch sowie davon für wen und für was sie notwendig sein sollen ab.

Wenn innerhalb des Entwicklungsdiskurses with von Escobar und Sachs dargestellt bewertet, stellt sich besonders BIP pro Kopf als den Entwicklungsdiskurs bestärkend dar. Weiterhin hat dieser Index generell wenig Validität oder Notwendigkeit, da er oft als Messinstrument von generellem Fortschritt dargestellt wird, diesem Anspruch aber kaum gerecht werden kann. Wenn der HDI innerhalb des theoretischen Rahmens evaluiert wird, so besitzt er einen gewissen Grad an Validität und Notwendigkeit, da er dazu beitrug, eine weitere Fassung von Entwicklung als bloßen ökonomischen Fortschritt zu kreieren. Auch dieser Index besitzt jedoch einige homogenisierende Elemente, da er aus Indikatoren besteht, welche Bildung, Gesundheit und Reichtum standardisieren. Weiterhin kann er seinem eigenen Anspruch, menschliche Entwicklung zu messen nicht gerecht werden. Außerdem produziert er ein

Ranking welches indiziert, dass es nur eine ‚Evolution‘ hin zu mehr Entwicklungsfortschritt gibt. Was Datenmaterial angeht, so kann Qualität und Verfügbarkeit nicht immer garantiert werden.

Auch der HPI hat einem gewissen Grad an Validität und besonders Notwendigkeit da er eine Debatte über Konzepte von Entwicklung entfacht und den westlichen Entwicklungsweg in Frage gestellt hat. Einige Einschränkungen was Datenmaterial bei Lebenszufriedenheit und Ökologischem Fußabdruck angeht bestehen jedoch.

Fazit: Entwicklungsindizes bewegen sich im Allgemeinen innerhalb des Entwicklungsdiskurses wie von Escobar beschrieben und untermauern diesen. Es gibt jedoch Unterschiede was deren Validität und Notwendigkeit angeht. Validität und Notwendigkeit hängen weiterhin von theoretischem Rahmen und politischer Absicht ab. Entwicklung in ihrer Gesamtheit zu messen hat kaum Validität, da sie zu komplex und divers ist um sie mit einem einzigen Index zu messen. Teile von ihr zu messen hat jedoch möglicherweise einen gewissen Grad an Validität wenn die entsprechenden Resultate mit der notwendigen Vorsicht gehandhabt werden.

Entwicklungsindikatoren welche problematische Aspekte in der ganzen Welt, und nicht nur in den so genannten Entwicklungsländern hervorheben sind besonders notwendig.

Appendix B

Rankings – GDP per Capita

Table 1a: Ranking GDP per capita 2006-2010

	1991-1995	1996-1999	1991-1995	1996-2000	2001-2005	2006-2010	
Country name	2006	2007	2008	2009	2010		
Luxembourg	90,032	106,902	118,841	106,252	108,921		
Norway	72,250	82,294	93,587	78,409	84,840		
Switzerland	52,276	57,490	65,699	63,525	66,934		
Denmark	50,462	57,021	62,157	55,933	55,988		
Sweden	43,949	50,558	52,731	43,406	48,832		
United States	44,663	46,406	46,971	45,745	47,184		
Netherlands	41,459	47,771	53,106	48,068	47,159		
Canada	39,162	43,185	45,003	39,599	46,148		
Ireland	52,220	59,489	59,573	49,738	45,497		
Austria	38,919	44,850	49,739	45,555	44,863		
Finland	39,458	46,505	50,905	44,577	44,522		
Singapore	33,019	36,645	39,136	36,758	43,867		
Japan	34,148	34,264	38,212	39,456	43,137		
Belgium	37,638	43,161	47,187	43,640	42,969		
Germany	35,429	40,468	44,264	40,659	40,509		
Iceland	54,813	65,566	53,129	37,972	39,679		
France	35,558	40,460	44,117	40,663	39,460		
United Kingdom	40,335	46,092	43,286	35,163	36,100		
Italy	31,614	35,641	38,382	35,073	33,917		
Hong Kong SAR, China	27,699	29,900	30,865	29,882	31,758		
Spain	27,989	32,130	34,988	31,891	30,542		
Israel	20,676	23,257	27,652	26,102	28,504		
Greece	23,777	27,767	30,884	28,936	26,934		
Slovenia	19,409	23,445	27,033	24,101	23,267		
Bahamas, The	21,217	21,997	21,872	20,916	21,985		
Portugal	18,996	21,845	23,716	22,030	21,473		
Korea, Rep.	19,707	21,653	19,162	17,110	20,757		
Equatorial Guinea	15,346	19,528	27,816	17,944	19,998		
Czech Republic	13,887	16,858	20,729	18,137	18,257		
Slovak Republic	12,809	15,608	18,212	16,174	16,386		
Saudi Arabia	14,381	15,091	18,203	13,901	15,836		
Trinidad and Tobago	13,912	16,398	20,385	14,684	15,206		
Estonia	12,359	15,938	17,541	14,239	13,939		
Croatia	11,229	13,372	15,767	14,323	13,754		
Venezuela, RB	6,788	8,243	11,138	11,490	13,451		
Hungary	11,199	13,713	15,485	12,847	13,031		
Poland	8,958	11,157	13,886	11,288	12,271		

Uruguay	5,974	7,183	9,351	9,364	11,996	
Chile	8,912	9,879	10,166	9,487	11,888	
Barbados	11,772	12,551	13,485	13,181	11,718	
Antigua and Barbuda	11,899	13,445	13,850	12,502	11,442	
Lithuania	8,865	11,584	14,071	11,034	10,933	
Seychelles	11,440	11,983	10,591	9,028	10,825	
Brazil	5,793	7,197	8,628	8,251	10,710	
Latvia	8,713	12,638	14,858	11,476	10,705	
Russian Federation	6,947	9,146	11,700	8,615	10,440	
Turkey	7,687	9,246	10,298	8,554	10,106	
St. Kitts and Nevis	9,780	10,172	11,157	10,168	10,038	
Lebanon	5,476	6,060	7,219	8,321	9,262	
Mexico	8,831	9,485	9,909	7,880	9,166	
Argentina	5,486	6,624	8,226	7,665	9,124	
Kazakhstan	5,292	6,772	8,514	7,241	8,764	
Gabon	6,832	8,128	10,020	7,411	8,643	
Malaysia	5,887	6,900	8,066	6,909	8,373	
Palau	7,826	8,166	8,226	8,095	8,288	
Panama	5,202	5,907	6,752	6,956	7,614	
Mauritius	5,193	6,181	7,598	6,951	7,593	
Romania	5,681	7,856	9,300	7,500	7,538	
Costa Rica	5,141	5,899	6,560	6,369	7,419	
Botswana	5,921	6,421	6,892	5,790	7,403	
South Africa	5,468	5,930	5,642	5,733	7,275	
Montenegro	4,299	5,842	7,183	6,569	6,340	
Bulgaria	4,313	5,498	6,798	6,403	6,325	
Colombia	3,726	4,676	5,436	5,166	6,225	
Grenada	5,478	5,904	6,541	5,906	6,009	
Belarus	3,798	4,667	6,328	5,183	5,765	
Dominica	4,595	5,032	5,493	5,532	5,649	
Azerbaijan	2,473	3,851	5,279	4,808	5,647	
Serbia	3,943	5,336	6,647	5,690	5,366	
St. Lucia	5,580	5,690	5,793	5,545	5,356	
Namibia	3,767	4,079	4,075	4,096	5,330	
Peru	3,312	3,807	4,456	4,412	5,291	
Dominican Republic	3,825	4,334	4,708	4,756	5,195	
Jamaica	4,502	4,819	5,255	4,693	5,179	
St. Vincent and the Grenadines	4,571	5,092	5,348	5,357	5,137	
Maldives	3,057	3,474	4,097	4,230	4,685	

Maldives	3,057	3,474	4,097	4,230	4,685	
Thailand	3,078	3,643	3,993	3,838	4,613	
Jordan	2,826	3,138	3,922	4,242	4,560	
Algeria	3,509	4,005	4,967	4,022	4,495	
Bosnia and Herzegovina	3,241	4,029	4,902	4,523	4,491	
Macedonia, FYR	3,119	3,984	4,791	4,510	4,425	
Angola	2,655	3,449	4,667	4,069	4,423	
China	2,069	2,651	3,414	3,749	4,393	
Tunisia	3,057	3,484	3,954	4,169	4,199	
Turkmenistan	2,140	2,606	3,460	3,710	4,180	
Belize	4,025	4,099	4,218	4,056	4,153	
Ecuador	3,058	3,286	3,856	3,648	4,073	
Albania	2,893	3,377	4,076	3,773	3,678	
El Salvador	3,071	3,340	3,607	3,425	3,519	
Fiji	3,747	4,046	4,226	3,314	3,497	
Tonga	2,903	2,983	3,382	3,150	3,435	
Cape Verde	2,316	2,756	3,181	3,228	3,323	
Samoa	2,443	2,721	3,184	2,722	3,087	
Kosovo	2,203	2,620	3,143	3,011	3,080	
Swaziland	2,389	2,603	2,466	2,513	3,073	
Vanuatu	2,069	2,449	2,716	2,635	3,042	
Ukraine	2,303	3,069	3,899	2,545	3,007	
Armenia	2,080	2,995	3,787	2,769	2,996	
Indonesia	1,586	1,859	2,172	2,272	2,946	
Guyana	1,949	2,320	2,558	2,690	2,945	
Congo, Rep.	2,131	2,236	3,073	2,431	2,943	
Syrian Arab Republic	1,767	2,099	2,678	2,692	2,891	
Marshall Islands	2,770	2,877	2,874	2,862	2,883	
Guatemala	2,319	2,554	2,859	2,685	2,863	
Paraguay	1,544	1,997	2,708	2,245	2,862	
Morocco	2,106	2,389	2,793	2,842	2,808	
Tuvalu	1,656	1,873	2,341	2,610	2,704	
Egypt, Arab Rep.	1,422	1,696	2,079	2,371	2,699	
Georgia	1,761	2,318	2,919	2,441	2,620	
Micronesia, Fed. Sts.	2,289	2,323	2,372	2,498	2,588	
Iraq	1,585	1,946	2,867	2,097	2,565	
Sri Lanka	1,409	1,596	1,989	2,035	2,375	
Mongolia	1,314	1,614	2,108	1,690	2,207	
Philippines	1,403	1,685	1,925	1,836	2,140	
Bhutan	1,331	1,737	1,793	1,772	2,088	

Honduras	1,556	1,731	1,913	1,922	2,026	
Bolivia	1,230	1,386	1,734	1,774	1,993	
Moldova	951	1,231	1,696	1,526	1,631	
Kiribati	1,173	1,345	1,373	1,306	1,519	
India	857	1,105	1,065	1,195	1,477	
Sudan	924	1,153	1,401	1,286	1,425	
Uzbekistan	643	830	1,022	1,182	1,384	
Papua New Guinea	897	990	1,223	1,181	1,382	
Ghana	920	1,085	1,226	1,098	1,283	
Solomon Islands	946	1,181	1,266	1,147	1,261	
Zambia	911	957	1,183	1,006	1,253	
Nigeria	1,025	1,129	1,375	1,091	1,222	
Lao PDR	599	719	913	997	1,208	
Vietnam	731	844	1,061	1,129	1,191	
Sao Tome and Principe	801	912	1,069	1,169	1,190	
Cote d'Ivoire	948	1,062	1,233	1,191	1,154	
Cameroon	1,000	1,127	1,265	1,157	1,143	
Nicaragua	952	1,018	1,131	1,088	1,132	
Mauritania	862	883	1,089	896	1,051	
Senegal	840	988	1,121	1,056	1,042	

Senegal	840	988	1,121	1,056	1,042	
Pakistan	789	871	979	950	1,007	
Lesotho	678	751	752	800	982	
Kyrgyz Republic	546	726	974	881	860	
Tajikistan	434	563	771	734	820	
Cambodia	538	632	749	748	802	
Kenya	616	725	781	744	775	
Benin	602	684	800	772	750	
Comoros	610	685	761	748	736	
Chad	605	676	784	625	676	
Bangladesh	435	475	547	608	673	
Haiti	515	621	658	657	671	
Timor-Leste	315	375	461	544	623	
Mali	432	510	604	601	602	
Zimbabwe	415	402	355	468	595	
Guinea-Bissau	415	485	583	562	580	
Burkina Faso	395	449	519	509	536	
Rwanda	330	385	471	510	530	
Tanzania	368	420	502	503	527	
Nepal	326	362	435	438	524	

Togo	398	446	548	535	523	
Uganda	340	393	461	488	509	
Gambia, The	329	409	502	436	467	
Central African Republic	361	408	468	459	457	
Guinea	307	449	395	427	452	
Madagascar	299	387	481	422	421	
Mozambique	333	368	443	428	410	
Eritrea	261	275	279	364	403	
Ethiopia	200	252	335	394	358	
Niger	271	308	372	351	358	
Malawi	236	254	291	327	343	
Sierra Leone	267	304	348	323	325	
Liberia	185	211	230	229	247	
Congo, Dem. Rep.	145	164	187	175	199	
Burundi	123	127	147	163	192	
Isle of Man	42,649	50,191				
Bahrain	19,540	19,955	20,813	17,609		
New Zealand	26,421	32,712	27,599	29,352		
Korea, Dem. Rep.						
Libya	9,584	11,921	15,150	9,957		
Somalia						
Macao SAR, China	28,810	36,777	41,593	40,919		
Mayotte						
Djibouti	933	1,010	1,148	1,203		
South Sudan						
Myanmar						
Guam						
Iran, Islamic Rep.	3,158	4,004	4,678	4,526		
West Bank and Gaza						
Brunei Darussalam	30,975	32,443	37,414	27,390		
Monaco	132,234	169,270	186,243	172,676		
Andorra	35,349	39,875	44,952			
Cyprus	23,848	27,853	31,992	31,298		
Cuba	4,682	5,201	5,565			
St. Martin (French part)						
Sint Maarten (Dutch part)						
Malta	15,900	18,452	20,423	19,326		
New Caledonia						
San Marino	47,820	54,428	60,895			
Faeroe Islands	40,642	46,904	49,650	45,206		

Suriname	4,223	4,742	5,951	6,255		
Northern Mariana Islands						
Kuwait	43,191	46,867	58,384	41,365		
Turks and Caicos Islands						
Aruba						
Cayman Islands						
Afghanistan	251	308	362			
United Arab Emirates	35,022	38,399	42,108	33,183		
Bermuda	84,442	91,574	94,516	88,747		
American Samoa						
Qatar	61,836	68,538	79,303	61,532		
Liechtenstein	113,981	130,504	138,775	134,915		
Puerto Rico						
Curacao						
French Polynesia						
Virgin Islands (U.S.)						
Australia	36,203	40,660	48,348	42,131		
Yemen, Rep.	896	987	1,190	1,130		
Oman	14,777	16,360	22,968	17,280		
Greenland	30,620	37,517	30,883	22,508		

Source: (The World Bank, 2011a).

Rankings – HDI

Table 2a: Ranking HDI 2010

HDI rank	Human Development Index (HDI) value ^a	Life expectancy at birth (years)	Mean years of schooling (years)	Expected years of schooling (years)	Gross national income (GNI) per capita (PPP 2008 \$)	GNI per capita rank minus HDI rank	Nonincome HDI value
	2010	2010	2010	2010 ^b	2010	2010	2010
VERY HIGH HUMAN DEVELOPMENT							
1 Norway	0.938	81.0	12.6	17.3	58,810	2	0.954
2 Australia	0.937	81.9	12.0	20.5	38,692	11	0.989
3 New Zealand	0.907	80.6	12.5	19.7	25,438	30	0.979
4 United States	0.902	79.6	12.4	15.7	47,094	5	0.917
5 Ireland	0.895	80.3	11.6	17.9	33,078	20	0.936
6 Liechtenstein	0.891	79.6 ^c	10.3 ^d	14.8	81,011 ^{e,f}	-5	0.861
7 Netherlands	0.890	80.3	11.2	16.7	40,658	4	0.911
8 Canada	0.888	81.0	11.5	16.0	38,668	6	0.913
9 Sweden	0.885	81.3	11.6	15.6	36,936	8	0.911
10 Germany	0.885	80.2	12.2	15.6	35,308	9	0.915
11 Japan	0.884	83.2	11.5	15.1	34,692	11	0.915
12 Korea, Republic of ^g	0.877	79.8	11.6	16.8	29,518	16	0.918
13 Switzerland	0.874	82.2	10.3	15.5	39,849	-1	0.889
14 France	0.872	81.6	10.4	16.1	34,341	9	0.898
15 Israel	0.872	81.2	11.9	15.6	27,831	14	0.916
16 Finland	0.871	80.1	10.3	17.1	33,872	8	0.897
17 Iceland	0.869	82.1	10.4	18.2	22,917	20	0.928
18 Belgium	0.867	80.3	10.6	15.9	34,873	3	0.888
19 Denmark	0.866	78.7	10.3	16.9	36,404	-1	0.883
20 Spain	0.863	81.3	10.4	16.4	29,661	6	0.897
21 Hong Kong, China (SAR)	0.862	82.5	10.0	13.8	45,090	-11	0.860
22 Greece	0.855	79.7	10.5	16.5	27,580	8	0.890
23 Italy	0.854	81.4	9.7	16.3	29,619	4	0.882
24 Luxembourg	0.852	79.9	10.1	13.3	51,109	-18	0.836
25 Austria	0.851	80.4	9.8	15.0	37,056	-9	0.859
26 United Kingdom	0.849	79.8	9.5	15.9	35,087	-6	0.860
27 Singapore	0.846	80.7	8.8	14.4 ^h	48,893	-19	0.831
28 Czech Republic	0.841	76.9	12.3	15.2	22,678	10	0.886
29 Slovenia	0.828	78.8	9.0	16.7	25,857	3	0.853
30 Andorra	0.824	80.8 ^c	10.4 ⁱ	11.5	38,056 ^{j,k}	-15	0.817
31 Slovakia	0.818	75.1	11.6	14.9	21,658	12	0.854
32 United Arab Emirates	0.815	77.7	9.2	11.5	58,006	-28	0.774
33 Malta	0.815	80.0	9.9	14.4	21,004 ^l	11	0.850
34 Estonia	0.812	73.7	12.0	15.8	17,168	13	0.864
35 Cyprus	0.810	80.0	9.9	13.8	21,962	6	0.840
36 Hungary	0.805	73.9	11.7	15.3	17,472	10	0.851
37 Brunei Darussalam	0.805	77.4	7.5	14.0	49,915	-30	0.769
38 Qatar	0.803	76.0	7.3	12.7	79,426 ^m	-36	0.737
39 Bahrain	0.801	76.0	9.4	14.3	26,664	-8	0.809
40 Portugal	0.795	79.1	8.0	15.5	22,105	0	0.815
41 Poland	0.795	76.0	10.0	15.2	17,803	4	0.834
42 Barbados	0.788	77.7	9.3	13.4 ⁿ	21,673	0	0.806
HIGH HUMAN DEVELOPMENT							
43 Bahamas	0.784	74.4	11.1 ^{h,o}	11.6	25,201 ^p	-9	0.788
44 Lithuania	0.783	72.1	10.9	16.0	14,824	7	0.832
45 Chile	0.783	78.8	9.7	14.5	13,561	11	0.840
46 Argentina	0.775	75.7	9.3	15.5	14,603	6	0.821

47	Kuwait	0.771	77.9	6.1	12.5	55,719	-42	0.714
48	Latvia	0.769	73.0	10.4	15.4	12,944	13	0.822
49	Montenegro	0.769	74.6	10.6 ^h	14.4 ^h	12,491	16	0.825
50	Romania	0.767	73.2	10.6	14.8	12,844	13	0.820
51	Croatia	0.767	76.7	9.0	13.8	16,389	-2	0.798
52	Uruguay	0.765	76.7	8.4	15.7	13,808	3	0.810
53	Libyan Arab Jamahiriya	0.755	74.5	7.3	16.5	17,068	-5	0.775
54	Panama	0.755	76.0	9.4	13.5	13,347	4	0.796
55	Saudi Arabia	0.752	73.3	7.8	13.5	24,726	-20	0.742
56	Mexico	0.750	76.7	8.7	13.4	13,971	-3	0.785
57	Malaysia	0.744	74.7	9.5	12.5	13,927	-3	0.775
58	Bulgaria	0.743	73.7	9.9	13.7	11,139	10	0.795
59	Trinidad and Tobago	0.736	69.9	9.2	11.4	24,233	-23	0.719
60	Serbia	0.735	74.4	9.5	13.5	10,449	11	0.788
61	Belarus	0.732	69.6	9.3 ^h	14.6	12,926	1	0.763
62	Costa Rica	0.725	79.1	8.3	11.7	10,870	7	0.768
63	Peru	0.723	73.7	9.6	13.8	8,424	14	0.788
64	Albania	0.719	76.9	10.4	11.3	7,976	19	0.787
65	Russian Federation	0.719	67.2	8.8	14.1	15,258	-15	0.729
66	Kazakhstan	0.714	65.4	10.3	15.1	10,234	6	0.756
67	Azerbaijan	0.713	70.8	10.2 ^h	13.0	8,747	8	0.769
68	Bosnia and Herzegovina	0.710	75.5	8.7 ^h	13.0	8,222	12	0.771
69	Ukraine	0.710	68.6	11.3	14.6	6,535	20	0.794
70	Iran, Islamic Republic of	0.702	71.9	7.2	14.0	11,764	-3	0.725
71	The former Yugoslav Republic of Macedonia	0.701	74.5	8.2	12.3	9,487	3	0.742
72	Mauritius	0.701	72.1	7.2	13.0	13,344	-13	0.712
73	Brazil	0.699	72.9	7.2	13.8	10,607	-3	0.728
74	Georgia	0.698	72.0	12.1 ^h	12.6	4,902	26	0.805
75	Venezuela, Bolivarian Republic of	0.696	74.2	6.2	14.2	11,846	-9	0.716
76	Armenia	0.695	74.2	10.8	11.9	5,495	19	0.787
77	Ecuador	0.695	75.4	7.6	13.3	7,931	7	0.749
78	Belize	0.694	76.9	9.2	12.4	5,693	16	0.782
79	Colombia	0.689	73.4	7.4	13.3	8,589	-3	0.732
80	Jamaica	0.688	72.3	9.6	11.7	7,207	6	0.748
81	Tunisia	0.683	74.3	6.5	14.5	7,979	1	0.729
82	Jordan	0.681	73.1	8.6	13.1	5,956	10	0.755
83	Turkey	0.679	72.2	6.5	11.8	13,359	-26	0.679
84	Algeria	0.677	72.9	7.2	12.8	8,320	-6	0.716
85	Tonga	0.677	72.1	10.4	13.7	4,038	23	0.792

MEDIUM HUMAN DEVELOPMENT

86	Fiji	0.669	69.2	11.0	13.0	4,315	21	0.771
87	Turkmenistan	0.669	65.3	9.9 ^h	13.0 ^h	7,052	1	0.719
88	Dominican Republic	0.663	72.8	6.9	11.9	8,273	-9	0.695
89	China	0.663	73.5	7.5	11.4	7,258	-4	0.707
90	El Salvador	0.659	72.0	7.7	12.1	6,498	0	0.711
91	Sri Lanka	0.658	74.4	8.2	12.0	4,886	10	0.738
92	Thailand	0.654	69.3	6.6	13.5 ^h	8,001	-11	0.683
93	Gabon	0.648	61.3	7.5	12.7	12,747	-29	0.637
94	Suriname	0.646	69.4	7.2 ^h	12.0	7,093	-7	0.681
95	Bolivia, Plurinational State of	0.643	66.3	9.2	13.7	4,357	11	0.724
96	Paraguay	0.640	72.3	7.8	12.0	4,585	9	0.714
97	Philippines	0.638	72.3	8.7	11.5	4,002	12	0.726
98	Botswana	0.633	55.5	8.9	12.4	13,204	-38	0.613
99	Moldova, Republic of	0.623	68.9	9.7	12.0	3,149	19	0.729
100	Mongolia	0.622	67.3	8.3	13.5	3,619	12	0.710
101	Egypt	0.620	70.5	6.5	11.0	5,889	-8	0.657
102	Uzbekistan	0.617	68.2	10.0 ^h	11.5	3,085	17	0.721
103	Micronesia, Federated States of	0.614	69.0	8.8 ^h	11.7 ^h	3,266 ^h	13	0.709
104	Guyana	0.611	67.9	8.5	12.2	3,302	11	0.702

	Human Development Index (HDI) value ^a	Life expectancy at birth	Mean years of schooling	Expected years of schooling	Gross national income (GNI) per capita	GNI per capita rank minus HDI rank	Nonincome HDI value	
HDI rank		(years)	(years)	(years)	(PPP 2008 \$)			
	2010	2010	2010	2010 ^b	2010	2010	2010	
105	Namibia	0.606	62.1	7.4	11.8	6,323	-14	0.629
106	Honduras	0.604	72.6	6.5	11.4	3,750	5	0.676
107	Maldives	0.602	72.3	4.7	12.4	5,408	-11	0.636
108	Indonesia	0.600	71.5	5.7	12.7	3,957	2	0.663
109	Kyrgyzstan	0.598	68.4	9.3	12.6	2,291	17	0.726
110	South Africa	0.597	52.0	8.2	13.4	9,812	-37	0.581
111	Syrian Arab Republic	0.589	74.6	4.9	10.5 ^c	4,760	-9	0.627
112	Tajikistan	0.580	67.3	9.8	11.4	2,020	22	0.709
113	Viet Nam	0.572	74.9	5.5	10.4	2,995	7	0.646
114	Morocco	0.567	71.8	4.4	10.5	4,628	-10	0.594
115	Nicaragua	0.565	73.8	5.7	10.8	2,567	7	0.652
116	Guatemala	0.560	70.8	4.1	10.6	4,694	-13	0.583
117	Equatorial Guinea	0.538	51.0	5.4 ^{ba}	8.1	22,218	-78	0.454
118	Cape Verde	0.534	71.9	3.5 ^{ba}	11.2	3,306	-4	0.573
119	India	0.519	64.4	4.4	10.3	3,337	-6	0.549
120	Timor-Leste	0.502	62.1	2.8 ^{ba}	11.2	5,303	-23	0.485
121	Swaziland	0.498	47.0	7.1	10.3	5,132	-23	0.482
122	Lao People's Democratic Republic	0.497	65.9	4.6	9.2	2,321	3	0.548
123	Solomon Islands	0.494	67.0	4.5 ^{ba}	9.1	2,172	6	0.550
124	Cambodia	0.494	62.2	5.8	9.8	1,868	12	0.566
125	Pakistan	0.490	67.2	4.9	6.8	2,678	-4	0.523
126	Congo	0.489	53.9	5.9	9.3	3,258	-9	0.503
127	São Tomé and Príncipe	0.488	66.1	4.2 ^{ba}	10.2	1,918	8	0.553

LOW HUMAN DEVELOPMENT

128	Kenya	0.470	55.6	7.0	9.6	1,628	10	0.541
129	Bangladesh	0.469	66.9	4.8	8.1	1,587	12	0.543
130	Ghana	0.467	57.1	7.1	9.7	1,385	14	0.556
131	Cameroon	0.460	51.7	5.9	9.8	2,197	-3	0.493
132	Myanmar	0.451	62.7	4.0	9.2	1,596	8	0.511
133	Yemen	0.439	63.9	2.5	8.6	2,387	-9	0.453
134	Benin	0.435	62.3	3.5	9.2	1,499	8	0.491
135	Madagascar	0.435	61.2	5.2 ^{ba}	10.2	953	22	0.550
136	Mauritania	0.433	57.3	3.7	8.1	2,118	-5	0.454
137	Papua New Guinea	0.431	61.6	4.3	5.2	2,227	-10	0.447
138	Nepal	0.428	67.5	3.2	8.8	1,201	12	0.506
139	Togo	0.428	63.3	5.3	9.6	844	22	0.557
140	Comoros	0.428	66.2	2.8 ^{ba}	10.7	1,176	12	0.507
141	Lesotho	0.427	45.9	5.8	10.3	2,021	-8	0.448
142	Nigeria	0.423	48.4	5.0 ^{ba}	8.9	2,156	-12	0.436
143	Uganda	0.422	54.1	4.7	10.4	1,234	5	0.491
144	Senegal	0.411	56.2	3.5	7.5	1,816	-7	0.433
145	Haiti	0.404	61.7	4.9	6.8 ^a	949	13	0.493
146	Angola	0.403	48.1	4.4 ^{ba}	4.4	4,941	-47	0.353
147	Djibouti	0.402	56.1	3.8 ^{ba}	4.7	2,471	-24	0.394
148	Tanzania, United Republic of	0.398	56.9	5.1	5.3	1,344	-1	0.441
149	Côte d'Ivoire	0.397	58.4	3.3	6.3	1,625	-10	0.420
150	Zambia	0.395	47.3	6.5	7.2	1,359	-5	0.434
151	Gambia	0.390	56.6	2.8	8.6	1,358	-5	0.426
152	Rwanda	0.385	51.1	3.3	10.6	1,190	-1	0.432
153	Malawi	0.385	54.6	4.3	8.9	911	6	0.463
154	Sudan	0.379	58.9	2.9	4.4	2,051	-22	0.373
155	Afghanistan	0.349	44.6	3.3	8.0	1,419	-12	0.358
156	Guinea	0.340	58.9	1.6 ^{ba}	8.6	953	0	0.380
157	Ethiopia	0.328	56.1	1.5 ^{ba}	8.3	992	-2	0.357
158	Sierra Leone	0.317	48.2	2.9	7.2	809	4	0.360
159	Central African Republic	0.315	47.7	3.5	6.3	758	4	0.363
160	Mali	0.309	49.2	1.4	8.0	1,171	-7	0.312
161	Burkina Faso	0.305	53.7	1.3 ^{ba}	5.8	1,215	-12	0.303
162	Liberia	0.300	59.1	3.9	11.0	320	5	0.509
163	Chad	0.295	49.2	1.5 ^{ba}	6.0	1,067	-9	0.298
164	Guinea-Bissau	0.289	48.6	2.3 ^{ba}	9.1	538	1	0.362
165	Mozambique	0.284	48.4	1.2	8.2	854	-5	0.300
166	Burundi	0.282	51.4	2.7	9.6	402	0	0.400
167	Niger	0.261	52.5	1.4	4.3	675	-3	0.285
168	Congo, Democratic Republic of the	0.239	48.0	3.8	7.8	291	0	0.390
169	Zimbabwe	0.140	47.0	7.2	9.2	176	0	0.472

GDP per Capita in \$US, 2009. Source: (UNDP, 2010a, p. 143ff).

Rankings - HPI

Table 3a: Ranking HPI 20006

Countries in HPI rank order					Countries in HPI rank order				
	Life Sat	Life Exp	EF	HPI		Life Sat	Life Exp	EF	HPI
Reasonable ideal	8.2	82.0	1.5	83.5	Reasonable ideal	8.2	82.0	1.5	83.5
1. Vanuatu	7.4	68.6	1.1	68.2	90. Gambia	5.7	55.7	1.1	42.5
2. Colombia	7.2	72.4	1.3	67.2	91. Cambodia	5.6	56.2	1.1	42.2
3. Costa Rica	7.5	76.2	2.1	66.0	92. Albania	4.6	73.8	1.5	42.1
4. Dominica	7.3	75.6	1.8	64.5	93. Jordan	5.1	71.3	1.9	42.1
5. Panama	7.2	74.8	1.8	63.5	94. New Zealand	7.4	79.1	5.5	41.9
6. Cuba	6.3	77.3	1.4	61.9	95. Japan	6.2	82.0	4.3	41.7
7. Honduras	7.2	67.8	1.4	61.8	96. Congo	5.7	52.0	0.9	41.6
8. Guatemala	7.0	67.3	1.2	61.7	97. Egypt	4.8	69.8	1.5	41.6
9. El Salvador	6.6	70.9	1.2	61.7	98. Turkey	6.3	68.7	2.0	41.4
10. St. Vincent and the Grenadines	7.2	71.1	1.7	61.4	99. Denmark	8.2	77.2	6.4	41.4
11. St. Lucia	7.0	72.4	1.6	61.3	100. Brunei Darussalam	7.6	78.4	5.6	41.2
12. Vietnam	6.1	70.5	0.8	61.2	101. Georgia	4.1	70.5	0.8	41.2
13. Bhutan	7.6	62.9	1.3	61.1	102. Korea	5.8	77.0	3.4	41.1
14. Samoa (Western)	6.9	70.2	1.4	61.0	103. Bosnia and Herzegovina	6.1	74.2	2.3	41.0
15. Sri Lanka	6.1	74.0	1.1	60.3	104. Senegal	5.6	55.7	1.2	40.8
16. Antigua and Barbuda	7.4	73.9	2.3	59.2	105. Azerbaijan	4.9	66.0	1.5	40.7
17. Philippines	6.4	70.4	1.2	59.2	106. Gabon	6.2	54.5	1.7	40.5
18. Nicaragua	6.3	69.7	1.1	59.1	107. Libya	5.7	73.6	3.1	40.3
19. Kyrgyzstan	6.6	66.8	1.1	59.1	108. United Kingdom	7.1	78.4	5.4	40.3
20. Solomon Islands	6.9	62.3	1.0	58.9	109. Laos	5.4	54.7	1.0	40.3
21. Tunisia	6.4	73.3	1.4	58.9	110. Benin	5.4	54.0	1.0	40.1
22. São Tomé and Príncipe	6.7	63.0	1.0	57.9	111. Canada	7.6	80.0	6.4	39.8
23. Indonesia	6.6	66.8	1.2	57.9	112. Pakistan	4.3	63.0	0.7	39.4
24. Tonga	6.6	72.2	1.6	57.9	113. Ireland	7.6	77.7	6.2	39.4
25. Tajikistan	6.1	63.6	0.6	57.7	114. Poland	5.9	74.3	3.6	39.3
26. Venezuela	7.4	72.9	2.4	57.5	115. Norway	7.4	79.4	6.2	39.2
27. Dominican Republic	7.0	67.2	1.6	57.1	116. Macedonia	4.9	73.8	2.3	39.1
28. Guyana	7.2	63.1	1.5	56.6	117. Israel	6.7	79.7	5.3	39.1
29. St. Kitts and Nevis	7.4	70.0	2.3	56.1	118. Namibia	6.5	48.3	1.6	38.4
30. Seychelles	7.4	72.7	2.6	56.1	119. Sweden	7.7	80.2	7.0	38.2
31. China	6.3	71.6	1.5	56.0	120. Romania	6.2	71.3	2.7v	37.7
32. Thailand	6.5	70.0	1.6	55.4	121. Hungary	5.7	72.7	3.5	37.6
33. Peru	5.6	70.0	0.9	55.1	122. Guinea	6.1	53.7	1.0	37.4
34. Suriname	7.3	69.1	2.3	55.0	123. Finland	7.7	78.5	7.0	37.4
35. Yemen	6.2	60.6	0.7	55.0	124. Mauritania	5.3	62.7	1.1	37.3
36. Fiji	6.7	67.8	1.7	54.5	125. Kazakhstan	5.8	63.2	2.8	36.9
37. Morocco	5.6	69.7	0.9	54.4	126. Togo	4.9	54.3	0.9	36.9
38. Mexico	6.9	75.1	2.5	54.4	127. Kenya	5.6	47.2	0.9	36.7
39. Maldives	6.6	66.6	1.6	53.5	128. Czech Republic	6.4	75.6	5.0	36.6
40. Malta	7.5	76.4	3.5	53.3	129. France	6.6	79.5	5.8	36.4
41. Bangladesh	5.7	62.8	0.6	53.2	130. Armenia	3.7	71.5	1.0	36.1
42. Comoros	5.9	63.2	0.8	52.9	131. Singapore	6.9	78.7	6.2	36.1
43. Barbados	7.3	75.0	3.1	52.7	132. Slovakia	5.4	74.0	3.6	35.8
44. Malaysia	7.4	73.2	3.0	52.7	133. Greece	6.3	78.3	5.4	35.7
45. Palestine	5.4	72.5	1.1	52.6	134. Tanzania	5.5	46.0	0.9	35.1
46. Cape Verde	5.8	70.4	1.3	52.4	135. Guinea-Bissau	5.4	44.7	0.7	35.1
47. Argentina	6.8	74.5	2.6	52.2	136. Portugal	6.1	77.2	6.2	34.8
48. Timor-Leste	6.6	55.5	0.8	52.0	137. Eritrea	4.4	53.8	0.7	34.6
49. Belize	6.9	71.9	2.6	52.0	138. Bahrain	7.2	74.3	6.6	34.4
50. Trinidad and Tobago	6.9	69.9	2.3	51.9	139. Australia	7.3	80.3	7.7	34.1
51. Chile	6.5	77.9	2.6	51.3	140. Mali	5.3	47.9	1.1	33.7
52. Paraguay	6.5	71.0	2.2	51.1	141. Mozambique	5.4	41.9	0.7	33.0
53. Jamaica	7.0	70.8	2.6	51.0	142. Cameroon	5.1	45.8	0.9	32.8
54. Nepal	5.5	61.6	0.6	50.0	143. Djibouti	4.8	52.5	1.3	32.7
55. Mauritius	6.5	72.2	2.4	49.6	144. Ethiopia	4.7	47.6	0.7	32.5
56. Mongolia	6.7	64.0	1.9	49.6	145. Bulgaria	4.3	72.2	2.7	31.6
57. Uruguay	6.3	75.4	2.6	49.3	146. Nigeria	5.5	43.4	1.2	31.1
58. Ecuador	5.6	74.3	1.8	49.3	147. Moldova	3.8	57.7	1.2	31.1
59. Uzbekistan	6.4	66.5	1.9	49.2	148. Burkina Faso	4.7	47.5	1.1	30.1
60. Grenada	6.5	65.3	1.9	49.0	149. Lithuania	4.7	72.3	3.9	29.3
61. Austria	7.8	79.0	4.6	48.8	150. United States of America	7.4	77.4	9.5	28.8
62. India	5.4	63.3	0.8	48.7	151. Côte d'Ivoire	4.5	45.9	0.9	28.8
63. Brazil	6.3	70.5	2.2	48.6	152. Rwanda	4.4	43.9	0.7	28.3
64. Iceland	7.8	80.7	4.9	48.4	153. Sierra Leone	5.0	40.8	0.9	28.2
65. Switzerland	8.2	80.5	5.3	48.3	154. United Arab Emirates	7.4	78.0	9.9	28.2
66. Italy	6.9	80.1	3.8	48.3	155. Angola	4.8	40.8	0.8	27.6
67. Iran	6.0	70.4	2.1	47.2	156. South Africa	5.7	48.4	2.8	27.8
68. Ghana	6.2	58.8	1.1	47.0	157. Sudan	3.8	58.4	1.0	27.7
69. Bolivia	5.5	64.1	1.2	46.2	158. Uganda	4.7	47.3	1.5	27.7
70. Netherlands	7.5	78.4	4.7	46.0	159. Kuwait	7.2	78.9	9.8	27.7
71. Madagascar	5.8	55.4	0.8	46.0	160. Latvia	4.7	71.6	4.4	27.3

72. Cyprus	8.9	78.6	4.0	46.0	161. Niger	4.5	44.4	1.1	26.8
73. Algeria	5.2	71.1	1.5	45.9	162. Malawi	4.6	39.7	0.7	26.7
74. Luxembourg	7.6	78.5	4.8	45.6	163. Zambia	4.9	37.5	0.8	25.9
75. Bahamas	7.7	69.7	4.1	44.9	164. Central African Republic	4.9	36.3	1.1	25.8
76. Papua New Guinea	6.3	55.3	1.3	44.8	165. Belarus	4.0	68.1	3.2	25.8
77. Burma	5.3	60.2	0.9	44.6	166. Qatar	7.0	72.8	9.8	25.5
78. Belgium	7.3	78.9	4.9	44.0	167. Botswana	5.4	36.3	1.3	25.4
79. Slovenia	6.6	76.4	3.8	44.0	168. Chad	4.5	43.6	1.3	25.4
80. Oman	7.3	74.1	4.4	43.9	169. Turkmenistan	4.0	62.4	3.1	24.0
81. Germany	7.2	78.7	4.8	43.6	170. Equatorial Guinea	5.2	43.3	2.5	23.6
82. Croatia	5.9	75.0	2.9	43.7	171. Lesotho	4.3	36.3	0.6	23.1
83. Lebanon	5.6	72.0	2.3	43.6	172. Russia	4.3	65.3	4.4	22.8
84. Taiwan	6.6	78.1	3.9	43.4	173. Estonia	5.1	71.3	6.0	22.7
85. Haiti	5.5	51.6	0.5	43.3	174. Ukraine	3.6	66.1	3.3	22.2
86. Syria	5.1	73.3	1.9	43.2	175. Congo, Dem. Rep. of the	3.3	43.1	0.7	20.7
87. Spain	7.0	79.5	4.8	43.0	176. Burundi	3.0	43.8	0.7	19.0
88. Hong Kong	6.6	81.8	4.8	42.9	177. Swaziland	4.2	32.5	1.1	18.4
89. Saudi Arabia	7.3	71.8	4.4	42.7	178. Zimbabwe	3.5	36.9	1.0	16.8

Source: (Marks, Abdallah, Simms, &

Table 4a: Ranking HPI 2009

Countries in HPI rank	Sub-region	Life Exp	Life Sat	Footprint	HPI	Countries in HPI rank	Sub-region	Life Exp	Life Sat	Footprint	HPI
2050 target		87.0	8.0	1.7	89.0	2050 target		87.0	8.0	1.7	89.0
1. Costa Rica	1a	78.5	8.5	2.3	76.1	83. Turkey	3b	71.4	5.5	2.7	41.7
2. Dominican Republic	1a	71.5	7.6	1.5	71.8	84. Hong Kong	6b	81.9	7.2	5.2	41.6
3. Jamaica	1a	72.2	6.7	1.1	70.1	85. Azerbaijan	7a	67.1	5.3	2.2	41.2
4. Guatemala	1a	69.7	7.4	1.5	68.4	86. Lithuania	7b	72.5	5.8	3.2	40.9
5. Vietnam	6c	73.7	8.5	1.3	66.5	87. Djibouti	4b	53.9	5.7	1.5	40.4
6. Colombia	1b	72.3	7.3	1.8	66.1	88. Norway	2d	79.8	8.1	6.9	40.4
7. Cuba	1a	77.7	6.7	1.8	65.7	89. Canada	2b	80.3	8.0	2.1	39.4
8. El Salvador	1a	71.3	6.7	1.6	61.5	90. Hungary	7b	72.9	5.7	3.5	38.9
9. Brazil	1b	71.7	7.6	2.4	61.0	91. Kazakhstan	7a	65.9	6.1	3.4	38.5
10. Honduras	1a	69.4	7.0	1.8	61.0	92. Czech Republic	7b	75.9	6.9	6.4	38.3
11. Nicaragua	1a	71.9	7.1	2.0	60.5	93. Mauritania	4c	63.2	5.0	1.9	38.2
12. Egypt	3a	70.7	6.7	1.7	60.3	94. Iceland	2d	81.5	7.8	2.4	38.1
13. Saudi Arabia	3b	72.2	7.7	2.6	59.7	95. Ukraine	7c	67.7	5.3	2.7	38.1
14. Philippines	6c	71.0	8.5	0.9	59.0	96. Senegal	4c	62.3	4.5	1.4	38.0
15. Argentina	1b	74.8	7.1	2.5	59.0	97. Greece	2e	78.9	6.8	5.8	37.6
16. Indonesia	6c	69.7	5.7	0.9	58.9	98. Portugal	2e	77.7	5.9	4.4	37.5
17. Bhutan	5a	64.7	6.1	1.0	58.5	99. Uruguay	1c	75.9	6.8	6.5	37.2
18. Panama	1a	75.1	7.8	3.2	57.4	100. Ghana	4c	66.1	4.7	1.5	37.1
19. Laos	6c	63.2	6.2	1.1	57.3	101. Latvia	7b	72.0	5.4	3.5	36.7
20. China	6a	72.5	6.7	2.1	57.1	102. Australia	2a	80.9	7.9	7.8	36.6
21. Morocco	3a	70.4	5.6	1.1	56.8	103. New Zealand	2a	79.8	7.8	2.2	36.2
22. Sri Lanka	5a	71.6	5.8	1.0	56.5	104. Belarus	7c	68.7	5.8	3.9	35.7
23. Mexico	1a	75.6	7.7	3.4	55.6	105. Denmark	2d	77.9	8.1	8.0	35.5
24. Pakistan	5a	64.6	5.6	0.8	55.6	106. Mongolia	7a	65.9	5.7	3.5	35.0
25. Ecuador	1b	74.7	6.4	2.2	55.5	107. Malawi	4a	36.3	3.4	0.5	34.6
26. Jordan	3b	71.9	6.0	1.7	54.6	108. Russia	7c	65.0	5.9	3.7	34.5
27. Belize	1a	75.9	6.6	2.6	54.5	109. Chad	4b	50.8	5.4	1.7	34.3
28. Peru	1b	70.7	5.9	1.6	54.4	110. Lebanon	3b	71.5	4.7	3.1	33.6
29. Tunisia	3a	73.5	5.9	1.8	54.3	111. Macedonia	7b	73.8	5.5	4.6	33.7
30. Trinidad and Tobago	1a	69.2	6.7	2.1	54.2	112. Congo	4a	54.0	3.6	0.5	32.4
31. Bangladesh	5a	63.1	5.3	0.6	54.1	113. Madagascar	4a	58.4	3.7	1.1	31.5
32. Moldova	7b	68.4	5.7	1.2	54.1	114. United States of America	2b	77.9	7.9	9.4	30.7
33. Malaysia	6c	73.7	6.6	2.4	54.0	115. Nigeria	4c	48.8	4.8	1.3	30.5

33.	Malaysia	6c	73.7	5.8	2.4	54.0	115.	Nigeria	4c	48.5	4.8	1.3	30.3
34.	Tajikistan	7a	66.3	5.1	0.7	53.5	116.	Guinea	4c	54.5	4.0	1.3	30.3
35.	India	5a	63.7	5.5	0.9	53.0	117.	Uganda	4b	49.7	4.5	1.4	30.2
36.	Venezuela	1b	73.2	6.9	2.8	52.5	118.	South Africa	4a	50.6	5.0	2.1	29.7
37.	Nepal	5a	62.6	5.3	0.8	51.9	119.	Rwanda	4b	45.2	4.2	0.8	29.6
38.	Syria	3b	73.6	5.9	2.1	51.3	120.	Congo, Dem. Rep. of the	4a	45.6	3.9	0.6	29.0
39.	Burma	5a	60.8	5.9	1.1	51.2	121.	Sudan	4b	57.4	4.5	2.4	28.5
40.	Algeria	3a	71.7	5.6	1.7	51.2	122.	Luxembourg	2c	78.4	7.7	10.2	28.5
41.	Thailand	6c	69.6	6.3	2.1	50.9	123.	United Arab Emirates	3b	76.3	7.2	9.5	28.2
42.	Haiti	1a	66.5	5.2	0.5	50.8	124.	Ethiopia	4b	57.8	4.0	1.4	28.1
43.	Netherlands	2c	79.2	7.7	4.4	50.6	125.	Kenya	4b	52.1	3.7	1.1	27.6
44.	Malta	2e	79.1	7.1	3.8	50.4	126.	Cameroon	4c	49.8	3.9	1.3	27.2
45.	Uzbekistan	7a	66.8	6.0	1.6	50.1	127.	Zambia	4a	40.5	4.3	0.8	27.2
46.	Chile	1b	76.3	6.3	3.0	49.7	128.	Kuwait	3b	77.3	6.7	9.9	27.0
47.	Bolivia	1b	64.7	6.5	2.1	49.3	129.	Niger	4c	55.8	3.8	1.6	26.9
48.	Armenia	7a	71.7	5.0	1.4	48.3	130.	Angola	4a	41.7	4.3	0.9	26.8
49.	Singapore	6b	79.4	7.1	4.2	48.2	131.	Estonia	7b	71.2	5.6	8.3	26.4
50.	Yemen	3b	61.5	5.2	0.9	48.1	132.	Mali	4c	53.1	3.8	1.6	26.4
51.	Germany	2c	79.1	7.2	4.2	48.1	133.	Mozambique	4a	42.8	3.6	0.9	24.0
52.	Switzerland	2c	81.3	7.7	5.0	48.1	134.	Benin	4c	55.4	3.0	1.0	24.6
53.	Sweden	2d	80.5	7.9	5.1	48.0	135.	Togo	4c	57.8	2.6	0.8	23.3
54.	Albania	7b	76.2	5.5	2.2	47.9	136.	Sierra Leone	4c	41.6	3.8	0.8	23.1
55.	Paraguay	1b	71.3	6.9	3.2	47.8	137.	Central African Republic	4a	43.7	4.0	1.6	22.9
56.	Palestine	3b	72.9	5.0	1.5	47.7	138.	Burkina Faso	4c	51.4	3.6	2.0	22.4
57.	Austria	2c	79.4	7.8	5.0	47.7	139.	Burundi	4b	48.5	2.9	0.8	21.8
58.	Serbia	7b	73.6	6.0	2.6	47.6	140.	Namibia	4a	51.6	4.5	3.7	21.1
59.	Finland	2d	78.9	8.0	5.3	47.2	141.	Botswana	4a	49.1	4.7	3.6	20.9
60.	Croatia	7b	75.3	6.4	3.2	47.2	142.	Tanzania	4b	51.0	3.4	1.1	17.8
61.	Kyrgyzstan	7a	65.6	5.0	1.1	47.1	143.	Zimbabwe	4a	40.9	2.8	1.1	15.6
62.	Cyprus	2e	79.0	7.2	4.5	46.2							
63.	Guyana	1a	65.2	6.5	2.6	45.6							
64.	Belgium	2c	78.8	7.6	5.1	45.4							
65.	Bosnia and Herzegovina	7b	74.5	5.9	2.9	45.0							
66.	Slovenia	7b	77.4	7.0	4.5	44.5							
67.	Israel	3b	80.3	7.1	4.5	44.5							
68.	Korea	6b	77.9	6.3	3.7	44.4							
69.	Italy	2e	80.3	6.9	4.8	44.0							
70.	Romania	7b	71.9	5.9	2.9	43.9							
71.	France	2c	80.2	7.1	4.9	43.9							
72.	Georgia	7a	70.7	4.3	1.1	43.6							
73.	Slovakia	7b	74.2	6.1	3.3	43.5							
74.	United Kingdom	2c	79.0	7.4	5.3	43.3							
75.	Japan	6b	82.3	6.8	4.0	43.3							
76.	Spain	2e	80.5	7.6	5.7	43.2							
77.	Poland	7b	75.2	6.5	4.0	42.8							
78.	Ireland	2c	78.4	8.1	6.3	42.6							
79.	Iraq	3b	67.7	5.4	1.3	42.8							
80.	Cambodia	6c	58.0	4.9	0.9	42.3							
81.	Iran	3b	70.2	5.6	2.7	42.1							
82.	Bulgaria	7b	72.7	5.5	2.7	42.0							

HPI colour key:

All 3 components good



2 components good, 1 middling



1 component good and 2 middling



3 components middling



Any with 1 component poor



2 components poor, or 'blood red' footprint



For colour key of HPI components see Table 1, page 25.

Sub-region codes:

- 1a Central America, Mexico & Caribbean
- 1b South America
- 2a Australia & NZ
- 2b North America
- 2c Western Europe
- 2d Nordic Europe
- 2e Southern Europe
- 3a North Africa
- 3b Middle East / South West Asia
- 4a Southern & Central Africa
- 4b East Africa
- 4c West Africa
- 5a South Asia
- 5b China
- 5c Wealthy East Asia
- 5d South East Asia
- 7a Central Asia & Caucasus
- 7b Central & Eastern Europe
- 7c Russia, Ukraine & Belarus

Source: (Abdallah, Sam Thompson, Michaelson, Marks, & Steuer, 2009, p. 61).

Appendix C

Author's CV

Nora Hanna Steurer
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EDUCATION

- | | |
|--------------------------------|---|
| Sept. 2010 – Sept. 2011 | University of Oxford, Oxford
MSc Environmental Change and Management. Achieved distinction on dissertation (sustainable transport in Mexico City). |
| Oct. 2004 – March 2012 | University of Vienna, University of Bonn
Diplom International Development (Master & Bachelor combined), grade 1.3 (with distinction, expected). Double degree with economics (see below). |
| Oct. 2006 – June 2010 | University of Vienna, University of Cologne
B.A. Economics, grade 2.1. |
| Jan. 2000 - June 2003 | Heilwig Gymnasium (“Heilwig High School”), Hamburg
Abitur (German university entrance qualification). Average 1.5 (with distinction), third best of class of 2003. |
| Jan. 1999 - Jan. 2000 | Kodaikanal International School, Kodaikanal (India)
Placed on the “Principals’ List” for academic excellence. |

WORK EXPERIENCE

- | | |
|------------------------------|--|
| Oct. 2011 – Dec. 2011 | Transport Studies Unit, University of Oxford, Oxford
Research Assistant.
Successfully participated in writing proposals; independent researching and writing of academic paper on youth mobility & sustainability (publication forthcoming). |
| Aug. 2007- Aug. 2010 | UNEP/Wuppertal Institute Collaborating Centre on Sustainable Consumption and Production (CSCP), Wuppertal
Research assistant. Excellent knowledge and skill gains in the area of biodiversity and consumer behaviour, resource- and energy efficiency, development indicators EU policies and acquisition. Projects include: <ul style="list-style-type: none">• Organization of ‘The CSCP Biodiversity Shop’• Beyond GDP: Finding alternative indicators for the GDP• Manager of acquisition processes. |

- Preparation of UN and EU sustainability conferences.

April 2009-April 2010	Member of the executive board of oikos Cologne, Cologne Successfully co-organized of lecture series about sustainable development, panel discussions and workshops (oikos is a student society for sustainability: “Students for sustainable economics and management”).
June 2006 - Sept. 2006	UNEP/Wuppertal Institute Collaborating Centre on Sustainable Consumption and Production (CSCP), Wuppertal Three-month Internship. Successful participation in the project “Human Development through the Market”.
April 2006 - July 2007	United Nations, Vienna Consultant (Tour Guide). Acquisition of excellent communications skills and high degree of professionalism. Tours held for VIP (Ministers and Party members), tourists and school classes.
Feb. 2004 - Aug. 2004	ITEI (Instituto de Terapia e Investigación, Institute for Therapy and Investigation), La Paz (Bolivia) Internship with ITEI. Acquisition of intercultural sensitivity, interview skills and workshop organization.

PRIZES, SCHOLARSHIPS AND PUBLICATIONS

May 2011	oikos Anthology “Sustainability in Development Cooperation”, Co-publication of an academic paper ‘The sustainability discourse in Development Cooperation’ within the anthology.
May 2009	University of Vienna, Department of International Development, Institute for African Studies, Vienna Co-publication of an academic paper “Beloved Poverty, Abhorred Misery – Poverty in Christian Religion”.
Since March 2008	Heinrich-Böll-Stiftung (Heinrich-Böll-Foundation) Winner of a scholarship for excellence and social engagement.

EXTRACURRICULAR ACTIVITIES

Sept. 2009	World Resources Forum, Davos. Student Reporter as one of ten Student Reporters to cover the event.
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LANGUAGES & COMPUTER SKILLS

German	Native Speaker
English	Fluently written and spoken on a professional level (IELTS: 8.5/9)
Spanish	Fluently written and spoken
French	Working knowledge in writing and speaking (UN French-Certificate: Level 5/7)

Computer skills Proficiency in several software applications

INTERESTS

Swimming, rowing, singing in a choir, travelling, Greek drama & mythology.