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MASTER'S THESIS

**BEYOND GDP: HAPPINESS AS AN ALTERNATIVE**

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## INTRODUCTION

The 20<sup>th</sup> century has been a century of remarkable progress, but this progress was not equally shared across different parts of the world. Nevertheless, the free-market system seemed to work. Even places that did not have it, adopted it eventually. Thus, seriously questioning it, for policy making purposes, was not common. This system brought large increases in wealth and production. Its main goal is to maximize growth. This growth had to be measured somehow and for this purpose economist Simon Kuznets developed the gross domestic product measure, the infamous GDP.

However, even at its inception, its creator warned against misusing it as an indicator of welfare. Indeed, welfare does not always equal production, or GDP which we use to measure it. Economists have always known about GDP deficiencies, such as the fact that it does not account for externalities, gives no information on the income distribution and ignores unpaid work as if it would not exist. What they perhaps did not know was the gravity of these issues and how they would progress with a deeper entrenchment of strictly free market philosophies in our economies' policy making.

This (blind) faith in the free market system would be shaken, by exacerbated income distributions, class division, escalated pollution levels and climate change which today the International Panel for Climate Change attributes to human activity. The growing awareness of GDP as faulty has led to a movement called Beyond GDP, a term which took up after an EU conference in 2007. Given the rapid changes in some aspects that were previously perhaps negligible, Beyond GDP is growing in popularity and relevance. Given the potential benefits of following suit in the Beyond GDP movement timely and in the right way, my Master's thesis is about Beyond GDP and how to justify operationalizing it or improve it if it already is operational.

Since I have stated that this thesis will be exploring Beyond GDP, some words are needed to characterize it before we get to the problem description. Two things are characteristic for the Beyond GDP movement: i) offering alternative goals to growth and ii) transforming the current metrics by either supplementing or replacing them. The first has broadly produced two other goals: degrowth and happiness, where degrowth refers to scaling down growth prospects and pursuing lower growth figures in order to safeguard the environment, as well as general sustainability concerns, and happiness refers to general well-being. However, there are issues with both goals and measures in Beyond GDP which makes the whole movement rife with practicality issues in terms of policy making.

With regards to goals, at first glance, both alternative goals are problematic. Degrowth is most likely problematic for countries which are not yet advanced economies and thus cannot afford to scale down growth. The second is problematic because it is so subjective, which is why any proposal to place this as a goal for policy makers sounds well-intentioned, but impractical. However, the past two decades have witnessed a research boom in a field called

happiness economics, which is broadly divided upon two strands: i) characterizing happiness and ii) analyzing the pursuit of happiness. Sociological research says that there is potential here. Nevertheless, the Kingdom of Bhutan tried to target happiness and the attempt is regarded as a failure, as policy had not yet ensured basic needs before moving on to ensuring happiness as a general holistic concept. There is potential in happiness as a goal though, as it could unite both growth and degrowth as goals, as will be explained in continuation.

With regards to the alternative metrics, there is practically a proliferation of them. Indeed, many indices claim to represent true progress accurately as opposed to what the cold figures of GDP show. However, the problem with all these indices is that they treat progress as determined by several dimensions which matter equally for progress. It is not difficult to understand why this is the case, as if before too much importance was given to only one dimension such as GDP and the others neglected, the natural first response to correct this is to give equal importance to everything today. Another problem with these indices is that they assume that what constitutes progress is the same across countries.

Thus, although Beyond GDP originates from valid economic concerns for production and welfare (that it misrepresents them), it is simply not there yet when it comes to offering viable solutions that go beyond GDP, for both goals and metrics.

The analysis in this thesis thus emanates from the absence of viability of Beyond GDP solutions, this being related to the more specific problems with goals and metrics just stated. Namely, the first problem is to see whether happiness is a unifying goal in the Beyond GDP movement. The second problem is to improve the metrics in the Beyond GDP movement. Intuitively, human progress is reflected in human happiness, at least true progress as a holistic concept as we understand it today. Thus, answering the second will shed light on the first. That is because happiness can be a unitary goal depending on what matters across countries. If it is GDP growth which matters most for happiness, then targeting happiness will be primarily targeting growth. If it is aspects of degrowth, then targeting happiness will involve targeting degrowth by means of reducing GDP or any other aspect.

To claim that it is unitary, we would have to see whether there are differences in happiness equations across countries, that is whether subjects across advanced and developing economies attribute same relevance to different dimensions. Showing this would provide a way to improve the current metrics. The most relevant dimension for searching for happiness' potential for goal unity is clearly GDP, as GDP is at the forefront of the growth and degrowth agenda, except the former tries to maximize it and the other seeks to minimize it (to an environmentally acceptable level for example). If there are differences in valuing GDP across two groups of countries, there are grounds to claim that happiness is a unitary goal and at the same time there is a suggestion on how to improve the current metrics on progress or happiness.

Thus, my research will answer whether happiness can be a unitary goal, and if so, which are the differences in happiness equations that support this claim. This will be a contribution for happiness economics and the Beyond GDP literature. Thus, the intention is to:

- a) make a contribution to the Beyond GDP literature and research policy potential
- b) review happiness determinants and the pursuit of happiness literature (on the basis of research produced in the past decade)
- c) analyze the future of the Beyond GDP movement

The specific goals of my research are to:

- a) State whether happiness can be used as a (unitary) economic goal
- b) Identify whether groups of countries show differences in happiness equations and if so, which

As mentioned, there is reasonable doubt for why some dimensions of well-being do not matter the same for happiness. My literature review revealed that there are multiple determinants to happiness. I have divided these into five types of factors: human capital and health, social, financial, institutional and environmental. On the basis of happiness determinants literature review in general and across countries, I formulate the following hypotheses:

H1: More than one type of factor (human capital and health, social, financial, institutional and environmental) matters for happiness. This is in line with a holistic view of happiness.

H2: Even if all or several types of factors matter, they do not matter equally:

- a) Financial factors will matter more than other types of factors, as well as health.
- b) Social and institutional factors should be secondary in importance, with human capital tertiary
- c) Environmental factors are last because the sample contains many developing countries and thus a world analysis will be more biased towards this result. However, that is the composition of the world we live in today, so the sample reflects that.

H3: Even if all or several types of factors matter, they do not matter equally across countries. Thus, the following hypothesis is formulated for each set of countries:

- a) Developing countries: Types of factors differ in importance and these differences are more pronounced for these countries. Further, human capital and health, social and financial will matter more than institutional and environmental factors. From these, financial factors should be the most important.
- b) Developed countries: Types of factors will still differ in importance, but these differences will be smaller. In relation to the factors relevant in developing countries, I expect that social and institutional factors will matter much more than in developing countries. Environmental factors may also matter, although comparatively not as much as social and institutional.

For the needs of this research, I will be doing a cross-sectional analysis on happiness data from a sample of advanced and developing economies. The analysis will entail evaluating what matters (different indicators and types of factors) and whether it matters differently (across countries). The cross-sectional analysis will be done using a multiple regression. Multiple regression analysis would allow us to evaluate whether or not all types of factors matter and how. However, multiple regression does not directly provide information on the relative importance of predictor variables. Beta coefficients are usually used for this purpose. However, beta coefficients have also been criticized because they do not account for possible interaction between predictors. Thus, beta coefficients are not very useful when one is analyzing possibly correlated predictors (Johnson, 2000).

Empirical research has found a way around this. Thus, what is in use today is relative weights analysis which is not ideal but it is better than beta coefficients, when one is attempting to assign relative importance to correlated predictors (Johnson, 2004). Since this is preferable for possibly correlated predictors and a holistic view of happiness entails accounting for possibly correlated predictors' effects on happiness, it is this method which will be used to assign relative weights. The point of Johnson's method is not to reveal which variables best explain the variance of the data, as this is what multiple regression does well, but to assign relative importance only (Johnson, 2004).

Since this quantitative analysis should answer several questions, among which whether all types of factors matter, how much across all countries together and how much across different country groups of development, I will be conducting several regressions. The first is a regression using all country-level data, to see whether all types of factors matter universally. Relative weights will be assigned as well. The second is a set of regressions by country group, in order to see whether there are any differences in statistical significance of coefficients across different country groups.

To carry this out, I followed the subsequent research plan to organize the thesis. The plan is to introduce the Beyond GDP movement, what led to it and present its main features in terms of alternative goals and alternative metrics. The next step is to introduce happiness as a concept and then analyze it empirically, before drawing conclusions. Chapter 1 will focus on the first part. The main caveats of growth and deficiencies of the key economic variable used to measure it will be introduced. Since this is standard knowledge, these will be touched upon.

The second part should analyze happiness as an alternative goal, theoretically by analyzing its determinants and policy potential, and empirically by checking an assumption for happiness measures. Since this contains a theoretical and empirical part, it will be divided in two parts. Namely, the theoretical part on happiness will be covered in Chapter 2. Chapter 2 is thus a chapter on happiness economics, both descriptive and analytical. Chapter 3 will introduce the happiness measures, both one-dimensional and multidimensional and compare them. Chapter 4 is a chapter on happiness analysis. This is where the data results from estimation will be presented and discussed.



The thesis concludes with an outlook on happiness research and Beyond GDP. This is covered in Chapter 5, before the Conclusion where it will be stated whether happiness is a unitary goal and whether there are implications for Beyond GDP given the results obtained.

## 1 GROWTH AS AN ECONOMIC GOAL

The father of economics is considered to be Adam Smith. He is frequently quoted about his concept of the invisible hand which will guide the market to equilibrium. This invisible hand is actually a metaphor to refer to the forces of supply and demand. Adam Smith is thus known for his analysis of *homo economicus*, or the economic man - a rational agent who pursues his own needs. That individuals pursue their own needs is not a surprise. What was new with Adam Smith was that the individual pursuit of needs would lead to desired public outcomes as well, as the economic man “intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention” (Smith, 1776, p.364). The invisible hand, i.e. market would indeed take care of it.

This is common knowledge to most undergraduate students in economics and is taught probably everywhere. The ramifications of this are even more wide-spread because they serve as intellectual grounds to justify liberalism and banish government intervention as it was seen for a long time that there was no need for it. However, Adam Smith did not only make a contribution for liberalism. He is credited to be the father of economics and best known for his depiction of man as a selfish, rational being.

Yet, Adam Smith also speaks of compassion, since “how selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it except the pleasure of seeing it” (Smith, 1790, p.4). Thus, Adam Smith spoke of the two conflicting but both innate natures of man. It is this duality which is crucial to understanding welfare, as obviously satisfying one part of needs is not enough.

Still, this duality was not really remembered as part of Adam Smith’s intellectual legacy to economics, at least not for the general students in economics rather than specialists in political economy. He was remembered as the man who wrote the “Wealth of Nations” and spoke of a selfish, rational man. The duality Smith had in mind was selectively abandoned. A similar misunderstanding exists regarding his ideas on government, as for Smith “all constitutions of government, however, are valued only in proportion as they tend to promote the happiness of those who live under them” and “this is their sole use and end” (Smith, 1790, p.166). This is anything but lauding unfettered markets unequivocally.

Soon after Smith, the Industrial Revolution followed and the modern world was ready to embark on a road to economic growth, as economic growth increased welfare. Originally, **welfare** or **well-being** used to misleadingly stand for economic output, or **utility** derived

from consumption of goods. With the growing output and complexity of economies came a need for a better measurement of the economic output produced. The measure that was perfected for this was the well-known **gross domestic product** (hereinafter: GDP) defined as the sum of the value of the final goods and services produced in an economy over a given period of time (usually a year). It is important to note that in its conception and refinement GDP was intended to provide information on the output produced and not people's well-being. Yet, somehow it was taken to be representative for people's well-being as well. It actually distorts both.

### 1.1 GDP deficiencies

GDP is among the most commonly used measure of welfare today. It was preceded by the **gross national product** (hereinafter: GNP), which measured the value of all final goods and services produced by residents of a certain country, living both inside and outside of the country. It is calculated as GDP plus net property income. Due to the fast unraveling of globalization it became common to have foreign owned entities in a country, more of them and staying longer, which meant that employment opportunities for example were to a growing extent determined by these foreign entities.

Therefore, it no longer made sense to use GNP as an indicator for people's welfare as factors that mattered (such as employment) and indeed economic activity were increasingly determined by the foreign entities present in the home country. Then, if a country's residents engaged in economic activity outside of its borders and this did not affect people's welfare in the home country, as these provided employment elsewhere, GNP was slowly abandoned. The Bureau of Economic Analysis (BEA), an agency within the US Department of Commerce started to emphasize GDP over GNP as the most comprehensive measure of economic activity in December 1991. Today, GDP is among the most commonly used measures of economic activity.

This already reveals an important point. Careful readers would have noticed that in one sentence I have stated that GDP is the most commonly used measure of welfare and in another that it is the most commonly used measure of economic activity. It is vital to distinguish what it is we want to measure, as we see that GDP is used for both. Economic activity can proceed at the expense of people's welfare. People's general welfare can occur at the expense of economic activity, if we consider an equity-efficiency trade-off view, since redistributive measures intended to increase welfare may hurt stimulus for work and thus affect economic activity negatively.

However, whether we regard GDP as a crude measure of economic activity or as a measure of people's welfare, in both cases we observe deficiencies. These deficiencies are standard knowledge for many undergraduate students in economics. Therefore, they will only be briefly mentioned before I proceed to new directions to correct for them. GDP is often criticized for either not accounting at all or misrepresenting the following:

### a) **Gray economy**

GDP includes formal economic activity. The **gray (shadow) economy** refers most broadly to the informal economy which includes activities that would otherwise be legitimate if reported, but also activities that are illegitimate, such as black market activities. This means that countries with large informal sectors, or gray economies, do not have as low GDP's as reported and/or as high unemployment rates as reported. This is clearly a larger issue for developing countries as they are more likely to have large informal sectors, due to the inadequate institutions to support the formal sector. It is an issue for developed countries as well and it is not negligible.

Clearly, this underestimates true economic activity. For welfare it could be ambiguous. It is true that people are arguably better off, as the unemployed are not really unemployed but they work in the informal sector. Further, they do not pay taxes either, therefore additional labor market distortions are not there. However, clearly they could be worse off as well, as the informality of these sectors implies a loss of taxation revenues and consequently provision of public goods or active policy interventions on the labor market for example.

### b) **Income distribution**

GDP does not take into account the income distribution. It only states what the final value of products on a given territory is, i.e. the total pie of potential income, yet the shares of the pie might and often differ significantly. It is thus flawed as a measure of welfare as larger inequality may decrease welfare for the majority of the people in the economy. The effect on welfare depends on people's perception though, whether they believe this is fair or not. Thus, it could be argued that it is an ambiguous effect, although naturally we lean in more to the view that it decreases welfare. A liberal argument might be the aforementioned. In any case, the measurement of welfare is flawed. The **Gini coefficient** is a measure used to show how far off society is from perfect equality. It ranges from 0-1 and the larger it is, the more unequal the society. The average change in the Gini coefficient over the period 1990-2008 is 2.58 on a world level. This masks growing inequality in emerging economies, notably China, which had a Gini coefficient of 0.42 in 2009 compared to 0.36 in 1993. (World Bank, 2014).

### c) **Pollution**

GDP does not tell us much about negative externalities such as pollution. Indeed, higher economic growth is typically associated with larger pollution levels. This is a typical trade-off which was arguably inevitable while today's developed countries were still developing. It is unclear whether it will remain like this in the future. For the time being though GDP and economic growth come at a price of pollution. More formally, there is a positive elasticity of emissions to GDP. Since pollution comes at a cost, specifically its abatement would cost around 2% of GDP (Stern, 2008), GDP is misleading and overestimated.

#### **d) The nature of activities**

GDP can be quite misleading for welfare information if we just look at the raw data. That is because something which normally decreases welfare is actually counted as an increase in GDP. For example, natural catastrophe which would arguably affect welfare negatively is actually reflected positively in GDP measures, due to all the reconstruction and rebuilding taking place after this catastrophe. In that case, GDP gives a clearly perverse indication of welfare.

Furthermore, one number does not tell us what is being produced in a country, just the sum of the value of final products, yet not whether those are capital or consumption goods. An example of this is the Soviet Union and the US in the 20<sup>th</sup> century (McGee, 2009). At one point Soviet Union GDP was actually larger than the US one. Looking at GDP figures only, we would be misled to believe that living standards were higher in the Soviet Union than in the US. However, Soviet Union GDP was higher because they invested heavily in capital goods. Thus, consumers in the Soviet Union were not better off, but the contrary because of the empty shelves. Thus, GDP gives a distorted picture of welfare in this case as well, because it does not distinguish between different activities.

#### **e) Non-market work**

GDP does not take into account non-market work such as household production. There have been some recent attempts to value household production by for example attaching general wages to hours of household production (cooking, caring, repairing). However, the efforts are not uniform. Imputations for household services are sizeable. They are evaluated using time use surveys, with detailed information on how people spend their time. It is estimated that household production amounts to around 35% of conventionally-measured GDP in France (average for years 1995-2006), 40% in Finland and 30% in the United States for the same period (Stiglitz, Sen & Fitoussi, 2009).

#### **f) Quality changes**

GDP does not reflect quality changes. Underestimating quality improvements, for example in the technology and communications sectors, is equivalent to overestimating the rate of inflation and thus to underestimating real income. For example, the Boskin Commission Report estimated that due to improper accounting for quality changes in goods and services inflation was overestimated by 0.6% for the US. This means that real income is underestimated in relation to GDP. In Europe, the debate goes in the opposite direction (Stiglitz Et al., 2009) with the rate of inflation being underestimated, which means that real income is overestimated in relation to GDP. Thus, GDP does not take quality into account from a dynamic perspective.

### **g) Inappropriate valuation of public services**

However, GDP does not take quality into account from a static perspective either. Namely, GDP includes public services as part of government expenditure which means that these are input based measures which do not reflect the true progress or quality in terms of output provided. For more accurate information, we would need to have output based measures of public services. It is not a negligible statistical caveat. For example, the US is one of the countries which spend more on healthcare than many European countries in per capita terms, yet its health outcomes are worse. Further, using output-based measures the UK growth rate is revised downwards from 3% to 2.75% per year between 1995 and 2003 (Atkinson, 2005). A similar effect is found for France, whereas for Denmark using output-based measures for health actually is an increase in progress.

Therefore we see that there are certain problems with GDP as a measure for welfare. It remains unclear why it even was considered as a measure of welfare when it was actually a measure of output. In fact, GDP's creator Simon Kuznets warned that this was a measure of production only and not welfare (Kuznets, 1934). A possible explanation could be that at that time output still had not expanded as much for most countries. This means that any negative externalities from production in today's most developed countries, such as pollution for example, had not yet risen to such levels which would endanger human welfare. Additionally, large global players such as China and India were still not developing rapidly so as to even start questioning what will happen if their development and growth path follows the one of their developed counterparts.

Alternatively, societies could have been getting more and more affluent and producing more economic output but people's perception had not yet caught up with that. Therefore, a view that economic output reflects welfare could have been valid then, because absence of welfare previously might have been associated with lack of economic output. This view is outdated. It is worth to mention that critics of GDP appeared fairly early as well. For example Margaret Reid criticized the omission of household work (Reid, 1934). Then it becomes even less clear why it was so widely understood as a measure of welfare.

Whether or not GDP is a (good) measure of welfare has relevant implications for the economic agenda, in terms of measurement and goals. Due to the aforementioned deficiencies of GDP there have been some suggestions for expansion of welfare metrics. Furthermore, there is some scrutiny to prioritizing growth as well. This is commonly referred to as "Beyond GDP". The next section introduces the Beyond GDP movement itself and the implications for metrics and goals that follow from it.

#### **1.2 Beyond GDP**

The term Beyond GDP took on after the European Commission's conference "Beyond GDP" in 2007. Thus, there is a markedly growing awareness of GDP as deficient. This has in turn

motivated what could be called a proliferation of new indices. Although it is a trend to be saluted, it opens another issue which is how to choose among all the new indicators? Namely, if each corrects for some deficiencies of GDP as an indicator, we would still be getting a flawed picture. However, given the recent attention this has attained, it is perhaps too soon to expect a consensual measure.

As was stated somewhere in the beginning, many people knew about GDP deficiencies and these problems are not anything new. What could be new though is the gravity of some of these deficiencies. If an indicator is flawed but this flaw does not represent a major omission, perhaps it could still be accepted. However, given the worrying trends in (almost) all items listed in the previous section, it is clear that something new is needed. This was in fact the motivation behind the then French President Nicholas Sarkozy upon summoning a commission chaired by Amartya Sen, Andrea Fitoussi and Joseph Stiglitz to present and evaluate the alternatives to the current (inadequate) measurement system (Stiglitz Et al., 2009). Their main recommendations are in line with the misinterpretation of GDP as a measure of production and not living standards.

Thus, they recommend that instead of production, priorities should be income and consumption. However, they should be considered jointly with wealth for both inter-generational and intra-generational considerations. The former stems from sustainability considerations, as they propose to consider wealth as endowment with different types of stocks (physical, human, natural, social). Thus, it would allow to gauge how much is left to future generations. The latter stems from the possibility of someone having low incomes but large inherited wealth and therefore higher living standards than otherwise. Because of the former consideration it is therefore important to consider income, consumption and wealth distributions as well.

When and if future policy makers consider these, they should put larger focus on the household perspective, because real household incomes have growth quite differently from real GDP, usually at a lower rate. In addition to considering the household perspective in terms of market outcomes, it is becoming ever more important to consider it outside the market as well. This means accounting for household production in official statistics as well. Some countries are already doing this, but it is far from universal and rather nascent. Another issue here would be data compilation in developing countries and regularity in reporting, which will make any time series analysis rather cumbersome.

Another significant and well-known political acknowledgment of the seriousness of the matter is the Kingdom of Bhutan and its targeting of Gross National Happiness (hereinafter: GNH) instead of Gross Domestic Product. It should be noted though that this was abandoned with the switch of the regime because it was acclaimed that targeting happiness was too soon to be done, because it did not ensure satisfaction of certain priority needs.

In the academic world moving beyond GDP has developed in two strands, one aiming to supplement existing GDP figures and the other aiming to replace it. In relation to the first, corrected GDP figures for its deficiencies are used for cross-country comparisons. For example recently there is a famous academic dispute between Gordon and Blanchard when it comes to welfare in the US and the EU. This dispute is basically about how much closer EU GDP will be to US GDP after correcting either one for some of the deficiencies. It turns out that after correcting for the higher incarceration rates in the US, more densely populated cities and larger energy use, EU GDP amounts to 77.8% of US GDP instead of the previous 71.2% (Gordon, 2010). However, this calculation does not account for inequality explicitly, as it is assumed that taxes are usefully spent for it. Life expectancy does not enter the equation either. Additionally, it is a comparison for two economic entities only, but it gives a first impression that such corrections may be sizeable.

Another attempt at making more serious work uses an altered utility function by expanding it to include not only consumption, but also life expectancy, leisure and income inequality. The idea is quite simple and could again be related to some of the deficiencies already mentioned. The results reveal a major point: there may be significant changes in rankings. (Jones & Klenov 2010). After the correction, as expected the EU block was closer to the US as previously thought. Unsurprisingly, due to low life expectancy and/or large inequality which are related to some regions, Sub-Saharan Africa, Latin America, Southern Asia and China were substantially poorer once corrected. Since some countries in these blocks are substantially poorer than the developed world and are faced with severe weather conditions, it does not come as a surprise that perhaps leisure is not all that high (more time has to be spent for food security for example, due to lack of industrialization).

If the first strand is not as harsh on GDP faults, the other strand is more radical and aims to replace GDP with new goals and metrics. For example, one such goal is happiness. Thus, focusing on what really matters instead of the cold figures of GDP has given birth to a whole new branch of economics called **happiness economics**. Happiness economics can be divided among two strands: i) what happiness is, and ii) the pursuit of happiness in general. It started with a now landmark paper by Richard Easterlin in which he concludes that there is no significant long-run relationship between income and happiness (Easterlin, 1974). Possible explanations could be that income simply does not matter for happiness, or that there is a large omitted variable bias (for example for all the deficient items excluded with GDP). The inexistence of a link between income and happiness is now known across the literature as the Easterlin paradox, which I get back to at several later points in the text.

The previous two sections introduced Beyond GDP as a political and academic trend. The attention this movement has attracted in academia and political circles has resulted in new metrics and a scrutiny of current goals. The next two sections thus introduce some of the new metrics and goals.

### 1.3 Beyond GDP – metrics

The numerous GDP deficiencies created a need for new indices which would reflect welfare better. Some of these beyond GDP metrics are meant to supplement and some are meant to replace GDP. The following list introduces some of the new metrics.

#### **a) Human Development Index (hereinafter: HDI)**

The human development index is a composite index based on three dimensions: primary school enrolment, life expectancy and GDP/capita. It was developed in order to replace GDP with a more comprehensive measure. It is one of the oldest collected indicators in the Beyond GDP movement. It is a popular index, but is mostly used to supplement GDP information and has not yet overridden it in popularity.

#### **b) Inequality-adjusted Human Development Index (hereinafter: IHDI)**

The Inequality-adjusted Human Development Index is the same index as item 1) produced from the same organization, but it also accounts for inequality as well, which has turned into quite a pressing problem lately. It is quite a recent index, collected for a couple of years only, as income inequality was not even seen as a huge problem in the years preceding the crisis.

#### **c) Genuine Progress Indicator (hereinafter: GPI)**

The Genuine Progress Indicator is a measure that is intended to replace GDP. Unlike the previous two though, this one builds on the traditional GDP. It is constructed by taking the original figure which is GDP and then correcting it for the previously mentioned GDP deficiencies. These are monetized so as to make them comparable with GDP. Perhaps because it is so demanding in terms of data, the Genuine Progress indicator has not been resonating with success among researchers.

#### **d) Legatum Prosperity Index (hereinafter: LPI)**

The Legatum prosperity index is based on the idea that it is not enough to just add or subtract values to GDP, but to have another ranking or index for progress which will also include variables that are currently not monetized. It is based on a variety of factors: economy, entrepreneurship and opportunity, governance, education, health, safety & security, personal freedom and social capital. As such, it is an index supposed to supplement GDP.

#### **e) Social Progress Index (hereinafter: SPI)**



The Social Progress Index is based on a similar idea as the Legatum Prosperity index, thus it is meant to supplement GDP as well. It is based on three key areas: foundations of well-being, opportunity and satisfying basic human needs. These three are then further divided in sub-indices of their own, with four dimensions each.

**f) (Weighted) Social Progress Index (hereinafter: WSPI)**

The Weighted Social Progress Index is again based on a similar idea, supplementing GDP, however it applies different weights to different dimensions. It is not based on the Social Progress Index in the previous lines. It is based on another Social Progress Index and both were developed by Richard Estes. The dimensions include: education, health status, women status, defense effort, economy, demography, environment, social chaos, cultural diversity and welfare effort.

**g) Happy Life Years (hereinafter : HLY)**

Happy Life Years is a little simpler than the previous composite indices. It is a composite index meant to supplement GDP but it only incorporates two dimensions. It is obtained by multiplying happy life years with life expectancy in order to obtain how many happy years people live on average.

**h) Ecological Footprint (hereinafter: EF)**

The Ecological Footprint is meant to supplement GDP. It is about comparing the human demand for resources to nature's supply of resources. This demand includes the areas for producing the resource we consume, the space for accommodating buildings and roads, and the ecosystems for absorbing waste emissions such as carbon dioxide and others. They are then compared to nature's biocapacity.

**i) Happy Planet Index (hereinafter: HPI)**

The Happy Planet index is a composite index which includes the previous index for Ecological Footprint. Combining data for life expectancy, experienced well-being and Ecological Footprint, it is supposed to supplement GDP. It is an efficiency measure which ranks countries on how many long and happy lives they produce per unit of environmental input.

**j) Better Life Index (hereinafter: BLI)**

The OECD's Better Life Index is a multidimensional index which includes the following dimensions: housing, income, jobs, community, education, environment, civic engagement, health, life satisfaction, safety and work-life balance. It is an index meant to supplement GDP, but is still rather nascent, as the methodology is still being refined.

**k) Gross National Happiness Index (hereinafter: GNH)**

Gross National Happiness Index is the Kingdom of Bhutan’s multidimensional index for nine dimensions: psychological wellbeing, health, education, time use, cultural diversity and resilience, good governance, community vitality, ecological diversity and resilience, and living standards. The term itself was coined by the fourth King of Bhutan, Jigme Singye Wangchuck in the 1970s. For a while, it was also the main goal pursued in the Kingdom, prior to economic growth.

The following table shows three categorizations of these indices. The first is along the lines of the dimensions in **sustainable development**, which is development that seeks to optimize along three dimensions: economic, social and ecological. The second is how the index accounts for the dimensions that are usually deficient in GDP, as a single (one) or composite (more) index. The third is the link to GDP, that is whether it is supposed to supplement or replace GDP.

Table 1. Beyond GDP Indices categorization by domain, dimension and link to GDP

Indicator/ Category	Domain			Dimensions	Link to GDP
	Environmental	Economic	Social		
HDI	-	+	+	more	replace
IHDI	-	+	+	more	replace
GPI	+	+	+	one	replace
LPI	+	+	+	more	supplement
SPI	+	-	+	more	supplement
(W)SPI	+	+	+	more	supplement
HLY	-	-	+	more	supplement
EF	+	-	-	one	supplement
HPI	+	-	+	one	supplement
BLI	+	+	+	more	supplement
GNH	+	+	+	more	replace

As is evident from the table, there are only two indices here which aim to replace GDP and incorporate multiple dimensions according to the sustainable development principles. These are the GNH and the GPI indices.

The previous sections share the common niche with the idea of this text and the idea behind the augmentation or alternatively supplementation of GDP as a welfare measure. This revolves around the need for an all-encompassing measure of GDP (methodologically challenging) or a supplement to the insufficient, albeit valuable information contained in GDP. Indeed, this has been one of the major focal points of the Beyond GDP movement. Apart from producing new metrics which would augment or supplement GDP, the beyond

GDP movement has also come to mean questioning the current growth one or even advocating for different goals, such as GNH in Bhutan for example. Thus, the next section is a section on economic goals and how they fit within the Beyond GDP movement.

#### 1.4 Beyond GDP - goals

As a social science, economics revolves around optimization problems, meant to provide answers on how to maximize production given limited factor endowments, i.e. resources, so as to best satisfy people's unlimited wants. As a society, we undoubtedly care about economic growth as a goal, since growth should enable an increase in living standards.

Indeed, when we choose our governments for the next 4 years, most of us probably take their economic program seriously, and growth prospects are a centerpiece in them. The reason for this is simple, the pie is getting larger, and assuming our shares are relatively unchanged, then it is straightforward that we each get a larger share. Even if each of us do not get the same share immediately, that growth will eventually be felt by all classes, even lower ones, due to positive aggregate effects of employment and investment spurred by the initially rewarded generation. This is the so called **trickle-down** effect. Once income trickles down, we will enjoy larger incomes, be able to work less due to higher productivity, perhaps enjoy more leisure and finally feel the increase in living standards.

The story just described contains some non-negligible caveats for the prioritization of growth:

- a) **High growth as a channel to living standards**
- b) **The trickle-down effect and its unraveling**
- c) **Leisure-happiness nexus?**

#### a) **High growth as a channel to living standards**

Is higher growth the only channel to living standards? If it is not the only one, is it the best then? Modern economies and governments place growth first on their agenda. Is this because it is the best channel to living standards? If so, what reason do they have to believe and consequently follow this? The previous section mentioned some estimates of GDP deficiencies to illustrate that they are not negligible. Because of this, a growing body of economists calls for alternative scenarios to the traditional higher growth one. Much of the concern traditionally came from the third item which was pollution. In fact, human activity has been acknowledged as the unequivocal driver of climate change (IPCC, 2013, p.13). If that is true, we do not know the environmental challenges that await us and if not bleak, then future growth prospects look meager at best, owing to a disappearing growth-clean environment trade-off. Then, it is no longer whether high growth is a channel to living standards or not, but how achievable it is at all. Policy makers have focused mostly on climate change, although lately there are some positive changes for the other items as well. The crisis has undoubtedly emphasized the need for change on other fronts.

## **b) The trickle-down effect and its unraveling**

The trickle-down effect does not necessarily occur. The absence of the trickle-down effect and the rising inequality *within* countries as opposed to a falling inequality *between* countries (Milanovic, 2007, pp.31-33) make this an imperative concern for policy makers, especially after the 2007 fall. In relation to this, there are some who advocate a demand based explanation of the global financial crisis instead of a supply based one of low interest rates and excess liquidity on global markets. Instead, it is the growing inequality which pushed people to even accept the homeownership offers, so as to avoid falling down behind the rich class too much (Stockhammer, 2012; Van Treeck, 2013). This is relevant in this part of the discussion as it suggests two directions of causality with a different sign: i) higher growth leads to larger inequality and ii) larger inequality may lead to lower growth.

## **c) Leisure-happiness nexus?**

More leisure might not be conducive to greater levels of happiness, as it might encompass some other activities such as household work (caring for the children, doing repairs) which may or may not increase levels of happiness. In fact, as mentioned in the beginning, estimates show around a 30% share of unpaid work in GDP (Ruger & Varjonen, 2008), that is yet to be officially accounted for. It is not certain though that this implies a double burden, especially on women, but it is relevant for gender equality issues for example. It is always important to consider the sociological implications as well, particularly so in this case, as with the growing feminization of paid work, female participation in the labor force, skills and knowledge are becoming ever more important. Ignoring gender equality issues that might be negatively exacerbated with growth can be damaging to the latter's future prospects. Future growth is going to depend ever more on skills as economies evolve into knowledge economies.

Considering these caveats and the worrying trends in GDP deficiencies, growth has been questioned as a goal. Given how the other deficiencies are relatively new on the political agenda, any evaluation on political proactivity would come from item three. It seems though that this focus is more in terms of making pledges, instead of actually keeping these pledges. Moreover, one of the world's largest polluters which is the USA has not even ratified the Kyoto protocol, although recent advances in US energy policy may bring this to a halt. Another growing concern is what happens to pollution levels from developing countries, with China at the forefront. On one hand, China should not pollute for the greater global good, but on the other hand all of the developed countries polluted in their own developing time.

Such concerns and the desire to avoid or make climate change as innocuous as possible (at least at a prevention level) has led some to argue for a "degrowth" scenario. **Degrowth** stands most broadly for decreases or complete halting in economic growth. It has been

coined by French economist Nicholas Georgescu-Roegen in a 1971 paper on “entropy and the economic process” (Georgescu-Roegen, 1971). There have been four big international conferences on degrowth from 2008 onwards (Degrowth, 2014). Degrowth is the intentional pursuit of lower levels of growth in order to deal with climate change or other social trends better. A degrowth scenario is another way of pursuing sustainable development.

On this front trends in GDP are of secondary importance: what matters is the pursuit of well-being, ecological sustainability and social equity... GDP can decrease and nonetheless other dimensions of life can improve (Schneider, Kallis & Martinez-Alier, 2010, p. 512). It is an interesting thought experiment if nothing else. We are all used to pursuing growth as the ultimate goal. Undeniably, the crisis has emphasized this, as the public discourse largely focuses on achieving higher growth rates and restarting the growth engine.

The other issues that are concomitant with crisis times, such as lower quality of life and loss of jobs with both its income and psychological effects, are somehow idling away in the background. Perhaps they are not idled away completely in terms of public discourse, but more so in terms of action taken. One only needs to look at the rashness of economic policy making during the crisis, especially for ailing Southern European economies. A couple of years later, news come out that they were indeed rash actions without even the theoretical/academic background they claimed to have. Around the same time, the human cost of the crisis is acknowledged as well in terms of decreased satisfaction with life (OECD, 2013).

Was the human cost of the crisis that difficult to predict? Of course, this does not refer to a precise numerical estimate of the decrease in life satisfaction, but merely to the idea that any such brutal measures would undeniably decrease human welfare. However, the choice of those policies clearly reveals what came first and what was second on the list of priorities. Thus, the opportunity cost of our crisis resolution mechanisms intended to boost economic growth as fast as possible is the human cost in terms of lower welfare.

This is the motivation behind degrowth scenarios, as the most recent financial meltdown and ensuing economic crisis have clearly marked the pinnacle and subsequently demise of the then prevailing neoliberal paradigm. More and more focus is placed on human economics which in turn has to do with sustainability concerns, which are conflicting with the neoliberal paradigm and what the latter delivered.

However, identifying degrowth as a (viable) alternative to growth does not necessarily mean accepting it as a valid alternative. Since growth has not delivered or has delivered what was not wanted, is degrowth a valid alternative then? To try and answer this, we should look into empirical forecasts for countries. A degrowth macroeconomic model exists for the Canadian economy, which was used in the exploration of different scenarios. One paper explores four such scenarios on the basis of this model: business as usual, low growth/no growth, selective growth and a degrowth scenario. (Victor, 2012). They range from highest to lowest growth

figures. The highest growth scenario, business as usual, predicts a doubling of GDP/capita however by the lowest growth scenario, i.e. the degrowth scenario, Canadian GDP/capita goes back to its 1976 levels and world GDP goes back to its 1980 levels, without exceeding global biocapacity (Victor, 2012).

These figures have a couple of implications for the new goals designed to embrace sustainability and they have to do with trade-offs, ability to trade-off and effects of the change.

Sustainability is by definition based on trade-offs. That is because sustainability is supposed to balance across three dimensions: economic, social and ecological. There is an inherent trade-off between the dimensions, so societies have to learn to live with it and make their choice. They cannot demand excessively high growth rates and ecological sustainability at the same time.

Although sustainability involves trade-offs, not everyone will be equally able, if willing even, to give something up. Developed economies such as Canada will be most able to revert to lower GDP in order to trade-off better societal outcomes (lower emissions, unemployment, poverty). That is because even with the degrowth scenario, Canada is not that doing that bad. However, degrowth scenario cannot possibly be applied uniformly, especially not to Sub-Saharan African countries. Namely, there is a positive relationship between poverty reduction and economic growth (Dollar & Kray, 2012)

Unless done unequally, degrowth may have the opposite effect of the initially desired one. Therefore, alternatives are needed. Indeed, the degrowth movement is not always taken as an ecological movement only and completely against growth, but also as a broader trend for reform, which calls for: monetary reform, substituting GDP with well-being or gross national happiness indices, income redistribution, relocating industrial manufacturing and agriculture, new forms of governance, the importance of citizenship and participatory democracy, embedding the economy within the social and cultural context, the ecological case for new kinds of laws and treaties, trade deglobalization, steady state economics, ecological economics and managing degrowth (Eaton, 2012).

The previous section dealt with possible faults of growth at the forefront of the economic agenda. Growth-promoting policies and generally placing growth at the forefront of every economic agenda is done in the hopes of it promoting development which should enable an increase in living standards. In the background of this optimization is human welfare which is contingent on factor endowments in the broader environment but also institutional endowments in the narrower environment (that could be a household, neighborhood, country). By this logic optimization problems in economics cannot and should not center only on optimization of factor endowments, in terms of a never-ending quest for a larger production through better use of resources.

Alternatively, we could turn to the other polar end. However, if crude optimization is not the answer, neither is suboptimal stagnation. As can be seen from scenarios done on an advanced economy, this alternative is simply not universally acceptable. Thus, we need a middle ground, a goal in between, whose pursuit will not over-deliver (positive and negative outcomes) like economic growth and GDP maximization but one that will also not under-deliver like degrowth. A goal which could serve as middle ground in addressing the growth fetishism could be happiness.

That is because happiness as a goal could ameliorate the issues with the two goals at two polar ends and placate this problem of choice as it allows for both. For example, if we target happiness in a low income country which is struggling with providing basic needs, growth is preferable to degrowth, because income and production have a higher marginal utility at this point. As the economy grows, there is more space to focus on optimization of other factor endowments, for example environmental or institutional endowments, which embraces the sustainability concept behind degrowth scenarios.

Thus, happiness has an important place in the Beyond GDP movement, as happiness metrics can be used for supplementing GDP, but also placing it as a goal in itself. Given this importance, the next chapter is a chapter on happiness economics itself, specifically on what the concept is and the analytical implications for policy that arise from it. Namely, before naming happiness as (another) goal and going into deeper analysis of policy potential, we should seek to understand what determines it, which is what the next chapter is devoted to.

## **2 HAPPINESS**

The previous chapter ended with the potential of happiness as a goal. The aim of the following chapter is to elucidate on what happiness is within the happiness economics literature. This is the first strand of the happiness economics literature. The chapter is organized as follows: the first section presents a chronological overview of happiness concepts and the second section presents happiness determinants, mostly identified in the past couple of decades' research.

### **2.1 Happiness concepts**

Concepts such as happiness can be found all throughout as they represent timeless, philosophical questions. What is new is the research attention this field has been getting for the past couple of decades. Although officially the start of happiness economics is with Easterlin's landmark paper on the income-happiness paradox, especially during the past decade there has been a booming literature on subjective well-being and happiness, as the prime measure of well-being was increasingly recognized as lacking. When it comes to the subject, more and more economists and sociologists have produced valuable economic research for policy making.

The concept itself clearly extends to psychology as well. Even though psychology analyzed happiness, it analyzed it within the framework of how to ensure that people are not unhappy. Yet, today there is a renewed focus on positive psychology when it comes to happiness, instead of only negative psychology. As will be seen in continuation, early philosophy's concepts lean more towards positive psychology, which is psychology that analyzes positive emotions and how they appear instead of analyzing negative emotions and how to make them disappear.

The earliest accounts on happiness come from Ancient Greece, a cradle of today's civilization. Western philosophy considers Democritus (460 BC-370 BC) as the first to elaborate on the concept. For Democritus happiness was not only about favorable outcomes, but rather a man's mental construct or cast of mind (Tatarkiewicz, 1976). Further thinkers relate happiness more to enjoyment of pleasure. For example, happiness for either Socrates or Plato is more objective, in the sense that it comes out of "secure enjoyment of what is good and beautiful" (Plato, 1999, p. 80). In today's times, we could interpret this as a clear endorsement for consumerism, at least in the short run where as consumers we get nudges to buy certain products because of their good value and accompanying beauty.

However, given the inherent ambiguity of the philosophical mind, one should at least be aware that such interpretations are precarious. That is because what is good and beautiful can be anything. What is good and beautiful can refer to goods, but what is good and beautiful can also refer to enjoyment of virtue, possibly also one's own virtue. In that sense then both versions of happiness are not that diametrical as they initially seem. Indeed, for Aristotle, happiness meant living in accordance with the most valued virtues (Aristotle, 1992). He advocated a holistic view of well-being and this is typically referred to as *eudaimonia*. With regards to the discussion, it could also be that one leads to the other. Namely, if one lives in accordance with the most valued virtues, one is perhaps able to enjoy a higher social status and because of this be better able to then secure the enjoyment of what is good and beautiful.

For whichever explanation above, a virtuous life was generally considered valuable also among the Hellenistic philosophers. Epicurus propagated living a virtuous life as well. For him there were three aspects of a virtuous life that would be necessary for happiness: self-sufficiency, self-awareness and social connections (De Botton, 2000). However, there are some who take an extreme view though. Namely, Arristipus was of the opinion that "no considerations should restrain one in the pursuit of pleasure, for everything other than pleasure is unimportant, and virtue is least important of all" (Tatarkiewicz, 1976, p. 317).

Before proceeding with other notions of happiness throughout history, it is worth mentioning that there are issues concerning not just our modern-day interpretation of philosophers' ideas, but also concerning the interpretations in the past which may have influenced what was passed down and what was not. Therefore, it is not unsurprising to find somewhat conflicting accounts of philosophers' ideas. For example, the secure enjoyment of what is good and beautiful seems rather objective, as something which can indeed be secured. For some



though, this is the opposite from Plato. Namely, there are some accounts by which happiness and happy life are absolute ideals which no ordinary man can attain. Rather, they are available only to the most developed, contemplative spirits (Plato, 2008; Tatarkiewicz, 1976).

The issue has salience for other philosophers as well. Another example is Epicurus who seems to have been understood as proclaiming pleasure and this was mistaken for pleasure deriving from enjoyment of goods. Even today an Epicurean is a person who enjoys fine food and drinks. However, the pleasure he speaks of is more close to a pleasure derived from living a virtuous life in accordance with the three domains mentioned above. Actually, his teachings were considered so valuable by his follower Diogenes who carved Epicurus' teachings on a huge stone tablet. The tablet was placed in one of the most frequented locations of his village, so that people could be reminded on a regular basis of what were for him useful teachings. Even with this tablet, what has been passed down is still unclear.

Therefore, relying on the (imperfect) accounts of Ancient Greek thinkers, they seem to have had two views on the concept of happiness: i) the maximization of pleasure and ii) minimization of aberration (i.e. leading a virtuous life). Following the Hellenic philosophers, the Middle Ages abide more to the latter concept of happiness rather than the first. However, it should be noted that the concept is not entirely the same. Namely, if for Hellenic philosophers happiness was something attainable by way of virtuosity, for philosophers in the Middle Ages happiness was generally attainable through the same mean, except that actually experiencing it was seen as also contingent on God and not merely on whether one has led a virtuous life or not (Tatarkiewicz, 1976).

Following this period, the Age of Enlightenment already brings a less other-worldly concept. Happiness is again something which is attainable, even without a divine intervention. The perception that happiness is something attainable by all is also reflected in thoughts that happiness should be attained for all, or at least as many as possible. This is already Jeremy Bentham's utility maximization concept of happiness. Happiness is synonymous with utility; if policy can maximize utility, it will maximize happiness as well. Thus, the philosophy of utilitarianism is born, i.e. the idea of achieving the greatest happiness for the greatest number of people.

The utilitarian philosophy is anything but trivial. That is because it seems it has given birth to some faulty conceptions in economics. It makes a very large difference whether one abides to the pleasure or virtue camp. The utilitarian one seems to abide more to the former. In fact, the utilitarian explanation of happiness is criticized for several assumptions today (Helliwell, Sachs & Layard, 2013). Namely, utility is assumed to come out of consumption of commodities and not social relations, thereby resembling closer a theory of consumer behavior than one of well-being. In addition, utility is assumed to be stable and therefore unaffected by experience, education, social norms or moral instruction. Thus, preferences should be taken as given, as they cannot be changed by either of these potent change-inducing determinants.

Considering the initial materialist assumption that utility is a function of consumption of commodities and the subsequent understanding of utility theory as a theory of consumer behavior, we can relate utilitarianism more to the pleasure strand in the Hellenic philosophical thought. During these times happiness was no longer as important to mainstream economics and 19<sup>th</sup> century economists had moved away from considerations of happiness as virtue and ethics, if any at all. Moving on to modern times, happiness was primarily researched by psychologists, as economists only started paying large attention to happiness research in the last quarter century of the 20<sup>th</sup> century, with the biggest proliferation occurring in the past decade or two.

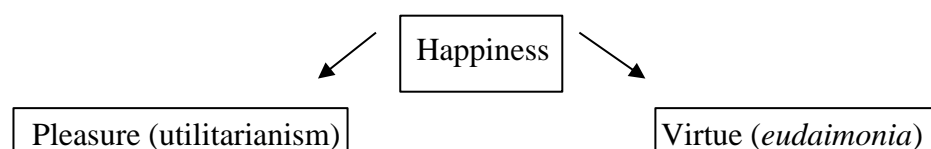
From a psychologists' view, happiness was still considered to be attainable and this is further backed by psychology research. However, if before psychologists considered happiness as the absence of mental health, then after the publication of two papers the perception changes. Psychology is called on to incorporate both deterministic realms for happiness (Jahoda, 1958) and a breakthrough in psychology is the recognition of two independent deterministic realms for happiness (Bradburn, 1969). One is the absence of negative affect and the other is the presence of positive affect. The latter is what positive psychology studies.

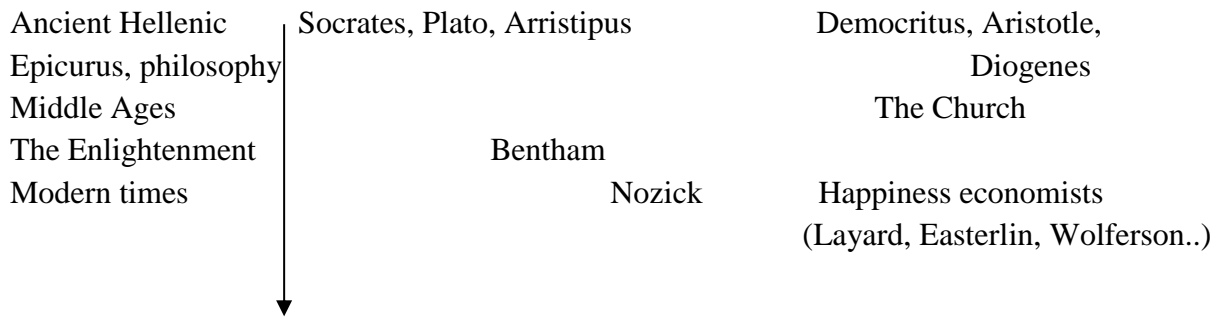
If we understand the concept of happiness as contingent on the presence of positive affect, then the modern concept of happiness is closer to the pleasure camp in Ancient Greek philosophy. Pleasurable activities stimulate positive affect, even if short-lasting. Yet, it could well be that virtue also causes positive affect due to merely knowing that one is living something real and not something invented.

In that sense then, the modern concept of happiness is not all that different. Nozick speaks of a thought experiment in which humans would be subjected to an experience machine which would stimulate positive emotions (pleasure). However, he also notes that due to human nature itself, there will be those who will refrain from this experience machine, who would put reality before pleasure (Nozick, 1974). This is closer to the Ancient philosophers' view on living a virtuous life and being self-aware.

I have so far reviewed the history of the concept of happiness. The following is a graphic representation to enable the reader to follow more easily.

*Figure 1. History of happiness concepts*





The concept of happiness then clearly causes some confusion because it has various meanings. For anyone wishing to engage in happiness research this is clearly a problem. This is reflected in the choice of wording in happiness metrics. Namely, since the word itself has a variety of meanings, what is widely used today across surveys is the term subjective well-being, as suggested by the first psychologists studying happiness scientifically (Diener, 1984; Kesebir & Diener, 2008). Nowadays, researchers use these two interchangeably (Lu & Gilmour, 2004; Veenhoven, 2006).

Another term that commonly appears in the literature and happiness surveys is life satisfaction. **Life satisfaction** is conceived as the degree to which an individual judges the overall quality of his life-as-a-whole favorably (Veenhoven, 2006). In research, it is commonly referred to as subjective well-being and measured on a 1-10 scale as an answer to the question “How satisfied are you with your life as a whole?” What will affect this judgment will come from both objective and subjective factors, related to the external and internal environment. The following table is one way of delineating what life satisfaction is or is not.

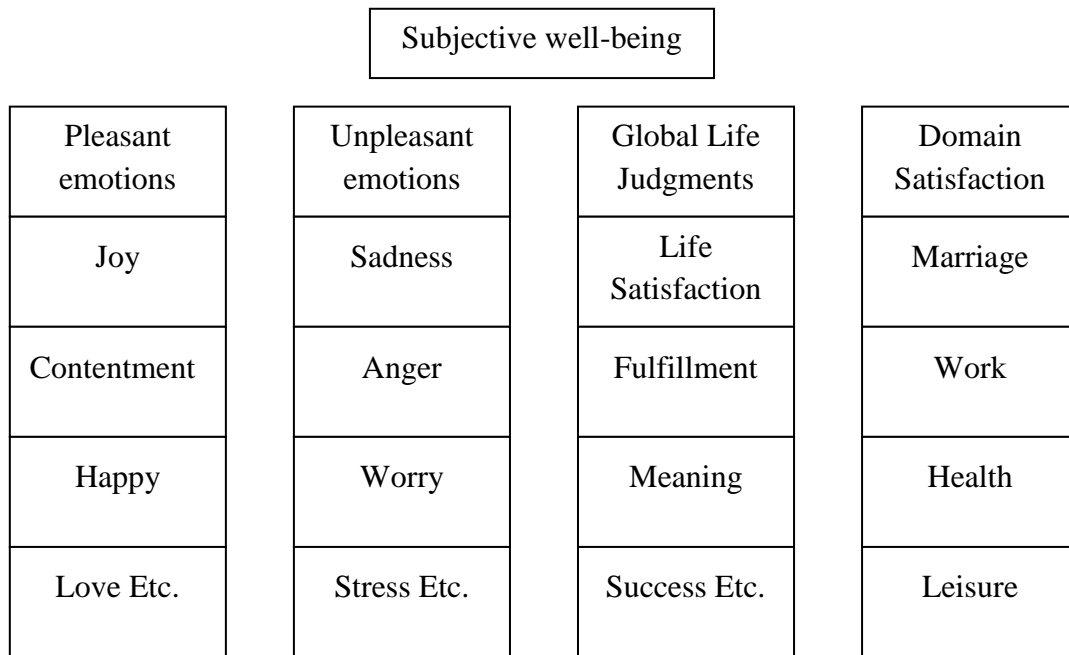
Figure 2. Four kinds of well-being

	Outer qualities	Inner qualities
Life-chances	Living in a good environment	Being able to cope with life
Life-results	Being of worth to the world	Life Satisfaction

Source: R. Veenhoven, *How do we assess how happy we are*, 2006.

As can be noted, life satisfaction is only one kind of well-being according to Veenhoven. Thus, although happiness could be *eudaimonic*, life satisfaction is not *eudaimonic* in the sense of a holistic incorporation of elements. In fact, some of the concepts mentioned earlier such as leading a virtuous life do not enter this way of delineating what life satisfaction is. If there is a channel that being of worth to the world increases the feeling of autonomy and self-worth, it could affect life satisfaction and this depiction would be omitting major parts of the greater picture. Thus, a better depiction of life satisfaction is the following.

Figure 3. Subjective well-being depiction



Source: E.Diener & M.E.P. Seligman, *Beyond Money: Toward an Economy of Well-being*, 2004.

This is a better depiction than the previous because the components are related between each other. However, for Diener life satisfaction is just an aspect of subjective well-being as well. Thus, life satisfaction is only a proxy for it. In that case, having equated happiness with subjective well-being and taking life satisfaction as a proxy for it would mean that we are omitting information.

This delineation, where life satisfaction is only a part of subjective well-being is present in the conceptualization of a psychologist and a sociologist. However, economic research produced within happiness economics tends to equate happiness with subjective well-being, where both would be based on a hedonic subjective idea as opposed to the Aristotelian *eudaimonic* objective one (Bruni & Porta, 2005). This mainstream view boils both happiness and subjective well-being down to only one aspect presented in the graphs above, which is life satisfaction, as life satisfaction is taken to mean subjective well-being and this is then a proxy for happiness. As can be seen from the graphs above though, sociological and psychological theory would suggest otherwise.

Which view is valid empirically? Empirically, taking life satisfaction as a proxy for happiness has been shown to be valid. However, this could result from two cases. For example, it results because life satisfaction is the same as subjective well-being and happiness and in that case, life satisfaction is composed of satisfactions with different domains and each matters for the happiness of the individual. Alternatively, life satisfaction could be taken as a proxy for happiness, even if one abides to the other view, where life satisfaction is only a constituent part of subjective well-being and happiness, but their biggest.

There is some evidence for the first. For example, an extensive analysis of happiness concludes that happiness does mean total satisfaction with life (Tatarkiewicz, 1976). In that case, life satisfaction as a whole is acceptable as a proxy for happiness because it widens the construct for happiness, thereby freeing it from narrow constructs such as mood and particular domains (Hadjistavropoulos, Stones, Tuuko & Kozma, 1995).

The second explanation is also backed by research. For example, a comparison of life satisfaction and happiness data for European countries shows that although the means of the two series differ significantly, with life satisfaction generally being rated higher by 0.4 points on the 11-point scale, tests of explanatory equations show that the same variables explain happiness and life satisfaction, with generally similar coefficients, including the effects of income. Thus, even though they are not conceptually the same, empirically they yield similar findings.

Another example is the European Social Survey country rankings for happiness and life satisfaction which were found to be almost identical (Helliwell Et al., 2012). Further, according to a study conducted on the meaning of happiness across a mixed sample of German and South African students, the following concepts appear (arranged from closest to furthest away from what students thought happiness was): 1) satisfaction; 2) contentment; 3) positive affect; 4) social relationships; 5) freedom; 6) the opposite of unhappiness; and 7) surprising events (Pflug, 2009).

This seems to suggest that life satisfaction is a good enough proxy for happiness. As discussed earlier, this does not necessarily negate either view, as it could be that life satisfaction really means subjective well-being and is therefore synonymous with happiness as well, or it could be that it is just a part of it, but its largest. That is why it would serve as good proxy for happiness empirically, even if theoretically it is incorrect to treat it as the only constituent part as the graphs above would suggest.

However, even though we seem to have found justification for why to use life satisfaction as a concept for subjective well-being and happiness, there is one main caveat. Namely, happiness research has not even been conducted for some parts of the world. Notably, current research has a rather limited range of sampled cultures with Arab and Sub-Saharan countries. (Suh and Oishi 2004). Thus, it cannot be claimed that life satisfaction means happiness universally due to lack of testing and addressing the fundamental question of the meaning of happiness only rarely (Wierzbicka, 2004).

Currently though, according to data available so far, it is the closest concept to happiness available. As discussed earlier, this could occur due to both views, where life satisfaction is happiness or is its biggest part, which would justify taking it as the closest concept. This in turn implies that the width of the concept of happiness and subjective well-being is not seriously impaired with taking life satisfaction as the closest concept. Therefore, I am also using life satisfaction as a proxy for happiness.

However, it is still true that even if the width of subjective well-being and happiness is not seriously impaired, identification of what composes this width simultaneously is, as an answer to one general question on life satisfaction as a whole does not say much about the sources of this life satisfaction. Happiness research has been dealing with this by analyzing these answers in relation to various factors, thus allowing to identify happiness determinants only, but not the sources of changes if those arise. The following section presents the findings from the research conducted on happiness determinants using life satisfaction as the closest concept to happiness.

## 2.2 Happiness determinants

As there may be many determinants of happiness, this section presents what matters for happiness in terms of endowment with factors (human capital and health, social, financial, institutional, environmental). The basic idea builds on the mainstream utilitarian one, except that it is wider since it allows for different contributors to this utility, thus unifying both strands in the happiness writings. Happiness also depends on demographics and personal characteristics, such as age which has a U-letter relationship with happiness for example (Frey & Stutzer, 2002). However, this section is dedicated more to factors and determinants which policy may affect. Thinking along these lines is useful for problems within happiness economics, for example the Easterlin paradox. Thus, the section opens with a review of human capital and health factors and their effect on happiness. It should be noted that research done so far has used subjective well-being, life satisfaction and happiness interchangeably, even though this may not be completely correct theoretically, as seen earlier.

### 2.2.1 Human capital and health factors

**Human capital** refers to the skills and knowledge possessed by an individual or population. It does not stand for merely education and skills obtained in school. Increasingly, in the modern dynamic knowledge economy, it becomes ever important to have other personal skills as well, such as emotional intelligence and overall (or specifically intellectual) flexibility. **Emotional intelligence** refers to the skill of understanding and managing one's own emotions and also understanding the emotions of those around. Both are highly personal which may mislead us to think they cannot be changed or trained. In fact, they are (Goleman, 2004; Sternberg, Ballard, Hardy, Katz, Doraiswamy & Scanlon, 2013).

Since nurturing and developing these types of intelligence does not come with a certificate proving mastery in either one, most of the literature on happiness and education has used a narrow definition of education. However, if the distinction between an educational and non-educational activity is that learning occurs in the former, but not in the latter, then it is a major omission and oversimplification to reduce education to something which offers certification. According to such a narrow definition of education, education has little effect

on happiness (Michalos, 2008). However, this is misguided as both academic and emotional intelligence matter for job performance (Hawyer, Humphrey, O'Boyle Jr. & Story, 2011). Some deem the latter to be more important than the former (Goleman, 2004). In any case, if these matter for job performance and job performance matters in turn for happiness because of an effect on income but also on general satisfaction with oneself, this is clearly a misrepresentation.

In fact, a study for Spain concludes that education has two effects on happiness: a direct and indirect effect. The direct effect comes from a so called "self-esteem" effect from the mere acquisition of knowledge. The indirect effect comes from the ability to earn larger incomes and then through income, a better ability to satisfy certain needs (Cunado & Perez de Garcia, 2012). In the same study, individuals with larger education levels had higher chance of being employed. This could be interpreted as both a direct and an indirect effect, where the direct effect is feeling greater self-esteem because one is more attractive to employers, even if one wishes to stay out of the labor force. The indirect effect goes again through income. Interestingly, the study finds that education affects happiness for all three levels (primary, secondary, tertiary). This clashes with a view that the indirect effect is caused by the ability to satisfy basic material needs.

Another study on four East Asian countries (Japan, China, Taiwan, South Korea) finds a positive relation between education and happiness. However, unlike the previous study, this study attributes most of the effect to what could be called a direct effect (analogous to the previous study). Namely, the study found that education affects happiness through an effect on social networks in Japan, South Korea and Taiwan. Those individuals who were more educated had wider social networks and greater interaction overall, or what they call cosmopolitanism. For China, they found a stronger indirect effect, or that education affects happiness through its effect on income (Chen, 2012).

It is difficult to tell which effect prevails, even in a brief literature review, due to sampling issues. There is still not enough research done on it so as to be able to compare. Nevertheless, some describe education as the means to a larger income and not higher happiness (Seligman, 2002, p. 59). This view is rather partial. Even if it is not true for adults, it may well be that it is true for young children. Namely, a study for Australia finds that getting good grades and being smart in class is linked to having better social connections in early childhood (Cooper, O'Rourke & Gray, 2012). In addition, income may affect happiness itself.

Another factor which relates to human capital is life expectancy or health. Health affects happiness (Frey & Stutzer, 2002). It is possible to speak of a reverse causality as well, as happier people may live longer or feel healthier. It is placed in the section on human capital, because education determines demand for healthcare. In fact, individuals with tertiary education are more likely to take better care of themselves and have higher life expectancy (Eurostat, 2010). Thus, this could be another channel how human capital affects happiness, not only through income, self-worth but also health in general.

In summa, human capital tends to affect happiness. The research done so far has been done on the measurable skills that come with certification such as formal education and there are two effects here, a direct effect through self-worth and an indirect one through income. Human capital which does not (yet) come with certification has not been researched much but there are grounds to believe it matters. In addition, one could also speak of another effect, which is the effect of human capital on health, usually proxied by life expectancy. Specifically, these softer skills may affect other factors which are the next to be reviewed, namely, social factors.

### 2.2.2 Social factors

**Social capital** is defined as the value of networks of relationships among people who live and work in a particular society, enabling that society to function effectively. Within the literature, social connections have been found to be important for subjective well-being (Bartolini, Bilancini & Pugno, 2011; Saraccino, 2011; Tang, 2007; Graham, 2010). Perhaps because this is rather intuitive, the literature has also focused on comparing the magnitude of this effect with the magnitude of others on well-being.

Thus, reference income and social connections have a larger effect on happiness than confidence in institutions (Bartolini & Saraccino, 2011). Between social connections and reference income, according to some authors non-pecuniary factors (which include social connections) have an even bigger effect on well-being than reference (relative) and absolute income (Ball & Chernova, 2008). What is more is that as income increases, social connections and job satisfaction tend to be even more important for subjective well-being (Diener & Seligman, 2004; Saraccino, 2013). In line with this view, what counted the most were close relations and ability to prosper, which were augmented by social institutions such as political democracy, a welfare state as well as an equal income distribution are seen as contributors to overall satisfaction and happiness (Haller & Hadler, 2006).

When it comes to close relations, there is one typical determinant – marriage. The marital status could affect happiness in that married people may be happier in general, but there could also be a selection effect here. Namely, those who are happier are the ones who get married in the first place. A study based on longitudinal data finds that happier singles are more likely to enter in marriage and that large differences exist in terms of benefits from marriage between couples (Frey & Stutzer, 2002). However, the causality could go in the other direction and there is some evidence to it. After marriage, people reported higher levels of happiness after 5 years of marriage (Easterlin, 2003).

Marriage is a one-to-one social relation but one could also speak of a one-to-many relation in analyzing the effect of relations on happiness. An example of a one-to-many relation is religion. In general, there is a positive correlation between religion and happiness, with a positive effect from churchgoing and protestant confession. The results on internal religiosity



are not as unambiguous (Frey, Steiner & Leinert, 2010). Religion has been also acclaimed to have an insurance effect on happiness in times of adversity and systemic economic or institutional changes, for example for transition countries (Popova, 2010). Further, religious people deal better with idiosyncratic shocks to their income as they tend to cherish different values (Clark and Lelkes, 2006; Dehejia, De Leire & Luttmer, 2007). These results are only suggestive. Even if it may cushion shocks, it may be detrimental to social capital due to a proclivity for religious extremism.

Overall though whether we speak of a one-to-one or one-to-many relations, relations and consequently the value people attach to them matter for happiness. Even though this is intuitive it is important because its magnitude is not negligible. For example, according to some, they matter more than income itself, or start mattering more after a certain income threshold. This will be important for future considerations which should analyze interactions with other types of factors and thus a non-linear effect on happiness. Such considerations are reviewed in the next section which reviews the effects of financial factors on happiness.

### 2.2.3 Financial factors

The following section deals with financial factors which will be used in the connotation of income, homogeneously, since there is no distinction between effects of labor or non-labor income on well-being, such as effect of bequests on well-being for example. Financial factors could affect happiness positively for several reasons. The first is the simplest and it comes out of the bare love of money. This could be because of feelings of security or accomplishment associated with having more money and not necessarily because it solves some material-based need. Usually though we would associate the utility of money with its ability to satisfy a material-based need. Therefore, another channel could be money's ability to satisfy a material-based need. This includes needs such as hunger, safety, shelter etc.

Other channels work through the other types of factors analyzed in this text. Money or financial factors do not necessarily need to increase utility only on its own, but can increase it because it drives or enables improvement in social or institutional factors. For example, the first one might be related to having enough money to socialize at the same venues as your friends, go to the same vacation spots or enroll at the same schools. Alternatively, money could damage social factors because income differentials may lead to feelings of envy and thus disrupt relationships. For the latter, it could work through donations to political candidates that one deems as the most fit investors or managers of the institutional factors at stake.

The literature is anything but conclusive on the relation between income and well-being, as is evident with the Easterlin paradox. This is because money enters people's utility functions differently. It is likely the case that it enters the utility function positively, but this does not say anything about the many possible individual thresholds above which money does not play a role (see Kahnemann & Deaton, 2010) or about the diminishing marginal utility of money

(Bentham, 1780). In addition, much of the literature does not disentangle the effects described above. Thus, it is mostly divided along the lines of whether income affects well-being or not. For some, income affects well-being but only in the short run before individuals get habituated. Thus in the long run there is no significant relation between income and happiness (Easterlin, 1974).

Others refute this **hedonic adaptation** view, that people get used to larger incomes, and conclude that income does affect happiness. (Stevenson & Wolfers, 2008; Angeles, 2011; Sacks, Stevenson & Wolfers, 2013; Veenhoven & Vergunst, 2013). Although this seems to go against Easterlin's result, it is not necessarily so. This is because it could easily be that income was rising but social connections such as marriages declined, thus leading to an overall stagnation or even decline in happiness (Angeles, 2011).

In general, then, income does affect happiness, at least in the short run. Whether this continues in the long run or not depends on people's preferences and the value they attach to other types of factors, for example social. Thus, we can distinguish between the effect of absolute and relative income. Whereas absolute income affects happiness positively and may matter more in the short run, it may be appropriated by a decrease in relative income in the long run which may affect happiness negatively. Relative income perception is shaped by views on inequality which forms part of the next type of factors to be analyzed, namely, institutional factors.

#### 2.3.4 Institutional factors

The next type of factors to consider are institutional factors which refers here to a set of institutions that support an economy. Institutions can be defined narrowly as public institutions, organs of the government, but also broadly in terms of habits, customs or generally speaking belief systems. Individuals' institutional factor endowment would depend on the extent to which they feel the formal institutions support their informal institutionalized belief systems, which can be determined internally or externally as a broader part of society.

One such institution is income inequality, whose effect on happiness depends on inequality aversion. This obviously depends on perceptions of social mobility and fairness, and how they are institutionalized within the national identity. Because of such concerns, the literature is not conclusive on the effect of inequality on well-being. For example, inequality is negatively correlated with welfare in Latin America where the inequality is linked to unfairness in the society (Graham & Felton, 2005). In the US inequality had negative effects in general, but different effects across groups, with left leaning rich people being the only group with a negative correlation for inequality and welfare (Alesina, Di Tella & MacCulloch, 2004; Clark & D'Angelo, 2013). However, it should also be noted that the Easterlin paradox disappears after looking at median income and happiness. Since both

stagnated, this suggests that inequality matters (Fisher, 2007). In the UK inequality was actually positively correlated with welfare, as greater inequality was associated with greater opportunity (Clark, 2003).

Another institution which affects well-being is democracy. Democratic values are widely promoted today and indeed we see a surge in country protests in order to obtain the coveted democracy. With regards to the literature, well-being or happiness policy are commonly linked with democracies (Rasiah, Ratneswary, Jambulingam & Habibullah, 2013; Frey & Gallus 2013). Democracy or another system should work well though. In light of this the role of government (good governance) and its contribution to happiness cannot be stressed enough. The absence of the former could explain why young democracies, do not immediately see a surge in well-being (Bjornskov, Dreher & Fischer, 2010), since democracy is not properly institutionalized yet.

Generally, studies show that happiness is higher in countries with good governance (Helliwell & Huang, 2008; Ott, 2009; Frey & Gallus 2013) and the result was robust with an increased sample and using a different indicator for happiness (see Helliwell & Huang, 2008 & Ott, 2009). In addition, quality of governance was found to explain much of the difference between average levels of happiness and inequalities in happiness (Ott, 2011). With regards to the former, it was superior to size of government (Ott, 2011). The acknowledgement of the role of good governance is therefore pivotal for happiness research, as it opens new directions in the field where we do not explore only the determinants of happiness but the (limited) maneuvering space for governments in the pursuit of happiness as well (Seoyoung & Donggeun, 2011).

Good governance plays a role in people's happiness, but only if materialized or incentivized. Given governments' natural inclination to misuse happiness indicators and the absence of one optimal policy to put happiness research to use (Frey & Stutzer, 2012) , democratic safe-check institutions such as the free press or the economics of competition (Frey & Gallues, 2013) might increase the pressure on governance thus pushing it to act better. Legal security and property rights, sound money and regulation, which follow as a consequence of good governance have been associated with subjective well-being as well (Gehring, 2013), as well as economic freedom (Inglehart, Foa, Peterson & Welzel, 2008).

To sum up, institutions matter. This has been resonating recently in development circles. Since development deals with the qualitative as opposed to the quantitative aspect of growth, it is reasonable to expect that they will matter for happiness as well which has to do with quality of life. However, even if they all matter, they do not matter in the same way. For example, even though good governance seems universally positive for happiness, inequality is not as it depends on inequality aversion. Institutions thus matter by themselves, but they also matter in enabling other types of factors such as environmental factors. Before doing so, one should see the effect of environmental factors on happiness first, which is the aim of the next section.

### 2.3.5 Environmental factors

With environmental factors I am referring to a stock of natural resources available so far, as most studies analyze changes in subjective well-being with a change in the current factors. Theoretically, it could refer to environmental bequests left to further generations as well. The research done on the relation between environmental factors and happiness or subjective well-being is not as booming as the one done on happiness determinants in general (more specifically economic, social and institutional factors), although it is more advanced in terms of revealing people's preferences. That is because of calculations of **willingness to pay** which tells how much other goods or services people are willing to give up in order to get a certain item which helps valuation of environmental goods. Sampling and over- or under-representation are still an issue.

Looking at the literature, it is unsurprising that deterioration in environmental factors shows as a decrease in happiness or subjective well-being as well. For example, there is a negative impact of SO<sub>2</sub> concentrations on self-reported life satisfaction (Ferreira, Akay, Brereton, Cunado, Martinsson, Moro & Ningal, 2013). A study based on a data set of 48 countries spanning the period 1990 to 2006 finds that individuals do not habituate to pollution. In addition, past pollution affects current utility levels (Menz, 2011). Further, a study conducted for 400 Londoners finds that an increase of 10 µg/m<sup>3</sup> in annual mean nitrogen dioxide concentration appears to correspond on average to a drop of nearly half a point of life satisfaction on an 11-point rating scale (MacKerron & Mourato, 2008).

Some studies go further to assign a monetary value to environmental degradation or improvement. The link to happiness is that people are willing to pay more for something which they consider more valuable or more conducive to happiness. Thus, for example, the improvements achieved in Western Europe in the 1990s are valued at about \$750 per capita per year in the case of nitrogen dioxide and about \$1400 per capita per year in the case of lead. Due to synergies among both pollutants, the value of a simultaneous reduction in both is slightly higher than only the sum of these two values (Welsch, 2006). A study done for Australia finds that on average, a respondent is willing-to-pay approximately \$14,000 Australian dollars in household income per annum to obtain a one-unit improvement in scenic amenity, where scenic amenity is measured on a 10-point rating scale (Ambrey & Fleming, 2011).

These results are hardly surprising, but it would be interesting to see what is the within and between variation in countries' data. As noted though, this is still nascent (also these papers are not older than a decade) so for the time being such comparisons are unavailable. Given the preceding discussion and literature review, we can conclude that there are multiple relevant dimensions for happiness. The following section synthesizes these findings in my conceptualization of happiness on the basis of the literature review conducted on concepts and determinants.

### 2.3 Happiness conceptualization

The literature review on research conducted so far within the happiness economics literature has revealed that happiness depends on multiple factors. Awareness of this multidimensionality is also present in Ancient Greek philosophical thought, although generally we could divide thinkers along two lines, where one camp emphasizes pleasure and the other virtue as the means to happiness. As stated earlier, one does not exclude the other, as one could derive pleasure from living a virtuous life. Such a unified view of both camps seems to go hand in hand with what the modern research on happiness has revealed so far. Namely, the literature review on happiness determinants showed that happiness depends on several types of factors.

Thus, given the review of concepts and determinants provided earlier, I conceptualize happiness as dependent on various factors. It is a holistic approach because it acknowledges the wide array of factors which influence happiness, which may be economic, political and/or sociological, thus making it interdisciplinary as well. In relation to the two lines of thought on happiness seen earlier, this conceptualization is unifying for both. Formally, my conceptualization is as follows:

$$Happiness = f(\text{human capital \& health, financial, social, institutions, environment}) \quad (1)$$

Naturally, individuals who value one type of factors more than the other will have a smaller decrease in happiness if the second type of factors suddenly deteriorates, as compared to someone who values all types of factors equally. This explanation can reconcile the seeming Easterlin paradox, while still taking the average income, as it could be that income does have a positive effect, but it is countered by an opposite event. What this means is that even if the direction of income is positive for well-being, one could still obtain the Easterlin paradox and it will be because of a simultaneous change in the other direction of another factor. Clearly, if the magnitude of the negative trend is larger than the positive trend, the net effect will be negative.

The conceptualization given by equation 1 reveals determinants of happiness. These could suffice for a merely descriptive framework. However, for the happiness economist who should advise on well-being policies it is necessary to look beyond, into the nature of happiness itself. Therefore, understanding happiness in a happiness economics perspective requires additional considerations as well. The following is a list of considerations of the nature of happiness. This is relevant because it widens the perspective to not only what affects happiness, but also which happiness could be affected, if any at all. The last consideration relates to the pursuit of happiness, or happiness targeting and who/what it is best left to.

#### a) **Happiness statics vs. dynamics**

- b) Individual vs. collective happiness**
- c) Relative vs. absolute happiness**
- d) Material vs. non-material happiness**
- e) Inter-generational vs. intra-generational happiness**
- f) Market vs. the state**

**a) Happiness statics vs. dynamics**

The first issue is obviously whether happiness even is subject to change or not. With regards to happiness statics or dynamics, longitudinal data in relation to happiness as both a personal and collective trait reveals that happiness is subject to change (Veenhoven, 1993). According to Veenhoven's review, happiness is stable in the short run, but not in the long run. This does not hold relatively nor absolutely. In fact, happiness changes in relation to positive or negative shocks. At the nation level, happiness changes with better living conditions. Since the past couple of decades have seen drastic decrease in poverty rates and previously poor nations have embarked on a growth trajectory, nation happiness has also changed profoundly due to the living conditions channel. However, there are still dilemmas as to whether this holds, given a possible income threshold above which happiness has no effect or only a marginal one at best and Easterlin's result of no relation between income and happiness. Thus, even if living conditions were to change, happiness would be expected to be static.

**b) Individual vs. collective happiness**

Veenhoven's review also reveals another aspect of happiness, a duality of individual and collective happiness. Individual happiness is not that dependent upon genetic factors, an innate disposition towards (un)happiness and thus could be affected by positive or negative shocks. These same shocks can affect collective happiness as well, through an effect on living conditions. Although we can speak of collective happiness as shared outlook on or attitude towards life, differences between nations are not due to their collective outlook on life. Thus, living conditions matter and whatever affects individual happiness will affect collective happiness as well, although it is possible to speak of cultural effects which may serve as a buffer. Whether or not individual happiness will turn into collective happiness has to do with absolute and relative aspects of happiness.

**c) Absolute vs. relative happiness**

Happiness can be something absolute or relative. The relation could be to other persons or other countries. Further, this can be regarded at both the individual and collective level. If individual happiness is relative to other persons, it is possible to explain the stagnation in collective happiness that Easterlin noted. If individuals look at their relative income, nationwide happiness will remain rather constant if everybody else's income is growing, as happiness decreases for the relative "have-nots" and increases for the relative "have's", and the net effect is stagnation. It could increase in relation to other countries', if living

conditions and income are increasing and spurring relative income assessments (to other countries). Thus, in relative terms, collective happiness may stagnate or improve, depending on whether the relation is to other persons or to other countries. When it comes to absolute happiness, it is clear that improved living conditions will generally increase both individual and collective happiness. However, the marginal effect of improved living conditions is unclear, as if the starting point was low, it is high, and vice versa. Living conditions are thus obviously a driver of happiness. What else drives happiness?

#### **d) Material vs. non-material happiness**

Given the previous literature review, this part is just a repetition. Namely, we know that there are many determinants of happiness. Material factors matter, but so do non-material factors, such as marriage, religion and generally social connections. A clean environment also matters, for example clean air, although it is something intangible and therefore non-material. This is again relevant for the Easterlin result and perhaps why he found no relation between income and happiness. Since happiness is affected by both material and non-material factors, it is possible that there was an improvement in the material factors, but this improvement was appropriated by a deterioration in the non-material factors, which overall led to a stagnation in happiness.

#### **e) Intra-generational vs. inter-generational happiness**

This aspect refers to whether happiness is something derived from and common to a generation or it is also affected inter-generationally. Some generations may generally be luckier or happier than others because they were born in good times for example. However, just because their cohort is happier on average does not exclude inter-generational effects. For example, if one imagines a dynastic model with altruistic agents in which the altruistic agents live through a tax decrease in the first period, their happiness goes up intra-generationally, due to an increase in disposable income. However, since these taxes have to be paid by other generations to come, happiness is easily inter-generational as well, because the altruistic agents will care about the debt they leave on to their children for example. Thus, it is possible to speak of both. Which aspect affects or dominates happiness depends on the discount factors individuals assign across time and individuals.

Up to this point, this chapter has been mostly about describing happiness and then looking deeper into its nature which is relevant for happiness economics. However, it has to be remembered that happiness economics is not a branch of economics introduced to describe happiness, although this is obviously the first step. Happiness economics developed as a branch meant to analyze well-being so as to ultimately guide policy on how to increase well-being. Therefore, it is of utter importance to keep that perspective and move beyond the descriptive realm of well-being.

Thus, it is necessary to use the descriptive realm of well-being as a prerequisite for progressing in the analytical realm of well-being, i.e. how to improve well-being, which is what happiness economics is about. Indeed, this is why the dual considerations were introduced, to set the grounds for the analytics on how to improve well-being. Before analyzing that in greater depth, one additional aspect has to be considered. This is the eternal dilemma between the market and the state. Namely, if the analysis is about to progress into how to improve well-being, it is necessary to reflect on whether the state should have any role in this or instead it should be left to the market.

#### **f) Market vs. state**

The market vs. state dilemma relates to the familiar private vs. public interest school issue. By the private interest school government cares about pursuing its own interest, thereby wasting public resources which implies that outcomes are best left to be determined by the market. By the public interest school, the government cares about its citizens and providing them with satisfactory outcomes. Thus, the main issue in the context of happiness is not so much whether the market or the state is better, as we are aware of inherent market failures pertaining to happiness, but whether the government will care for happiness.

There are two views: one of a self-interested government or a benevolent social planner. It seems they are mutually exclusive, unless one assumes an infinite dynasty model where even the self-interested government cares about ensuring happiness for its citizens because by ensuring the public interest it is also promoting its private interest, which is staying in office. This is possible if the government is infinite, for example as a monarchy. However, even if society is not organized as a monarchy, it is still possible to ensure public interest satisfaction for the purpose of private interest satisfaction, in case of a very informed and highly responsive *demos* which is so rational so as to see through the government. If it is possible to overturn the government rather quickly, it will care about satisfying public interest so as to stay in office.

What would happen if none of these describe society? In that case, there is room for targeting private interest exclusively. However, given the surge in social riots lately, it seems that happiness and ensuring citizens' satisfaction has climbed up the priority ladder, simply because the cost of doing otherwise has risen. Even though voters may not be perfectly rational, mediocre or less than mediocre provision of outcomes leads to social unrest in the medium to long run, which seems to be happening today.

Assuming that the government will care about well-being because it does not want to lose office, either for itself or its descendants for example if it is organized as a monarchy, the next section moves on to analyze the role of the state in the pursuit of happiness. This is already the analytical part of happiness economics which deals with who should target it, why and how, as opposed to what is there to target. The next section is devoted to the pursuit of happiness in greater detail, more specifically the role of the state, so as to put happiness



analysis in a political-economic framework as the name of the branch-happiness economics, implies.

## 2.4 The state and the pursuit of happiness

The previous sections looked at what determines happiness and what is the nature of happiness or what could be the nature of happiness. This descriptive part was relevant to move on to the analytical part of who to leave the targeting to. The last section touched upon the dilemma of the market or the state in the pursuit of happiness. The pursuit of happiness refers to a search for happiness. It can be carried out by individuals themselves or by the government. Since this thesis is exploring alternative goals Beyond GDP maximization it is the latter which is relevant.

Historically the pursuit of happiness has been around for a while and it has been mentioned ever since Ancient Greek times. In those times though it was up to individuals to pursue their own happiness, in accordance with the prevailing belief of what happiness is, virtue or pleasure, as explained in an earlier section. However, this pursuit becomes more complicated when we add exogeneity, dependent on what is the exogenous factor. For example during the Middle Ages, the exogenous factor was a deity, God. For this thesis the relevant exogeneity from individuals' perspectives is the one of government.

The pursuit of happiness by an exogenous entity such as a government appears as early as the 17<sup>th</sup> century birth of the nation state and with it the idea of a government which can target happiness, as mentioned in the beginning. It is around this time that the philosophy of utilitarianism is also born. The idea that nation states can and should promote happiness appears in the American Declaration of Independence as well, where it is stated that “all men are created equal, that they are endowed by their creator with certain unalienable rights, that among these are life, liberty and the pursuit of happiness, that to secure these rights, governments are instituted among men” (Jefferson, 1776).

For some, happiness arises naturally with economic development and not necessarily through the explicit guidance of the government. For example, John Maynard Keynes speaks of happiness in terms of more leisure time which people will be able to enjoy with the advent of technology and rapid growth (Keynes, 1972, pp. 328–29). This is an interesting thought because it reduces the need for governments steering the wheel. However, we can see that this prophecy has not come true, arguably because it does not consider income distributions or because it assumes that working lower hours translates to happiness (Carabelli & Cedrini, 2011). It also obviously ignores any positive effects of work on subjective well-being, such as the joy of having a fulfilling career or the value added of learning on the job for personal and professional development.

From then on, questioning whether government should pursue happiness or not was not much of an academic interest until the birth of happiness economics which is when this issue got

salient again. Nowadays, there has been one government who has explicitly stated to pursue happiness, the Kingdom of Bhutan, but there are other governments who are following suit gradually. For example, the United Kingdom is far from placing happiness as a major goal, but it has devoted resources to estimating well-being and developing new measures to do this, which shows that happiness has relevance, although not priority one.

Since public resources are finite, should/would the government even try? In relation to the considerations in the happiness conceptualization, it would be pointless to even try if happiness is something static or genetically predetermined. When the government decides whether to pursue happiness, it will do so by weighting the pro's and contra's. Arguments that are pro pursuit of happiness have to do with the gains to be had from the pursuit of happiness, such as efficiency gains, both allocative and productive, as well as broader social gains in terms of solidarity and cohesion.

**Allocative efficiency** refers to there being no excess supply or demand. In terms of happiness economics, this simply means that governments will provide what citizens want better if they target happiness as happiness decomposition will help identify this in the sense of what it is that makes citizens satisfied with their lives (better health care and education, gender equality policies for social capital or lower working hours in general, tax reforms, better institutions, cleaner environment) thereby increasing allocative efficiency. However, there is a caveat here. In order to induce governments to provide what citizens want so as to eliminate excess demand, governments need incentives. If the *demos* of a country, i.e. the people of this country, have information constraints, i.e. are not aware of the harmfulness or the actions themselves of the government, they will not demand for more. They may not demand for more if these agents are myopic, thereby not looking enough into the future so as to demand a change.

There is another economic gain in the pursuit of happiness. It is a gain in **productive efficiency**, i.e. production at lowest costs. Governments will be motivated to provide what citizens want at lower cost (as otherwise they will be punished for it by losing office), thereby increasing productive efficiency. The latter may increase also as an effect of higher productivity, as happier people tend to be more productive. In fact, mental health costs account for one-third of absenteeism costs of production (Layard, 2013). However, this gain is again conditional on some assumptions. It rests on the assumption that people are once again informed up to an extent and also that happiness is subject to change, i.e. we assume happiness dynamics. The two are linked, because if governments provide something at a higher cost and happiness is non-responsive to this due to happiness statics, any change in demand is unwarranted. That is, to ask for a change, demand for lower costs of provision of public goods for example, one needs to be responsive to the change that results from the higher costs.

The other arguments relate to social gains. For example, targeting happiness in an unequal way for everyone by setting a discount rate to some groups within one generation allows for

solidarity in policy making, thereby providing a rationale for redistribution within a generation. It should be noted that these pro pursuit of happiness arguments do not envision an equity-efficiency trade-off, as providing solidarity and happiness may increase efficiency, for example it may increase allocative efficiency if most of society wants more redistribution. This is not easily foreseen with a growth paradigm. Within the growth paradigm, even if most of society wants redistribution, the equity-efficiency trade-off provides reason against it. Since the most productive portion of population should enable satisfactory allocation for other, it is their allocations which are taken care of first. In essence, the current paradigm then targets few, as opposed to many which is the founding principle of the pursuit of happiness. Thus, these gains depend on discount factors, whether it is the most productive portion or the least productive portion which receives a larger weight in decision making and in general the view taken towards the existence of equity-efficiency trade-offs.

Another argument for government intervention here is larger equity through inter-generational solidarity. Namely, due to public finance constraints the government has to decide whose happiness it is to target primarily and how many resources it will leave for the next generations. This is important especially when considering external shocks, whose buffer is in the hands of government, for example wars. If the government decides to assign weights inter-generationally, it can increase solidarity between generations. This can in turn increase happiness within the current generation as well, if agents are altruistic in a dynasty model, as discussed in a previous section. Thus, it is once again contingent on discount factors and generally happiness statics/dynamics.

Why is solidarity relevant? It is relevant because it enables social cohesion which in turn stimulates stability and this is relevant for the whole business environment. Namely, places that have violent protests and political instability do not have a business-friendly environment inviting for foreign capital. One could speak of moral gains of social cohesion as well, simply because there is a joy effect of living in such a society, but there is an economic gain as well, simply because politically unstable societies are not business-friendly. Political instability itself is linked to social cohesion, as the larger the level of perceived differences, the lower the level of social cohesion and trust, thus the likelier the probability for political disunity. Thus, this gives an additional argument to target happiness and that is to promote social cohesion, because by not doing so, there is increased risk of political instability as well as misery costs, for example costs of treating mental illnesses in the national healthcare system. This once again depends on whether social cohesion even matters for happiness (it seems so given the theory presented earlier), that is how large a trust deficit the *demos*, people of a country are willing to tolerate, or also generally whether happiness is subject to change, the statics/dynamics assumption.

Thus, in general we see that there are both economic and social gains from targeting happiness. Economic aspects include higher efficiency, which may or may not clash with the social effects such as greater intra-generational or inter-generational solidarity, depending on the view taken towards the equity-efficiency trade-off. Furthermore, larger solidarity is

important for social effects as well, in terms of social cohesion as well, but also because of economic effects as well, because stable environments are good for business. To enable the reader to follow more easily, the following table lists the arguments for and against the pursuit of happiness in the hands of the government.

Table 2. Happiness pursuit argumentation

Argument	Pro	Contra
Economic	Increased allocative efficiency	Contingent on information
Economic	Increased productive efficiency	Contingent on information
Social	Inter-generational solidarity	Contingent on discount rates across generations (preferences)
Social	Intra-generational solidarity	Contingent on discount rates within generations (preferences)
Social/Economic	Social cohesion and lower trust deficit	Contingent on tolerance of trust deficits (preferences)

*Note.* Happiness dynamics assumption is implicit for all

Assuming we abide to the pro pursuit of happiness arguments and take the stance that happiness is dynamic, either as an individual or collective value which also has absolute aspects to it and emanates from material factors which government can influence directly or non-material which government can influence indirectly, there are some policy recommendations on how to target happiness that stem from the various happiness factors, within the generation.

For example, with regards to human capital, it is important to start nurturing emotional intelligence apart from only academic intelligence through formal education. This inclusion can embrace philosophy as well and some teachings mentioned in a previous section. Ensuring healthcare is providing a basic need, so there are barely any recommendations here. With regards to social factors, it seems there is little maneuvering space for policy, at least at the micro level. However, alleviating gender inequality or including social dimensions in the EC's Macroeconomic Imbalance Scorecard may help address the trust deficit and increase social cohesion in the EU specifically.

With regards to financial factors, it is redistribution which is crucial, but this is closely related to institutional factors and inequality in particular (is inequality associated with opportunity or not). Perception of inequality will determine whether there will be a welfare loss from redistribution or an added argument to the pro-redistribution arguments (Cullis, Hudson & Jones, 2011). With regards to other institutional factors, governments should strive to avoid government failures for both reelection and citizens' life satisfaction. Size of government was

inferior to the quality of government, which means corporate governance will be imperative. Democracies should be introduced where society is mature enough institution wise. With regards to environmental factors, governments should implement environmental regulation, but optimize so as to not suffocate an economy in dire need of capital by increasing the price of investment.

All these aspects are relevant for policy making and in general analysis of happiness as a goal. It therefore should be clear by now that even those recommendations will be contingent on societal preferences, which may differ given path dependence. There will be no one universal way to achieve happiness neither at the macro level simply because factors that are important for happiness, although likely all, will be associated with different problems/opportunities. Thus, it is relevant that policy makers are able to characterize happiness for their economies as much as possible, for example, using dualities as the ones above. It is futile to limit the understanding of happiness by choosing one combination because it loses the width of the concept, which is exactly the opposite of what Beyond GDP stands for.

Therefore, if we have looked at the determinants of happiness so far, given a suggestion on how to characterize it in such a way that it is relevant for policy, how does one characterize it then? This requires empirics and measurement. This in itself can make targeting or even simpler identification difficult, due to data problems. Thus, the analysis moves now from theoretical to more practical. The next chapter presents measures of happiness before moving on to the actual empirics.

### **3 HAPPINESS MEASURES**

The following chapter introduces measures of happiness. As stated earlier, happiness and subjective well-being are used interchangeably. A proxy for subjective well-being and therefore happiness is life satisfaction. However, recently there have been multidimensional measures created which follow the line of reasoning of multiple factors that are relevant for happiness or progress more broadly. This chapter is organized as follows: the first part is a part on subjective well-being measures as happiness measures, the second is a part on multidimensional measures of happiness and the third part is a part on the theoretical background for a specific improvement of current metrics.

#### **3.1 Subjective well-being measures as happiness measures**

This section presents subjective well-being measures. It consists of two parts. The first part offers an overview of these measures and the second provides an assessment of these measures on the basis of general criteria for assessing indicators: reliability, validity and comparability, for example cross-nationally.

Subjective well-being is synonymous with happiness. Researchers use them interchangeably, and proxy them with life satisfaction. The previous sections introduced subjective well-being

conceptually in theory and touched upon the empirics. The following section goes more in depth in the empirics. There are three aspects to measuring subjective well-being: life satisfaction as a whole, positive/negative affect and *eudaimonic* well-being (OECD, 2012). Consequently, the survey designed to measure subjective well-being will differ depending on which type of subjective well-being we are trying to capture.

There are several types of surveys for measuring subjective well-being, depending on the user need (OECD, 2012):

**a) Integrated household surveys**

These are primarily conducted as surveys on income, expenditure and labor market status, within which there are also questions on subjective well-being. However, since space is at a premium, they can only focus on core questions.

**b) General social surveys**

These surveys do not have one predetermined focus, but vary depending on the user and their needs. For example, the Australian Bureau of Statistics, focus their general social survey primarily on measures of social capital and social inclusion. Others rotate modules on various topics between survey waves (Statistics Canada). Some are explicitly multidimensional (Statistics New Zealand).

**c) Time-use surveys**

Within these surveys participants are asked to keep a time-use diary and fill out a questionnaire on demographic and other information. This is useful because activities can be related to particular subjective states, but also because it is an opportunity to see how much time people spend in different subjective states.

**d) Victimization surveys**

These are surveys conducted in order to obtain information on the level and distribution of criminal victimization in a society. They are useful to understand how victimization affects well-being in general, and how/whether the effect may vary for different types of victimization.

**e) Health surveys**

These are traditional surveys undertaken for patients, in order to assess their overall health status or to prescreen for mental health issues. They include questions on all three aspects of subjective well-being.

## f) Special topic surveys

These are one-off or periodic special topic surveys that are aimed to explore a certain topic in greater detail than through a module in a regular survey. These are suitable for in-depth analyses, but since they are done one-off or periodically, they do not really allow for a cross-time analysis.

## g) Panel surveys

Unlike special topic surveys, panel surveys can be used for comparisons through time. Panel surveys follow the same individuals through time, therefore researchers use them to analyze causality issues. Two known panel surveys are the German Socio-Economic Panel (GSOEP) and Understanding Society (the former British Household Panel Survey).

After explaining what is meant with subjective well-being in empirical surveys and presenting the various types of subjective well-being surveys, I proceed with a brief assessment of the most commonly used subjective well-being measure as a proxy for happiness, namely life satisfaction.

Focusing on life satisfaction as the most commonly used measure for subjective well-being and happiness, there are several issues (Diener, 1999). This will obviously depend on which aspect of subjective well-being is explored and through which survey. Generally, the results will depend on factors such as the type of scale used, time frame, current mood at the time of measurement, interview bias, measurement error or order of items.

These issues can be broadened to three major concerns for indices in general. Namely, a good indicator should be reliable, valid and preferably available for cross-country comparisons. **Reliability** of the indicator refers to its consistency and its ability to give the same results in repeated measurement (Van Hoorn, 2007). **Validity** of an indicator refers to how well it captures the concept in question.

In general, the reliability of subjective well-being measures is substantially lower than that of other microeconomic variables (such as personal income). Studies show that the more advanced measures, such as multi-item questionnaires, produce more reliable subjective well-being scores (Krueger & Schkade, 2008). Although perhaps inferior to these more global measures, generally life satisfaction is accredited with good psychometric characteristics: good internal consistency, moderate stability and appropriate sensitivity to changing life circumstances (Diener, Suh, Lucas & Smith, 1999). A test has internal consistency insofar as “each item of the test administered measures the same variable” (Kline 1998, p. 30).

Namely, even though it is inferior to measures for other microeconomic variables, these problems can generally be mitigated by careful survey design or appropriate measurement methods (Frey & Stutzer 2002; Van Hoorn 2007). For example, specifically for the mood

volatility and its effect on subjective well-being, it has been found that during normal testing situations, the stable component of life satisfaction overshadowed the effect of current mood. Appropriate measurement methods could also include consistent testing or systematically varied testing (OECD, 2013). Generally, the results for reliability are reassuring (Helliwell et al, 2012).

When it comes to describing the concept faithfully, the most commonly measured scale is somewhat troublesome from this aspect. As seen in an earlier section, even though it serves as a good enough proxy, it is too narrow for identification purposes simultaneously. Thus, a measurement that would capture each of the composing domains of subjective well-being individually is necessary which is something which cannot be achieved with one item evaluation scales (Diener, 2009) .

It follows from this that we would need a clear vision of what each of these composing domains is. In addition, one would have to assess whether these are the same composing domains for all individuals. Namely, another issue with validity is just how well it describes the concept across different individuals. The literature is already familiar with separate scales for the elderly. For example, there is now a scale which measures life satisfaction specifically among the elderly (Neugarten, Havighurst & Tobin, 1961).

When it comes to cross-country comparisons, similar issues appear: validity, availability and reliability. Data validity is problematic because it is likely that different cultures may have different conceptions, such as differences between the Chinese and the Anglo-Saxon one .Therefore, any metric that we have or are yet to develop will have to take this into account. Another complication is data availability and reliability, which is the most difficult problem of all happiness measures, at least when it comes to life satisfaction data. This is because it is either not conducted regularly or it is not conducted at the level of the whole nation. The latter clearly leads to representativeness problems.

The table below gives information on official statistics conducted by national offices. The measures analyzed are in accordance with the OECD’s conceptualization of subjective well-being as composed of three parts. Since most of the measures so far have only focused on asking subjects about their life satisfaction and further asking them to rank it on a 1-10 scale, the primary measure according to the OECD is subjective well-being. The other core measures are the other core components of subjective well-being, affect (which can be positive or negative) and *eudaimonia*.

Table 3. Measures used for subjective well-being across OECD countries

Country/ Measure/ Periodicity	Primary measure	Other core measures		Periodicity	Date for comparable data
	(Life evaluation)	(Affect)	(Eudaimonia)		



Australia	+**	-	-	Four years	2014
Canada	+*	+**	-	Yearly	1985
France	+*	-	-	To be determined	2011
	-	+*	-	To be determined	2010
Italy	+*	-	-	Yearly	2012
Mexico	+*	+*	-	Two years	2012
	-	-	+*	Quarterly	2013
Morocco	+*	-	-	To be determined	2012
New Zealand	+**	-	+**	Two years	2014
United Kingdom	+*	+*	+*	Quarterly	2011
	+*	+*	+*	Yearly	2012
	+*	+*	+*	Yearly	2011
United States	-	+***	+***	To be determined	2011
European Union	+*	+**	+*	To be determined	2013

Note. \*In line with the OECD Guidelines

\*\* Intend to be in line with the OECD Guidelines

\*\*\* The US included questions on affect and eudaimonia in the Time Use Survey

Source: OECD, *Guidelines on Subjective Well-Being*, 2012.

As we can see, the list is rather short, comprising of 37 countries worldwide. This is too little to be able to make reliable cross-country comparisons. In addition, the measures are not consensually agreed upon, but countries have their own measures in place. Standardization then is much needed.

In addition to standardization, efforts should be made in incorporating multidimensionality as even though these measures behave relatively well in terms of reliability, there are some issues with validity. Given these and the preceding discussion on happiness determinants, multidimensional measures would be preferred from this aspect. That is because they may allow to capture the concept better generally by acknowledging its breadth or specifically by allowing for different weights on dimensions across individuals. Thus, the following section assesses existing multidimensional measures in the three indicator aspects mentioned above.

### 3.2 Multidimensional measures of happiness

Since the aim is to go beyond GDP and find a new metric of welfare and progress in this welfare which will incorporate the other dimensions that GDP otherwise lacks, subjective well-being is lacking. This is because it does not explicitly take into account these

dimensions. It is useful though for examining determinants, because perception of life as a whole does depend on all those dimensions, whichever ones we choose to include on the basis of life satisfaction regressions.

Therefore, to better reflect the directions of welfare and happiness, we need multidimensional metrics. These were introduced in the initial sections along with other metrics beyond GDP. However, the other metrics that aim to go beyond GDP do not explicitly acknowledge this multidimensionality, which if acknowledged and incorporated would be useful for supplementing GDP and pursuing happiness at the same time. This section elaborates on those measures into more detail. As such, it is organized as follows: the first part offers a comparison between these measures and the second part suggests a way to improve them.

### 3.2.1 Comparison

Indices meant to go beyond GDP were presented earlier. This section contains a comparison between the various multidimensional indices. The ones used in the table are the following indices: Happy Life Years (**HLY**), Gross National Happiness (**GNH**), Social Progress Index (**SPI**), Weighted Social Progress Index (**WSPI**), Human development index (**HDI**), Inequality adjusted Human development index (**IHDI**), Legatum Prosperity Index (**LPI**) and OECD’s Better Life Index (**BLI**).

It should be noted that indicator assessment in the previous section focused on three aspects: reliability, validity and cross-country comparisons. Due to the infancy of these multidimensional measures, reliability has not been taken on so far and they are still work in progress. Since the methodology is not yet refined and thus non-permissive for reliability assessments, the table below will only compare indices in the two aspects of validity and cross-country comparisons.

Since validity refers to how well the indices describe the concept in question, the table shows number of dimensions or subdimensions by each index, as the theoretical review shoed that it makes sense to speak of multiplicity of dimensions. It remains to be seen just how much multidimensionality they incorporate and how.

Table 4. Comparison of multidimensional indices

<b>Characteristic/ Index</b>	<b>HLY</b>	<b>GNH</b>	<b>SPI</b>	<b>(W)SPI</b>	<b>HDI</b>	<b>IHDI</b>	<b>LPI</b>	<b>BLI</b>
<b>Validity</b>								
multi-dimensional	+	+	+	+	+	+	+	+
number of dimensions	2	9	3	10	3	3	8	11
number of	-	33	4 (each)	46	0		89	1 to 4

subdimensions						0		
weights across dimensions	-	-	-	+	-	-	-	- (*)
weights across subdimensions	-	+	-	N/A	N/A	N/A	+	-
weights across countries	-	-	-	-	-	-	-	-
<b>Cross-country comparisons</b>								
number of countries	149	1	50	107	187**	132**	142	36
data availability (years)	10	1	1	5	11***	1	4	2
data availability (access)	+	+	+	+	+	+	+	+

Note. \*Website allows for own weights

\*\*as of 2013

\*\*\* for a sample of countries only

This brief comparison on indices is revealing and encouraging, at least to an extent. Namely, the newer indicators do incorporate multidimensionality, which is to be saluted, as it means that happiness research does not stay only within the academic realm, but is actually used for something which may guide policy in the future, but this is so by default or choice in this table.

However, from the multidimensional ones, most of them suffer from data availability for cross-time comparisons. Namely, out of the multidimensional ones, only HDI has been conducted longer than a decade. However, HDI only includes objective measures. For a complete picture, we would ideally need both objective and subjective measures. Most of them can be found directly online or upon request.

Further, looking at the table, we see that most indicators' have one major limitation, which is the absence of weights. These weights can be applied across different dimensions and across different countries. There is one example of an index which applies different weights to different dimensions – the Weighted Social Progress Index. The weights are not available publicly and neither is the index, since it is calculated for personal research purpose and it does not represent an official index available for cross-country comparisons at all times.

The other indicators all apply the same weight across dimensions. For the GNH Index, it is stated that applying different weights across dimensions would go against the concept of happiness (GNH, 2014). For the SPI, it is acknowledged as a limitation (Legatum Institute, 2014) and researchers are invited to correct for this anomaly. The Better Life Index is also

not definitive with the equal weights. In fact, both of these indices allow an option to set own weights for the index and then see how they compare (Legatum Institute, 2014; OECD, 2014).

When it comes to weights across countries, the situation is even worse, because to date there is not one single index which applies different weights across dimensions to different countries. This is another acknowledged anomaly for the LPI (Legatum institute, 2014). Is this a relevant anomaly for measuring happiness or progress? The issue is taken on in further detail in the next section. Social progress is used as a proxy for happiness, interchangeably from now on. That is because the previous literature review revealed determinants which are either directly included or are prerequisites for the dimensions in the newly constructed multidimensional indices for social progress.

### 3.2.2 Improving current metrics in theory

This section takes on the weighting issue in greater detail as elucidating it has potential to advance these measures. There seem to be grounds for this, at least in theory. For example, Maslow's hierarchy of needs (Maslow, 1943) would suggest that income and social factors may have different relative importance in richer and poorer countries. There is empirical evidence also. In fact, the first World Happiness Report ever, notes that research using data from the Gallup World Poll shows country differences of this sort. Although cross-country comparisons remain scarce, at least on a global scale, evidence shows that the relative importance of social factors is higher in OECD countries, although generally both social and economic conditions matter (Helliwell Et al., 2012).

Therefore, it seems plausible that there is cross-country variation in weights attached to specific determinants in the happiness equation. As for the literature, most of the happiness literature has focused on specific determinants of subjective well-being. This is rather extensive and some of it was summarized in previous parts. However, what is generally missing is research of interaction between different determinants and a relative assessment of each determinant. In addition, the relevance of determinants has to be tested between groups of countries, as this can help inform the development agenda. Namely, given limited resources for development, priorities have to be set and thus some dimensions have to take precedence before others. Future research in this direction will thus help improve allocative efficiency for developmental policy making. Additionally, it could be decomposed further for different sociological groups or regions within a country.

The gap in the literature is then reflected in the gap in the indicators constructed for happiness. It can be seen from the table above that only one index applies weights across dimensions. GNH's explanation that applying different weights to dimensions clashes with the concept of happiness is normative and not backed with statistics. The absence of weights for countries is also missing in all the multidimensional indicators so far.

Nevertheless, there are some recent attempts at making relative assessments. Unsurprisingly, much of this scarce literature dealing with cross-country comparisons has focused on the income-happiness nexus, owing to the controversy around the Easterlin paradox. I present such relative assessments below, following the same classification for types of factors as before.

The previous assessment of the multidimensional indices revealed a major fault across the new multidimensional indices which was lack of weights. Thus, the following section should reveal the evidence in the happiness literature so far as to whether same weights are appropriate or not. The determinants analyzed are the same as the one in the main happiness equation presented earlier.

#### **a) Human capital and health factors**

When it comes to human capital, its usual proxy is education, although human capital in a modern and dynamic knowledge economy is much more encompassing than that. With regards to education, there are some studies for the relative importance attached to education, but scarce.

The effect is indirect, through institutions which would provide a certain need. Institutions providing basic needs such as food, shelter, health care and education have been found to affect well-being in countries at lower levels of economic development more. However, attention should be paid to what kind of education is referred to. The one in this study is basic education. It is not excluded that higher, tertiary education may help promote well-being in richer countries also (Bjornskov, 2006).

For example, a study for South Africa shows that black South African's well-being is more dependent on public goods and infrastructure provision as opposed to income, ownership of durable goods and education which are more relevant for white South African's well-being. This is not a cross-country comparison, but it could be informative because due to the apartheid the white and black South Africans have very different starting positions and incomes further in life, which is why the author takes race as a proxy for income (Bookwalter, 2012). Clearly, education here can be included explicitly as it is for white South Africans as higher education, as opposed to basic education which would be included as a public good.

#### **b) Social factors**

When it comes to social factors, it seems to matter more for rich countries than for poor countries. This is because it is scarcer in developed economies and thus more valuable for well-being. Further, individual freedom of choice and control on one's own life and trust in others are important correlates of subjective well-being, but more so for rich countries.

However, this result is not very conclusive, because of a small sample size and the quality of the data at hand (Saraccino, 2013).

Others confirm it though. Namely, leading a self-directed life has been shown to matter least for life satisfaction in poor countries (Delhey, 2010). What does matter is income. This is supposed to reflect a shift from materialistic to post-materialistic values as an economy develops, thereby valuing social factors as well once post-materialistic values ensue.

### **c) Financial factors**

As mentioned, this is one field where there is ample research for cross-country comparisons owing to the Easterlin paradox. A popular view for cross-country comparisons is the threshold view which posits that income matters only up to a certain level, up to where it allows satisfaction of certain basic needs. For example, a study for the US finds that income increases happiness, but only up to a threshold of 75 000 \$ (Kahnemann & Deaton, 2010).

A study including 94 countries finds that income is more important for countries with low levels of GDP/capita (Stanca, 2010). Another cross-national study finds that richer nations are happier than poorer nations but after some time the curve flattens out (Inglehart & Klingemann, 2000). The other evidence which points to no Easterlin paradox does not even find a differential. For these, income tends to increase well-being.

### **d) Institutional factors**

Previously, it was stated that democracy is positively associated with well-being. It is not uniform across countries. Namely, one study finds that democratization increases well-being for middle income and high income countries, but not for low income countries. This implies that to increase well-being in these countries, democracy should not be forced as a value, as society is not mature enough to absorb it (Bjornskov Et al., 2010). The last thought could be linked to the recent Arab Spring uprisings in North African countries, where it is still chaotic even after or due to instilling democracy. A disorderly society is generally not conducive to well-being, unless the disorder is a prerequisite for order in the future.

When it comes to good governance and corruption, it is usually said that corruption has a negative effect on well-being due to an indirect investment effect and a direct moral effect. (Welsch, 2008). Whereas the latter is difficult to dispute for cross-national comparisons, the universality of the former may be questioned as even though corruption may affect growth rates negatively by discouraging investments (Mauro, 1995; Shleifer & Vishny, 1993), it may actually boost them in more sclerotic economies. This is the grease the wheel effect, rendering zero corruption sub-optimal (Acemoglu & Verdier, 1998; Leff, 1964). In addition, economic freedom has a different effect in rich and poor countries, with a more pronounced effect in the former (Inglehart Et al., 2008).

### e) Environmental factors

When it comes to environmental factors it becomes a little easier to assess differences between countries. This is due to calculations of willingness to pay for pollution abatement. Generally, willingness to pay can be calculated for anything we choose to place in the happiness equation. Then, these calculated values could be compared and we would have a monetary assessment of the relative importance. Throughout the literature, they are frequently associated with pollution abatement.

A study conducted a survey on 70 000 respondents in 48 countries in which it asked whether they were willing to pay 20 % higher prices to protect the environment and whether environmental quality or economic growth was more important. The results were that each \$10000 of household income adds about 1.7 % to the probability that a respondent expresses willingness to pay higher prices. Furthermore, willingness to pay increased with formal education (Israel & Levinson, 2004), which is in turn linked to income.

This result of increasing WTP is known throughout the literature as the Environmental Kuznets curve. By the original Kuznets curve, countries will have larger inequality as they grow and develop, but that this will subside and start decreasing as they grow further (Kuznets, 1955). The Environmental Kuznets curve is a similar idea, except that it relates to pollution (Dinda, 2004). Thus, pollution will increase in the initial years of economic growth, but will decrease as growth increases further. This can be explained through variations in WTP. By the Environmental Kuznets curve, WTP is increasing in economic growth.

This is plausible theoretically also. Namely, low income countries do not pollute not because they do not want to but because they cannot, as at very low levels of GDP/capita they face technological constraints (Stokey, 1988). Once they start growing, WTP is low and then starts increasing.

Given this brief theoretical review, it seems plausible to believe that there may be differences between happiness equations across countries, with financial factors mattering more in developing than in developed countries for example. This was one of the initial research questions posed in the beginning of this thesis. Namely, the first hypothesis was about whether more than one type of factor matters for happiness and thus whether it is a holistic concept. The second was about whether these various factors matter the same and the third was about whether if they do not matter the same, whether these differences are the same across countries or not. The next chapter is devoted to this.

I have so far introduced the concept of happiness and its measures, explained its determinants and posed a theoretical construct to look at it. Pursuit of happiness was analyzed as well, as it is relevant for policy. However, given the initial refuting of happiness as a goal, it is reasonable to ask ourselves whether we really understand it that well and whether/how it may differ across countries. This has implications for happiness in terms of goal setting. As happiness has been introduced thoroughly theoretically so far, the next section proceeds to

analyze it empirically, focusing on the research question(s) introduced in the beginning and the formulated hypotheses.

## 4 HAPPINESS ANALYSIS

After reviewing happiness theoretically, its determinants and various aspects to look at it relevant for its pursuit, the following section presents the data and methodology which will be used to answer the research questions posed in the beginning and check the aforementioned hypotheses. Namely, it has to be checked whether happiness is a holistic concept. If so, whether those various dimensions matter differently across variables and countries. Basically, the second and third hypothesis relate to whether there is room to question the equal weights assumption across variables and countries, which seems plausible given the theory. This section is dedicated to examining that.

### 4.1 Methodology and Data

Previously formulated research questions and hypotheses will be analyzed with a cross-sectional analysis of data from 89 countries. More advanced studies such as panel data analysis would have to wait on (better) public data availability, once reliable and regular data is compiled for several countries. The data on happiness is country-level data, specifically the average country score when rating life satisfaction on a scale from 1-10 and is taken from the Second World Happiness Report (Helliwell, 2013). It is the average of answers from surveys from 2010-2012, as data for each year is not publicly available.

The cross-sectional analysis will be done using a multiple regression. Since country level data are averages of citizens' responses on a scale of 1-10, an ordinary least squares regression will suffice, as the data is no longer on a scale of 1-10. Multiple regression analysis would allow us to evaluate whether or not all types of factors matter and how. Further on, it is relative weights which will be used, as explained in the beginning. This quantitative analysis should answer several questions, as said, whether all types of factors matter, how much across all countries together and how much across different country groups of development.

Data for predictor indicators is obtained from multiple sources (See Appendix for sources and precise definitions). Predictor variables were chosen so as to have at least one variable for each type of factor (human capital, health, social, financial, institutional, environmental). Thus, predictor variables include:

a) **Human capital and health** variables such as the available ones and most commonly used average years of schooling or shares of the population with completed primary, secondary and tertiary education so as to allow for differentiation among levels of education. Each of these three will affect average years of schooling. More advanced variables on learning outcomes from standardized tests are simply not available for all countries, as they are not universally conducted or available. Health is proxied by average life expectancy.



b) **social variables** such as measures of social cohesion and civic activism as these are closest

to social factors identified in the literature review. For example social connections, nation-wide variables such as marriage or divorce rates are not universally available. In addition they could be questionable as if people are happier in their next marriage divorce rates do not signify social decay. Satisfaction with marriage though is not universally available across countries or time for the years required.

c) **financial** variables such as GDP/capita and the share of population which has saved any money as it is possible that developing countries have inaccurate official statistics due to an unofficial (gray) economy. Unemployment rate was not used as there is a link between GDP and unemployment (negative) and thus it was avoided so as to keep the model simpler if similar information could be obtained from a variable already inside.

d) **institutional** variables such as the level of economic freedom or perception of corruption in an economy, as they came up in the literature review as well. Democracy and inequality are also factors but not all countries have democracy scores and world inequality data is not available for 2010 for all countries, thus they are not included.

e) **environmental** variable such as an overall environmental performance index as quality of environment has been shown to have an effect on life satisfaction. There is no differentiation though between different types of polluting agents and they are all included within this one index, as there is no reason to believe that a certain type of polluting agent will harm citizens in a developed or developing country in a different way.

The following table contains descriptive statistics of the indicators used.

Type of factor	Variable/ Summary Statistic	Mean	Median	St. dev.	Min.	Max.
Happiness	Life satisfaction	5.68	5.51	1.04	3.96	7.69
Human capital & health	Years of schooling	8.41	8.70	2.58	1.20	12.50

Table 5. Descriptive Statistics

table continues on page 53

continued from page 52

Table 5. Descriptive Statistics

Human capital & health	Share of population with primary education	26	23.89	14.32	3.84	59.73
	Share of population with secondary education	47.99	48.41	17.16	5.41	80.26
	Share of population with tertiary education	14.43	12.26	9.66	0.95	50.63
	Life expectancy	71.92	74.00	8.80	47.77	83.40
Social	Social cohesion	0.69	0.72	0.08	0.40	0.79
	Civic activism	0.52	0.51	0.05	0.42	0.68
Financial	GDP/Capita	14709.12	7376.83	16182.54	492.58	57505.84
	Share of people with savings	36.53	32.24	17.45	7.48	82.85
Institutional	Corruption Perception index	4.45	3.61	2.03	1.93	9.25
	Economic freedom index	62.38	63.83	9.46	23.27	82.17
Environmental	Environmental performance index	60.57	62.20	11.37	32.10	86.40

This section has introduced the data and methodology. The next section gives the model specification and presents the results.

#### 4.2 Model specification and results

The introductory section posed several research questions all of which cannot be answered simultaneously. This section gives the model specification and presents the results. Thus, I summarize the general model whose conceptualization was introduced earlier and present the relative weights analysis and significance results. The regression tables can be found in the Appendix.

Equation 2 on page 54 gives the general model for happiness, specified using the theoretical background and data availability. The theoretical background showed grounds for a holistic understanding of happiness, as dependent on human capital, health, financial, social, institutional and environmental factors, the empirical analysis also moves in that direction. The table in continuation shows the relative shares of variables. It is a two-stage analysis, as is implied by the research questions. Namely, the first research question is general and is about whether all factors matter for happiness. The other two deal with differences in weights. However, these can refer to differences across variables or across countries.

$$Happiness = f(\text{years of schooling, life expectancy, social cohesion,}$$

$$civic\ activism, \frac{GDP}{capita}, savings, corruption, economic\ freedom, environmental\ performance) \quad (2)$$

Table 6. Relative importance of variables in the general model (as % of R<sup>2</sup>)

Type of factor/Variable		Shares (1) <sup>1</sup>
Human capital & health	Years of schooling	5.37**
	Life expectancy	19.02***
Social factors	Social cohesion	2.99*
	Civic activism	10.99***
Financial factors	GDP/capita	17.61***
	Saved any money	16.41***
Institutional factors	Corruption	10.81***
	Economic freedom	6.18*
Environmental factors	Environmental performance	10.6***

Note. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

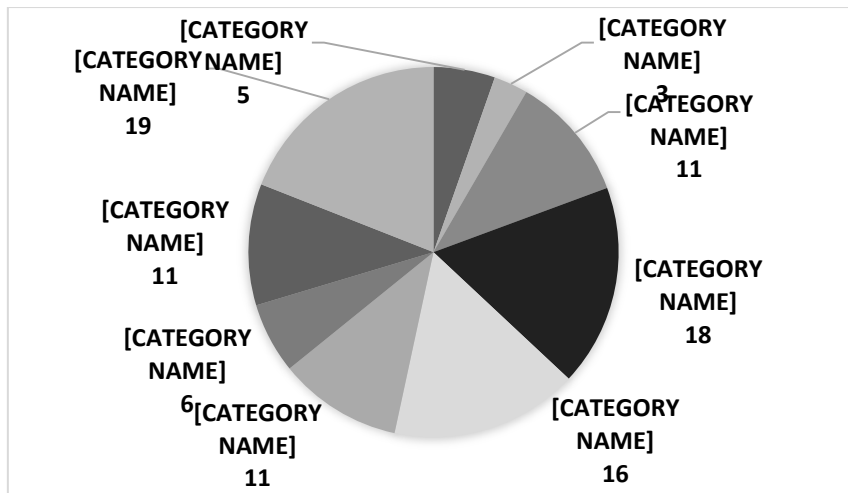
The table has implications for the hypothesis and research questions posed in the introduction. These results confirm the first hypothesis- that more than one or several types of factors matter for happiness. This means that happiness is a holistic concept, thus negating the mainstream view that happiness comes from utility of goods, more specifically consumption goods. This is in line with the theoretical expectations, as the theoretical review showed that a multitude of factors matter for happiness. There is a way in which this could be in line with the mainstream view also, if goods are taken to mean social goods, institutional goods instead of merely goods for consumption as is usually meant.

The results also confirm the second hypothesis which is that these types of factors do not matter equally. In addition, the sub-hypothesis that they do not matter equally, with financial factors mattering more than social and institutional, and the latter more than environmental, is also confirmed. However, the difference between social and environmental is rather small. In any case, this effectively means that there is room to doubt the equal weights assumption in the new alternative indices designed to go Beyond GDP. Thus, this gives a way to improve Beyond GDP by starting with its metrics first, even if the goal itself is not altered.

The figure on the next page shows a graphic representation of the values in the table.

Figure 4. Relative importance of variables for happiness (as % of R<sup>2</sup>)

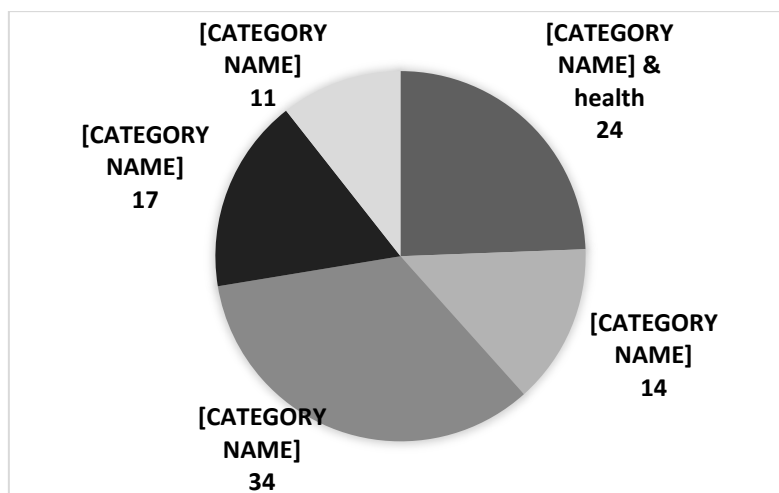
<sup>1</sup> (1) refers to the first regression done using world data on 89 countries



It should be noted that these weights are approximations, which have been shown to be statistically and conceptually reliable, meaning that they capture relative importance relatively well statistically, at least when compared with other methods, and the results have been shown to be conceptually valid as well. The advantage of this method is thus allowing for weights calculation (and relative analysis), even when variables are correlated. A disadvantage is that these are only proxies and weights obtained for variables which do not show significance in the general model, but do so in relative weights analysis.

The following figure shows these weights graphically by types of factors. Variables have been summed to represent factors in the initial conceptual model. Thus, years of education and life expectancy are human capital and health factors, civic activism and social cohesion are indicators of social factors, financial factors are share of population with savings and income per capita, institutional factors are corruption and economic freedom, whereas environmental performance is an environmental factor.

Figure 5. Relative importance of types of factors for happiness (as % of  $R^2$ )



After having analyzed the first and second hypothesis, I move on to the third hypothesis. The following table shows the relative importance of variables across groups of countries.

Table 7. Relative importance of variables across groups of countries (as % of R<sup>2</sup>)

Type of factor/Variable		Shares (2) <sup>2</sup>	Shares (3) <sup>3</sup>
Human capital & health	Years of schooling	2.28	2.98
	Life expectancy	13.34	17.05
Social	Social cohesion	1.99	0.96
	Civic activism	7.89	10.58
Financial	GDP/capita	22.3	35.13
	Saved any money	19.33	9.79
Institutional	Corruption	16.65	2.98
	Economic freedom	14.34	1.05
Environmental	Environmental performance	1.87***	19.48***

Note. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The third hypothesis has to do with cross-country comparisons - that is whether different types of factors matter differently across different groups of countries. The weights obtained differ, but they make sense if there is actual statistical significance behind them. Any conclusion on the third hypothesis is thus unwarranted. Therefore, the third hypothesis cannot be proven with this analysis. I proceed with a brief discussion of the results before concluding the chapter.

#### 4.3 Discussion

The results above support the first and second hypothesis, that happiness is a holistic concept and that different factors matter differently, although not across countries as the third hypothesis was not proven. Part of the second hypothesis is refuted as environmental factors have almost the same weight as human capital. Taking into consideration that environmental factors affect fulfilment of basic needs, for example health, this is not as surprising. The other hypotheses that social and institutional factors are second in importance after financial factors, which are supreme, have sufficient statistical evidence behind them to claim them, although not all variables were significant with a p-value of 0.05.

As it was possible to speak of differentiation of human capital, I did this for the sake of differentiation, but also for a robustness check. The results are in the Appendix. The first and second hypothesis hold, and this time even human capital is more important than environmental capital. Thus, the first and second hypothesis are robust to differentiation of human capital or inclusion of other variables as well. However, there is still not enough

<sup>2</sup> (2) refers to the second regression conducted only on developed economies' data. Developed economies are considered those that had a GDP/capita above 12715\$, according to the World Bank lending groups.

<sup>3</sup> (3) refers to the third regression conducted only on less developed economies' data. Less developed economies are those that had a GDP/capita below 12715\$, according to the World Bank lending groups.

statistical evidence to claim that average income carries a different weight in evaluating life satisfaction across countries. The only variable that did have a significantly different weight was environmental performance, which is not in line with expectations.

Therefore, the conclusion of the empirical part is that all types of factors matter for life satisfaction which was a proxy for happiness. Thus, it is sensible to speak of a holistic understanding of happiness. Even though financial factors clearly play the biggest role, they do not play the only role, and other factors such as social or institutional play a big role as well (both above 10% as shares of explained variance). That means that policies which focus solely on income are wrong from a happiness perspective. It also means that Easterlin's result may well be sensible, due to offsetting effects.

In addition, it means that the alternative indicators we are developing to go Beyond GDP use a wrong assumption that everything matters equally. Thus, it is true that everything matters, but income matters most, followed by social and institutional factors. Different happiness equations across countries simply do not have enough statistical evidence to back this claim with confidence.

This analysis though rests on several assumptions and hence limitations also. One of the main assumptions is that human progress, observed through a holistic lens, is synonymous with happiness. It depends on the second assumption which will be that happiness is subject to change. Namely, if happiness is not subject to change, then even ensuring progress in the broadest sense possible, is not going to do much, but the contrary – it would waste public resources for the pursuit of happiness. That kind of happiness dynamics assumption follows from the literature, but it does not come out of my own literature review. Rather, I rely on sociologist Veenhoven's observations to claim that indeed we can make an assumption on happiness dynamics as opposed to statics, i.e. that happiness is subject to change (Veenhoven, 1993).

The main limitation is in the empirical part and it is data availability. Namely, the happiness analysis will be done using data for 2010-2012 only, as data for other years and for the range of countries I am considering is unavailable. That is as far as the cross-sectional analysis goes. It would have been possible to do a panel data analysis also using Gallup World Poll data, but again I encounter the same problem with data availability. Namely, comparing the effect of multiple determinants requires multiple indicators. For many developing countries, they are simply not available (back in time). This implies that the conclusions for policy may be subject to scrutiny.

After having looked at happiness empirically, the next section gives an outlook on happiness research and the Beyond GDP movement, before concluding.

## 5 FUTURE OF BEYOND GDP MOVEMENT

The previous part of this work focused on what led to the Beyond GDP movement and what the Beyond GDP movement stands for today. I selected a specific goal from the Beyond GDP movement to work with which was analyzed in detail, namely happiness. Thus, since the previous chapters dealt with past and present aspects, with the preceding chapter dealing with aspects for improvement for the future, the following chapter is a chapter on the future of happiness research, but also more broadly of the Beyond GDP movement in general. Thus, it is organized as follows: the first part is a part on the future of happiness research and the second part is a part on the future of Beyond GDP overall.

### 5.1 Future of happiness research

Even though happiness literature as a part of the Beyond GDP movement has been booming in the past two decades, there is still a long way to go. Some issues have been mentioned along the way in the text. This section summarizes them together. Future happiness research will have to explore or ensure: subjective well-being data availability and comparability, subjective well-being analysis on another level (for example for policy appraisal) and in another context where instead of the explained, it is treated as an explanatory variable (Helliwell Et al., 2012).

The future of happiness research lies in exploring national trends over time, distribution of outcomes across countries and/or across groups in societies. This is the research question pursued in this text, namely whether happiness equations differ across countries. Thus, this thesis has gone into one part of future happiness economics research, although with some drawbacks due to data availability. Future research should ensure data availability and comparability so as to be able to claim reliability for the information on national trends through time, outcomes across countries or societal groups. However, it should also go deeper and analyze what is driving these differences (preferences, endowments, preferences because of past endowments).

Since future research should analyze what is driving these trends, it will also focus more on explaining subjective well-being. It is true that exploring subjective well-being determinants has been largely the direction in which happiness research has taken off so far. However, the list of explored determinants has to become longer. Further, all the research produced on subjective well-being so far should be used to take it on another level. This means that we would still be researching subjective well-being as the explained variable, but no longer for merely its determinants, but also in terms of policy. Thus, subjective well-being research will be used for policy trade-offs, policy options appraisal and generally policy design and evaluation.

Whereas the second point focuses on subjective well-being as the explained variable, this point focuses on subjective well-being as the explanatory variable. Well-being or behavior

have other elements also and subjective well-being should be used in that context. Further, subjective well-being should be used to estimate the value of non-market goods and services, as well as to guide future policy through cost-benefit analysis. It is already used to evaluate willingness to pay, but these efforts should be broadened in scale and in scope, thus including both countries and more non-market goods and services.

It is also worth mentioning that although we are no longer at the bare beginning of happiness economics and significant advances have been made in identifying happiness determinants, we have to bear in mind the following potential pitfalls: that targeting happiness can stigmatize the unhappy which means policy priority or at least superiority becomes questionable, and also the fact that GDP correlates strongly with other well-being indicators.

Intensifying happiness research and pressure on governments to incorporate it as a goal may actually backfire. That is because an excessive public focus on targeting happiness may work the other way on individuals who are not happy at the time of announcement in switch of policy or data collection of new, comprehensive indicators which were recommended. Thus, instead of increasing their happiness, it might decrease it because of a potentially nascent social stigma attached to unhappiness.

Before we can regard happiness research or targeting as the best way to embrace Beyond GDP, we have to bear in mind that this data has been shown to have high correlations with GDP, 0.76 between GDP per capita and Happy Life Years, and GDP per capita and Social Progress Index. This can lead some to interpret happiness data as irrelevant, as we could be able to make predictions about the state of human welfare more or less accurately with traditional measures such as GDP. Thus, efforts to embrace GDP may prove irrelevant unless we come up with a more comprehensive measure.

## 5.2 Future of Beyond GDP overall

This leads us to the future of the broader GDP movement instead of merely happiness as a part of it. If the Beyond GDP movement is to succeed, future developments will have to focus and ensure the supplementation and standardization of national accounts, creation/expansion of dashboards.

As was seen in previous sections, some deficiencies of GDP are correctable in the current statistic. These are for example gray economy and time-use. Currently, there are some estimates for both but they need to be done for all countries. Clearly, to ensure comparability across countries these need to be standardized. Some work has been done on this, but it is too little in terms of number of countries and number of times time-use surveys have been conducted. This is needed so as to impute values for leisure to the current GDP statistic for every year or in any other new statistic which may succeed it.



Other than stating a simplistic choice between GDP and a yet undiscovered indicator that will magically resolve the problems with GDP, we might want to open up to the option of dashboards. This means that perhaps the future of the Beyond GDP movement does not necessarily lie in one ideal indicator (at least for the time being) which is difficult to obtain considering the multiplicity of dimensions that need to be incorporated, but instead in dashboards with information from multiple sources. This alleviates the problem of waiting for the ideal indicator and meanwhile still prioritizing GDP. A composition would be informative for policy even now.

Just as we have those directions for the overall Beyond GDP movement, there are some potential pitfalls here as well. Although generally the consensus is against these, there are those who consider them, so they should be mentioned for the sake of completeness. They have to do with potential GDP improvements and non-definitive conclusions from GDP deficiencies.

This text opened with GDP deficiencies which gave birth to the Beyond GDP movement which in turn gave birth to new metrics and the new potential goal that is happiness. However, if GDP itself turns out to be correctable, so as to bring it closer to a measure of welfare instead of just output, then prioritizing happiness or generally trying to come up with a new indicator may be too enthusiastic and futile. One example of this was the GPI, which is for the time being too demanding, but if data collection improves over time, perhaps so will this indicator.

Another critique is that GDP deficiencies themselves were not as definitive in terms of conclusions to begin with. Some argue that these deficiencies are actually overstated and invalid as there is a way around them. For example, gray economy and leisure can be imputed. Inequality was not as bad as stated, because median incomes have stagnated but equivalent median incomes (which take household size in account) have grown. Pollution is not irreversible conditional on a high rate of technological progress (Oulton, 2012). That would once again imply that Beyond GDP is blown out of proportion.

Overall, there is still a long way to go with Beyond GDP although it is positive that there are movements in the directions outlined above. Carrying this out successfully will require serious attention from policy which will have to invest resources in new research, which is marginal at this point at best. This chapter has given an outlook on where the field will go for both happiness research and Beyond GDP in general. With that, the past, present and future overview of Beyond GDP is rounded up and I proceed to conclude.

## **CONCLUSION**

This thesis opened with an introduction of one of the main economic goals we have today and presented its deficiencies, either due to its own caveats or deficiencies in the measure used for it, the GDP. Thus, the Beyond GDP movement was introduced in Chapter 1. There are two

alternative goals in the Beyond GDP movement, degrowth and happiness. The problem with degrowth was that it cannot be applied universally. The problem with happiness was that it gave equal weight to everything, thus neglecting the importance of income for less developed economies. Thus, the question that emerged was whether happiness could be considered a unitary goal by adjusting measures with different weights. This means weights of variables for all countries, as well as different weights of variables across groups of countries. Another issue was how to adjust metrics so as to improve the Beyond GDP movement.

Those questions have to be answered empirically. However, there is an extensive theoretical part before that as the whole happiness economics field is rather unclear about what constitutes it and research is fragmented on determinants with an asymmetry of research done about determinants than for policy implications. Thus, before the empirics, there is a theoretical part on the research produced within happiness economics. This is the topic of Chapter 2 which covers what happiness is or what are its determinants and the pursuit of happiness extending into policy implications putting happiness economics in an analytical political-economic framework rather than a descriptive philosophical one. It reveals, at least in theory, that happiness is a holistic *eudaimonic* concept which is determined by education, health, social, financial, institutional and environmental factors. Furthermore, there is room for the government here, but mostly if this government can be incentivized to provide societally optimal outcomes. The gains can be economic in terms of efficiency or social in terms of solidarity and cohesion.

Following the introduction of the concept of happiness in Chapter 2, Chapter 3 presented the new measures of happiness. They are all put under the umbrella of happiness measures although they are not necessarily called that way because they constitute determinants that research so far has identified as relevant for happiness. Therefore, it is important to consider them in empirical research in happiness economics as well. They can broadly be divided on one-dimensional and multidimensional measures. One-dimensional measures are various measures on aspects of life satisfaction. The multidimensional measures are the new indices meant to go Beyond GDP, introduced in Chapter 1 already in more detail.

The next chapter, Chapter 4, is the empirical part. The empirical part uses latest publicly available happiness data to test the first hypothesis which was whether several types of factors matter for happiness, the second hypothesis of equal weights assumption for the multidimensional measures, across variables, and the third hypothesis of equal weights across countries. The latter would imply whether we can consider it as a unitary goal. The results obtained support the first and second hypothesis. Thus, it makes sense to speak of a holistic concept of happiness, not only theoretically, but also empirically. This implies that measures of well-being need to be extended and incorporate a multiplicity of dimensions. This is already present to some extent, but the most widely used which is life satisfaction is still related to one question only.

The results support the second hypothesis as well, which means that those new measures that will be developed should look deeper into the equal weights assumption and see whether it holds. What this analysis showed was that income is still dominant, although other factors matter themselves as well. There was not enough statistical proof to claim the third hypothesis holds, which means happiness cannot be considered a unitary goal of growth and degrowth, as explained in the introduction.

Thus, I have looked into one way to improve happiness research and thus Beyond GDP, which given the results, is not a new goal yet, but a way to improve the new alternative indices. The thesis rounded up with a future outlook of both happiness research and Beyond GDP in Chapter 5. Future development of happiness research will depend on how well/fast we extend data availability and comparability and analyze subjective well-being on another level relevant for policy which is the asymmetry noted in Chapter 2 for example, as more research has been done on determinants than on policy implications. Happiness or well-being should be put in another context as well where it is used as an explanatory and not explained variable.

Development of Beyond GDP will depend in turn on how well/fast we extend national accounts and standardize dashboards as suggested by the Stiglitz commission. Although there seems to be some doubt as to whether we even need these new measures as they correlate with GDP strongly, it should be remembered that Beyond GDP does not deny GDP it just does not single it out. What else will be included in policy making will depend (statically and dynamically) on country preferences or weights, as this thesis has shown.

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## **APPENDIXES**

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Appendix A: Sources and definitions of the indicators used

Variable	Explanation	Source	Data for year(s)
Life satisfaction	Answer to the question: “These days, how satisfied are you with your life on the whole?”; measured on a 1-10 scale	WHR	2010-2012
Years of schooling	Average years of schooling of adults	UNDP	2011
Life expectancy	Life expectancy at birth	UNDP	2010-2012
Share of population with primary education	Share of population aged 15 and above with only primary education	Barro-Lee	2010
Share of population with secondary education	Share of population aged 15 and above with only secondary education	Barro-Lee	2010
Share of population with tertiary education	Share of population aged 15 and above with tertiary education	Barro-Lee	2010
Social cohesion	Measures relations of cooperation and respect between identity groups in a society, measured on a scale from 0-1	ISD	2010
Civic activism	Measures the use of media and protest behavior measured on a scale from 0-1	ISD	2010
GDP/Capita	GDP/capita in 2005 PPP dollars	UNDP	2010-2012
Share of people with savings	Share of population aged 15 and above that has saved some money in the past 12 months	WB, FINDEX	2011
Corruption Perception index	Measure of public sector corruption, measured on a scale from 1-10	TI	2010-2012
Economic freedom index	Measure of economic freedom along four pillars: rule of law, limited government, regulatory efficiency and open market, measured on a scale from 0-100	HF	2010-2012
Environmental performance index	Measures environmental issues in two broad policy areas: protection of human health from environmental harm and protection of ecosystem, on a scale from 0-100	Yale Research Center	2010

Table 1. Sources and definitions of the indicators used

Appendix B: Regression tables

$$\text{Happiness} = f(\text{years of schooling, life expectancy, social cohesion, civic activism, GDP/capita, saved any money, corruption, economic freedom, environmental performance}) \quad (1)$$

Table 2. Regression table 1

Happiness	(1)	(2)	(3)
Years of schooling	-0.0406 (0.0428)	-0.0226 (0.0858)	-0.0856* (0.0443)
Social cohesion	0.225 (1.201)	-3.527 (3.170)	0.413 (1.155)
Civic activism	-0.403 (3.199)	-1.683 (4.296)	0.944 (4.098)
GDP/c	2.09 <sup>e-5</sup> * (1.08e <sup>-5</sup> )	1.58e <sup>-5</sup> (1.43e <sup>-5</sup> )	0.000172**** (3.84e <sup>-5</sup> )
Saved any money	0.0161** (0.00629)	0.0143 (0.0104)	0.0233*** (0.00714)
Corruption	0.0117 (0.0984)	0.133 (0.131)	-0.255* (0.149)
Economic freedom	-0.00217 (0.0129)	0.0258 (0.0280)	0.00235 (0.0132)
Environmental Performance	0.0116 (0.0103)	-0.0138 (0.0158)	0.0181 (0.0113)
Life expectancy	0.0414*** (0.0142)	0.0493 (0.0365)	0.0213 (0.0141)
Constant	1.581 (1.761)	3.392 (3.781)	1.929 (2.118)
Observations	89	35	54
R-squared	0.648	0.738	0.645

Note. Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

$$\text{Happiness} = f(\text{primary, secondary, tertiary education, life expectancy, social cohesion, civic activism, GDP/capita, saved any money, corruption, economic freedom, environmental performance}) \quad (2)$$

Table 3. Regression Table 2

Happiness	(1)	(2)	(3)
Primary education	0.0188** (0.00785)	0.0421 (0.0280)	0.00622 (0.00866)
Secondary education	0.00351 (0.00652)	0.0412 (0.0265)	-0.00556 (0.00676)
Tertiary education	0.00800 (0.0111)	0.0114 (0.0308)	-0.00402 (0.0160)
Social cohesion	-0.391 (1.166)	-5.916* (3.101)	-0.142 (1.187)
Civic activism	-0.859 (3.075)	-2.559 (3.938)	0.241 (4.246)
GDP/c	2.00e <sup>-5</sup> * (1.05e <sup>-5</sup> )	1.73e <sup>-5</sup> (1.28e <sup>-5</sup> )	0.000153*** (3.96e <sup>-5</sup> )
Saved any money	0.0138** (0.00613)	0.0124 (0.00917)	0.0204** (0.00755)
Corruption	0.0442 (0.0964)	0.203 (0.122)	-0.155 (0.169)
Economic freedom	0.000600 (0.0125)	0.0411 (0.0281)	0.000746 (0.0133)
Environmental Performance	0.0102 (0.00991)	-0.0173 (0.0141)	0.0174 (0.0115)
Life expectancy	0.0350** (0.0145)	0.0502 (0.0324)	0.0209 (0.0153)
Constant	1.448 (1.692)	0.719 (3.553)	2.124 (2.221)
Observations	89	35	54
R-squared	0.681	0.809	0.651

Note. Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1



Appendix C: Relative weights

Table 4. Relative weights (as % of R<sup>2</sup>)

Type of factor/Variable	Shares (1)	Shares (2)	Shares (3)	
Human capital & health	Primary	3.05	2.11	5.34
	Secondary	1.26	1.48	2
	Tertiary	7.37**	3.62	5.63
	Life expectancy	16.78***	12.65	15.1
Social	Social cohesion	2.87	2.52	0.78
	Civic activism	10.42***	7.49	9.4
Financial	GDP/capita	16.56***	19.86	31.68
	Saved any money	14.87***	17.85	8.2
Institutional	Corruption	10.68***	15.87	2.78
	Economic freedom	6.37	14.62	1.11
Environmental	Environmental performance	9.78**	1.93***	17.9***

Note. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1