Life Satisfaction in Welfare States

Bachelor Thesis

in partial fulfillment of the requirements
for the degree of
Bachelor of Science in Economics

written by

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Berlin, 27.9.2009
Foreword

I would like to begin this thesis by presenting to the reader my favorite passage that I discovered during my research:

“Economic Performance is not intrinsically interesting. No-one is concerned in a genuine sense about the level of gross national product last year or about next year’s exchange rate. People have no innate interest in the money supply, inflation, growth, inequality, unemployment and the rest. The solid greyness of the businesspages of our newspapers seem to mirror the fact that economic numbers matter only indirectly” (Oswald 1997)

I relate very closely to these words. Since I began my studies of Economics at Humboldt University, I could hardly find a motivation for the named economic figures either. Economic phenomena never really caught my passion and I wondered why I continued studying. I asked myself what is the point of interest in Economics and whether or not I could support the “maximizing” view that more money, economic growth, efficiency or productivity are progresses in the right direction.

So, I stepped back and checked the underlying assumptions and searched for the final variable of interest.

I soon found happiness to be the variable that was intrinsically motivating me. I was deeply interested in finding out what causes and what maximizes it. Suddenly, it occurred to me that what I really wanted to investigate was what makes people happy, and I realized that all the tools I had reluctantly learned during my studies of Economics were very useful for that purpose.

Researching this topic from a number of different perspectives, I found I had gained some insight into all kinds of fields, from Buddhism to psychology. Not only did it bring back my motivation for my studies in Economics, but it also helped me to get a teaching job at my University and an internship in Rotterdam, both of which have been valuable experiences in my life.

During the internship, the focus for this thesis was proposed to me by Ruut Veenhoven, who believed it would be good to replicate his earlier study about happiness and the welfare state.

I immediately liked this focus because I had first hand experiences with the downsides of different welfare systems based on my past year in Germany and the United States. Also, I had taken some classes at the faculty of social sciences and could
use some of the skills I had gained there. Remembering passionate political discussion about the question of socialism versus liberalism, I started researching this topic from my perspective of happiness with the belief that I would finally be able to find an answer.

In the end, my findings were not what I had hoped for when I started working, but I am still happy to have had the opportunity to do this. There were some turning points during the last weeks, when my earlier interpretation turned out to be wrong and I had to delete most of my work and rewrite it. However, now that it is finished, the results of this present version are correct to my best knowledge and I believe I have answered the initial question in the best way I can.

At this point, I want to thank Ruut Veenhoven for giving me a hint that led me to choose for this topic during a lunchtime at my internship at the World Database of Happiness and being very helpful and open with his critical comments. The second thanks goes to my supervisor Dr. Schmerbach, who let me choose my own topic for this thesis and encouraged me to think for myself and follow my intrinsic motivation. Last but not least, I thank my friend Boris Bornemann, who was interested in reading this paper and gave the most helpful comments as well as some lessons in the art of scientific writing to me.

Julia Propp
Berlin, 27.9.2009
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<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>BHP</td>
<td>British Household Panel</td>
</tr>
<tr>
<td>c.p.</td>
<td>ceteris paribus (holding all else constant)</td>
</tr>
<tr>
<td>ESSPROS</td>
<td>European System of Social Protection Statistics</td>
</tr>
<tr>
<td>etc.</td>
<td>et cetera (and so on)</td>
</tr>
<tr>
<td>EUROSTAT</td>
<td>Statistical Database of the European Commission</td>
</tr>
<tr>
<td>e.g.</td>
<td>exempli gratia (for example)</td>
</tr>
<tr>
<td>et al.</td>
<td>at alii (and others)</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GSOEP</td>
<td>German Socio Economic Panel</td>
</tr>
<tr>
<td>GSS</td>
<td>General Social Survey of the United States</td>
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<tr>
<td>HDI</td>
<td>Human Development Index</td>
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<tr>
<td>ILO</td>
<td>International Labor Organization</td>
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<tr>
<td>N.N.</td>
<td>Nomen Nescio (author unknown)</td>
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<tr>
<td>PPP</td>
<td>Purchasing Power Parity</td>
</tr>
<tr>
<td>p.c.</td>
<td>per capita</td>
</tr>
<tr>
<td>RDD</td>
<td>Random Digit Dial</td>
</tr>
<tr>
<td>RGDP</td>
<td>Real Gross Domestic Product</td>
</tr>
<tr>
<td>SOCX</td>
<td>OECD Social Expenditure Database</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>US</td>
<td>United States (of America)</td>
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<td>WVS</td>
<td>World Values Survey</td>
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1 Introduction

A social net that supports those in need exists in every modern society in the world. This net is organized in different ways and intensities that change constantly. During the process of modernization, many nations decided to provide certain welfare services on a national level and shift responsibility from families and religious organizations to the government. The areas that were focused on were unemployment benefits, health care and old-age pensions. With this evolution, came the birth of the welfare state which has since been highly criticized.

In developed countries, the importance of governmental welfare programs has increased constantly over the past 20 years because inequality in market income has risen (e.g., Kenworthy and Pontusson 2005). Economically speaking, this can be considered a market intervention with a redistributive effect on income.

The terms well-being and welfare are often intuitively linked and used together. The term welfare state suggests that it is meant to increase peoples well-being. Surprisingly, the different forms of welfare states have rarely been evaluated with the direct question whether or not they really do so.

Opinions about the ideal level of state-welfare intensity vary tremendously. Every form of state-organization on the continuum from a communist to a libertarian government finds supporters who believe their idea is in the best interest of the citizens. Later in this paper, some recent major changes that modified the welfare system due to political pressure in the US and in Europe will be discussed.

Numerous studies have examined the redistributive income effect of the welfare state and its success in reducing poverty in absolute and relative measures (e.g., Scruggs and Allan 2006; Kenworthy 1999; Bradley et al 2003). Mostly, this function evolved because of an ethical and social preference for equality. With the theory of diminishing marginal utility, a redistribution from the upper to the lower end is expected to increase the sum of the outcomes and equalize the distribution. We assume that the same amount of money will produce greater happiness in the hands of a less well-off person than if given to a well-off person. If so, a redistribution of wealth from the rich to the poor will increase the total happiness of a society.

Economic and political decisions are usually evaluated by the benefits that are assumed to result from them for society. In our case, we evaluate benefits resulting from the welfare state system. The question here is how these benefits can be operational-
ized. One way is to use measurable economic indicators as for example growth of GDP per capita. Another option is to refer to indexes, that include a broader range of variables like for example the Human Development Index, measuring not only income, but also life expectancy and level of education.

Little research was done on how the whole effect of the welfare state influences the subjective well-being or happiness of the nation which is our final variable of interest. Measures of happiness are attractive to evaluate public policies because they include more than economic growth or performance on the labor market. They include all tradeoffs between labor and leisure, taxes and benefits etc. in an aggregate measure.

The question is now, what effect does the welfare state have on the happiness of its inhabitants and how can it be measured. Various other macroeconomic variables such as the rates of inflation and unemployment have already been the focus of happiness research (e.g. Di Tella et al. 2001).

In fact, using happiness as an indicator of governmental success is in line with the so-called utilitarian approach. The concept of utility is a key concept in economics. Usually, it is assumed that individuals face a set of options, limited by the available resources and their interchangeability. To identify the best choice, the alternatives are ranked according to their utility and then the option with the highest utility is chosen. Now, the question on a national level is how to aggregate the personal utilities of the citizens. Three different operationalizations are presented here, based on utilitarian ideas in philosophy.

1. The standard utilitarian view, captured by Jeremy Bentham’s call for the “greatest happiness for the greatest number of people” (Bentham 1834). In mathematical terms, this means that the variable to be optimized is mean happiness of all people of a nation.

2. The egalitarian view is that we should minimize inequality in happiness. A focus on inequality shifts the preferences to a smaller dispersion of life satisfaction regardless of the average. Mathematically speaking this means we consider standard deviations of the values.

3. The maximin-principle, first established by John Rawls, states that social and economic inequalities should be arranged in such a way that “they are to be of the greatest benefit to the least-advantaged members of society” (Rawls 1971). In our case, for an evaluation with the maximin-principle only the very low val-
ues will be considered regardless of the average or overall dispersion. We will operationalize this by favoring a small share of unhappy people in a country. Unhappiness will be operationalized as the share of people rating themselves below five on a 0-10 scale.

By far the largest number of cross-national comparisons of well-being that evaluate political decisions use the first operationalization, which addresses mean happiness levels. Thus we will work with this definition for the largest part of our empirical analysis. The other two will be used afterwards.

Consistent with most of the literature, this paper uses the terms "life satisfaction", "well-being" and "happiness" interchangeably, as it was shown that they are commonly associated with the same construct and their use does not have an impact on the results (e.g. Frey 2008; Schyns 2003).

The Dutch researcher Prof. Ruut Veenhoven assessed the topic of this paper by conducting a cross national study using different samples and indicators of well-being and welfare states around the year 1990 and for the periods between 1950-1985 and 1980-1990 (Veenhoven and Ouweneel 1995; Veenhoven 2000). Contrary to his own assumption, he did not find a relationship. Later however, Benjamin Radcliff used a different method and stated that, "the quality and extent of welfare provisions affect a nation's aggregate level of satisfaction" (Radcliff 2001, Pacek and Radcliff 2008). Radcliff used slightly newer data and included more control variables but less countries than Veenhoven.

The following study is an attempt to partly replicate Veenhoven's study with a more recent dataset for the years 2002 and 2005 and slightly different operationalizations for the measurement of the welfare state. We test how robust Veenhoven's results are and will see to what extent Radcliff was right. This is in line with Veenhoven's call for replication at the end of his latest paper on the topic (2000 p. 119).

It is easy to believe that a form of security enhances one's happiness. Still, the question arises, of what role the system of state-welfare plays. For example, citizens of the Nordic States, such as Sweden, Finland, Norway, and Denmark usually report higher life satisfaction than other states. In addition, the Nordic States have the most generous welfare systems. Thus, it is easy to conclude that their political environment with intense welfare benefits contributes to the well-being of a nation. On the other hand, nations such as the United States of America that have a rather restrictive welfare-
system, also report high levels of well-being.

To dissolve this puzzle, in a first step this paper will empirically investigate whether peoples life satisfaction is systematically higher in states that provide a high level of governmental welfare than in those which provide less. The definitions, operationalizations and data sources that are used for the terms life satisfaction and welfare state are described in section 2 and 3 and in section 4 their relationship will be assessed with correlations. Here, we use only the first definition of utility (i.e. mean happiness of all citizens within a nation). In essence, we first want to find out whether there is any dependency between welfare benefits and the level of average life satisfaction in a nation.

In the second step we will investigate how this level changes over the time, simultaneously to changes in welfare systems. Finally the other two definitions of utility will be checked. At the end the results are evaluated and problems and further research directions will be discussed in section 5 and 6.

2 Life satisfaction

For a long time, economists refused to make use of data on life satisfaction, mainly because it reports experienced rather than revealed preferences and it is obtained by collecting subjective statements rather than by observing objective behavior. But within the last decade, the possibility to use it as a proxy for utility and empirically evaluate economic performances, as well as theory with it, arouse interest. Today, numerous scientists use data on life satisfaction. By the year 2000 already 4351 articles had been published on the topic, many of them in the worlds top academic economic journals (Veenhoven 2007).

According to a study by the Allensbach Institute, 68 % of the German adult population state, “being happy and having many friends”, is the meaning of their lives. In fact, it is the most frequently chosen answer (Allensbach 2001). Beyond that, the American sociologist Ronald Ingelhart concludes from data of the World Values Survey (WVS), which represents over 75% of the worlds population that, “the rise of postindustrial society brings a shift toward more trust, tolerance, well-being, and postmaterialist values” (Ingelhart 1990; Ingelhart and Baker 2000). Thus, observing the factors that influence this happiness, life satisfaction or well-being is indeed a relevant endeavor.
2.1 Definition of the concept

Knowing that happiness is of high importance for most people leads us to the question of how it can be defined and measured. For this analysis we will be interested in the overall appreciation of life-as-a-whole. This specification makes it clear that we do not want to observe satisfaction with certain areas of life but with the global situation. Moreover the wording overall appreciation indicates that a rating should be given independent from mood, context or recent events.

We assume that the concept of life satisfaction is familiar to the respondents. This is supported by the fact that answers are given quickly and that usually less than one percent of the people asked refuse to provide the information (e.g. Andrews and Withey 1976).

2.2 Measuring life satisfaction

The most common method of measurement is to directly ask people to provide subjective ratings about their overall satisfaction with life. For this paper, the average (mean) rating, the dispersion of the ratings and the share of very low ratings within a nation will be of interest.

The average will be computed through adding up individual responses of a representative sample and dividing by the number of respondents afterwards. To measure the dispersion, standard deviations will be calculated. These will indicate how far the values deviate from their mean. Low standard deviations signify a smaller dispersion. For the share of low ratings, we take the number of respondents that answered with values between 0 and 4 on a 0-10 Scale and divide that number by the total number of values.

In general, for all these operationalizations, we are interested in the subjective evaluation of overall life satisfaction with life-as-a-whole of each individual, which is measured by a response to a direct single-item survey question.

One type of survey question, which has been used since 1966 in numerous studies, is called Cantril’s self-anchoring ladder. Respondents are asked, “Please imagine a ladder with steps numbered from zero at the bottom to ten at the top. Suppose we say that the top of the ladder represents the best possible life for you, and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time, assuming that the higher the step
the better you feel about your life, and the lower the step the worse you feel about it? Which step comes closest to the way you feel?” (Cantril, 1966).

Other survey questions do not use the symbol of a ladder and apply different scales and formulations, but in principle address the same problem. For cross-national comparisons, reliable data sources include the World Values Survey, the Gallup World Poll and the Statistical Database of the European Commission (EUROSTAT). Examples for country specific data include the German Socio Economic Panel (GSOEP, Germany), the General Social Survey (GSS, US) and the British Household Panel (BHP, UK), which also include longitudinal data.

Quality of the data

The data gathered through this type of questions has been critically examined for its informative value by various authors. Its reliability and validity will be addressed in the following.

The question of reliability is whether we measure the same results at various points of time. It was tested empirically for different life satisfaction scales (e.g., Francis et al. 1998; Diener and Suh 1996) and found to be high. Diener and Suh (1996), for example, found a test-retest correlation of 0.77 over four weeks, which proves that people are quite consistent in their answers. It has to be mentioned however, that current mood and context are found to have a significant impact on people’s answers (e.g., Schwartz 1987). Since we observe average happiness of nations in this paper, we can assume that positive and negative distortion by context or mood, outweigh each other and do not bias the averaged results systematically.

Still, the question of validity remains. This question can be stated as follows: Do high subjective values on the survey question actually reflect high levels of subjective well-being? Particularly important for our study is the question whether the self-stated value and the actual level of well-being is constant across nations, or, in other words, can the reported values be compared between nations. One could argue that national influences, such as social desirability or a cultural tendency for optimism distract the answers from the underlying reality on the national and personal level.

Veenhoven approaches these problems on the national level and extensively tests different hypotheses on this subject. He finds for example that within one nation happiness negatively correlates with mental distress, and positively with material comfort. This shows, that happiness ratings are not independent from other indicators of high life quality. Tests also showed, that other factors such as language or cultural influences
do not lead to a distortion either (Veenhoven 1992).

On an individual level, Kahneman and Krueger (2006) summarized different indicators and found that higher reported life satisfaction correlates positively with the frequency of smiling, ratings of ones happiness by friends, frequent verbal expressions of positive emotions, subjective health and other factors commonly associated with happiness.

In conclusion, it can be said that reported differences in happiness levels, as observed in survey studies, do indeed reflect differences in experienced happiness between nations and between individuals.

**Data sources**

After having justified, for which reasons data on self reported life satisfaction can be used, it is necessary to choose an appropriate dataset. Since we aim to run a cross-national comparison, we are looking for a dataset which is as complete as possible and provides detailed, transparent information on the sources and method of data collection. The source that best meets these demands is the Gallup World Poll. It is an ongoing survey, which monitors public opinion in over 150 countries and includes Cantril’s self-anchoring ladder (Cantril 1966, see above) to assess well-being. The data is available through the Word Database of Happiness (WDBH, 2009). Mean values for the observed countries are depicted in figure 2.1.

**Data collection**

In each of our countries of interest, 1000 people aged 15 and above were interviewed (Gallup Organization, Websource). A Random-Digit-Dial (RDD) telephone survey design was used to collect data from a random sample. This was done by generating random telephone numbers, which were called up to five times until the respondent was reached. Since in all of the considered countries at least 80 percent of the population had a landline phone, this yielded a random sample. Individuals were interviewed for about 30 minutes in total in the major language of the country. The resulting means and standard deviations of life satisfaction in each country are available and will be used in the following.
Figure 2.1: Mean ratings of life satisfaction in 29 countries
3 The welfare state

All OECD countries define themselves as welfare states. However, the political approaches and ways of organization, differ substantially and have been debated since the idea of state-welfare emerged. In order to work with this concept, we will first define what a welfare state is and then discuss two approaches of measurement.

3.1 Definition of the concept

To compare the impact of the different forms and intensities of welfare states, two questions need to be answered. First: “What is our definition of welfare-states?”, and second: “How can we construct a standardized measurement to compare these?”

Consistent with the literature, we define a welfare state as "a government that undertakes responsibility for the welfare of its citizens through programs in public health and public housing and pensions and unemployment compensation etc." (Source: Wordnet, Princeton).

This definition is quite broad, but points out that only governmental welfare with the character of a compulsory insurance for all citizens is discussed here. Welfare that is provided by other institutions, such as churches or families, is not included. The governmental actions, that take place with the provision of welfare services constitute a market intervention and usually have redistributive income-effects. Various systems of social security stabilize the income of an individual over the time, meaning that usually taxes are deducted in times of high income and benefits are paid during periods with little or no earnings. Simultaneously, a redistribution between individuals takes place.

3.2 Measuring the welfare state

After defining the concept, methods of operationalization and measurement need to be discussed critically. Measuring the intensity of welfare states across nations is a challenging task for two major reasons.

First of all, it is a latent construct, which can only be measured indirectly through other indicators. The question of which variables should be included and how they should be weighted is answered in numerous different ways and leads to a variety of results. For example, the Organization for Economic Co-operation and Development (OECD) includes health care benefits in their calculation, whereas the International Labor Organization (ILO) does not.
Second, the national accounting systems and ways of collecting data in countries are not standardized and macrodata needs to be adjusted for a comparison. For example in Sweden, unemployment benefits are relatively high but the recipient pays taxes on them, whereas in Germany these benefits are relatively low but no taxes are deducted.

Since the underlying measurement and calculation processes are very complex and can hardly be replicated here, existing data is employed. Two sources, the OECD Expenditure Database (OECD 2007) and Scrugg’s Generosity Index (Scruggs 2003) are taken into account. These differ not only in their source of data, but also in their theoretical approaches and method of calculation. Both are commonly used but fundamentally different. The methods are called “expenditure-approach” and “entitlements-approach”. In the expenditure-approach, actual governmental spending is measured, whereas the entitlements-approach indicates the citizen’s legal rights for benefits.

An illustrative example of the differences between the approaches, is the unemployment insurance under the Thatcher regime during the 1980s in the UK. The government realized major cuts in unemployment and sickness benefits in this period, but since the number of unemployed people grew rapidly, total expenditure increased. Focusing on expenditure, the welfare state expanded during this time. At the same time, the legal rights for benefits decreased and the entitlements-approach would measure a decline of the state-welfare. Both approaches monitor different trends (Esping-Andersen 1980).

The use of both approaches separates their different effects and checks their influence on life satisfaction individually. Theory, measurement procedures, and data sources are described in more detail in the following section.

3.2.1 The OECD expenditure-approach

Idea and definition

The OECD uses the expenditure-approach to monitor trends in social security (welfare) expenditure of its members in relation to their Gross Domestic Product (GDP). The results are published in the Social Expenditure Database (SOCX, OECD 2009). Since this covers 29 countries and data is available until the year 2005, it is valuable for our analysis. The OECD considers a program to be social if participation is compulsory, and if entitlements involve inter-personal redistribution of resources among program participants (OECD 2007). Such programs are either financed through general taxation or social security contributions, which lead to the redistribution of resources across
the population or within population groups (e.g., all members of an unemployment insurance fund).

**Data sources and operationalization**

According to this definition, expenditures in nine policy areas are measured and summarized: old-age (e.g., pensions), survivors, incapacity-related benefits, health, family, active labor market programs, unemployment, housing, and other social policy areas (see Appendix 1). Not only cash benefits (e.g., pensions) and social benefits (e.g., childcare) but also tax breaks for social purposes (e.g., favorable tax treatments of families) are considered. All expenditures, benefits and tax breaks within the nine areas are summarized and then set in relation to the GDP of the respective country. This is a complicated procedure, as the systems of national accounting differ and numerous data sources must be harmonized.

**Data collection**

The data is not taken from a single, all-encompassing questionnaire, instead it is derived from a combination of sources. For 22 European countries, for example, most data is provided through EUROSTAT’s European System of Social Protection Statistics (ESSPROS) database (Eurostat 2006). Data for the remaining countries is collected through a questionnaire, which is completed by delegates of the committee on social policy of each of the countries. Data for expenditure on public health and active labor market policies is taken from the OECD Health Data and the OECD database on Labor Market Policies (OECD 2007).

The OECD itself admits that this is not an ideal way of collecting data. It is difficult to evaluate the impact of a comparison with such different sources. The problem becomes more serious because the production of data differs from country to country. The procedure also limits interaction between the data producers, which would be preferable. However, the OECD has made an effort to produce the best comparable data for its member states. Even considering the difficulties, it is surely of great informative value and since no better data is available, it will be used in the further analysis.

**3.2.2 The Generosity Index for the entitlements-approach**

**Idea and definition**

Another approach to measure the degree of state-welfare, is to measure the entitlements of citizens. In other words, it aims on measuring what resources are available
for the people, in case they are needed, independent from whether or not they are actually used. Gosta Esping-Andersen first discussed this approach in his seminal publication *The three Worlds of Welfare Capitalism* (Esping-Andersen 1990). He introduced the term *decommodification*. It is defined as, ‘*the degree to which individuals or families can uphold a socially accepted standard of living independently of market participation*’ (p. 37).

**Data sources and Operationalization**

Esping-Andersen computed three decommodification-scores, one for each of the areas: unemployment benefits, health care, and old-age pensions (Esping-Andersen 1990). Later, Lyle Scruggs (2003) created a dataset in which he recalculated decommodification for 18 countries between 1971 and 2002 and furthermore established his own *Generosity Index*. This is, in spirit, very similar to Esping-Andersen’s indexes, but offers some advantages: the underlying data is fully documented, results are newer, and there is higher accuracy and consistency of the measurement. Thus, in the following, the Generosity Index will be used. For this dataset, the data was collected from numerous country-specific or international sources, for example national accounts, statistical yearbooks, and the *Social Security Programs Throughout the World Database*. A detailed listing of all sources and calculation procedures can be found in the codebook (Scruggs 2004).

As with the OECD data, the critical question of comparability remains, since different sources were used. Still, there are no alternatives. After data is collected, separate *Program Generosity Scores* for each of the three social insurance programs are computed and then weighted with the *coverage ratio*, which is the fraction of people who have access to the benefits (Scruggs 2004).

After computing the Generosity Indexes, societies can be ranked along a continuum of social policies. Those with high values are characterized as more generous states with universal entitlements, those at the lower end have more rigid eligibility requirements and low levels of benefits.

**3.2.3 Relation between the two approaches**

The most recent available data will be used for each approach and as many countries as possible will be included. For the expenditure-approach, data on 29 OECD countries is available for the year 2005, whereas the Generosity Index was only computed for 18 countries until the year 2002.
The question now is, to what extent the two approaches yield similar results and rank countries in similar ways? To assess this question, the *Pearson-correlation*, as well as the *Spearman-rank-correlation* between them were computed for the year 2002. The Pearson-correlation is a measure of linear association between the variables. Spearman’s correlation coefficient is computed by comparing the rank-orders of the countries, which follow when ordering them according to the two indicators.

Both are positive and significant ($r=+0.58$ with $p<0.05$ and $\rho =+0.57$ with $p<0.05$; Appendix: figure 8.3). The fact that the relationship is positive is not surprising. Both indicators measure the same construct, which is the welfare state from different perspectives. With a constant number of recipients, higher entitlements lead to higher expenditures.

Figure 3.1: Welfare Expenditures and Generosity Index for 18 countries in 2002
But what about the sizes and levels of correlation? The significance levels are both high, especially when regarding that only 18 cases could be taken into account. This means that we can be confident, the observed relationship is not due to chance. But the values show that the positive relation is not perfect. For a perfect relationship, the values of both correlations should equal “1”. Figure 3.1 shows that the Generosity Index for example ranks Norway as the most generous state, whereas in terms of expenditure, Norway is only in ninth position. The difference makes it seem appropriate to consider both indexes in the following analysis.

4 Empirical Analysis

4.1 Comparison at one point in time

4.1.1 Method

To assess whether a population’s life satisfaction is higher in states which provide more welfare we will first undertake a cross-national comparison between countries with different amounts of state-welfare efforts. The results will then be plotted visually and we will interpret the relationship. Wealthier states tend to have a higher level of state-welfare. Thus, in the second step, we will compute a partial correlation between welfare and wellbeing in order to control for the possibility that the impact of welfare on wellbeing is merely an artefact of their relation to economic prosperity.

To keep this study comparable to those of Veenhoven and Ouweneel (1995) and Veenhoven (2000), this analysis closely follows their approach and will later be discussed critically.

4.1.2 Results

To begin, we correlate the two welfare state measurements with life satisfaction. In doing so, we investigate whether or not there is a relationship and whether or not the hypotheses that this relationship occurs by chance can be rejected. Figure 4.1 shows the correlations between the two welfare indexes with average life satisfaction. They are based on different nation sets because the OECD dataset includes more countries.

Both of these correlations are positive. The correlation between the OECD dataset and life satisfaction, is significant at $\alpha=0.05$ ($p=0.037$), whereas the p-value of the Generosity Index is slightly higher ($p=0.072$). Note that the lower the p-value, the less
likely it is that the relationship emerged by chance. We also have to consider that significance depends on the number of cases. Our case numbers are quite small and in relation to this, the significance levels are high.

Looking at these correlations, we could conclude that welfare efforts indeed might have a moderate and significant positive influence on life satisfaction, or at least that these two variables are systematically related related to each other. The p-values indicate that it is very unlikely that this relationship appeared by chance.

But correlations do not tell the entire truth. To visualize the data, we use scatterplots visualizing individual countries by their levels of life satisfaction and welfare intensity. Figure 4.2 plots the relation between welfare expenditure and life satisfaction in 29 countries.

If we take a closer look at the allocation of the single cases, it stands out, that the poorer countries are allocated at the bottom left, whereas the richer countries are found on the upper right. To highlight this distribution, countries were divided in two groups. The poor countries with a real GDP per capita (RGDP p.c.) of less than 24,000US$ in 2005 are colored red (Source: OECD, see Appendix 2 and figure 8.2). Looking at the two groups of rich and poor countries separately, we do not see an obvious relationship between life satisfaction and welfare expenditure.

Running the correlation for the groups individually shows that they loose significance

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<table>
<thead>
<tr>
<th>Indicator</th>
<th>Correlation with average life satisfaction (p-Value)</th>
<th>N</th>
<th>Nations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welfare Expenditure (% GDP), OECD Definition</td>
<td>0.39 (0.037)</td>
<td>29</td>
<td>Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Republic of Korea, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States</td>
</tr>
<tr>
<td>Generosity Score</td>
<td>0.43 (0.072)</td>
<td>18</td>
<td>Austria, Australia, Belgium, Canada, Denmark, France, Finland, Germany, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Sweden, Switzerland, United Kingdom, United States</td>
</tr>
</tbody>
</table>
Figure 4.2: Welfare expenditure (% GDP) and life satisfaction of 29 countries
and no positive relationship remains. For the group of poor nations, we even see a negative correlation (rich nations: $r=0.05$, $p=0.843$; poor nations: $r=-0.26$, $p=0.581$; see Appendix, figure 8.4). This means that there is no effect on welfare state intensity once we distinguish between rich and poor nations.

A possible conclusion resulting from these findings is that the variable that influences life satisfaction is rather the level of wealth in a country and not the share which is spent on welfare.

The allocation of the groups also shows that countries with a smaller RGDP p.c. tend to spend less of it on welfare expenses, since we find them more to the left of the graph.

![Figure 4.3: Generosity Index and life satisfaction of 18 countries](image)

The interpretation of the scatterplot is different for the Generosity Index (Figure 4.3). With the exception of the Czech Republic, this dataset only encompasses countries,
which we earlier defined as rich. Also, the range of average life satisfaction is only half of that of the range of the data of figure 4.2. For these rich countries, we could not see any correlation when observing the expenditure earlier. The positive correlation is more obvious in this case, meaning that more generous states tend to have higher values of life satisfaction even in the group of the rich states. The entitlements-approach thus has a higher predictive value for life satisfaction than does the expenditure-approach.

However, a closer look at the allocation of some countries makes clear that this is not a general piece of evidence, it can only be interpreted as a tendency. The countries Switzerland and Norway for example, are characterized by almost the same levels of life satisfaction, but very different levels of welfare entitlements.

To sum up, in this first analysis of correlations we found that welfare expenditure as a percentage of RGDP p.c. does not have an impact on life satisfaction, once poor and rich nations are considered separately. Instead, the legal entitlements for welfare are positively related to life satisfaction for rich countries.

As we saw in figure 4.2, the economic performance of one country seems to influence systematically its life satisfaction and its welfare expenditures. It could be concluded now, that life satisfaction is only influenced by the RGDP p.c independent of state-welfare. To look closer at this effect, we must compute partial correlations controlling for the impact of RGDP p.c. of the respective years. The results are shown in figure 4.4.

**Figure 4.4: Correlations of life satisfaction and state-welfare effort in 29/18 countries with RGDP p.c. partialed out**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Correlation with average life satisfaction, RGDP p.c. partialed out (p-Value)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welfare Expenditure (% GDP), OECD Definition</td>
<td>0.27 (0.178)</td>
<td>29</td>
</tr>
<tr>
<td>Generosity Score</td>
<td>0.41 (0.102)</td>
<td>18</td>
</tr>
</tbody>
</table>

As we could have expected from the earlier separation in rich/poor countries, the values of the correlations for the expenditure approach decrease and they become insignificant. Considering expenditures, it can be concluded again that no or only a weak relationship with life satisfaction is found. The finding is independent from the level of wealth in one country. In other words, general prosperity matters more than its own redistribution.
Interestingly, there are only minor changes in the correlation and its p-value for the Generosity Index. They almost remain the same. This means, that the level of entitlements still influences life satisfaction independent from the wealth in a country.

Figure 4.5: Welfare entitlements and life satisfaction in 18 countries, effects of RGDP p.c. on both variables removed (plot of residuals). $r=0.41$, $p=0.104$

Now, the relationship that is independent from the RGDP p.c. can be visualized through plotting the standardized residuals of two linear regressions of life satisfaction and entitlements on RGDP p.c.. In these regressions RGDP p.c. is the independent variable and life satisfaction or welfare entitlements is the dependent variable. A regression helps us to understand how the typical value of the dependent variable changes when the independent variable changes. The conditional expectations according to the level of RGDP p.c. are given with the regression. The residuals measure to what extent the actual values deviate from these expectations. They indicate whether for example a
country’s Generosity Index is above or below the level that would be expected due to its wealth. Results can be seen in Figure 4.5. The meaning of this figure will be explained with an example: Norway can be found in the bottom right quadrant of the graph. For welfare entitlements, this means that Norway’s Generosity Index is higher, than what was expected by the regression according to its level of RGDP p.c.. This is not the case for life satisfaction. The value for life satisfaction is relatively lower than expected for the level of RGDP p.c.. In short, for its RGDP p.c. Norway has more entitlements but less life satisfaction compared to the other countries. Economically speaking, Norway’s efficiency for entitlements in increasing happiness is below average.

The same visualization was performed for the expenditure-approach (see Appendix figure 8.5). In this case, as expected with the low correlation and and high p-value, the relationship can not be seen.

4.2 Comparison of changes over the time

In a next step, we want to investigate how changes in welfare influence changes in life satisfaction over a period of time. This follows two studies done by Veenhoven (Veenhoven and Ouwenweel 1995; Veenhoven 2000). Veenhoven first correlated changes of welfare with changes in life satisfaction between the years 1960-1980 and later between 1980-1990. Both these studies did not find a relationship.

We will update these findings for our two indicators. For the expenditure-approach we have data of changes between 1980 and 2005. For the entitlements-approach we have data of the changes between 1971 and 2002. The changes are computed by subtracting the older value from the newest one.

In considering changes over the time, we acknowledge the fact that all systems have evolved over a certain period. For example, two states which spend the same share of their GDP on welfare at one point can have considerably different histories. Maybe in the first state the nation fought for the status quo in the previous decade, whereas in the second state the system had long been established. Accordingly, life satisfaction would have increased in the first state where a more intense welfare state developed during this period. Instead, the second sate had a higher level from the beginning and remained the same. If both states are now characterized by similar levels in life satisfaction and state welfare, information on the relevance of welfare expenditures for life satisfaction is thus lost if we only look at this single point in time. An elevation in life satisfaction during or following change in state-welfare, will indicate a relationship
between the two variables.

4.2.1 Method

We will now look at the correlations for changes in welfare expenditures and welfare entitlements with changes in life satisfaction. Six new variables have to be computed. For the analysis we need the changes in the two measurements of state welfare as well as the changes of life satisfaction, and wealth for the two periods. This again reduces the number of cases that we can investigate, since data is not available for all countries for the years 1971 and 1980 respectively.

For the expenditure-approach, we can compute changes in 23 countries. In most of these countries, the welfare expenditure as a percentage of GDP increased (see Appendix, figure 8.6). In the Netherlands it decreased by 3.8% and in Ireland it remained the same.

The changes in the Generosity Index can be computed for all 18 initial countries. All countries but Germany increased their entitlements during the 30 years that we consider here (see Appendix, figure 8.6).

We also compute the changes in life satisfaction. This again limits the number of countries that can be included for both approaches.

For the comparison of changes there now remain 21 cases for the expenditure-approach and 17 for the entitlements-approach. As done before, we will also control for the change in RGDP p.c. (see Appendix, figure 8.7). The periods of changes at which we take a look are different for the two approaches. In order to avoid mistakes in our interpretation that are only due to the different time-spans we also consider the expenditure approach for the period 1980-2005 to check if that makes any difference.

In all countries, economic growth was positive during these periods and RGDP p.c. increased.

4.2.2 Results

If the level of state-welfare positively influences life satisfaction within one nation, we expect a positive correlation. Figure 4.6 shows the correlations and countries that were used. For the expenditure approach, we find again that an initial positive correlation ($r=0.37$, $p=0.113$) looses in value and significance level ($r=0.18$, $p=0.501$) after controlling for RGDP p.c.. This means that increasing expenditures does not result in higher life satisfaction once we partial out the increase in wealth.
For the entitlements-approach we have a similar picture. All correlations do not reveal a clear relation between the change in entitlements and the change in life satisfaction within one country. Also, if the economic growth during that period is controlled for, no influence can be found. The non-relationship is depicted figure 4.7.

Italy for example can be found on the upper right of the plot. Welfare entitlements have risen in Italy since 1971 and simultaneously life satisfaction has increased sharply. On the other hand, in Ireland, welfare entitlements have risen even more, but life satisfaction has slightly decreased. Ireland can be found on the bottom right.

In fact, this longitudinal result is a contradiction to our earlier findings. When considering changes within countries over time, entitlements no longer influence life satisfaction. Whereas the non-effect of expenditures had already been found for the analysis of one point in time, the non-effect of entitlements is a new result.

4.3 Other measures of utility in relation to the expenditure approach

Welfare expenditures and changes within them do not have an impact on life satisfaction. This is counterintuitive and hard to believe. For that reason, we want to undertake further investigations. The fact that expenditures do not increase the average well-being of nations may not necessarily mean that the system of the welfare state fails to
Figure 4.7: Changes in Generosity Index and Life Satisfaction 1972-2002
satisfy its purpose. One might argue that the redistributive effect of welfare benefits is more important than an increase in the average. We thus recall the three definitions of utility that were given earlier in section 1 on page 8. So far, we have only applied the first definition which evaluated the welfare state with respect to its impact on the average happiness in a nation. This will now be complemented by a check for the other two definitions: equality and the maximin-principle.

The impact of welfare expenditure on equality in life satisfaction

It has been claimed that it is not the obligation of a welfare system to increase average life satisfaction but rather to reduce inequalities within one nation. This follows the classic view of Marshall (1950), who stated that, “the basic human equality has been clearly identified with the status of citizenship” (Marshall 1950 p.9). In his opinion, redistribution should be undertaken among citizens independent from the participation in the labor market, merely because they are citizens of a country. This redistribution can be achieved through a reduction in income inequality, but should also result in a reduction in inequality of life satisfaction.

First, we will look at the effect of welfare expenditure on income distribution, which is relatively easy to assess since both variables are measurable by objective factors. Later, we will investigate the effect on life satisfaction.

A redistributive effect of the welfare state in terms of income has been found empirically. Welfare expenditures cause a redistribution of resources within a nation and thus equalize the living standards followed by a higher equality in income ceteris paribus (c.p.). The worst effects of the market are mitigated through the idea of social citizenship. We now want to check whether this also holds for our set of data. Therefore, we need to investigate whether or not in countries with high expenditures on welfare, income is indeed more uniformly distributed. To assess inequality, we use the Gini Coefficient of income. It is a well known measure of statistical dispersion that is often used to measure income inequalities within nations (OECD 2007; See Appendix 3).

A correlation between the Gini Coefficient and expenditures is high and significant (r=-0.58) on the α=0.01 level, this also holds if level of wealth is partialled out (r=-0.50). For our analysis, we can now conclude, that high welfare expenditures as measured in our data indeed influence the income distribution in countries. However, from our earlier results we know that higher expenditures on welfare do not positively influence average life satisfaction in a country.

If expenditures do not influence average life satisfaction but do influence equality
in income however, one could speculate that they also influence equality in life satisfaction. To approach this proposal, we can use the standard deviations of reported happiness in our nations as a measure for equality. The lower the standard deviation, the closer the values are to their mean. We thus anticipate a negative correlation between standard deviation or life satisfaction and expenditures if expenditures reduce inequality in life satisfaction.

Figure 4.8: Welfare expenditure and standard deviation of life satisfaction in 29 countries, effects of RGDP p.c. on both variables removed (plot of residuals). $r=-0.20$, $P=0.319$

At first, the correlation between welfare expenditure and the standard deviation of life satisfaction is negative. But again, after controlling for wealth it becomes insignificant. Once more, we have to ask, what this result means. There is an equalizing effect of welfare expenditures on income and life satisfaction. But then, wealthier countries
also systematically spend a bigger share of their wealth on state-welfare. This can only be seen after controlling for RGDP p.c.. In fact, the influence of RGDP p.c. on the dispersion of life satisfaction is high \((r=-0.57)\) and significant on the \(\alpha=0.01\) level. Thus, in wealthier countries, reported life satisfaction is distributed more equally but this is independent from the expenditures on welfare. As shown in figure 4.4, this non-dependency is visible in the plot of residuals of both variables. No relationship can be seen in this plot. Countries with relatively high welfare expenditures compared to their RGDP p.c. (e.g., Sweden, France, Germany) do not systematically differ in their dispersion of life satisfaction from the countries with low expenditures (e.g., Republic of Korea, Mexico, United States).

The impact of welfare expenditures on unhappiness: applying the maximin-principle

In a last step, we take a look at the effect of the welfare state on unhappiness in a country. As discussed earlier in section 1 on page 8, this approach follows the argumentation that it is the most important function of the welfare state, to elevate the least privileged members of the society to a maximum level.

It was empirically shown elsewhere before, that a welfare system operates to reduce the extreme risks in a country. For example, evidence by Kenworthy (1999) and Bradley et al. (2003) suggests, that for more intense welfare states the incidences of extreme poverty are reduced systematically.

This is known as the maximin-principle which means that the minimum values should be maximized. We can transfer the maximin-principle to life satisfaction, with the investigation of unhappiness. No longer do we look at how the welfare system makes the happy people happier or increases the average, but whether or not it elevates the people who report the lowest values.

To check this empirically we now look only on the impact that the welfare state expenditures have on the number of unhappy people in a society. In doing so we expect that there are fewer people that are extremely unhappy in an extensive welfare state since the state takes care of their basic needs and relieves them from extreme poverty. Unhappiness is operationalized by measuring the percentage of people that report values between zero and four when asked to indicate their life satisfaction on a 0-11 scale. Under this definition 16.5% of the people across all countries report to be unhappy.

Unfortunately, for this step, we can not use the data from the Gallup world poll, since only the means and standard deviations are available. Thus we will make use of
as expected the correlations are negative ($r=-0.32, p=0.225$) but controlling for RGDP p.c. they become insignificant and there is a high probability that these results are due to chance ($r=0.22, p=0.424$).

Again, we see that in wealthier nations even the unhappy people seem to be better off but this is independent from the welfare expenditure in a country. More intensive state-welfare does not result in a smaller share of unhappy people.

The correlations for the expenditure approach with all three definitions of utility are summarized in figure 4.9.

<table>
<thead>
<tr>
<th></th>
<th>Correlation with Expenditure (p-value)</th>
<th>Correlation with Expenditure, controlled for RGDP p.c. (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average life satisfaction</td>
<td>+0.39 (0.037)</td>
<td>+0.27 (0.176)</td>
</tr>
<tr>
<td>Inequality in life satisfaction (SD)</td>
<td>-0.33 (0.086)</td>
<td>-0.19 (0.329)</td>
</tr>
<tr>
<td>Minimization of Unhappiness</td>
<td>-0.32 (0.225)</td>
<td>-0.22 (0.424)</td>
</tr>
</tbody>
</table>

Figure 4.9: Welfare Expenditure and three operationalizations of utility data collected with the World Values Survey in 2005 (WVS 2005). This covers 16 of the countries in our analysis and includes a question on life satisfaction as well (see Appendix 2).

The study yielded the following main results. First of all, wealthier states tend to spend a bigger share of their RGDP p.c. on welfare. Secondly, concerning life satisfaction it does not matter how big this share is, welfare expenditures do not have influence. Instead, economic performance seems to be the indicator that really matters.

In a cross sectional design it showed that the level of entitlements does have a positive impact on life satisfaction independent from the RGDP p.c.. These two results hold for a cross-national comparison for the year 2002 for the entitlements and 2005 for the expenditures.

A longitudinal comparison yielded a different pattern of results. All correlations were
small and insignificant. Even controlling for changes in prosperity (economic growth) did not change this. Thus, changes in entitlements and changes in expenditures do not have an effect on life satisfaction if compared in a longitudinal analysis.

Since the non-effect of expenditures for one point in time was somehow counterintuitive, two other operationalizations of life satisfaction were used. These are the equality in life satisfaction values as well as the amount of people that were unsatisfied with their lives. However, the amount of expenditures also did not have an impact on either one of them once the RGDP p.c. was controlled.

In the following, these results are interpreted and the method is discussed critically.

Our initial intuition that well-being and welfare state intensity are positively related, is incorrect. The analysis of the data available to us, indicates that welfare expenditures do not have a positive influence on well-being. This is in line with Veenhoven (1995). Welfare entitlements do have a positive influence on well-being in a cross national comparison for a single point in time but not for a longitudinal analysis of changes within countries. This is in contradiction to a recent study by Pacek and Radcliff (2008). However they had used more control variables which might have caused their results.

The question for the optimal level of welfare expenditure becomes obsolete, since every level seems to work equally well.

Leaving the search for the ideal level behind, a number of questions need to be discussed. First of all, why is this so hard to believe and what initially caused the intuition that the variables are positively related to each other? Secondly, why does the redistributive effect of the welfare expenditures not increase average life satisfaction, and neither affect its dispersion or the share of unsatisfied people? And lastly, what psychological factor causes the influence of entitlements on life satisfaction for the one point in time but no influence of expenditure?

Eight attempts to answer these questions and explain our results will be made in the following. Furthermore, the weak points of the method will be discussed and some possible focuses for future work will be named.

5.1 Attempts of explanation

Explanation 1: Wrong assumptions were misleading us to a wrong intuition.

Before we attempt to interpret our results, we want to address critically the initial research question. The motivation for our analysis was the intuition that the system of the
welfare state must influence the well-being of a nation. Since the welfare state developed over a long period of time and changed the way of political and social organization in modern societies, we assume that it will also influence their well-being.

After not having found a relationship, we can now step back to look at the underlying assumptions that made us think there must be an impact.

The fact that it seems not to matter for our well-being whether a country spends a big or a small amount of its wealth on social security was not anticipated. But why is it that we intuitively thought, that welfare-expenditures increase well-being? At the end of his paper, Veenhoven (2000) tries to explain this with some simple facts, which will be repeated and discussed.

First of all, a positive relationship is indicated by the terminology. The connotations of the terms well-fare state and social security are positive and for that reason we associate a positive influence on well-being. As Veenhoven argues later, the term Insurance State, that was first coined by VanMaarseveen (1990, cited after Veenhoven 2000) functions as an eye-opener in this case. This term describes the same phenomenon, but with a negative connotation. If we think of social security as a compulsory insurance, it is not hard to believe, that a more expensive insurance does not make people happier. This argument shows the suggestive power of words in the generation of scientific hypotheses.

Secondly, we do not have a clear picture of how our systems would look if state-welfare is reduced or abolished. It is hard to imagine what other structures could evolve and replace the governments’ responsibilities and the ways in which they would do good. Non-state services are documented less in public and generally we assume that they are only unique exceptions which occur on case by case basis but cannot secure everybody. People tend to think of existing things more positively than of non-existent. This is also true for the welfare state system and surely lead us towards the direction of our intuition.

Thirdly, as Veenhoven points out, it seems hard to believe for us that people can live happy lives without knowing that a level of security will always be present. Even if they will never actually face extreme poverty, people tend to be aversive to risk and seldom ask themselves how risk might also have a positive and motivating impact.

To sum up, we have seen that our intuition comes from positive wording, the lack of imagination for better alternatives, and the less obvious advantages of risks.

Under this light, we will leave behind the intuition that welfare increases well-being. To explain the reasons that caused our findings, we step back from the intuition and
analyze possible reasons more objectively.

Explanation 2: There may be a psychological mediation of the effect of welfare on well-being.

The two approaches measure variables with different psychological impacts on the population of a country. The entitlements-approach measures to what extent every individual is secured against potential dangers. Imagining the so-called “social net” as a “social pillow”, it measures how soft this pillow will be in case one falls onto it. Living in a state that provides high entitlements means reliable security and consistent supply of basic needs, of which every citizen profits. Long before the entitlements-approach evolved, in his seminal paper about the human hierarchy of needs the psychologist Abraham Maslow described this security as one of the fundamental conditions for well-being (Maslow 1943, see Appendix, figure 8.8). This could explain the positive impact of entitlements for measurements at a single point in time. However it does not give an explanation for the non-difference for the comparison of changes.

On the other hand, the expenditure-approach does not only measure how comfortable the pillow of state-welfare is but also how many people are lying on it. High expenditures do not affect all people equally. The part of the population which receives welfare-benefits may be positively affected if they are higher, but the part that pays for them potentially reports a loss in utility. The majority of the citizens are obviously not positively influenced. Also, expenditures are high in an economic recession when many people lose their jobs and expenditures are low in economic upturn.

It is rather the sense of security that matters in this case than the expenditures that are undertaken to provide it.

In line with this conclusion, Di Tella et al. (2001) also found an impact on security rather than the actual usage of the benefits for life satisfaction. They showed that if the unemployment rate is high in a country, the levels of life satisfaction are low, even among the people who have jobs. The insecurity influences their ratings of life satisfaction too, even if they are never actually affected.

This explains the differences between the approaches at one point in time but the non-difference for the changes over a period can not be explained with it.
Explanation 3: The minimum requirement may be met in all considered countries.

The reason for the lack of difference in life satisfaction for higher expenditures, might be simply that our countries are not different enough. Due to a shortage of data we did not include any of the “least-developed” countries. If we assume that welfare benefits are subject to the phenomenon of diminishing marginal utility, the minimum amount of welfare might be already given.

The Human Development Index (HDI), is a well-known indicator that ranks countries by level of human development. For example, it classifies all the considered countries of our analysis as “highly developed” countries (HDI>0.83) (UNDP 2005). In the smaller nation-set for the analysis of the Generosity Index, there is an even narrower range (HDI>0.89).

In the investigated countries, we find few incidences of extreme poverty. This means that all considered welfare systems already prevent the population from starvation and other extreme risks. They protect against the worst effects of a purely competitive market economy. The common basic level could just be high enough and all other services beyond this required minimum are of marginal profit for well-being of a population.

Explanation 4: The state may not be the best welfare provider.

It is incorrect to conclude, that we do not need welfare of any kind for individual well-being. We have seen that higher entitlements do affect people positively for specific points in time. In some situations, such as in cases of severe illness or unforeseen work incapacity, without external support most people would fall into extreme poverty or even starve to death. The question remains whether or not the state is the best institution to reduce the risks of these events. Many other institutions could take over some of these tasks.

In the past, more welfare services were provided within families. Today, in more individualized societies, private insurance companies frequently offer to take over the risk of such events for their clients. Beyond that, religious organizations, labor unions, minority groups and others take over the responsibility to provide welfare to their members.

These services usually supplement the basic governmental benefits. It is possible, that the state-provision already crowded out some of these institutions over the time. The development of these structures is a long and ongoing process. Whether the absence of any state-welfare structures would have led to the creation of a more efficient,
private net of providers is an open question.

Since only state-welfare was included in our analysis, we did not observe in which countries the total welfare, meaning the sum of state- and non-state services was the highest. Also, this was not our initial question, but maybe would have changed our answer and could be be interesting for further research.

**Explanation 5: There may be a negative link between the system of the welfare state and economic performance of one country.**

Some critics of the welfare state argue that the economic performance of one country is not independent of the welfare system. They claim that the welfare state adversely affects economic growth. If this proposal is true it should be considered in our analysis of the relationship between welfare and well-being.

It is possible that the welfare system directly affects life satisfaction positively, but indirectly reduces economic growth, which in return has a negative effect on life satisfaction. Empirical studies of the relationship do not yield conclusive evidence. Some find that higher spendings reduce growth, others conclude, that they improve economic performance (Atkinson 1999). If the welfare state has a strong negative or positive impact on economic growth, controlling for wealth in our analysis yields incorrect results, due to the fact that we partialled out their common variance. This might be another reason for our results and should be examined further.

**Explanation 6: Welfare benefits may cause negative incentives and increase dependency amongst recipients.**

The welfare state is not only seen from a positive perspective. Some new right critics argue that an excessive welfare state discourages working spirit and generates poverty traps (Murray 1984). In their view, everybody would profit if everyone took his lot in his own hand. They claim that generous social security encourages voluntary unemployment. This has been proven to have dramatic negative effects on life satisfaction, even if income is controlled (e.g. Frey 2008). Other phenomena, that negatively influence life satisfaction correlate with welfare intensity. These include higher divorce-rates that result in more low-income single parent families (Kalil and Danziger 2000), as well as higher rates of reported psychological diseases (Chung and Bemak 1996).

As Veenhoven carefully worded, “In their opinion the medicine is worse than the disease; the yields of income security would not balance the losses that result from inherent repression” (Veenhoven 2000).
The welfare state is assumed to endanger personal freedom in contrary to the market. The fact that welfare expenditures do not reduce the share of the least happy people supports this view.

**Explanation 7: Unhappiness and inequality are not influenced because of adaptation and social comparison.**

What about the impact on inequality and unhappiness? There might not be any influence on the *average* life satisfaction simply because positive and negative impacts cancel each other out with the aggregation of data.

We have seen that expenditures cause more equality in income ceteris paribus. If income and life satisfaction are related, there should also be an equalizing effect on the life satisfaction variable and values should be closer to each other.

We expect then, that the share of the population which is the net payer of the redistribution will suffer a loss in life satisfaction, whereas the people that gain from the redistribution will also gain in life satisfaction. In that case, happiness levels would shift toward the middle and the share of unhappy people as well as the dispersion would be reduced. However, our empirical results did not support this theory.

One explanation for this puzzle could be that the relative position as opposed to the absolute position influences life satisfaction. Humans are unable to judge absolute measures, they are constantly seeking reference points. These reference points are usually derived from the immediate environment. If one is asked about her satisfaction with life, she takes a comparison with other people around her. It was shown that individuals adapt to their absolute living standard quickly but that they constantly compare themselves with others and the past (e.g., Clark et al. 2006). Even if a redistribution of resources lessens the distance between people, it still does not change their rank-orders. If only the relative standing is important, then expenditures do not cause a difference. This also supports findings, of Schwarze and Härper (2003) who investigated the link between life satisfaction and inequality before and after governmental redistribution of income in Germany. They found that reduced inequality reduction by the state did not improve well-being. No negative effect of inequality on well-being was shown for data of the German Socio Economic Panel (GSOEP) between 1983 and 1998.

The lack of influence on the share of unhappy people can be explained by quick adaptation to a certain standard. This effect is often referred to by the term “hedonic
treadmill" (Brickman and Campbell 1971) which describes the phenomenon of relative stable happiness despite improvement of outside living conditions. In our case of welfare benefits this means that once a certain minimum level is guaranteed to everybody, the population gets used to this level and takes it as the minimum reference point, rather than comparing it to the absence of any benefits. Thus, no permanent increase in happiness is reached.

In essence, the relative standing influences well-being but is not affected by expenditures. On the other hand, the absolute standing is influenced by expenditures but it is habitualized quickly. This could explain the lack of effects.

**Explanation 8: Differences in the perception of the role of the state between cultures.**

The lack of influence of welfare expenditures could also be explained by varying ideas of state responsibility between cultures. We will take the comparison between the US and Sweden as an example to support this statement.

A Swedish citizen is born in a state-hospital, delivered by a state-employed doctor. Later, she most likely lives in a house, that was built with state-loans and basically goes to a state-run public school that she and her peers leave with relatively similar opportunities. The following education at a state-university is of high quality and free of costs (Holmberg 1991). None of this holds for a US citizen. Sweden has had over 500 years of unopposed central rule. The importance of security as opposed to the wish for personal accomplishment for taking risk has never been openly questioned. Most people in Sweden receive at least some welfare benefits at certain periods of their life, which yields broad support for the system. The Swedes let the government take over responsibility for entire sectors of their life like education and health-care. To finance this system, Swedish workers pay high taxes during their work-life.

On the other hand, US citizens identify themselves less with their state as a provider of security than as a provider of freedom. Welfare payments in the US are primarily concerned with supporting those that are most in need, rather than taking responsibility of entire societal sectors. Historically, within the US, personal freedom and success through hard labor is believed to be a fundamental goal of each member of the society. From the *dishwasher to the millionaire* every man is believed to be the architect of his own fortune. The US population developed another mentality and a higher status of self-responsibility over the time. For example, unlike in Sweden until very recently the
state was not expected to assume responsibility for health care. The new health care reform promoted by president Barack Obama and aiming at a public health care system is highly criticized among a large part of the population. Government interventions and compulsory participation for everybody is feared as a risk to personal freedom and flexibility.

The US citizens are used to a flexible and small social security system and they trust themselves rather than a state. Taxes are traditionally low and autonomy is a high.

We might also want to mention at this point, that 25 % of the Swedish population emigrated to the US between 1860 and 1910 (Holmberg 1991). It is possible, that the group of the most daring Swedes left the country and the remaining 75 % continued building up their system with high governmental responsibility. This would have been a process of self selection of the culture with which one identifies.

Moreover, there are 9,1 millions of people living in Sweden as opposed to 305 million Americans in the US. The Swedish population consist of more than 90% of people, whose ethnicity is Swedish, whereas in the US, a mix of many ethnicities live together.

This shows that the two countries substantially differ not only in their welfare organization but also in their history, perception of the state, and population composition. The aim to establish one overarching system for both seems preposterous. This can be an other reason, why our comparison does not yield a clear statement.

We now consider all Nordic countries (Denmark, Finland, Norway, Sweden) together instead of focusing on Sweden. If we look back at figure 4.3 on page 23, it is notable that they are clustered in the upper right of the graph. All of them are characterized by very high entitlements and simultaneously high life satisfaction values.

Two explanations for this pattern are possible: First, their strong systems could have evolved because government intervention has always been perceived positively, which in return causes positive effects. This supports the argument that citizens of Nordic countries have been grown into cultures that perceive the state differently than citizens of other countries.

Or one could argue, that for any other reason citizens of Nordic countries are generally happier. There might be another common factor such as a common geography, culture or genetic heritage which results in greater happiness.

Regardless of which is correct, it can be seen clearly that there is no relationship between welfare entitlements and life satisfaction once the Nordic countries are taken away from the scatterplot (figure 4.3).
5.2 Reference to current political changes

As previously mentioned, the welfare systems are not static. The longitudinal part of the analysis shows that there are considerable changes, even if we only look at them since 1980. In Europe today, many states tend to lower their welfare entitlements to create incentives for the people to take back the responsibility for their personal risks from the government.

The old-age rent can be taken as a first example. In western societies, the number of people who receive old-age rents is increasing, whereas the number of working people who pay for them decreases. Due to this demographic change, a redistribution between younger and older citizens will not suffice any longer to uphold living standards of retired citizens. The government needs private responsibility of every citizen. An example for this progress is the “Riester-reforms” in Germany. These reforms changed the system of old-age rent in subsidizing provision for one’s private retirement plan.

Another reform was necessary on the labor market. Not exclusively since the economic crises in 2008 came up, modern countries have historically struggled with the problem of increasing unemployment rates. Generous unemployment benefits are expensive to a government and set negative incentives for the search for new employment. In Germany, for example, the “Hartz-reforms” radically shortened the period in which one receives unemployment payments after losing a job. Simultaneously, tests for eligibility for social welfare payments were established. These steps decrease the incentives for voluntary periods of unemployment and lower payments. In other countries, similar changes were performed.

Last but not least, the planned reform of the US health-care system should be mentioned here. This reform is an example of a change in the direction towards a more intense welfare state. It does not reduce state-welfare responsibility but expands it. The goal is to ensure universal health care for citizens and to achieve that coverage and premiums do not vary with health status. Here, the government seeks more participation and control on the health-insurance market to avoid the negative consequences of an ongoing privatization.

We have not investigated how these specific changes influence the well-being, since we only included the sum of welfare as a variable. A separation of the single dimensions (e.g., unemployment, health care, old-age pension) would be interesting for future research and their impact on well-being could supplement future discussions on these
5.3 Weak points of the method

The method of this paper has various weak points. The ones that seem most important will be discussed briefly in the following.

First and foremost, the incompleteness of the data causes problems. As already mentioned, poor states are underrepresented. Especially for the entitlements approach, data for poor countries is missing. The availability of data is even further reduced, once we include longitudinal aspects and focus on equality in life satisfaction and the minimax operationalization. As for the difference in the expenditure- and the entitlements-approach, our empirical part was based on different sets of nations, which makes a direct comparability of their effects doubtable.

Second, a cross-national comparison should be seen as critical in this case. The welfare system in a country is the result of a long historical process. With a comparison between countries we neglect this process, assuming similar impacts of welfare intensity in different cultural settings. Surely, the Finish population, for example, would suffer in terms of well-being if their generous system would change to the restrictive American system tomorrow.

Third, the method limits itself in using only correlations and partial-correlations as an instrument. The explanatory value could be increased with a more elaborate look at the data. As for the longitudinal analysis, only comparing changes over two or three decades does not tell much about their correlation over time. Changes in life satisfaction and state-welfare should be monitored more frequently in order to see the relationship directly. This could be improved with a fixed-effects-estimator that controls for unobserved heterogeneity that is constant over time and influences the dependent variable. In doing so, effects of welfare state intensity could be looked at separately, independent of other country-specific influences. All available data for the US is plotted in figure 5.1 showing the sequence of entitlements and life satisfaction between 1971 and 2002. In this case, also a time-lag variable could be included in a longitudinal analysis, because it is likely that changes in the welfare system need time until their effect on reported life satisfaction unfolds entirely.

Furthermore, more control variables should be included for a higher informative value. Life satisfaction depends on other macroeconomic factors not simply wealth and state-welfare. For example, unemployment rates as well as the level of individualism have been shown to influence the level of well-being (e.g., Frey 2008; Diener et al.
1995) and should be included to avoid distortion.

Also, the employed method does not allow the direction of causality to be inferred. We assume that the welfare state has an impact on life satisfaction rather than the other way around. As a paper by Rice et al. (2006) shows, this is not necessarily the case. The authors find a causality running from levels of life satisfaction to regime type.

Finally, one may question whether it makes sense to look at aggregated happiness ratings across nations and relate them to welfare expenditures. Individuals are affected by the system in different ways, according to their status in society. It would be more logical and interesting to analyze the levels of life satisfaction of different social classes (e.g. employed and unemployed) separately and then relate them to the expenditures.

### 6 Conclusion

Our result that an intensive welfare state does not enhance well-being is politically explosive, since the welfare state costs a large amount of money and is always under discussion. Politicians from both, the libertarian and the socialist side will not like this outcome because it does not give new substance to their argumentation. We should not support the assumption that social security increases well-being but, on the other hand there is no sign that it harms life satisfaction either.
We discussed various explanations for this lack of influence. Some theorists may argue that it could be taken as a proof that a strong social welfare system has negative effects on economic growth as well as individual motivation for work and thus affects well-being negatively, canceling out any potential positive impacts. Others may attribute the results to deficiencies in the employed methods. Important methodological concerns are that happiness scores might be on a too coarse level of analysis and that not enough countries were included in the analysis.

Whereas entitlements seemed to have an impact on a comparison at one point in time, it disappeared once changes were compared over time. This supports the claim that cultural differences cause the variety of systems to develop and that they are not to be compared with each other.

Moreover, in countries with high expenditures peoples’ ratings of their happiness are not closer to each other, nor do the least happy people profit from their redistributive effect.

All of these results are against our initial intuition. We have explained our false intuition with the misleading assumptions and the positive wording.

Future research should use smaller units of analysis (e.g., income classes within a country) and try to elucidate the psychological mechanisms that mediate the connections between social welfare and subjective well-being if any exist. Data on the sum of state and non-state welfare could reveal interesting insight in the overall impact of welfare. However, an effect of this remains in speculation.

Some recent examples for the public discussion about changes in welfare states have been given to show the importance of the topic. The lack of relationship with life satisfaction might just let us look at these changes in a more relaxed manner. Both a strong welfare state as well as a more liberal system of state organization seem to have advantages and disadvantages. Since there is no definite direction of relationship, the preference for a specific form of state-welfare, can be regarded a “question of taste”. It should thus be considered in relation to the cultural background and social norms of the nation in which it occurs.
7 References

Literature


Data


• Veenhoven, R., World Database of Happiness, Erasmus University Rotterdam.
  Available at: http://worlddatabaseofhappiness.eur.nl, Assessed at: 28.7.2009


Online Sources


Appendix

Appendix 1: Real Gross Domestic Product per Capita
Real Gross Domestic Product per Capita has been calculated expenditure based. It is measured in US Dollars, using current exchange rates and at current prices of the country. Purchasing Power Parities (PPP) have been used to express real GDP. Through a division by the population, income per capita is expressed (Source: OECD).

Appendix 2: World Values Survey
The Variable “V22” of the World Values Survey is used. The original question is: All things considered, how satisfied are you with your life as a whole these days? Using this card on which 1 means you are “completely dissatisfied” and 10 means you are “completely satisfied” where would you put your satisfaction with your life as a whole?

Appendix 3: Gini Coefficient
Graphically, the Gini Coefficient is measured as the area between the Lorenz curve and the line of equality. Here, the Lorenz curve represents income distribution in showing for every poorest x % of the society how many y % of income they possess. If a single person possessed everything, the Gini Coefficients’ value became “1”, for a uniform distribution of the income, the Gini Coefficients’ value became “0”.

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Figure 8.1: Appendix 4: Structure of SOCX database for public and mandatory public programs, by branch (1-9), type of expenditure (cash/in kind) and type of program)

1. OLD AGE
   Cash benefits
   Pension
   Early retirement pension
   Other cash benefits
   Benefits in kind
   Residential care / Home-help services
   Other benefits in kind

2. SURVIVORS
   Cash benefits
   Pension
   Other cash benefits
   Benefits in kind
   Funeral expenses
   Other benefits in kind

3. INCAPACITY-RELATED BENEFITS
   Cash benefits
   Disability pensions
   Pensions (occupational injury and disease)
   Paid sick leave (occupational injury and disease)
   Paid sick leave (other sickness daily allowances)
   Other cash benefits
   Benefits in kind
   Residential care / Home-help services
   Rehabilitation services
   Other benefits in kind

4. HEALTH
   Benefits in kind

5. FAMILY
   Cash benefits
   Family allowances
   Maternity and parental leave
   Other cash benefits
   Benefits in kind
   Day care / Home-help services
   Other benefits in kind

6. ACTIVE LABOUR MARKET PROGRAMMES
   Employment service and administration
   Labour market training
   Youth measures
   Subsidies for employment
   Employment measures for disabled

7. UNEMPLOYMENT
   Cash benefits
   Unemployment compensation / severance pay
   Early retirement for labour market reasons
   Benefits in kind

8. HOUSING
   Benefits in kind
   Housing assistance
   Other benefits in kind

9. OTHER SOCIAL POLICY AREAS
   Cash benefits
   Income maintenance
   Other cash benefits
   Benefits in kind
   Social assistance
   Other benefits in kind
Figure 8.2: Appendix 5: Used data for the empirical analysis (welfare expenditure, Generosity Index, life satisfaction and RGDP p.c.

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Figure 8.3: Appendix 6: Pearson correlation and Spearman’s rank correlation between welfare expenditure and Generosity Index

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Figure 8.4: Appendix 7: Correlation between welfare expenditure (%GDP) and life satisfaction by groups of rich/poor nations

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Figure 8.5: Appendix 8: Welfare expenditure and life satisfaction in 29 countries, effects of RGPD p.c. on both variables removed (plot of residuals) $r=0.27$, $p=0.167$
Figure 8.6: Appendix 9: Changes of Life Satisfaction, Welfare Expenditures and Welfare Entitlements

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Figure 8.7: Appendix 10: Changes in RGDP p.c.

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Figure 8.8: Appendix 11: Maslow's hierarchy of human needs

- **Physiological needs**: food, drink
- **Safety needs**: security, physiological safety
- **Belongingness and love needs**: affiliation, acceptance, affection
- **Esteem needs**: competence, approval, recognition
- **Aesthetic and cognitive needs**: knowledge, understanding, goodness, justice, beauty, order, symmetry
- **Self Actualization**
Declaration of Authorship

I hereby confirm that I have authored this Bachelor’s thesis independently and without use of others than the indicated sources. All passages which are literally or in general matter taken out of publications or other sources are marked as such.

Berlin, September 27, 2009

Julia Propp