

# Flexploitation or flexibilisation?

- A cross-sectional study of youth well-being in a changing labour market.

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## Abstract

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The aim of this study was to explore the development of well-being among youth in the Nordic countries in relation to changing labour market conditions. The dimensions of focus constituted subjective and personal accounts of physiological and psychological well-being. The study was based on perspectives and previous studies on labour market participation and employment standards and the influence of such factors for the well-being of individuals. Theory on the associations of such factors were constructed and tested through quantitative analysis making use of data from the European Social Survey in a cross-sectional study. Much in accordance with the theorized associations Employment, Income and Education was shown to be positive predictors of Health. Additionally, work satisfaction and satisfaction with work-life balance was related to higher psychological and physiological well-being. Despite previous studies suggesting that rising non-standard employment (NSE) arrangements such as limited contracts and lower employment security are causing ill-health, no such changes could be identified in neither the youth population in the Nordic countries nor in Europe. There were further no significant correlations between NSE contracts and the operationalized well-being measure of Health made use of in the undertaken multiple regression analysis. These findings could suggest that non-standard employment and the flexibilisation of the labour market does not have as adverse effects for the well-being of youth and perhaps not even for the greater population. The flexible non-standard employments might have become the new standard.

*Keywords:* Cross-sectional study, well-being, subjective health, non-standard employment, flexibilisation.

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# 1. Introduction

The labour market in vast parts of the world has changed due to global developments during the 20th century. Economic changes in terms of mobility for labour and means of production have spurred new types of policies in order to adapt to the new economic realities. These policy responses are far from only economic policies, as they seek to alter migration patterns and welfare arrangements. Combined, these trends form powerful mechanism that affect the daily life of the population thus potentially the general well-being. Broad concepts of welfare governance changes describe different eras during the post-war period, conceptualising an initial trend where the welfare state emerged in the form of a universal and nationally regulated type of governance financed by a boost in economic growth. Declining growth and globalisation has since been the core argument for a change of governance (Jessop 1999, Hemerijck 2013).

The shift from an industrial society to a knowledge society is altering the conditions for those entering the labour market (Halvorsen & Hvinden, 2014) and new ideals of a flexibilisation of labour are upheld and combined with conditional welfare provisions in new governance models, as presented by Bob Jessop (1999). While the demand for labour increasingly value higher education and more complex skills, new employment conditions have also emerged that require more individual management of work-life balance. Such types of employment are for example part-time, temporary and self-employment (Fritz & Koch, 2013). The emergence and expansion of these so-called non-standard employment arrangements (NSE) is theorized as bringing potentially adverse effects for the population. In theorizing these developments on the labour market Martin Fritz (2013) discuss the concept of anomie, which incorporates notions of normlessness and insecurity throughout a population undergoing societal change. The removal of - or weakened - former standards is linked with inequality and exclusion in a process where predetermined cultural goals and norms remain while the means of achieving such goals are removed. The central role of employment for individuals to participate in society form the basis of the norms which Fritz (ibid.) propose are being eroded when employment conditions are altered. The concept of anomie is further theorized as combined changes of

disintegration, disorganization and disorientation in a society of global changes towards flexibilisation.

These transitions in society are thereby also highlighting another transition, that between education and work. Not only is this transition postponed for many in the youth population, it is further changing to be more complex and less linear. Once youth enter the labour market they are often doing so through precarious forms of employment in what can be described as a peripheral workforce (Furåker, 2013). The share of this workforce is shown to increase in several European countries during the first decade of the 21<sup>st</sup> century while the historically more common “standard” employment arrangements ensuring full-time and permanent employment is still the majority standard in the European labour market. However, such secure arrangements are predicted by many scholars to increasingly give way to NSE-arrangements (Fritz & Koch, 2013).

The former standard employment arrangements still constitute the core workforce, providing secure jobs to the majority of the population. In the Nordics, the rates of less secure temporary contracts are however much higher among the youth population (Furåker, 2013). If the core labour force mainly consist of the older population we are faced with issues for the inclusion of youth into the secure labour market.

Employment opportunities for unskilled workers are declining in countries transitioning from an industrial to a knowledge based economy and the demand for higher and theoretical education is followed by an increased risk of school-dropouts in many Nordic countries (Halvorsen & Hvinden, 2014). Dropping out of school could further entail a future within the peripheral workforce and risks of low paid and uncertain jobs in contrast to the employment protection within the core workforce. Employment is important for the well-being of individuals for several reasons. Theory of employment and well-being assumes both an economic need for employment and a psychological need. If either of these needs are unfulfilled they can cause psychological distress (Haworth, 1997).

These developments could be very likely to segment the labour market and the challenges from these trends appear to present themselves primarily for the youth population.

A segmentation of the labour market could mean social exclusion for the young labour force. Exclusion from the core labour market could create a rising poverty and increase the demand for minimum income support as larger shares of the population lack entitlements to social insurances. Repeated periods of unemployment could also lead to dependency of welfare and inactivity as citizens become discouraged from seeking new entry to the labour market in order to protect themselves from previous experiences of failure or degradation.

One might also argue that experiences of degradation could be originating from the labour market policies that are emerging as a response to the changing economic developments. As part of the changing governance of welfare, policies are decreasingly universal and are more focused on incentive reinforcement and assistance in seeking employment (Jessop 1999, Bonoli, 2012). The responsibility and pressure of finding work thereby placed even more on the individual while this task is audited by employment officers more frequently.

This inactivity and dependency of welfare could for example be indicated by a rise in different forms of social protection benefits. Interestingly, the provisions of minimum income support and disability pension for youth have risen recently in several of the Nordic countries, according to some available research (Inspektionen för Socialförsäkringen, 2013:7. Halvorsen & Hvinden, 2014). However this development is a difficult one to attain certain data on, given the complex and sensitive nature of such data.

The Nordic countries are well-known for having extensive welfare governance with universal entitlements and social protection. Many of these countries have reformed and are reforming their policies much in line with the activation approach to labour market policies. Other social protection policies are also being reformed in order to retrench the welfare provision (Morel, Palier, & Palme, 2012).

### **Research focus**

Building on the theories of anomie and the adverse effects of changing labour market conditions my approach will focus on the notion of well-being. For example concerns for well-being developments consider rising inequalities, weakened labour market regulation and rising anxieties among the population, all of which are intertwined in Fritz's (2013) conceptualization of anomic normlessness in the wake of flexibilisation

The aim within my research focus is therefore to further explore these problematic developments of a potential rising social exclusion and decreasing well-being of the young population with special focus on the Nordic countries. I hope to contribute to the knowledge of these developments through an explorative research approach. My approach will mainly revolve around the well-being of youth in order to explore whether well-being is changing and what is determining individual well-being. I find this to be a very relevant and interesting approach in order to investigate if the flexibilisation could cause adverse consequences for youth and whether the developments can rightfully be considered an exploitation of youth. The title of the thesis - "*Flexploitation or flexibilisation*" - is derived from the aim of my approach.

### **The concept of Well-being**

Notions of "Well-being" include several dimensions of human life, where a positive physical, social and mental state are included. It is not merely a term for the inactiveness or lack of vigour which "disability" denotes. Following from the broad definition of Well-being we are faced with several approaches in measuring levels of well-being (Marks A. & Shah H., 2005; Vittersø J., 2004 & Sen A., 1993). There are objective and subjective accounts of "being well" and there are personal well-being, social well-being and happiness dimensions that are used to evaluate the welfare of a population. My approach will focus primarily on the personal dimension, making use of subjective evaluations regarding psychological and physiological well-being. I've chosen this scope because my topic of interest is the potential activity restrictions following from subjective ill-health. My primary conceptualization and focus in terms of well-being will therefore revolve around health issues that could hinder participation in labour market activities. However, my analysis will incorporate a broad discussion of well-being and its dimensions and measurements, making use of objective measure such as employment status and income in order to explore the association of such contextual factors on the subjective accounts of well-being and health.

### **Previous Studies**

A majority of research on well-being focus on the overall satisfaction and happiness rather than personal well-being and have found that this notion of well-being is influenced by *Life circumstances* (contextual factors such as income and available resources) explaining 10% of the variation in happiness and *Intentional activities*

(individual factors and actual behaviour in working towards ones goals and meaningful work) explaining 40% of the same variation while *Genetics* is explaining 50%. In presenting these conclusions Marks & Shah (2005) note that genetic predispositions is interacting with environment and means of upbringing that might activate or prevent such predispositions. This helps position my own departure to look closer at what would affect varying degrees of personal well-being in the domain of freedom to be vigorous and active.

Propositions that contexts concerning resources, activity, achievement and meaningful work are important factors for individual well-being suggest that being unemployed should have implications for the well-being of individuals. Not surprisingly many studies do show that this is true and in terms of unhappiness it is one of the most significant sources. The level of effect is mediated by the economic and social situation of individuals (Marks & Shah, 2005. Nordenmark & Strandh, 1999, Strandh 2001, Bjørnstad 2006). While economists argue that the negative emotional effects of being unemployed will increase efforts in job-searching the effect seem to be the opposite and the more affected by unemployment, the more passive individuals become as rejections in their search for employment produces withdrawal in response to the trauma of unemployment (Bjørnstad 2006, p 462).

Research on policy intervention and its effect on the individual well-being show varying levels of impact. If unemployment causes adverse well-being, then labour market policy interventions should also effect/mediate well-being. Participation in training or manpower programmes improves mental well-being according to some studies including youth, while results concerning access to unemployment benefits do not show any conclusive effects on well-being (Strandh, 2001) According to these studies our interest should therefore be further focused on the economic situation of individuals and also their activities while not being employed, such as whether participating in education/training or not is related to levels of well-being.

Some of the flexibilisation developments have also shown adverse effects for well-being (Koch & Fritz, 2013). On a European level Van Lancker (2013) has shown that temporary employment increases the risk of poverty, compared to permanent employment but note that this is mainly due to lower wages for temporary employed. Other than causing financial hardship and lower degrees of employment protection a temporary employment and being part of the peripheral workforce might affect the

well-being of such employees as they are excluded from the core workforce and their (former) rights and privileges from their standard employment arrangements.

In contrast to temporary employment, part-time employment have been shown to be less problematic in terms of poverty, precariousness and exclusion (Koch & Fritz, 2013). It is even related to wealth and welfare indicators, such as fertility rates, trust and female employment according to Fritz's (2013) analysis. In all types of non-standard employment (NSE) the share of employees that are poorly educated is high. This could serve as a verification that the flexibilisation of the labour market is exploiting already marginalised groups of the workforce according to Marin Fritz (ibid). The prevalence of various non-standard forms of employment is therefore a potential predictor of well-being that I will incorporate into my analysis in this research approach.

In a study similar to what I am interested in undertaking, Bengt Furåker (2013) investigates whether non-standard employment is increasing in the Nordics and how employees in NSE are perceiving their employment situation. Furåker conclude that shares of non-standard employment have not increased in the Nordics and go on to note that temporary employees experience less variety in their jobs while they do not feel more pessimistic about finding other employment opportunities in the future. My departure will build on these findings and more specifically investigate the experiences of youth in the Nordic countries.

### *Previous studies of youth well-being in the Nordics*

Some studies have shown and discussed an increase in both disability benefits and in the prevalence of self-perceived long-standing health issues among Nordic youth (Inspektionen för Socialförsäkringen, 2013:7. Halvorsen & Hvinden, 2014). Issues in making use of shares of disability- and similar benefits however include comparative problems of differing national systems for benefits and that such objective accounts of well-being need to incorporate different eligibility criteria within benefit systems and the existence of overlapping income support from other social insurances and benefits. Data on disability is also treated as sensitive information and therefore challenging to acquire. Not being a subjective evaluation of well-being a benefit share measurement would not incorporate that being a recipient of such benefits need not necessarily imply that one is feeling unwell or hindered in ones

freedom to act towards ones subjective valuable achievements and according to ones will.

Self-assessment of health is however an easier task to acquire and conceptually more suitable from the departure of this research approach. Such self-perceived health measurements have shown that health issues hampering the activity levels of youth in many of the Nordic countries rose between 2002 and 2011. This conclusion is found in the report *New Policies to Promote Youth Inclusion* by Rune Halvorsen & Björn Hvinden (2014). They have produced the following comparative table of worrying developments of health problems among the young population in the Nordics.

Table 1: Prevalence of long-standing self-perceived health problems in four Nordic countries. 2002 and 2011. Both sexes. Percent

	DK	FIN	SE	NO
<b>2002</b>				
<i>Age 16-29</i>	12.0 %	17.2 %	11.6 %	9.3 %
<b>2011</b>				
<i>Age 16-29</i>	14.5 %	39.0 %	31.3 %	8.0 %

DK= Denmark, FI= Finland, SE =Sweden, NO= Norway

Source: Halvorsen & Hvinden 2014 (LFS Ad-hoc modules 2002 and 2011. Reported by the National statistical offices).

The source for these figures is the Eurostat Labour force Survey Ad-Hoc modules of 2002 and 2011. The question to respondents was worded somewhat differently in 2002 and 2011. (LFS 2002: “Do you have a long-standing health condition or disability?” & LFS 2011: “What kind of longstanding health condition or disease do you have?”). While researching the above data it appeared that the Ad-hoc module survey data used on this topic is only available for those two years as seen above (2002 and 2011) and that the table produced have made use of individual data to construct the age-group of 16-29 year old respondents.

A very central theme in the approach of this thesis will be to investigate whether the proposed developments of adverse well-being among youth in the Nordics can be replicated in other data sources. This will serve as my first research question. The period of interest for my empirical data is therefore starting in 2002. Additionally I aim to explore the theorized and presented studies of mediators of well-being more specifically in the youth population. This exploration is covered in my second research question.

In order to explore the historical developments related to my research topic I will make use of Eurostat aggregate data helping me in the process of theorizing on the cross-national changes of socio-demographics and well-being during the last decade.

As presented briefly, the concept of well-being is a complex and broad notion. In order to specifically explore subjective well-being that could influence the potential for individuals to participate in labour market activity I aim to make use of personal accounts of well-being that I will operationalize as related to health. These will be variables denoting psychological and physiological well-being. By incorporating several variables into a composite measure - a “Health Index” - I hope to demarcate relevant personal accounts for this purpose while keeping a broad perspective of different subjective experiences that could limit labour market participation.

To facilitate data for an analysis of assumed relationships of predictors of well-being I will access individual data from the European Social Survey (ESS). The ESS is a regularly recurring cross-national survey in many European countries including the Nordics. It has been conducted since 2002, a year which therefore will serve as the starting point for the period during which I will analyse developments. My main focus will be on youth in the Nordics, while the available data makes it possible for me to compare developments with other European countries. With the material from the European Social Survey - using SPSS software - I will make use of Regression analysis to identify factors that are predicting well-being and to what extent. It is within this section of my analysis that I plan to make use of a composite measure of health. Regression analysis can - if sufficient and relevant data is acquired - determine what changes can be seen in one variable by varying other variables. This will help me answering my research questions by indicating what is associated to changes in youth well-being in the Nordics.

## **Research Questions**

Has personal well-being decreased among youth in the Nordics since 2002?

In what way are labour market activity and standards associated to personal well-being?

## 2. Research Design & Method

This thesis is a scientific approach to explain and further understand the relationship between socio-demographics such as labour market status and income in relation to well-being and ultimately activity restrictions and disability. In order to achieve knowledge on the subject some research considerations are needed in terms of the acquisition of knowledge and truth as well as how answers to my research topic and questions can be achieved. There are several available approaches and not only one true way to practice scientific method and define ones philosophy of science. I will therefore outline research philosophy, design and methodology in this section before I continue to present the theoretical perspectives on well-being.

### Philosophy of Science

What constitutes scientific method and a suitable pursuit of knowledge and truth differ significantly within available philosophies of science within the social sciences. Philosophy of science entails a conceptualization of what can be considered as real or in existence through its *ontological claims* as well as how knowledge can be reached about this reality through the *epistemological claims* of the researcher. A complete philosophy of science finally includes a statement of what methodology is applicable in the given scientific inquiry. Traditionally this has also been the sequence of research, according to Jackson (2011, p.26) as methodology has followed the preceding issues of *being* (ontology) and *knowing* (epistemology). However, Jackson (ibid.) considers methodology to be a thorough reflection of the decision on what methods to utilize in order to achieve the knowledge we are striving for. I agree with this view on methodology from which it follows that methodology must not necessarily follow from ontology but rather that methodology is a tool to make sense of what methods of knowledge production would make sense. According to Jackson (2011) methodology serves as a form of *philosophical ontology* as it formulate how researchers can produce knowledge initially, prior to the *scientific ontological* statements of what exist (evidence for the existence of e.g. objects and processes).

My focus of this thesis considers effects of labour market standards and social policy in producing unwanted side effects for the population. I have had the ambition to identify the best suitable approach for this topic. As previously mentioned, I do not agree that there exists one true scientific method or approach. Instead I agree with

Andrew Sawyer's (1999) notion of so called "disciplinary parochialism" that there are several available research approaches that individually could equate to knowledge limitations in research. When conducting research in an interdisciplinary field such as policy evaluation one could therefore benefit from using several approaches and perspectives.

### *Ontology*

I share the ontological world-view of both positivism and critical realism that there is a divide between the knowing and the known, that is, between the observing researcher and the object of study. This split, labelled the Cartesian split after Rene Descartes thus holds that the world is dual and that there is a gap between the mind-world of researchers and the bodily world. Consequently such an ontological view of existence assumes that what is "real" is independent of human awareness and consciousness (Jackson 2011, p 44). I accept the postulates of what Thomas Brante (2001) defines as *Casual realism* to which he has summarized several forms of realism within philosophical debate. Besides the mind-world dualism formerly mentioned, Brante (ibid.) identifies an additional postulate stating that there is a social reality independent of the representations and awareness by social scientists. When accepting the axiom of mind-world dualism any researcher is faced with the issue of what we can be sure in knowing do exist, other than our own existence. This Cartesian problem of an intense need for certainty in a mind-independent world where such certainty is nearly impossible has meant that subsequent epistemological postulates differ within philosophy of science (Jackson, 2011).

### *Epistemology*

Knowledge is in many definitions of science based on facts. However, as Alan Chalmers (1999) notes, there are certain obstacles in attaining these fact and how we are to produce knowledge from them. According to Chalmers (Ibid.) the basis of facts underpinning science assumes that they are (1) given by (neutral) observers via our senses (2) independent and prior to theories and finally (3) that facts are a foundation for scientific knowledge. This view that observing is the key to knowledge is related to the concept of phenomenology, which entails an axiom that experience lead to knowledge much like in differing accounts of ontology that uphold a contrasting world-view that is monist, thus that the knowing and known is not firmly separated. Epistemological wagers are in that case different to dualist approaches of

the Cartesian problem in that they rather theorize prior to experiencing and seek to interpret and idealize in order to produce scientific knowledge (Jackson 2011). Returning to the realm of the ontological starting point mind-world dualism that I accept as my own I do not agree with the axiom of for example positivism and empiricism that knowledge can only be acquired through experience. Nor do I commit to the view of relativism that all individual perspectives and experiences are equally valid in producing scientific knowledge. I do however commit to the statement that the world can be known from several different perspectives, although some perspectives can be judged to be more factual than others. Overall I therefore agree to great extents with the philosophy of science described by Andrew Sayer (2000) as critical realism and which in his words accepts epistemic relativism but rejects judgemental relativism, embraces a dualist ontological world-view and withholds that knowledge of unobservable objects and processes can be theorized as they exercise effects on what we can perceive. In order to know about unobservable objects critical realism incorporates the possibility of going beyond facts by transcending what we experience and theorizing about what we might not (Sayer, 2000). Jackson (2011) refers to this epistemological approach as transfactualism in contrast with the empiricist phenomenism.

### *Methodology*

As a researcher/author interested in the causal explanations of youth well-being and disability my methodological considerations lead me further towards approaching my research topic through the lens of critical realism. This philosophy of science focus attention to casual explanations while broadening the concept of causality. The focus is broader than positivist accounts where causal relationships need be regular, consistent and cause and effect in conjunction to one another in order for causality to exist. Critical realists instead stress the concept of casual tendencies, stating that objects and subjects have causal capacity and power to act. They might, however not always result in causality as inner capacity and external context may influence and counter-act such causalities (Sayer 2000). In social science I believe it is these social mechanisms that need explanation in order to attain greater knowledge in regard to my topic. As such mechanisms and inactive causal capacities are not always observable and possible to verify by empirical explanation the epistemological attainment through speculative knowledge claims will help in providing a better

understanding of the dualism between the mind and the world as put forward by proponents of Critical Realism (Jackson, 2011).

Being able to make normative claims of knowledge and thereby going beyond merely presenting results and further positioning oneself in social issues by taking a standpoint on what perspectives the resulting knowledge have produced, the researcher could contribute to what Sayer (2000, p 168) identify as the emancipatory ideal for the social sciences.

A critical realist approach to policy labour market policy and standards is able to study causality similar to positivist research although critical realists does not stake a claim on being able to produce general laws of causality of such causal processes. Instead the emphasis would be on mechanisms and contexts that tend to result in certain effects for the object studied (Jackson, 2011). Sayer (2000, p.22-24) exemplifies critical realist policy evaluation and how it differs from positivist attempts to look for regular causalities and how critical realist evaluation would rather seek to further explain the causal mechanism, outcomes and social setting of a process. A critical realist would continue shifting focus and studying why policy have that effect for that actor but not others. Further on being able to produce transfactual claims of mechanisms and factors that for example causes tendencies for some groups to benefit from the policy while others do not.

Therefore, adopting a realist approach in research or evaluation sets itself apart from evidence based research as it suggest that facts can be attained as evidence but emphasize tendencies rather than predictability implying that research focus more on contextual circumstances and the presence of mechanisms other than only measures of effectiveness, answering what works for whom, under what circumstances and how (Pawson & Tilly, 1997).

The approach in this research on well-being and disability in the Nordic countries will therefore be neither purely *inductive* (constructing theory from empirical results) nor solely *deductive* (verifying/falsifying initial theory through empirical results). I will instead make use of a mixture of those two approaches through an *abductive* approach which involves building hypotheses from observations and continuing making observations from new perspectives in order to construct new theory. The approach thus moves back and forth between inductive and deductive reasoning

aiming to attain the most probable theory. In the words of Jackson (2011, p. 83) an abductive approach is therefore a mean to achieve conjecture rather than conclusion which is what deductive and inductive approaches seek to reach. This relate to the conceptualization of objects and processes as being both observable and unobservable to the researcher and the possibility to speculate on the existence of undetected mechanisms in social processes in order to reach a probable explanation.

## **Research Strategy and Design**

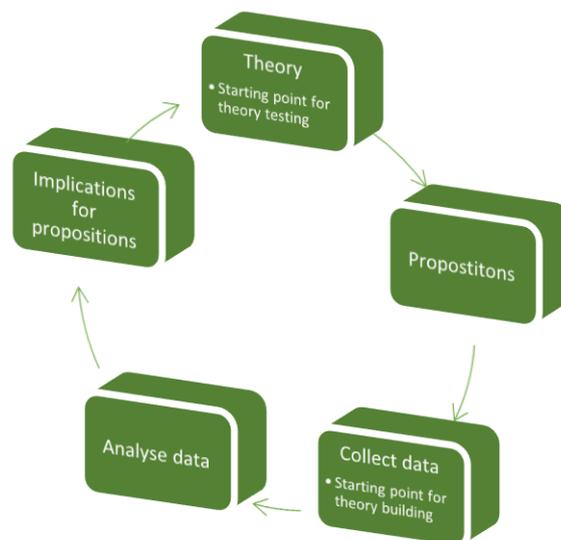
In order to form initial hypotheses I have researched relevant theoretical perspective on the research topic of which I have already produced a brief summary in the introduction section to this thesis. These theoretical perspectives will be presented in more detail further on. These perspectives additionally outline developments of well-being in the Nordic Countries and Europe. Impressions of this theoretical review will constitute the starting point of my abductive approach which will entail both theory building and theory testing (De Vaus, 2001). In order to achieve representative data for a large number of countries which is a prerequisite for my research questions and topic I will make use of a cross-sectional research design. Unlike an experimental design a cross-sectional design does not involve an active intervention from me as a researcher in order to impose differences or change for examination. However, the main advantage of a cross-sectional design over an experimental one is the magnitude of data samples that can be acquired. An experimental design which would seek answers to my research topic would not only require large resources to set up experimental interventions in all countries specified, it would also be both unethical and probably be impossible to apply different measures to different groups of the population in order to try and affect their well-being.

### ***Cross-sectional research***

David de Vaus (2001), summarize the main features of cross-sectional designs in research as follows: 1) Use of and focus on existing differences rather than on change from intervention, 2) Groups of study are based on existing differences and not on random allocation & 3) No time dimension. Cross-sectional studies could for example consist of national surveys and statistics as they incorporate such existing differences in existing groups of the population. The last feature regarding time could however constitute a flaw in the design in order for my approach to explore the developments of well-being and health. There is however strategies and methods in

cross-sectional design in order to obtain a time dimension. If repeated cross-sectional studies are conducted at several points in time the researcher can attain information while obtaining the otherwise missing time-dimension. Repeated studies within national statistics and surveys are common but make use of different sample groups each time they are repeated. Assuming that such surveys and statistics are making use of the same definitions and questions at each point in time research might still identify longitudinal developments. Applying such an approach would permit me to identify changes on an aggregate level but not individual changes. An aggregate analysis enabling a time dimension would thus be useful and meaningful in exploring my first research question, while the second research question; focusing on what factors are associated with well-being would benefit from a cross-sectional study from one point in time.

Figure 1 - The research process, Source: De Vaus, (2001)



### ***Building theory***

Combined with the theoretical perspectives, a longitudinal analysis of well-being and labour market developments would allow me to build theory that I could then test through a cross-sectional study from one point in time, analysing correlations and predictors of well-being.

This would initially enable me to explore both the development of well-being across countries as well as other tendencies in variables that I will have theorized as probable predictors of well-being. In Eurostat statistics I will be able to find data and population rates over time concerning many social and economic measures assuming that these statistics are derived from similar survey designs and questions they can make up a

source of repeated cross-sectional data for observing change. This will provide descriptions of aggregate change over time and enable simple conclusion whether any changes are seen and in what way (De Vaus, 2001). I hope that such a focus will contribute both in clarifying what noticeable changes have actually occurred as well as giving some insight into what other factors from the theoretical perspectives that have developed in a way which might indicate that they are related to well-being.

### *Testing theory*

Once the initial theory building is in place I will continue my analysis by studying the relationships of predictors of well-being more specifically. For this purpose my interest will be on individual changes rather than aggregate change over time. I will remain in the field of cross-sectional design although abandoning the longitudinal dimension of change, making use of a survey on the well-being and labour market status of respondents from one point in time. For this purpose I will make use of the European Social Survey and particularly the fifth round of that Survey from 2010 which included more questions on well-being and employment. The Survey is presented further in the upcoming parts of the thesis.

The data from the European social survey include a range of variables of which I intend to analyse which independent variables (guided by the prior theory building) are affecting levels of the dependant variables that I operationalize as measures of well-being. Through multiple regression analysis I can both identify how a single variable is affecting the well-being of individuals as well as to what extent several independent combined predict/indicate levels of well-being (De Vaus, 2001). In elaborating with different groups of variables my hope is to be able to correct my theoretical assumptions and re-test relationships to well-being, thereby identifying the most probable explanations of changes in well-being.

### *Triangulation*

Within research, designs and methods to study something by observing it from multiple angles and perspective is known as triangulation. This notion derive from methods in for example geometrics that make use of triangles to find an exact location of a point by viewing it from positions that are already known. In social research there are a multitude of designs and approaches that seek to apply triangulation. These could include triangulation of/and within methods, the use of several data sources and triangulation through use of several theoretical positions and perspectives.

(Denscombe, 2010). By adopting an approach making use of multiple sources of information and data we can strive to achieve the best probable observation of the research problem and in doing so the research need to identify the best combination of theories and methods within the resource limitations at our disposal, one example being the timeframe of the study (Djurfeldt, 2003).

My research design and strategy takes the notion of triangulation into account by firstly presenting the theoretical framework and the longitudinal changes as presented in official data from Eurostat, continuing to observe well-being and its theorized causes in different national contexts and finally seeking to test the predictive power of certain variables on the subjective personal well-being of respondents in a cross-national survey.

## **Operationalization & Empirical data**

### ***Eurostat Macro-data***

In outlining yearly developments in socio-demographics I will make use of Eurostat statistics. I hope that such macro-data will allow me to identify the changes in rates of participation in different forms of activities and measures of well-being.

Eurostat is an institution within the European Union tasked with providing statistics at European, national and regional level. The objective of the institution includes enabling comparison between these levels within a broad scope of themes where statistics on Population and Social conditions will be the domain where I will seek data on well-being and particularly dimensions of well-being that can be related to ill-health (potentially restricting labour market participation) and activities of citizens in the Nordic countries and the European Union. This will help guide me in theorizing the developments of well-being in terms of ill-health and to operationalize what contextual factors that might mediate the subjective well-being of young individuals.

### ***European Social Survey Micro-data***

Following the identified developments in Eurostat data I will make use of individual data from the European Social Survey in order to analyse the relationship between the assumed dependent variable of personal well-being (potentially restricting labour market participation) and independent variables which might affect such subjective well-being and ill-health. The European Social Survey is conducted regularly and most recently in 2012 in 29 European countries including the Nordic Countries.

Denmark, Finland, Sweden and Norway have participated in all Survey Rounds while Iceland is missing in a majority of the conducted Surveys. I am therefore able to make use of the ESS data in observing longitudinal change as well. Using data from multiple rounds of the ESS will however derive observed changes from smaller samples of the population than the data and statistics found through Eurostat.

In the European Social Survey there are core themed questionnaire modules that are included every round as well as themed modules varying from round to round. In the core themes questions of subjective health and socio-demographics are of interest for my research approach as I am able to make use of individual micro-data on subjects such as individual factors of subjective illness/disability as well as contextual factors including education, main activity and income of individual respondents.

The ESS includes six complete survey rounds with core themes/modules on topics of *Media and Social Trust*, *Politics*, *Subjective well-being*, *Gender & Household*, *Socio Demographics* and Human values. Additionally there are differently themed modules each round. One example of such a module is the Family, work & Well-being module in the ESS round 5 in 2010 including questions on Family, work and Well-being that I will make use of in order to analyse the predictors of well-being.

### 3. Theoretical Perspectives

#### Well-being

The starting-point for defining well-being in current debate is often followed by a departure from the overall happiness or life satisfaction in a population. This is a consequence of a shift of focus within psychology and sociology away from historical accounts of exploring well-being that primarily involved the study of illness and dysfunctionality (Marks & Shah, 2005).

Some other measurements of well-being are in contrast defining well-being through different predictors in a population, which are considered as determinants of well-being. Depending on how well-being is studied it can be investigated through either objective or subjective measurements. While objective measurement focus on observable predictors such as for example income, justice or freedom - subjective accounts measure emotions and levels of satisfaction. Subjective well-being can therefore be considered an evaluative account by respondents themselves regarding well-being as a “State” and not a process. Its focus on *having* positive feelings is in philosophy distinguished as *Hedonic Well-being*. While the objective approach of *attaining* - for example wealth or employment and thus well-being is categorized as *Eudaimonic well-being* in philosophical terms (Vittersø, 2004). Exploring well-being entails not only a choice of what to measure but how to measure it. Does one look at rates of disability in the population or ask the population for their personal experiences?

What one seek to measure is a matter of dissecting the various dimensions of well-being. These can be identified broadly as the dimensions of positive physical, social and mental state. Yet, my focus of this thesis derive from an interest in the activity of the population (particularly youth) and the dimension of well-being that I wish to investigate is therefore loosely conceptualized as “health” and more specifically in terms of vigour and ability; factors that I perceive as crucial in order to part-take in economic activity and the labour market. By making use of subjective accounts of well-being within this field I seek to explore the personal experiences of individuals rather than objective definitions of being in good health. This is not to conclude that I am making a presumption that objective measures are inadequate but rather a conceptualization in line with assumptions of objective measures as indicators and

potential prerequisite in a *process* for individuals to feel good and achieve a higher *state* of well-being.

Building on the framework of processes and states of well-being there are relating concepts in the *Capability approach* to well-being which Amartya Sen discuss in his and Martha Nussbaum's book *The Quality of Life* (1993). The approach defines *functionings* as the state of a person and specifically what said person is able to do and be in life where *capability* is used to denote what options there are for that person to act alternatively on and to be achieved by him or her. Having quality in life is considered to consist of being capable to reach valuable actions (functionings), where *value* is seen as a mainly subjective notion of personal evaluation both consisting of what is valuable objects and how much value are attributed to them. However, Sen (ibid) positions the concept of value within the approach as separate from merely utilitarian evaluation as it assume that there are various acts and states for individuals that are valuable in themselves disregarding the utility they produce.

The capability approach to well-being therefor involves similarities to the evaluative measurements discussed earlier as it derives the well-being of a person from the perspective of that persons own perspective of his or her wellness. Functionings or states of personal well-being might incorporate "elementary" ones such as being fed and having mobility as well more intricate states of being happy or being included.

As freedom of choice is central to this conceptualization of well-being, being disabled through for example ones state of physical or physiological health can hinder doing and being subjectively important actions thus limiting a person's capability. Doing certain activities can likewise facilitate or restrict capabilities, for example working or participating in other social activities. Enhancing well-being through means of policy is there for concerned with assisting equal opportunities for the population to realise subjectively valuable achievements.

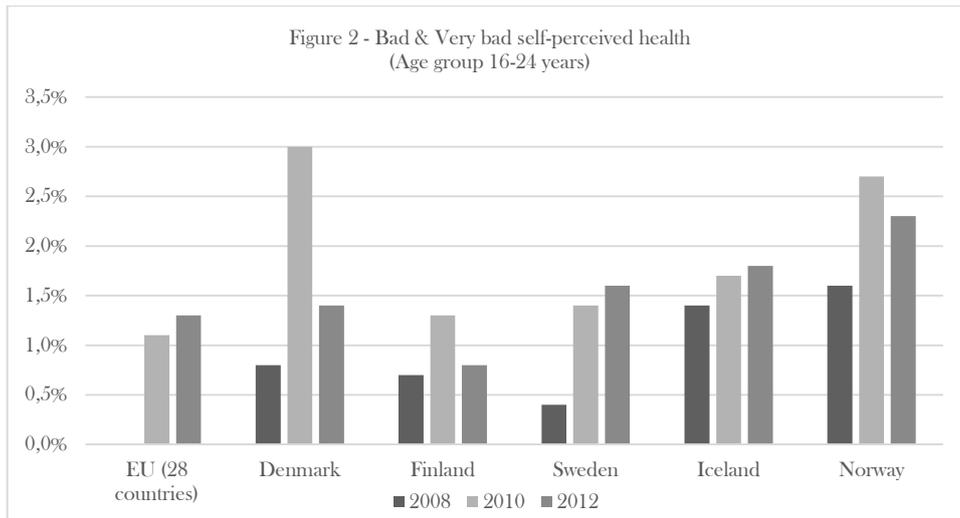
One central notion from this review of theoretical perspectives of well-being that I will incorporate in my own empirical exploration is the distinction between individual factors and contextual factors relating to well-being. Different scholars uses different concepts but broadly this distinction appear above in all the presented theoretical perspectives of well-being. In my interpretation the contextual factors are the processes, capabilities and what can be objectively measured in the context

surrounding the individual. The individual factors - how someone is perceiving and responding to the contextual setting in terms of functionings, values and personal well-being - are more difficult to capture through objective measures. They are more easily identified through individual evaluative accounts of happiness and positive/negative feelings. The individual factors constitute the current state of well-being for a person.

Considering the individual factors that might affect the labour market participation of an individual one can be unhappy and dissatisfied yet still able to participate in education or employment. In my operationalization of personal well-being and labour market conditions a further distinction must be made where adverse feelings relating to one's own self-perceived health will be the central aspect of well-being. Subjective accounts relating to feelings regarding psychological and physiological ability and health will serve as the core source of measurement in my empirical analysis for this reason. However as such "health" concepts are strongly related to several other dimensions of well-being and broad measures of satisfaction my analysis is not merely one of health but of the whole complexity of well-being with a particular interest in these health-aspects.

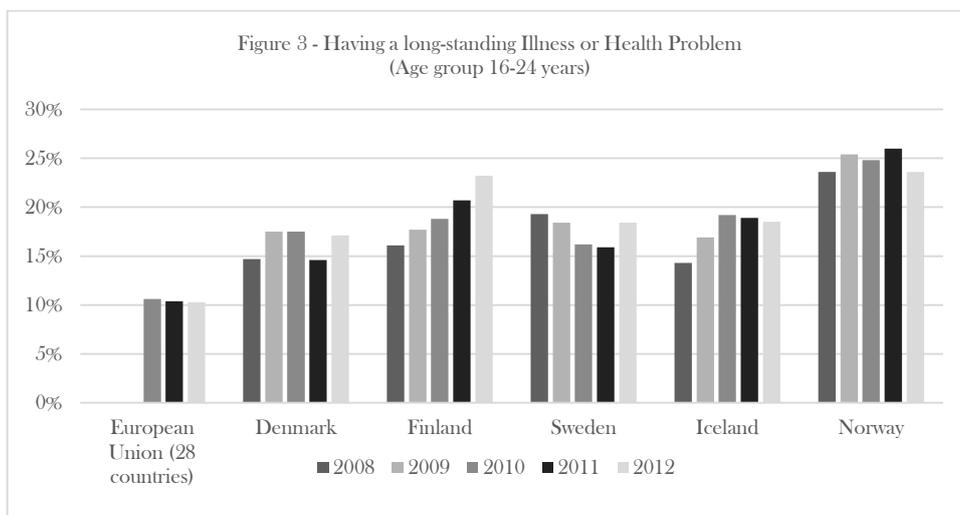
### *Youth well-being and disability in the Nordics*

As presented in my introduction of this thesis previous studies suggest that well-being has declined in terms of disability in the Nordics. In order to try and verify these changes we can turn to health measures of self-perceived health from the European Statistics on Income and Living Conditions (EU-SILC) available through Eurostat data. The data is based on recurring cross-sectional surveys and statistics and therefore enable us to view longitudinal developments of perceived Health. By selecting the shares of the youth population in age group 16-24 years stating that their general health is either "Bad" or "Very Bad" (the other available options being "Very Good", "Good" and "Fair") the presentation of the following bar chart is possible:



Source: EU-SILC through Eurostat Database 2015

As seen in this description of self-perceived health the shares of youth that feel that their health is bad or very bad appear to have risen in all Nordic countries in 2010 while decreasing again in some Countries while rising additionally in some as of 2012. It is however not at all at the level of rates for 2002 and 2011 that I have outlined in my introduction as reported by Halvorsen & Hvinden (2014) in regard to longstanding health conditions or disability. When turning to another variable in the statistics of the EU-SILC we see a lot higher rates. The variable is based on the question: “Do you have any long-standing illness or longstanding (have lasted or are expected to last for 6 months or more) health problem?” and the rates of which youth of ages 16-24 answered Yes can be seen in the following bar chart for the years 2008 to 2012.



Source: EU-SILC through Eurostat Database 2015

Statistics for both variables are missing for the total EU rates from 2009 and 2008 yet we can observe that the Nordic countries appear to have a youth population that to greater extents perceive that they suffer from a long-standing illness or health problem. There are signs of an increase of the prevalence of such problems in some of the Nordic countries although they still do not reach the high rates of up to 30% (Sweden) and 40% (Finland) as identified by Halvorsen and Hvinden (2014) for the age group 16-29 in 2011.

The proposition that youth in the Nordics are experiencing a higher level of illness or health problems than Europe can be somewhat observed in the given statistics. For some countries we might even propose that there is development towards worsening health in this regard. But what theories are there further on the causes?

### *Well-being, unemployment & inactivity*

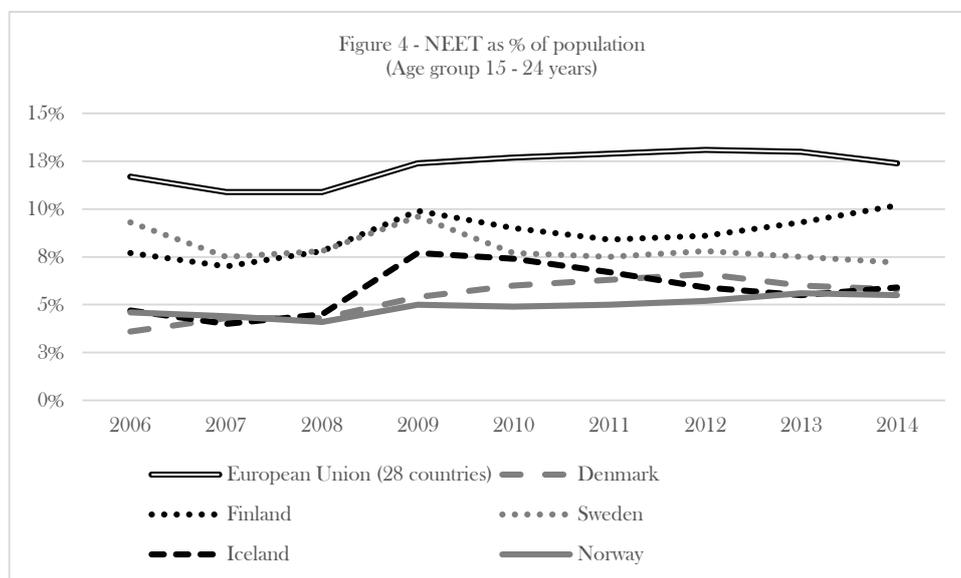
In order to draw accurate conclusions one need take into account that effects of unemployment could possibly be mediated by the deprivation of economic resources and social resource. A common theoretical approach in the field of unemployment and well-being is one which assumes both an economic need for employment and a psychological need. If either of these needs is unfulfilled they can cause psychological distress (Nordenmark & Strandh, 1999, Strandh 2001).

The deprivation theory on the physiological effects of unemployment, proposed by Marie Jahoda and the agency theory of Fryer both recognize that well-being is affected by psychological experience and social structures (Haworth, 1997). More precisely Jahoda conceptualises five categories of psychological experience that are important for human well-being and are also factors of employment: Time-Structure, social contact, collective effort/purpose, social identity/status and regular activity. Combined with the function of providing economic income, Jahoda emphasize the importance of social participation through employment in order to attain a high level of well-being. Some criticism of Jahoda's theories from for example David Fryer argue that too much importance is placed on these social structures and that poverty and loss of control of the future are the main causes for restricting the personal agency of someone who is unemployed (Haworth, 1997).

The concept of discouraged workers is an effect which economist claim causes some unemployed persons to be reluctant of actively searching for employment although

wanting work. In social psychology the notion of learned helplessness relates to this effect and incorporates lack of self-esteem, fear of rejection and fear of acquiring a job according to Bjørnstad (2006) whom conclude that discouragement is a consequence of the negative effects of being unemployed particularly long-term unemployment. Rather than only focusing on economic incentives, the incorporation of emotional effects broaden the notion of discouragement.

For an overview of the inactivity rates of youth in Europe and the Nordic countries there are a more meaningful statistic than merely unemployment rates that includes the fact that a large proportion of the young population are in fact unemployed since they are attending education and/or training for work. NEET-rates (*Neither in Employment nor Education and Training*) is thus a more informative statistic than pure unemployment rates. The source of these statistics is the Eurostat annual Labour Force Survey (LFS). As one can observe in the line chart below NEET-rates in the age group 15-24 years appear to have been at its highest in the Nordics in 2009 and have since declined with the exception of Finland where rates have returned to a rate of 10% in 2014. The share within the age group in the European Union is higher than in the Nordics.



Source: LFS through Eurostat Database 2015

### *Well-being and new labour market policies*

Welfare policy developments are often categorized into eras in which general trends can be said to be prominent. In general, many researchers identify the growth of the welfare state starting at the end of World War 2 and up until the 1970s where developments took a turn towards retrenchment and downsizing of welfare provision. There are some researchers suggesting that a new and third general trend has started in the 1990s, one of social investment policy. (Hemerijck, 2013; Morel, Palier, & Palme, 2012)

The labour market in Europe is today greatly different from the post-war period during which the economy was growing steadily making room for greater consumption and an encompassing welfare state. There were systems of universal social security in a majority of Western Europe's countries which included policies to mitigate social risks. Labour market policies set aims at achieving full employment and programmes of income transfers were set up and funded through progressive taxation and social contributions (Hemerijck, 2013). Political involvement in the economy was motivated through notions that public sectors had to regulate a capitalist economy. During this period a job predominantly meant an employment arrangement of a "Standard" employment, that is: male workforce, full-time, indefinite duration, working on-site in the presence of the employer (Fritz & Koch, 2013), women were not incorporated into the goals of full employment but were rather expected to be the caregiver to children and elderly within the family, while men were considered the breadwinner group within which full employment was the objective (Hemerijck, 2013, p. 123). In effect this period of continuous growth made way for and was boosted by mass-production and -consumption which facilitated an ambitious system of welfare that was regulated by nation states. Those states had a mandate to regulate the competitive interests of the labour market, through collective rights, taxation etc. within their borders. Shifts has since occurred both in the economy, labour market and employment arrangements each shift connected to the others and with them welfare states and policies is in need to change in response. Bob Jessop (1999) conceptualization of capitalism and its governance is a useful tool in summarizing the shifts in economic and social policy since WW2. Jessop does this through four dimensions that he defines as features of capitalism. These are:

1. The means of ensuring conditions for business profitability or the general economic policy.
2. The means of reproducing labour power.
3. The main scale of where policy decisions are taking place
4. The level of delivery and implementation of such policies.

Making use of this conceptualisation Jessop defines the shift in governance during the post-war period as a shift from a **Keynesian Welfare Nation State (KWNS)** to a **Schumpeterian Workfare Post-national Regime (SWPR)**.

The former, firstly defined as “Keynesian” as it made use of Keynesian countercyclical demand management and aims of full employment as tools to ensuring profitability for capital. Secondly, the “Welfare”-feature denotes how such governance managed the reproduction of labour power through the introduction of universal social rights and increased earnings so that a greater part of the population could consume, thereby also spurring demand and growth. This Fordist growth dynamic created national cycles of mass production and mass consumption. Its foundations of compromise between workers and businesses as well as the facilitating social policies were decided and politically located at national level, illustrated as the third feature in the **KWNS**. Delivery of policy and regulation of the market was finally conducted by state institutions, hence the fourth feature. The Fordist accumulation era and the **Keynesian nation welfare state** has since the 1970s gradually made way for an alternative **Schumpeterian workfare post-national regime**. (Jessop, 1999). By then the former model seemed to have failed as growth was stagnating, inflation high and unemployment far from the goals of full-employment. The previous co-existence of these indicators and welfare provision was questioned and new policy directions of neo-liberal & conservatism replaced **Keynesian** ideals (Hemerijck, 2013).

Current governance, according to Jessop (1999) is promoting innovation and flexibility in the economy by focusing on policies on the supply side rather than **Keynesian** strategies of increasing demand. This focus is part of a larger competitiveness between economic regions to promote business profitability relative to other regions where capital could move. Policies aimed at creating labour power has been altered and universal welfare increasing demand has generally been replaced by policies catering to the supply side of businesses, through for example

training and moving away from ambitions of full employment in favour of a flexible labour market and flexible labour power. Universalism in the typology of the KWNS and its emphasis on social rights have as a consequence been modified and the typological SWPR governance emphasize obligations in order for citizens to qualify for certain social support as denoted by the “Workfare” rather than “Welfare” dimension of social policy.

The political decisions of the third dimension of governance has changed from national sovereignty to various transnational, regional & local bodies of governance. These changes have come about as such institutions have been formed and facilitated through internationalisation and globalisation while policy areas of nation states have shifted both upwards and downwards. The final mode of delivery of policies is thus no longer only a matter for states themselves but complex arrangements or “regimes” where states and other actors (non-profit and private) form partnerships to secure the delivery of economic and social policy.

The fordist accumulation regime has been replaced by a finance-dominated accumulation regime according to Stockhammer (2008). Such a regime is based on financialization which for example encourages capital mobility and labour flexibility and focus on business management – shareholder cooperation rather than the fordist dynamic of business management – labour cooperation. It further incorporates deregulation of financial markets and uses improved access to credits for households as a mean to encourage economic growth. According to Stockhammer (ibid.) this have led to moderate growth but a fragile and crisis prone economy.

Labour market policies seek to ameliorate both the economic strain on the unemployed – providing unemployment benefits - and the social participation of the unemployed through a range of activation policies. Active Labour market policies (ALMP) can be grouped by 4 types of polices: *Incentive Reinforcement*, *Occupation*, *Employment Assistance and Upskilling* (Bonoli, 2012). In this division of policies the initial one target the economic consequences of employment status as these policies handle benefit levels and conditions for tax credits etc. *Occupation* policies in Bonoli’s (Ibid) conceptualisation appear to target the social structure of the unemployed as such policies are directed towards creating non-employment training programmes and public job creation schemes. *Employment Assistance* is policies

intended to match job-seekers with employers and provide subsidies to employees and support/counselling to jobseekers. Finally *Upskilling* concerns job-related vocational training in Bonoli's typology.

### ***Non Standard Employment***

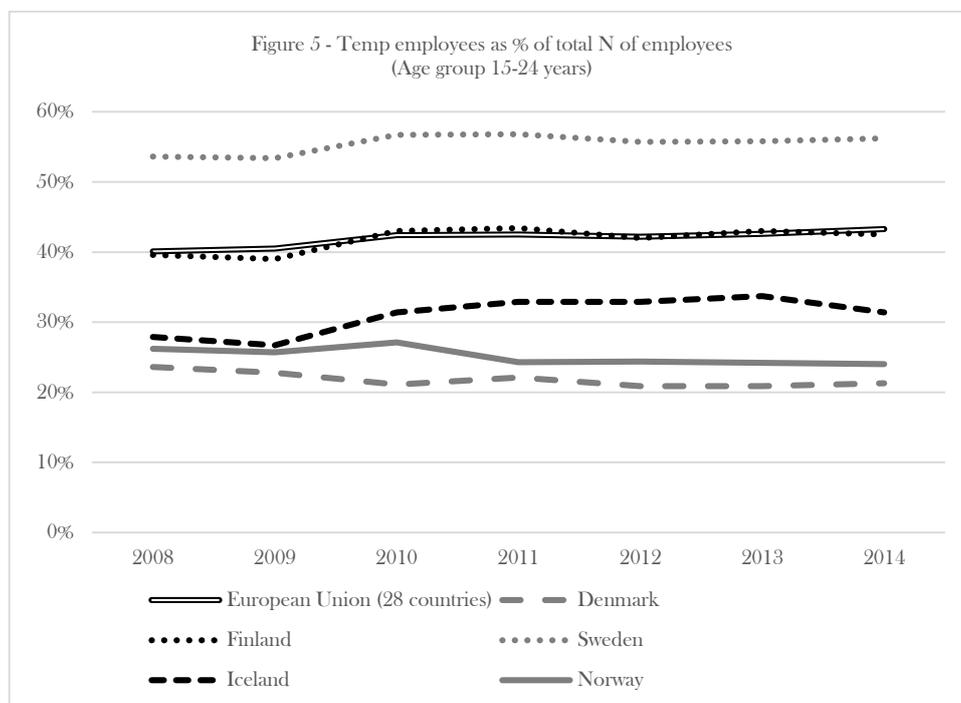
As theorized the current labour market is a flexible one and employment arrangements have changed more and more towards non-standard employment to facilitate this type of economic policy direction. "Non-standard employment" meaning all deviations from the standard employment arrangements during the KWNS discussed previously. For example non-standard employment (NSE) includes: part-time employment, temporary employment, working "off-site" and self-employment. In their efforts to be flexible in the face of global competition, companies have resorted to a peripheral workforce complementing the core workforce. These peripheral workers are contracted under insecure employment arrangements and low quality work conditions and companies can therefore adjust production and the number employees in a more flexible way (Furåker, 2013). Catering for a flexible labour market is thus a question of both decreasing work quality and work security. This distinction is related to that of Work and Employment where "Work" can be rated in terms of quality meaning for example levels of autonomy, motivation and self-fulfilment. "Employment" instead concerns employment protection such as permanent/temporary positions and welfare entitlements from the job (Koch, 2011).

If large parts of the labour power is transferred from being part of a core workforce of secure and long-term employment to being a part of a peripheral workforce of uncertain employment and decreased welfare entitlements we are presented with several social issues on the labour market. As NSE is increasing throughout Europe (Fritz & Koch, 2013) we should also see effects in terms of social issues such as poverty and a decrease in the well-being of the population. This potentially adverse consequence for well-being are operationalized by Fritz (2013) through the notion of Anomie, denoting the normlessness that follows in society when cultural goals and norms (such as security and solidarity) remain while the means to reach those goals are altered.

As employment is and have always been central to societal participation and integration it is theorized by Fritz (ibid) in relation to non-standard employment following from flexibilisation. Employment does not only provide income as I have discussed previously it appear to fill a social and psychological need. For many it is a central point from which identities are formed and predictor of how other aspects in life are ordered. Anomie can be applied to all societal changes leading to imbalances in relation to previous realities. The theoretical foundations of anomie applied on labour market conditions denote an unstable condition which it similar to discussions and debate on a precarious work and the “precariat” meaning the labour force which are employed under new and insecure employment arrangements. The key issue being that these uncertain conditions produces anxieties and exploitation of the work force whom to a lower degree can plan their lives and are living with fears of being replaced in their work by others. Fritz (2013) makes references to theoretical analysis that propose that the consequences for individuals could involve psychological ill-health in the form of disorientation, mistrust and indifference towards others. Weaker or changing former standards is thus linked with economic inequality and from exclusion in a process where prevailing cultural goals and norms remain while the means of achieving such goals are removed or altered. Anomie is dissected into separate domains of change specified as the disintegration, disorganization and disorientation within society. Flexibilisation is described as a driving force for ongoing global changes of that nature. Although my approach focus on the notion of well-being it is closely related to these theories of anomie. For example concerns for well-being developments consider rising inequalities, weakened labour market regulation and rising anxieties among the population, all of which are intertwined in Fritz’s (ibid.) conceptualization of anomic normlessness in the wake of flexibilisation.

Temporary employment could entail high levels of uncertainty as one cannot be sure to be able to earn a living in the future. Employees under such condition will have a difficult time planning household budgets and might have to be ready to move to other locations at short notice to find new work. In extreme cases temporary employment is offered with very short notice and under competition between several employees. This naturally causes stress and anxiety and could very well keep wages low.

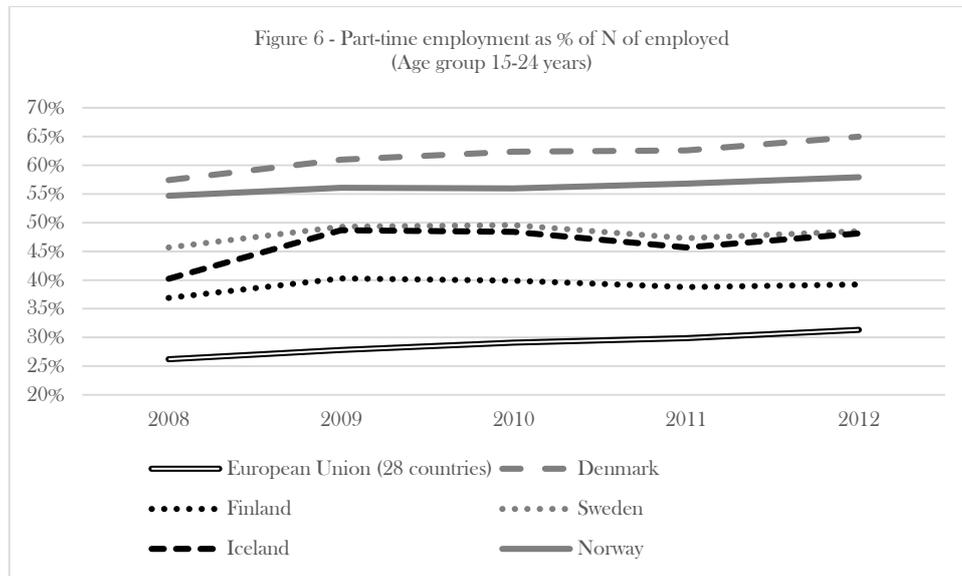
Eurostat statistics from the Labour Force Survey show the rates of temporary contracts within the youngest age-group of ages 15-24 over time since 2008. A majority of the Nordic countries show rates lower than the EU average but Sweden stand out with a consistent rate of about 55%, roughly double the rates of other Nordic countries (except Iceland with rates similar to the EU).



Source: LFS through Eurostat database 2015

As a part-time employee one is still part of the workplace community in a permanent arrangement and therefore the risk of alienation from others is lesser than if one is temporary part of a workplace community or self-employed. Even though working hours are fewer than in standard employment arrangements, part-time employees still benefit from regularity in the amount of work they can expect and is therefore able to plan and keep a budget as well as not worry about having to look for work elsewhere in the future. Part-time work is therefore less unstable and such employees are at lesser risk of poverty than those that does not know the length of their current employment. Social protection such as for example unemployment benefits and parental policies are also often more adaptable to part-time employment arrangements than to the other forms of non-standard employment. As a consequence the uncertainties of events such as illnesses and parenthood do not pose as big of a challenge for part-time employees since they can rely to a greater extent on systems of social protection.

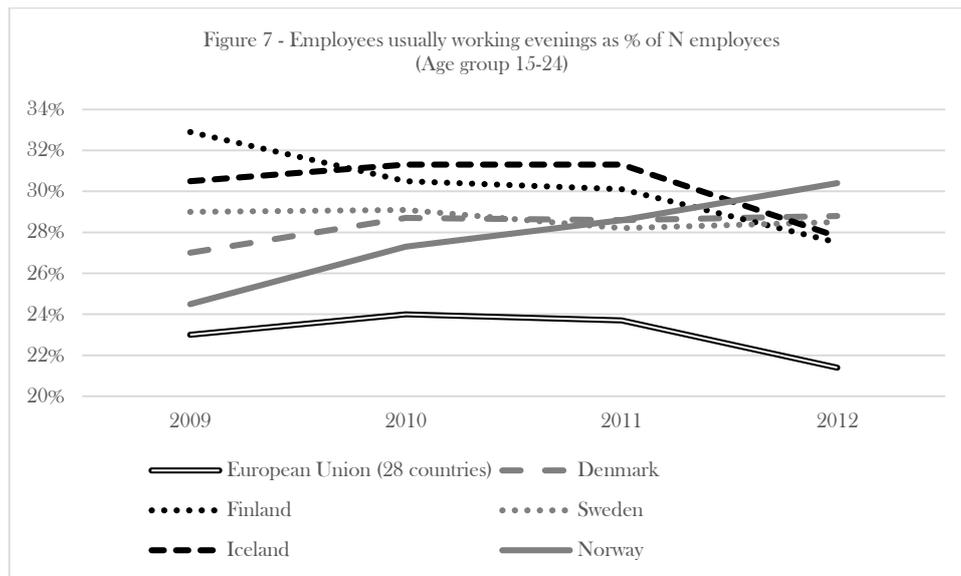
The rates of Part-Time employment from Eurostat Labour Force Surveys look as follows:



Source: LFS through Eurostat database 2015

According to the presented theory part-time work is enhancing well-being and does not entail adverse effects for the population. From the line chart above one can observe that shares of part-time work in the young population of the Nordic countries are much higher than the shares for Europe combined. This observation indicates that part-time employment could potentially mediate well-being in the Nordics and serve as a factor for a better well-being in the Nordics compared to the European Union.

A final and equally relevant exploration of non-standard employment arrangements is at what time of day work is taking place. If standard employment entails day-time working hours we might contrast that with working inconvenient shift, evenings and nights. How do the rates of these types of employment hours look in our countries of interest? Statistics, once again from the Labour Force Survey, give the following line chart for the period 2009-2012:



Source: LFS through Eurostat database 2015

Observing this final data of Non-standard employment arrangements give insight that youth in the Nordic countries is more prone to working evening hours than the combined youth population of the European Union. Our further analysis will look closer at this notion and whether such work is related to well-being.

Having explored various theoretical perspectives of well-being and potential factors for levels of well-being and their distribution and developments in the countries of interest I have a theoretical framework which will serve as my starting point when analysing predictors of well-being in the chapter to come. In will test correlations of proposed predictors through bivariate and multivariate methods of analysis.

As stated my main focus will be directed at the developments and predictors of personal well-being and particularly such variables and measurements that can be operationalized as physiological and psychological accounts of well-being. The primary interest in such aspects of well-being are derived from the discussed potential of such feelings and experiences to effect the labour market participation of individuals experiencing adverse health. Despite this particular interest I still consider the analysis and focus of my approach to be one of broader notions of well-being, as subjective measures of satisfaction and happiness are also explored together with objective well-being measures and contextual factors such as participation in various types of activities.

## 4. Data analysis

From my research topic and approach I have specified two different research questions that I seek to answer. Through a theoretical review and official statistics deriving from recurring cross-sectional data I have thus far proposed some probable predictors of personal well-being in general and identified to what extent some of these predictors are present in Europe and the Nordic countries. In this chapter I continue to analyse personal well-being through my stated research questions.

The first question, exploring whether personal well-being has decreased among youth in the Nordics is yet unanswered. The specific focus on well-being among particularly the younger population in the Nordics have not been in focus in the majority of previous studies that I have found and presented thus far. While Halvorsen & Hvinden (2014) have discussed such a possibility their findings are based on differing survey questions from only two points in time. The worrying developments that they have suggested have not been possible to replicate in the Eurostat data that I have presented in previous chapters. As discussed in relation to the concept of well-being I have the ambition to demarcate personal well-being and more specifically physiological and psychological well-being which will be done by operationalizing variables and measures that seek answers to questions of subjective health. In order to test the theory that personal well-being among youth in the Nordic countries have declined I will make use of the following hypotheses relating to my first research question:

*H1 = Subjective personal well-being has decreased since 2002.*

My null hypothesis is therefore:

*H0 = Subjective personal well-being has not decreased since 2002.*

Secondly I will test the theoretical propositions of what predictors there are for well-being in a population. This analysis seek answers derived from the following research question:

*“In what way are labour market activity and standards associated to personal well-being?”*

Since outlining the above question my research design have been described as an approach with abductive ambitions of both building and testing theory. By reviewing theory in the previous chapter I have presented potential predictors of well-being as well as presented different dimensions of well-being where I have found and presented that my main focus of interest are dimensions of well-being that could potentially limited a person's ability to participate in the labour market. Personal well-being as denoted by my second research question will therefore be operationalized through subjective accounts relating to health - physiological and psychological well-being.

In line with the research question variables related to labour market activity such as employment, employment types & education will be included in an explorative regression analysis. However, as the theoretical chapter have covered several other potential predictors of well-being and factors of labour-market flexibilisation, a range of additional control variables will be included in the analysis that I have operationalized as related to the theoretical propositions. Adding variables to be controlled for will help in building theory regarding what factors are associated to personal well-being among the population in the Nordics and elsewhere. Respondents from all countries and all ages available in the ESS data will be included. The second hypothesis to be tested is therefore:

*H2 = Employment, Education & Employments Standards are associated to the subjective health/personal well-being of individuals.*

## **Data source**

In reviewing research and literature on the topic of well-being and socio-demographics in Europe I have found several references to the European Social Survey (ESS) which a have chosen to make use of for my quantitative analysis. This recurring cross-national survey has been conducted every 2 years since 2002 and over 30 countries have participated so far. Each round includes questionnaires consisting of questions from the "Core modules" as well as questions from rotating modules that change each round. I have made use of the following modules:

Table 2 - European Social Survey - Modules, rounds & variables

<b>Socio-demographics</b>	<b>Subjective general health</b>	<b>Family, work and well being</b>
<i>(Rounds 2002, 2004, 2006, 2008, 2010 and 2012)</i>		<i>(Round 2010)</i>
Age, Gender, Country	General health	Questions on current job
Main Activity / Employment status	Hampered by illness	Felt Cheerful/Calm/active
Household total income		
Feelings about household income		

The individual variables that I have made use of are presented in frequency tables in appendix C. For an overview of all the modules and questions in the different rounds of the ESS I suggest a visit to the ESS-website.

Data collection is conducted through face-to-face interviews that form an hour long interview. Where the core modules take up half an hour and the additional modules follows and last an additional half hour. The main goals of the European Social Survey include:

Table 3 - **Main goals of the European Social Survey**

- to chart stability and change in social structure, conditions and attitudes in Europe and to interpret how Europe's social, political and moral fabric is changing
- to achieve and spread higher standards of rigour in cross-national research in the social sciences, including for example, questionnaire design and pre-testing, sampling, data collection, reduction of bias and the reliability of questions
- to introduce soundly-based indicators of national progress, based on citizens' perceptions and judgements of key aspects of their societies
- to undertake and facilitate the training of European social researchers in comparative quantitative measurement and analysis
- to improve the visibility and outreach of data on social change among academics, policy makers and the wider public

Source: About ESS, ESS Official Website, accessed 2015-05-21)

The European Social Survey is a European Research Infrastructure Consortium (ERIC) - a specific legal framework within the EU designed to facilitate establishments of joint research infrastructures of European interest. The ESS ERIC is governed by a general assembly that includes national representatives. The general assembly appoints the Director of the ESS and the current Director is Rory Fitzgerald at the City University in London, U.K.

### *Sampling and dispersion*

The sampling procedures for countries participating in the European Social Survey vary from countries in order to be achievable in different contexts. The sample quality is dependent on reliable lists of residents for each country and since such statistics are not as accurate in some countries different sampling procedures are allowed. However, the ESS sampling strategy specifies the following key principles for participating countries.

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Table 4 – European Social Survey sample strategy

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- Samples must be representative of all persons aged 15 and over (no upper age limit) resident within private households in each country, regardless of their nationality, citizenship or language
- Individuals are selected by strict random probability methods at every stage
- Sampling frames of individuals, households and addresses may be used
- All countries must aim for a minimum 'effective achieved sample size' of 1,500 or 800 in countries with ESS populations of less than 2 million after discounting for design effects
- Quota sampling is not permitted at any stage
- Substitution of non-responding households or individuals (whether 'refusals', 'non-contacts' or 'ineligibles') is not permitted at any stage

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Source: *European Social Survey, Methodology (2015)*.

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In regard to response rates, the strategy has a fixed goal of 70% response rates. However the actual response rates for each country and round vary roughly between 50-70%. (European Social Survey, Data and documentation, 2015)

Due to the different sampling designs in participating countries the samples do not have exactly the same chance of selection for certain groups and regions according to the ESS data documentation. In order to compensate for the sampling designs used the ESS data includes a weight-variable that corrects the chances of selection. Thus using the design weights corrects for selection bias in each country. According to ESS documentation the design weights are computed as an inverse of the inclusion probability and then scaled so that their sum equals the net sample size.

There are further more robust post-stratification weights that do not only correct for sampling designs but also sampling errors (related to attempting to measure only a fraction of the population) and non-response errors (which could lead to over- or under-representation of people with certain characteristics). The Post-stratification weights make use of information on age-group, gender, education and region and are obtained by adjusting the previously presented Design weights in a way that will

replicate the distribution in the population of the added information. The population distribution for the post-stratification adjusting variable/weight has been obtained from the European Union Labour Force Survey (LFS) according to the ESS data documentation.

A final weighting variable is used when examining data for two or more countries combined. The population size weights are the same for all persons within a country but differ across countries. These weights are used to correct for the fact that most countries taking part in the ESS have different population sizes but similar sample sizes. Without this weight, any figures combining data from two or more countries might be biased, over-representing smaller countries at the expense of larger ones. The population size weight makes an adjustment to ensure that each country is represented in proportion to its population size.

In my analysis I have therefore applied the Post-stratification weights when conducting analysis of countries separately and for analysis where countries are combined I make use of a weight variable where Post-stratification weights and Population size weights are combined according to recommendations in ESS documentation.

### ***Reliability and validity***

The randomness and structure applied in the European Social Survey sampling strategy contribute to the overall *reliability* of the data together with the large sample size when making use of data from all participating countries. A high reliability in quantitative statistical approaches involves an absence of random errors which indicate that a similar approach making use of the same methods and distributed in the same manner would produce similar results and responses (Djurfeldt, 2003). The thorough descriptions of the methodology and data documentation provided by the ESS through its website and the academically anchored guidelines for participants (and their national reports following participation) serve as a good indicator that replicability is achievable. Finally the use of data weighting strengthens the replicability as it corrects for some of the sampling errors that could affect reliability.

High *validity* indicates an absence of systematic errors where reliability indicates the absence of random errors. In terms of validity a replicable and reliable data source might lead to incorrect interpretations of the data if the questions used and responses

given does not actually mirror what the researcher is hoping to find answers to. This might be related to insufficiently specified questions and misunderstandings or the nature of data collection. Validity concerns the relevance of concepts and theories that are applied to the questions and answers in the data collection and the way that they are related by the researchers (Djurfeldt, 2003). In the ESS; questionnaires are pretested and examined whenever changes are introduced and although they are originally constructed in English; adequate translations are made through the help of national teams and further pretesting methodology. This helps in assessing a greater validity in the data collection phase and so does making use of face-to-face interviews rather than for example postal surveys since respondents might for example ask the interviewer for guidance if questions are unclear. However, my own operationalization of the responses and questions in the ESS data is equally important in order to ensure that the results of my analysis are valid and measure what I intend to measure.

### **Operationalization**

Data have been analysed through the SPSS computer software for windows. Guided by the very useful book and accurately titled as a “Survival guide” authored by Julie Pallant (2007).

For analytic operations involving comparisons between Nordic countries and other ESS participating countries I grouped the available Nordic countries into a new variable. However, Iceland did not participate in a majority of the ESS rounds and therefore the Nordic group in my analysis only includes Denmark, Finland, Sweden and Norway.

Several variables in the European Social Survey could be used directly in regression as they can be defined as ratios or scales which is a prerequisite for use in multiple regression analysis. Others however are categorical variables which needed to be recoded into dichotomous variables thereby qualifying as ratios. For an overview of the original variables that I have made use of in my analysis readers can find univariate dispersion and descriptive tables in appendix C.

Additionally, in order to acquire a robust measure of subjective personal well-being denoting health (physiological and psychological well-being) I chose to combine several related measure for that concept.

### *Creating a Health Index*

In order to demarcate the dimensions of well-being that incorporate subjective and personal accounts of well-being and aspects of well-being that potentially could exclude respondents from labour market participation and other activities that they perceive as valuable I have chosen to apply a more narrow focus than the broad concept of well-being. This will be done by selecting variables that I operationalize as measures of psychological and physiological well-being - in short denoted as “health”. Health is a phenomenon that is difficult to measure with a single question. A single question could measure other aspects that one is not interested in. One way to deal with this issue is to create a combined measure/index out of a number of questions that measure different aspects of the phenomena. In doing so characteristics of individual questions are averaged out which can produce a truer picture of - in this case - the phenomena of health. I therefore chose to create a combined index out of variables that I operationalize as valid in this conceptualization of health and personal well-being. They are further evaluative and subjective measure that portray the individual experiences of respondents. Additionally, by creating an index I can produce a continuous variable from variables that initially were categorical that may be used together with the existing continuous variables measuring well-being.

In the ESS Round 5 data I already have such continuous variables through the variables Life Satisfaction & Work Satisfaction. They are measures of other dimensions of well-being that do not entail the phenomena of health and will therefore not be meaningful to use as dependent variables in my analysis. I will however be including them as independent variables and explore their association to subjective health.

There is currently no continuous variable measuring health. Such a variable would help us explore predictors for physiological and psychological well-being (“health”). In the ESS Data I have identified the following questions/variables that I operationalize as measures of different aspects relating to health (operationalized as physiological and psychological well-being):

Table 5 - Variables included in the Health Index:			
Variable		Range	
<i>HEALTH</i>	- Subjective General Health	1 (Very good) +	to 5 (Very Bad) -
<i>HLTHHMP</i>	- Hampered in Activities	1 (Yes a lot) -	to 3 (No) +
<i>GDSPRT</i>	- Have felt cheerful and in good spirits last 2 weeks	1 (All of the time) +	to 6 (At no time) -
<i>CLMRLX</i>	- Have felt calm and relaxed last 2 weeks	1 (All of the time) +	to 6 (At no time) -
<i>ACTVGRS</i>	- Have felt active and vigorous last 2 weeks	1 (All of the time) +	to 6 (At no time) -

These variables measure different aspects of well-being as they incorporate both physiological health & psychological health, whether feelings are actually hampering activity and additionally an overall estimate of overall health. They are all subjective and evaluative measures. I consider the first variable “health” as an overall evaluative measure that can incorporate all aspects of health that the respondents consider meaningful and valuable. My focus of interest, the psychological and physiological aspects of health, are operationalized in the index by the next set of questions. “Hlthhmp” considers whether health is actually preventing the respondent from participating in activities that they would want to. The following three measures are operationalized in the index as they are perceived by myself as psychological states/conditions where I would interpret the measure of being calm and relaxed additionally as a measure of stress and anxiety. The measure of being cheerful and in good spirit would through a similar operationalization also be a measure of depression at one end of the range of available responses. Finally, the opposite end of the measure of feeling active and vigorous could be considered to be related to adverse physiological health. Constructing the Health index was done through the following process where the variables were:

1. *Controlled for errors and outliers*
2. *Reversed (if necessary) - in order to have higher scores measuring better health.*
3. *Normalized - Giving them equal weight in the index.*
4. *Added together in the composite variable Health Index.*

(See appendix B for a detailed description of the process and each step.)

A potential respondent with the highest possible health index score would therefore denote that he/she perceive that their overall health is very good, have no activity restrictions and have experienced no adverse psychological feelings or physiological restrictions during the last 2 weeks.

### *Converting independent variables for analysis*

Regression requires that each variable has the characteristics of at least an interval meaning that it needs to have an intrinsic ranking among its values so that measures are ordered and within equal distances. For the regression models that I have applied I have therefore created dichotomous variables out of those nominal variables that I have wanted to explore as predictors of the scores in the Health Index. By converting each of the nominal variables into one or more variables with only two levels of which one level has the value “0” and the other level the value “1”. For example I recoded the variable “Gender” into a dichotomous variable where (“Man” = “0” and “Woman” = “1”). In that way it fits the requirements for a ratio variable since it denotes “the amount of woman (100%) rather than man (0%)”

A more detailed description of recoded variables for this purpose and through this method see appendix B.

## **Results and Analysis**

Within the European social survey data I have made use of variables that are of both categorical and numerical (nominal, ordinal, interval and ratio). Analysis applied included bivariate comparisons of group means through Analysis of Variances (ANOVA) and conducting multiple regression analysis (MRA) and testing statistical significance. An overview of the results from these bivariate and multivariate operations will be presented below while the complete procedures and produced figures and charts can be found in appendix A. For univariate analysis of individual variables included in the bivariate and multivariate analysis the reader may consult appendix C.

### *Bivariate Analysis - longitudinal changes*

I have already summarized and presented developments of well-being in the Nordic countries in the previous chapter through statistics from Eurostat. I find it relevant and meaningful for my approach to also observe and present the developments in the survey samples of the European Social Survey.

Respondents in the European Social Survey were asked about their health. By selecting only respondents of the age-range 15-25 I compared the mean values of each ESS round in order to observe if there were significant changes in well-being. In initial preliminary bivariate analysis in line with the following comparisons of group

means I selected only youth (age group 15-25) in the Nordic countries. However as results were largely non-significant for all cases and comparisons I concluded that no changes in well-being had occurred in these restricted samples of the ESS respondents. In order to test whether personal well-being had changed at least in among youth in all participating countries cases were only selected on the basis of age for the following final bivariate analysis.

*Subjective General health has not changed between ESS Rounds in age-group 15-25*

The first question for this analysis labelled *subjective general health* (variable name: "health") and derived from the following question posed to respondents during all rounds:

*How is your health in general? Would you say it is ...*

**Values=Labels:** 1="Very good" 2= "Good" 3= "Fair" 4= "Bad" 5="Very bad"

*Lower scores therefore represent better health*

Mean values of subjective general health for each ESS survey round were analysed through ANOVA and post-hoc test Games-Howell. Results showed very small differences of mean between the ESS rounds. Thus within the ESS data, one can not conclude that overall health differ significantly between the ESS sample groups of different rounds. Differences were shown to be insignificant between several rounds. (See appendix A for detailed interpretation and figures).

*Disability has not changed between ESS Rounds in age group 15-25*

Another variable for the analysis of health/well-being exist in the ESS data labelled *Hampered in activities* (variable name: "hlthhmp") and derive from the following question posed to respondents during all rounds (however with an addition after round 1):

*Are you hampered in your daily activities in any way by any longstanding illness, or disability, infirmity or mental health problem? - If yes, is that a lot or to some extent? (Last addition to question added after Round 1)*

**Values=Labels:** 1="Yes a lot" 2= "Yes to some extent" 3= "No"

*Higher score equals better health*

Mean values of Hampered in activities for each ESS survey round were analysed through ANOVA and post-hoc test Games-Howell. Results showed very small

differences of mean between the ESS rounds. Thus within the ESS data, we could not conclude that disability has changed over time (or rather between the different sample groups for each ESS round). Differences were shown to be insignificant between several rounds (For detailed interpretation and figures see appendix A).

*Feelings about household income changed for the worse up until 2008 in age group 15-25*

As previous theoretical discussions have suggested that income is a factor for varying well-being I chose to analyse the developments of subjective feelings of household income through the variable labelled *Feelings about household income* (variable name: hincfel) acquired in the ESS by asking the following question:

*Which of the descriptions on this card comes closest to how you feel about your household's income nowadays?*

**Values=Labels:** 1= "Living comfortably on present income" 2= "Coping on present income" 3= "Difficult on present income" 4= "Very difficult on present income".

*Higher score equals worse subjective income*

Again, using an ANOVA with post-hoc test Games-Howell, the analysis of ESS round group means was applied. This time focusing on feelings of household income. Results showed some differences of mean between the ESS rounds. Thus within the ESS data, one could observe that mean values were rising from 2002 (mean 1.88) up until 2008 (2.19) while decreasing again in 2010 (2.10) and 2012 (2.09). A significant relationship between ESS Round groups and Feelings of household income was found (Brown-Forsythe  $F = 105.40$ ,  $p < .001$ ). Post-hoc tests (Games-Howell) revealed that differences between the survey round groups were significant for several groups. Particularly differences in mean values of 2002 and 2008 were significant to all other groups ( $p < .001$ ) see appendix A for more details.

### ***Multivariate Analysis - Predictors for differences in Health Index scores***

After preparations of creating a Health composite measure/index and recoding nominal variables (both procedures discussed above and detailed in appendix B) that are of interest in theorizing predictors a Multiple Regression analysis was conducted. Multiple regression was used to assess the ability of 38 control measures where one (Unemployment) was excluded due to showing no correlation to predict Health (Health Index scores).

Among the variables included were firstly measurements of labour market activity (being in employment, unemployed or in education). Secondly several variables related to employment standards were incorporated in the regression model, such as having a limited work contract, working part-time and being self-employed. These are factors that relate to the theoretical discussion in previous chapters of this thesis. Additionally I incorporated many more variables to serve as control measures in the model. Some control measures were included with the aim of observing more specific perceived qualities of the employment held by respondents. By doing so I hoped that the associations from the regression model would produce a more meaningful picture of the different predictive powers associated to activity restricting well-being (health). As more variables with different levels of specificity are included in a regression model the predictive power of each predictor is controlled more thoroughly. An identified predictive power of say, having a limited contract on perceived health could derive from the wage income, notions of insecurity, being called in at short notice and so on. Having included variables measuring these specific factors the isolated effect of having a limited contract will be controlling for such additional factors too. Thereby producing a better picture of the extent that the type of contract is the predictor or if it is rather other mechanism following from it, that are associated to levels of subjective health. Among these more specific variables of employment standards are for example variables measuring quality of work in terms of difficulty of tasks, levels of supervision and work-life balance. There are additionally some variables associated to the level of influence that employees and unions have on the work conditions as changes of such influence have been coupled with the flexibilisation of labour in my theoretical discussion.

Finally another range of control variables are present in the model in order to control for different individual factors that could mediate the activity restricting dimensions of well-being that I am focusing on in my Health index. In this group of control measures I choose to include socio-demographic measures of age, country of residence, gender, household income as this would allow me to hold their effects on health/well-being constant while looking at the effects of the various effects of labour market standards and activity. It would also allow me to identify potential differences between gender and countries which will be useful in my analysis. Finally, the subjective measures of well-being available in the ESS data – focusing on other notions of well-being than my health index – were incorporated in the model. These

are broader measures of well-being, focusing on other dimensions than feelings of subjective health. They denote overall happiness, life satisfaction and work satisfaction and their associations to my well-being measure of psychological and physiological well-being (“Health”) will be meaningful to include in the analysis.

Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity.

The total variance explained by the model as a whole was 43% ( $F(37, 9598) = 195.74$ ,  $p < .001$ ,  $R^2 = .430$ ).

Out of the control measure that were significantly contributing to the model; happiness (Beta = .229,  $p < .001$ ) and Life satisfaction (Beta = .160,  $p < .001$ ) were the biggest positive predictors of Health Index scores. These broad subjective measures of well-being outline individual factors that appear to be associated to the constructed health index. They were followed (in order of predictive power) by contextual factors such as being in Employment (Beta = .103,  $p < .001$ ) and Education (Beta = .097,  $p < .001$ ). The next positive predictors for health index scores were Satisfaction with work-life balance (Beta = .093,  $p < .001$ ) and Household total net income (Beta = .039,  $p < .001$ ). The other significant and positive factors for health (In order of predictive power) were: Work satisfaction (Beta = .036,  $p < .001$ ), Hours worked per week (Beta = .033,  $p < .01$ ), Self-Employed (Beta = .029,  $p < .01$ ), Variety in work (Beta = .029,  $p < .01$ ), Support from Co-workers (Beta = .029,  $p < .001$ ), Wage dependent on effort (Beta = .023,  $p < .01$ ), Boss’s knowledge of effort in work (Beta = .018,  $p < .01$ ) & Chances of getting similar/better job (Beta = .016,  $p < .001$ ).

Focusing on some non-standard employment factors one can observe that an increase in amount of hours worked per week predicted health scores in a positive direction and that being self-employed also showed a positive variance in health scores. It also appear as if having more variety in work and relation between recognition of one’s effort at work through wages and/or an intermediate boss is related to our well-being measure.

The greatest negative predictors of scores in our health index were: Age (Beta = -.219,  $p < .001$ ) which was quite expected as declining health is naturally related to ageing. An inclusion of age in the model, however meant that the variable is held

constant for all other predictors, enabling us to see their predictive power on subjective health when controlling for age.

Being too tired after work to enjoy other things was the second largest negative predictor (Beta =  $-.128$ ,  $p < .001$ ). Which could possibly be due to that respondents suffering from adverse health could be feeling more tired at/after work. Worrying about work outside of work showed similar negative predictive power in relation to health. Other interesting correlations were that being female (as our dichotomous Gender variable denote) was shown to be a negative predictor (Beta =  $-.046$ ) for health index scores. Working part-time (operationalized in my dichotomous variable as less than 30 hrs per week) showed a negative correlation (Beta =  $-.029$ ,  $p < .05$ ) to subjective health index scores. This overlap with the previously mentioned variable controlling for number of hours worked and how an increase in hours showed an increase in health scores. Again this could possibly be due to reverse causality, i.e. that working fewer hours is caused by a lower degree of well-being and not the other way around.

11 control measures were non-significant in the model. Out of these we can note that among them are the control measure that I have previously theorized as potential contributors of lower well-being. Neither job-security ( $p > .05$ ), working overtime ( $p > .05$ ) nor having a limited contract ( $p > .05$ ) appear to explain any variance in our health index to a significant degree. For a full presentation of the multiple regression procedure see appendix A.

## **Summary & Discussion**

Returning to the research questions and the hypotheses following from them, I have made use of bivariate analysis to conclude that personal well-being (operationalized through subjective general health and being hampered in activities) have not changed significantly among youth between ESS Rounds (2002, 2004, 2006, 2008, 2010 & 2012) neither while isolating changes in the Nordics nor when analysing all countries combined. Although the changes in mean differences (in all countries combined) are statistically significant between some rounds/years the actual changes in mean values are very small even in those cases and considering the sample size and the operationalization of what answers they denote one would expect larger mean changes in order to propose that changes have taken place. Therefor our null

hypothesis is confirmed, stating that subjective personal well-being has not decreased since 2002.

Among the bivariate comparisons of means I have also explored the development of ESS respondent's feelings about their household income. In this analysis I have concluded that such feelings have declined between 2002 and 2008 while improvements can be seen thereafter. We can theorize that this suggest that actual income have declined although the variable only denote subjective feelings about income and does not necessarily incorporate such an answer. Significant changes in this variable could not be identified while isolating youth in only the Nordic countries.

In the regression analysis of multiple variables and their role in predicting personal well-being (health) I included 38 control measures/variables out of which being unemployed showed no correlation and a group of 11 variables showed non-significant correlations. Notably several variables denoting non-standard employment showed no significant predictive ability in our health index. These were measures denoting working evenings/nights/weekends, having a secure job and a being employed through a limited contract.

The control measure of being from a Nordic country did appear to be a significant predictor of Health Index scores, which could suggest that existing health differences between Nordic countries and EU (that we have seen in Eurostat statistics) are explained by the other significant measures in the regression model.

Interpreting the analysis we can observe that the most positively important contextual factors in predicting the personal well-being among ESS-respondents were employment, education, work-life balance and household income (besides individual factors of other subjective well-being measures such as happiness and life satisfaction). The most important negative contextual factors for personal well-being (besides age) were feelings of tiredness after work affecting ability to do other things, worrying about work and a lack of advancement opportunities at work. Working part-time (less than 30hrs/week) was shown to be associated to lower well-being.

The multiple regression model aim to answer my research question of associations to personal well-being operationalized through the health index. It can therefore not "explain" causes for well-being as such. That is a matter for theoretical propositions

which of course can be guided by this predictive model of health. The stated hypothesis leading up to the model was:

*Employment, Education & Employment Standards are associated to the subjective health/personal well-being of individuals.*

My regression model is able to predict 43% of the variation in subjective personal well-being (as operationalized in the “health index”). Being in employment, being in education as well as several forms of non-standard employment arrangements have been validated as predictors of health. Out of the theorized non-standard employments the model shows that self-employment, part-time work, work-life balance and the variety in work all mediate the well-being among youth to a significant degree. Temporary contracts and job security however do not. The included control variable measuring county of residence (Nordic country or not) does not appear to be associated to differing levels of health which I interpret as an indicator that the model incorporates other significant factors that explain differences between the Nordics and other countries concerning subjective personal well-being.

In this thesis I have set out to firstly explore whether well-being has changed among youth in the Nordic countries and secondly to explore how a new type of labour market and employment arrangements are associated to well-being and the activities of youth. The approach has been motivated by a suggestion from previous studies that the well-being of the youth population in the Nordics has deteriorated - a notion that seemed worrying and important to investigate further in order to gain knowledge on what could be causing such changes.

Through an abductive research approach I have made use of both deductive theory testing and inductive theory building by making use of both existing research & theoretical propositions regarding well-being and my own empirical analysis from cross-sectional survey data.

Multiple perspectives of theory and available data, individual and aggregate, on the research topic have allowed me to build on existing theory in order to derive probable answers to my research questions.

For both of these questions an initial conceptualization of well-being has been necessary where I have discussed different dimensions of well-being and measurements of the concept. This presentation denoted overall concepts of well-

being such as happiness and satisfaction while narrowing my approach into one where the personal and subjective dimensions of well-being were central and where a composite measurement of well-being as Health was operationalized. Other objective measurements were discussed and their relation to subjective well-being theorized. In this process I have denoted my subjective measurements of well-being/health as states while objective measurements is denoted as processes to achieve a higher state of well-being. Objective measures of well-being have been operationalized as processes from which a certain state of well-being can be achieved and as contextual factors that affect individual well-being - the “state” of being well.

Theories and previous studies regarding well-being, its developments and causes have been presented where only a few have focused on the well-being of youth specifically. My study could therefore broaden the knowledge of well-being among youth.

### **Has personal well-being decreased among youth in the Nordics?**

Even though some studies that have served as my starting point for this thesis suggest that rates of disability and disability benefits are increasing in the Nordics I have not been able to find conclusive developments of that nature. Some aggregate statistics from official statistical offices and Eurostat show slight increases in rates of youth experiencing adverse health. They are however not verified by similar questions in the European Social Survey. Subjective Health does not appear to have declined among youth in Europe combined either.

Why do we get such different results from the Labour Force Survey of 2002 and 2011? A possible answer could be the leading nature of the question posed in the LFS of 2011 where respondents were asked *which* longstanding illness they had. This could be one reason for an increase in the rates of respondents stating that they actually suffered from such a longstanding activity difficulty.

The observed higher rates from Eurostat of individuals perceiving adverse subjective health in the Nordics could be mediated by higher rates at the other end of the scale. I.e. a more polarized population in the distribution of such measurements. If this is the case then we are observing a development where the most marginalised are becoming more marginalised rather than a development where the overall well-being is deteriorating.

Theoretical propositions used in this thesis have assumed that the flexibilisation of the labour market is causing adverse effects for equality and well-being. However few of them have been based on studies of youth specifically. Possibly youth are not as affected by the labour market developments as the older population. The assumption of work and social participation as a cornerstone in societal cohesion is based on former standards being replaced while prevailing norms remain thus causing a normless state in society through disorientation, disorganization and disintegration. This is assumed to present issues similar to my focus of adverse well-being in light of changes in the composition of work. The lack of such effects in the youth population might imply that those norms are not prevailing among youth. The notion of secure and standard employment might have been the norm for the older population while it is not a notion that youth have become accustomed to. These differing norms for youth in the labour market can be due to both that youth have often forced to settle with less employment security, income, and solidarity in their initial years as part of the economically active population. Youth in the labour market today might never have experienced the standard employments that older people appear to use as a reference point when affected by the adverse conditions of non-standard employment. This might explain why my specific focus on the developments for youth show only small signs that could suggest that youth are not experiencing worse well-being or health.

The causal relations between labour market status and well-being is additionally a very complex chain to map and from which to isolate predictors. As we have seen there are differences of well-being in within the Nordics as well as compared to the EU. The rates of different employment relations as well as NEET rates are also varying from country to country. If these predictors are mediating well-being they are doing so in a context where all other predictors are at work at the same time. For instance, the low NEET rates in the Nordics (compared to Europe) could affect well-being while part-time work and temporary work simultaneously is affecting the well-being in the Nordics. Consequently the new emerging forms of employment and the flexibilisation could very well produce adverse effects for well-being although we might not be able to observe these associations in the whole context of the Nordic or European population.

In order to get some insight into the potential effects for well-being from the changing opportunities and standards in a population we have the next part of my analysis at our disposal

### **How are labour market activity and standards associated to well-being?**

My exploration of theoretical perspectives of well-being assisted me in building theory for empirical testing in the cross-sectional survey data of the ESS. It suggested that circumstances such as employment and income would predict greater well-being and that individual capability - having the freedom - to achieve valuable states through intentional activities would also be related to a higher well-being.

In the light of the suggested negative and positive causes of well-being from my theoretical review such theorized predictors were included in an analysis of their predictive power of well-being. By applying multiple regression analysis the variance of scores within a constructed composite health index were tested. The index was constructed from individual factors of well-being, deriving from subjective evaluations and feelings of the respondents. Contextual factors such as income, country of residence and the main activities of respondents such as being in education or employment were tested as well as new rising forms of altered standards of employment such as part-time, temporary work and variables related to employment security and working hours. Employment had been theorized as serving both a source for economic and social need. Economic as it facilitates income and social as it offers time-structure, social contact, purpose and identity. Being in employment or education was verified in my empirical findings as important contextual factors for higher individual well-being and health. The differing forms of employment did on the other hand show some results that were differing to initial theory and somewhat perplexing. Temporary employment operationalized as having a limited contract or perceiving unsecure employment did not show any significant association to personal well-being, although theorized as a potential cause for psychological anxiety and precariousness. More hours worked per week showed higher health scores and working less than 30 hours per week was found to be associated to lower health scores. At first sight this, again, verifies that work is important for well-being, but does it suggest that part-time work is not associated to greater well-being as theorized? My interpretation is that the missing association might be due both to a lack in my operationalization as what I am actually measuring is the health of all those working

within a range of 1-30 hours per week. Since employment is regarded as providing both economic and social needs there would be a threshold where marginal well-being from working more hours would no longer increase. If part-time work is associated to better well-being I would need to operationalize a range of working hours derived from this threshold to be able to correctly analysis the association.

In the next chapter I will theorize my propositions in a final conclusion and reflect on the used methodology.

## 5. Conclusion

One of the most interesting proposition derived from my analysis have been that having limited employment contracts did not significantly appear to be associated to well-being despite theoretical notions of the opposite. A significant change in well-being did not appear even when specifically controlling health index scores for job-security in a separate variable. A probable explanation derived from the theoretical perspective on temporary employment could be that adverse effects of employment insecurity are derived from the risk of loss of income. Since income is already controlled for in our model that aspect might be isolated from the variables regarding employment security. Income insurance and benefit schemes could also serve as mediators for the perceived risk and thus the effect on subjective well-being.

A relationship to the well-being developments among youth might also exist and help build theory on the effects of non-standard employment. One could propose that non-standard employment is not causing adverse effects in a population that have not experienced previous “standard” employment to the same degree. If the employment arrangements facilitating the flexibilisation of the labour market have become the new standard then the population might have come to terms with such working conditions as the previous culturally determined goals of full-time work and life-long employment could have been altered and eroded into new norms of how employment is organised. Previously theorized as a reason that youth might not experience lower well-being despite a changing labour market, the same can be true in the broader scope of the population if non-standard employment and flexibilisation have been incorporated into norm over time.

Given that sufficient income is secured the prospect of employment as a mean for social participation, trust and solidarity could have been eroded along with the former employment standard. Perhaps we are seeing the beginning of a shift where the importance of work-life balance and what individuals have the resources to do outside of work are rising as a factor for shaping our identities and societies to a greater extent. Several control measures for health were related to the balance between work and life outside of work. These variables all showed that the notion of work spilling over on other activities in life were adverse for well-being. Suggesting that the contextual factors of income and work might be secondary priorities that primarily facilitate the capabilities of individuals to focus on other dimensions and achievements in life which they see as valuable. Verifying another theme in the research and theory of well-being, that having capability to pursuit intentional activities is a major factor in explaining overall well-being.

Fears that the flexibilisation of the labour market would entail an exploitation of the population – cleverly captured in the term flexploitaion – appear to be unjustified. At least through the lens of my research approach. It is plausible that the broad approach in this thesis, with focus directed to the whole population does not shed sufficient light on marginalised groups in order to identify such adverse effects. The majority of the population (in all age-groups) have security through different social protections from risks such as poverty and exclusion. Those that do not enjoy such protection are the ones that could be suffering from being exploited by the flexibilisation of the labour market.

## **Methodological Reflections & Limitations**

The sheer size and scope of the data available from the European Social Survey is overwhelming and extremely inspiring for further research. In this approach I have been restricted by my basic knowledge of quantitative analysis while realizing other meaningful potential approaches along the way. There are many additional variables that could predict well-being but applying them and using other models of analysis will have to be a future task, as have tried to narrow statistical operations in line with my initial research aim.

Despite the size of the ESS data samples one get a smaller sample the more one seek to narrow the cases for analysis. In order to look closer at the Nordic countries and the respondents of a certain age group we are left with far fewer cases to analyse than the initial sample sizes in the data. This has of course affected how specifically I have been able to analyse my research question. As an example when focusing on youth between 15-25 years of age in the Nordic countries in the ESS dataset from 2010 we are left with about 350 respondents in contrast to the initial 2000 Nordic respondents of that round. Further looking at the rates of for example part-time employment within such a sample and conducting bivariate analysis of correlations with yet another variable would have not given any meaningful results. In this regard the regression model of analysis benefit from being able to incorporate all measurements of interest and relating them to a single well-being measure.

Achieving answers of what is predicting variance in health and to what degree is a very useful and interesting tool for research. However the uncertainties following from these initial answers produces additional questions of why and how these predictors are determining (or being determined by) health. The predictive ability of regression analysis, is unfortunately difficult to derive any certain causal propositions out of. Correlation as used in regression analysis does not imply causation as it is equally true according to correlation measure that the predictive powers of independent variables can be theorized by the dependent variable Health causing changes in these other variables and not the other way around. A certain causal model of analysis would have been welcome to state what is causing well-being. However any approach with a pursuit of “true” scientific knowledge will be faced with this issue of certainty.

### **Suggested further research**

The propositions in this thesis would be interesting to base future research on. Although the quantitative approach have provided findings of correlations between well-being and factors of a changing labour market the focus on how the flexibilisation is affecting the well-being of a population need further attention, particularly concerning the younger age-group entering the market and other already marginalised groups.

A more focused quantitative approach of larger samples from the youth groups of different countries would enable a more accurate analysis of mediators of well-being and health. Given the requirements of reliable and valid data the methodology of

designing such a separate survey for this purpose would require resources not available to me in this approach. Accessing individual data, rather than aggregate data, from Nordic national statistical offices would enable a more detailed source of data for further analysing the developments of well-being and employment status among youth.

A more focused qualitative approach would similarly be able to explore how different activities in the labour market is perceived by the young population, and in such a research design it would be meaningful to include different forms of Active Labour Market Policy schemes in order to more clearly separate them. Thereby seeking to answer both how these different measures are affecting success in finding employment, but primarily how those measures are mediating well-being. Are they enhancing anxieties in the population as a mean of pushing individuals towards a greater need for employment or are they providing meaningful and positive well-being for the population currently excluded from employment. For example, in the approach undertaken here, the possibility of distinguishing regular education and participation in such education that constituted training through labour market policies were absent.

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# APPENDIX A – Data analysis

## *Subjective General health has not changed significantly between ESS Rounds*

Because a Levene’s test of homogeneity of variance turned out significant ( $p < .001$ ) more robust tests for equality of means were applied. A significant relationship between ESS Round groups and Subjective general health was found (Brown-Forsythe  $F = 26.17$ ,  $p < .001$ ). Post-hoc tests (Games-Howell) revealed that the survey round group for 2002 differed significantly from all other rounds ( $p < .05$ ), the survey group of 2004 differed non-significantly from 2010 while differences from other survey groups were significant ( $p < .05$ ). The 2006-group mean values differed non-significantly from 2008 & 2012 and significantly from other groups ( $p < .001$ ). The group of 2008 further differed non-significantly from 2012. All other differences were significant ( $p < .05$ ).

**Case Processing Summary**

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Subjective general health * ESS round	53516	99,9%	78	0,1%	53593	100,0%

**Report**

Subjective general health

ESS round	Mean	N	Std. Deviation
2002	1,82	6745	,772
2004	1,86	8999	,743
2006	1,93	8922	,763
2008	1,91	10596	,755
2010	1,86	9257	,763
2012	1,91	8996	,761
Total	1,88	53516	,760

### SPSS SYNTAX:

MEANS TABLES=health BY essround  
/CELLS=MEAN COUNT STDDEV.

ONEWAY health BY essround  
/STATISTICS HOMOGENEITY BROWNFORSYTHE  
/PLOT MEANS  
/MISSING ANALYSIS  
/POSTHOC=GH ALPHA(0.05).

### Test of Homogeneity of Variances

Subjective general health

Levene Statistic	df1	df2	Sig.
10,690	5	53510	,000

### ANOVA

Subjective general health

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	75,488	5	15,098	26,224	,000
Within Groups	30806,136	53509	,576		
Total	30881,624	53514			

### Robust Tests of Equality of Means

Subjective general health

	Statistic <sup>a</sup>	df1	df2	Sig.
Brown-Forsythe	26,168	5	51828,140	,000

a. Asymptotically F distributed.

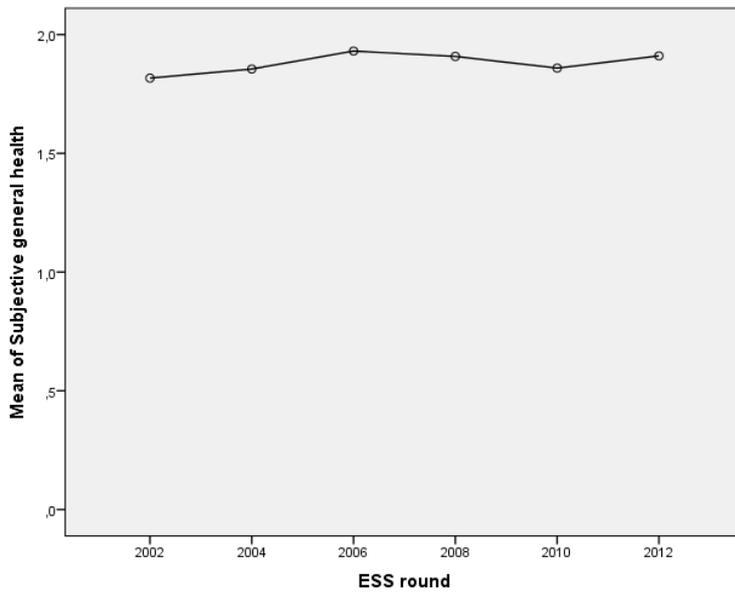
**Multiple Comparisons**

Dependent Variable: Subjective general health

Games-Howell

(I) ESS round	(J) ESS round	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
2002	2004	-.038*	.012	.023	-.07	.00
	2006	-.114*	.012	.000	-.15	-.08
	2008	-.091*	.012	.000	-.13	-.06
	2010	-.042*	.012	.008	-.08	-.01
	2012	-.093*	.012	.000	-.13	-.06
2004	2002	.038*	.012	.023	.00	.07
	2006	-.076*	.011	.000	-.11	-.04
	2008	-.053*	.011	.000	-.08	-.02
	2010	-.004	.011	.999	-.04	.03
	2012	-.055*	.011	.000	-.09	-.02
2006	2002	.114*	.012	.000	.08	.15
	2004	.076*	.011	.000	.04	.11
	2008	.023	.011	.298	-.01	.05
	2010	.072*	.011	.000	.04	.10
	2012	.020	.011	.474	-.01	.05
2008	2002	.091*	.012	.000	.06	.13
	2004	.053*	.011	.000	.02	.08
	2006	-.023	.011	.298	-.05	.01
	2010	.049*	.011	.000	.02	.08
	2012	-.002	.011	1.000	-.03	.03
2010	2002	.042*	.012	.008	.01	.08
	2004	.004	.011	.999	-.03	.04
	2006	-.072*	.011	.000	-.10	-.04
	2008	-.049*	.011	.000	-.08	-.02
	2012	-.051*	.011	.000	-.08	-.02
2012	2002	.093*	.012	.000	.06	.13
	2004	.055*	.011	.000	.02	.09
	2006	-.020	.011	.474	-.05	.01
	2008	.002	.011	1.000	-.03	.03
	2010	.051*	.011	.000	.02	.08

\*. The mean difference is significant at the 0.05 level.



*Disability has not changed significantly between ESS Rounds*

Because a Levene's test of homogeneity of variance turned out significant ( $p < .001$ ) more robust tests for equality of means were applied. A significant relationship between ESS Round groups and being Hampered in activities was found (Brown-Forsythe  $F = 7.04$ ,  $p < .001$ ). Post-hoc tests (Games-Howell) revealed that differences between the survey round groups were very small and between many groups non-significant.

**Case Processing Summary**

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Hampered in daily activities by illness/disability/infirmity/mental problem * ESS round	53023	98,9%	571	1,1%	53593	100,0%

**Report**

Hampered in daily activities by illness/disability/infirmity

ESS round	Mean	N	Std. Deviation
2002	2,91	6732	,331
2004	2,91	8965	,315
2006	2,89	8703	,353
2008	2,90	10495	,335
2010	2,91	9175	,321
2012	2,89	8952	,364
Total	2,90	53023	,337

**SPSS SYNTAX**

MEANS TABLES=hlthmp BY essround  
/CELLS=MEAN COUNT STDDEV.

ONEWAY hlthmp BY essround  
/STATISTICS HOMOGENEITY BROWNFORSYTHE  
/PLOT MEANS  
/MISSING ANALYSIS  
/POSTHOC=GH ALPHA(0.05).

**Test of Homogeneity of Variances**

Hampered in daily activities by illness/disability/infirmity

Levene Statistic	df1	df2	Sig.
27,736	5	53017	,000

**ANOVA**

Hampered in daily activities by illness/disability/infirmity/mental problem

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3,996	5	,799	7,033	,000
Within Groups	6024,132	53016	,114		
Total	6028,128	53021			

**Robust Tests of Equality of Means**

Hampered in daily activities by illness/disability/infirmity/mental problem

	Statistic <sup>a</sup>	df1	df2	Sig.
Brown-Forsythe	7,035	5	51283,047	,000

a. Asymptotically F distributed.

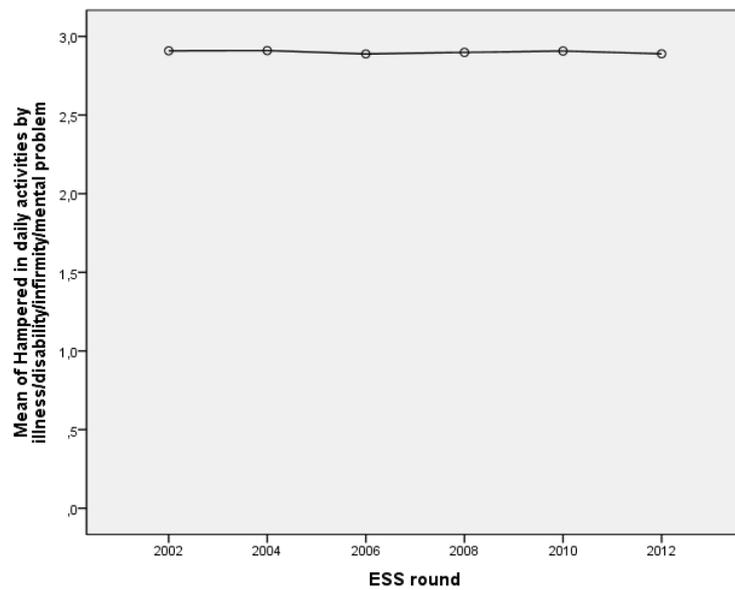
**Multiple Comparisons**

Dependent Variable: Hampered in daily activities by illness/disability/infirmity/mental problem

Games-Howell

(I) ESS round	(J) ESS round	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
2002	2004	-.001	,005	1,000	-.02	,01
	2006	,020*	,006	,004	,00	,04
	2008	,010	,005	,335	,00	,03
	2010	,002	,005	,999	-.01	,02
	2012	,019*	,006	,008	,00	,04
2004	2002	,001	,005	1,000	-.01	,02
	2006	,021*	,005	,000	,01	,04
	2008	,012	,005	,120	,00	,03
	2010	,003	,005	,988	-.01	,02
	2012	,020*	,005	,001	,01	,03
2006	2002	-.020*	,006	,004	-.04	,00
	2004	-.021*	,005	,000	-.04	-.01
	2008	-.010	,005	,386	-.02	,00
	2010	-.018*	,005	,004	-.03	,00
	2012	-.001	,005	1,000	-.02	,01
2008	2002	-.010	,005	,335	-.03	,00
	2004	-.012	,005	,120	-.03	,00
	2006	,010	,005	,386	,00	,02
	2010	-.009	,005	,427	-.02	,00
	2012	,009	,005	,512	-.01	,02
2010	2002	-.002	,005	,999	-.02	,01
	2004	-.003	,005	,988	-.02	,01
	2006	,018*	,005	,004	,00	,03
	2008	,009	,005	,427	,00	,02
	2012	,017*	,005	,008	,00	,03
2012	2002	-.019*	,006	,008	-.04	,00
	2004	-.020*	,005	,001	-.03	-.01
	2006	,001	,005	1,000	-.01	,02
	2008	-.009	,005	,512	-.02	,01
	2010	-.017*	,005	,008	-.03	,00

\*. The mean difference is significant at the 0.05 level.



*Feelings about household income changed for the worse up until 2008 in age group 15-25*

Because a Levene's test of homogeneity of variance turned out significant ( $p < .001$ ) more robust tests for equality of means were applied. A significant relationship between ESS Round groups and Subjective general health was found (Brown-Forsythe  $F = 7,04$ ,  $p < .001$ ). Post-hoc tests (Games-Howell) revealed that differences between the survey round group of 2002 and all other groups was significant ( $p < .001$ ). So was differences of the group from 2008 between all other groups ( $p < .001$ ). Differences between 2004 and 2006 was also significant ( $p < .05$ ). Finally differences in mean between 2006 and 2012 were also significant ( $p < .05$ ). All other differences were non-significant ( $p > .05$ ).

**Case Processing Summary**

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Feeling about household's income nowadays * ESS round	49629	92,6%	3965	7,4%	53593	100,0%

**Report**

Feeling about household's income nowadays

ESS round	Mean	N	Std. Deviation
2002	1,88	5583	,757
2004	2,09	7748	,853
2006	2,13	8574	,859
2008	2,19	10227	,872
2010	2,10	8819	,871
2012	2,09	8678	,853
Total	2,09	49629	,855

**SPSS SYNTAX**

MEANS TABLES=hincfel BY essround  
/CELLS=MEAN COUNT STDDEV.

ONEWAY hincfel BY essround  
/STATISTICS HOMOGENEITY BROWNFORSYTHE  
/PLOT MEANS  
/MISSING ANALYSIS  
/POSTHOC=GH ALPHA(0.05).

**Multiple Comparisons**

Dependent Variable: Feeling about household's income nowadays

Games-Howell

(I) ESS round	(J) ESS round	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
2002	2004	-.207 <sup>*</sup>	.014	.000	-.25	-.17
	2006	-.251 <sup>*</sup>	.014	.000	-.29	-.21
	2008	-.316 <sup>*</sup>	.013	.000	-.35	-.28
	2010	-.218 <sup>*</sup>	.014	.000	-.26	-.18
	2012	-.210 <sup>*</sup>	.014	.000	-.25	-.17
2004	2002	.207 <sup>*</sup>	.014	.000	.17	.25
	2006	-.044 <sup>*</sup>	.013	.013	-.08	-.01
	2008	-.109 <sup>*</sup>	.013	.000	-.15	-.07
	2010	-.011	.013	.966	-.05	.03
	2012	-.003	.013	1.000	-.04	.03
2006	2002	.251 <sup>*</sup>	.014	.000	.21	.29
	2004	.044 <sup>*</sup>	.013	.013	.01	.08
	2008	-.065 <sup>*</sup>	.013	.000	-.10	-.03
	2010	.033	.013	.112	.00	.07
	2012	.041 <sup>*</sup>	.013	.020	.00	.08
2008	2002	.316 <sup>*</sup>	.013	.000	.28	.35
	2004	.109 <sup>*</sup>	.013	.000	.07	.15
	2006	.065 <sup>*</sup>	.013	.000	.03	.10
	2010	.099 <sup>*</sup>	.013	.000	.06	.13
	2012	.106 <sup>*</sup>	.013	.000	.07	.14
2010	2002	.218 <sup>*</sup>	.014	.000	.18	.26
	2004	.011	.013	.966	-.03	.05
	2006	-.033	.013	.112	-.07	.00
	2008	-.099 <sup>*</sup>	.013	.000	-.13	-.06
	2012	.008	.013	.992	-.03	.04
2012	2002	.210 <sup>*</sup>	.014	.000	.17	.25
	2004	.003	.013	1.000	-.03	.04
	2006	-.041 <sup>*</sup>	.013	.020	-.08	.00
	2008	-.106 <sup>*</sup>	.013	.000	-.14	-.07
	2010	-.008	.013	.992	-.04	.03

\*. The mean difference is significant at the 0.05 level.

**Test of Homogeneity of Variances**

Feeling about household's income nowadays

Levene Statistic	df1	df2	Sig.
40,110	5	49623	.000

**ANOVA**

Feeling about household's income nowadays

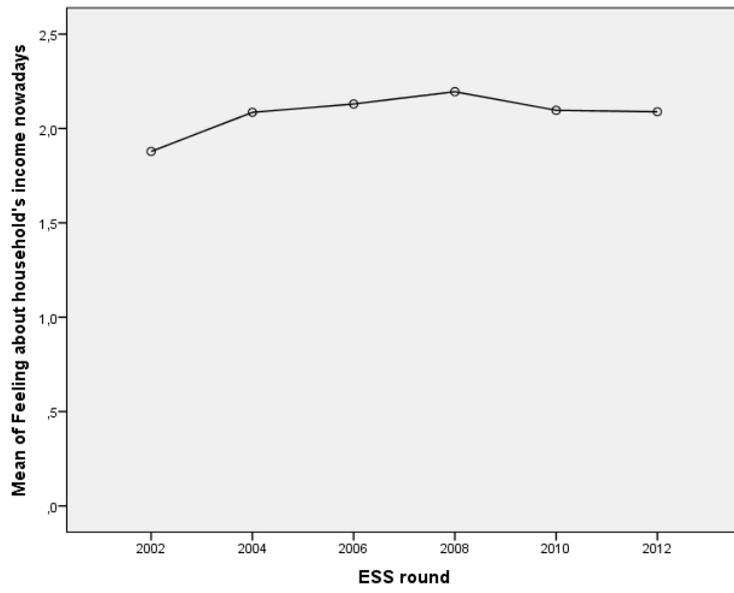
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	375,312	5	75,062	103,650	.000
Within Groups	35935,850	49622	.724		
Total	36311,163	49627			

**Robust Tests of Equality of Means**

Feeling about household's income nowadays

	Statistic <sup>a</sup>	df1	df2	Sig.
Brown-Forsythe	105,402	5	48805,440	.000

a. Asymptotically F distributed.



# Multivariate Analysis – What predictors are there for differences of Health Index scores?<sup>2</sup>

**Descriptive Statistics**

	Mean	Std. Deviation	N
Health Index	,0235	3,70833	51090
How happy are you	6,96	2,107	51804
How satisfied with life as a whole	6,50	2,403	52126
Employed or Not	,4930	,49996	52223
Education or Not	,1011	,30140	52223
Unemployed or Not (Looking and not looking)	,0668	,24967	52223
Satisfied with balance between time on job and time on other aspects	6,18	2,176	25396
Household's total net income, all sources	5,34	2,793	40607
How satisfied are you in your main job	7,16	2,090	25581
Total hours normally worked per week in main job overtime included	40,42	13,623	41753
Self Employed or Not	,0996	,29942	46136
Current job: Variety in work	2,76	1,015	22354
Current job: can get support/help from co-workers when needed	3,07	,886	22205
Current job: Wage/salary depends on effort put into work	1,95	1,072	22281
How difficult/easy for immediate boss to know how much effort put into work	7,20	2,477	21624
How difficult/easy to get similar or better job if had to leave employer	4,54	2,796	21420
Age of respondent, calculated	45,86	18,630	52271
Worry about work problems when not working, how often	2,81	1,165	25612
Too tired after work to enjoy things like do at home, how often	3,01	,988	25634
Gender	1,53	,499	52336
Current job: health/safety at risk because of work	1,91	1,013	22182
Current job: Job requires learning new things	2,67	1,034	22292
Current job: Job requires work very hard	2,22	,947	22343
Current job: Never enough time to get everything done in job	3,02	1,151	22231
Current job: Good opportunities for advancement	3,23	1,129	21814
Job prevents you from giving time to partner/family, how often	3,00	1,358	25339
I would enjoy working in current job even if did not need money	2,98	1,231	25181
Part time (Less than 30hrs/week)	,1749	,37989	41753
How much influence trade unions have over decisions that affect working conditions/practices	17,85	24,511	20584
How difficult/easy for employer to replace you if you left	6,17	4,372	21352
Work involve working evenings/nights, how often	2,89	2,061	25521
Current job: Job is secure	2,74	1,016	21367
Current job: can decide time start/finish work	1,81	1,044	22274
Work involve working at weekends, how often	2,75	1,505	25479
Limited Contract (Limited and No Contract)	,2218	,41547	41054
Considering efforts and achievements in job I feel I get paid appropriately	3,02	1,105	22043
Work involve having to work overtime at short notice, how often	2,95	1,929	25183
How much influence discussions have on decisions that affect working conditions/ practices	2,23	,763	11422
Nordic country or Not	,0396	,19503	52339

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,656 <sup>a</sup>	,430	,428	2,80500

a. Predictors: (Constant), Nordic country or Not, Self Employed or Not, Limited Contract (Limited and No Contract), How difficult/easy for immediate boss to know how much effort put into work, Too tired after work to enjoy things like do at home, how often, Current job: Job requires learning new things, How difficult/easy to get similar or better job if had to leave employer, Gender, How difficult/easy for employer to replace you if you left, How much influence discussions have on decisions that affect working conditions/ practices, Employed or Not, How much influence trade unions have over decisions that affect working conditions/practices, Considering efforts and achievements in job I feel I get paid appropriately, Current job: can decide time start/finish work, Work involve working evenings/nights, how often, Part time (Less than 30hrs/week), Current job: Never enough time to get everything done in job, How happy are you, Current job: can get support/help from co-workers when needed, Current job: Wage/salary depends on effort put into work, Current job: Job is secure, Current job: health/safety at risk because of work, I would enjoy working in current job even if did not need money, Current job: Job requires work very hard, Current job: Good opportunities for advancement, Education or Not, Job prevents you from giving time to partner/family, how often, Worry about work problems when not working, how often, Household's total net income, all sources, Work involve having to work overtime at short notice, how often, Satisfied with balance between time on job and time on other aspects, Work involve working at weekends, how often, Current job: Variety in work, How satisfied are you in your main job, How satisfied with life as a whole, Age of respondent, calculated, Total hours normally worked per week in main job overtime included

b. Dependent Variable: Health Index

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	56982,685	37	1540,073	195,738	,000 <sup>b</sup>
	Residual	75520,931	9598	7,868		
	Total	132503,615	9635			

a. Dependent Variable: Health Index

b. Predictors: (Constant), Nordic country or Not, Self Employed or Not, Limited Contract (Limited and No Contract), How difficult/easy for immediate boss to know how much effort put into work, Too tired after work to enjoy things like do at home, how often, Current job: Job requires learning new things, How difficult/easy to get similar or better job if had to leave employer, Gender, How difficult/easy for employer to replace you if you left, How much influence discussions have on decisions that affect working conditions/ practices, Employed or Not, How much influence trade unions have over decisions that affect working conditions/practices, Considering efforts and achievements in job I feel I get paid appropriately, Current job: can decide time start/finish work, Work involve working evenings/nights, how often, Part time (Less than 30hrs/week), Current job: Never enough time to get everything done in job, How happy are you, Current job: can get support/help from co-workers when needed, Current job: Wage/salary depends on effort put into work, Current job: Job is secure, Current job: health/safety at risk because of work, I would enjoy working in current job even if did not need money, Current job: Job requires work very hard, Current job: Good opportunities for advancement, Education or Not, Job prevents you from giving time to partner/family, how often, Worry about work problems when not working, how often, Household's total net income, all sources, Work involve having to work overtime at short notice, how often, Satisfied with balance between time on job and time on other aspects, Work involve working at weekends, how often, Current job: Variety in work, How satisfied are you in your main job, How satisfied with life as a whole, Age of respondent, calculated, Total hours normally worked per week in main job overtime included

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Correlations			Collinearity Statistics		
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF	
1	(Constant)	-1,091	,409		-2,670	,008	-1,892	-,290						
	How happy are you	,404	,019	,229	20,870	,000	,366	,442	,485	,208	,161	,491	2,036	
	How satisfied with life as a whole	,247	,017	,160	14,409	,000	,213	,281	,460	,146	,111	,481	2,079	
	Employed or Not	,765	,077	,103	9,905	,000	,614	,916	,176	,101	,076	,548	1,825	
	Education or Not	1,191	,137	,097	8,712	,000	,923	1,459	,201	,089	,067	,481	2,078	
	Satisfied with balance between time on job and time on other aspects	,158	,017	,093	9,186	,000	,125	,192	,290	,093	,071	,580	1,723	
	Household's total net income, all sources	,052	,012	,039	4,235	,000	,028	,076	,254	,043	,033	,700	1,429	
	How satisfied are you in your main job	,065	,019	,036	3,485	,000	,028	,101	,285	,036	,027	,542	1,847	
	Total hours normally worked per week in main job overtime included	,009	,003	,033	2,691	,007	,002	,016	-,032	,027	,021	,387	2,584	
	Self Employed or Not	,353	,104	,029	3,408	,001	,150	,557	,044	,035	,026	,847	1,180	
	Current job: Variety in work	,104	,037	,029	2,802	,005	,031	,177	,107	,029	,022	,573	1,745	
	Current job: can get support/help from co-workers when needed	,123	,035	,029	3,495	,000	,054	,191	,152	,036	,027	,846	1,182	
	Current job: Wage/salary depends on effort put into work	,080	,029	,023	2,733	,006	,023	,138	,012	,028	,021	,824	1,213	
	How difficult/easy for immediate boss to know how much effort put into work	,027	,012	,018	2,220	,026	,003	,050	,056	,023	,017	,914	1,094	
	How difficult/easy to get similar or better job if had to leave employer	,022	,011	,016	1,984	,047	,000	,043	,120	,020	,015	,888	1,126	
	Age of respondent, calculated	-,044	,002	-,219	-18,985	,000	-,048	-,039	-,349	-,190	-,146	,447	2,238	
	Worry about work problems when not working, how often	-,282	,029	-,089	-9,794	,000	-,339	-,226	-,151	-,099	-,075	,725	1,379	
	Too tired after work to enjoy things like do at home, how often	-,481	,035	-,128	-13,740	,000	-,550	-,412	-,290	-,139	-,106	,682	1,466	
	Gender	-,345	,063	-,046	-5,463	,000	-,469	-,221	-,103	-,056	-,042	,821	1,218	
	Current job: health/safety at risk because of work	-,113	,031	-,031	-3,642	,000	-,175	-,052	-,123	-,037	-,028	,819	1,221	
	Current job: Job requires learning new things	-,084	,037	-,023	-2,274	,023	-,156	-,012	,095	-,023	-,018	,559	1,787	
	Current job: Job requires work very hard	-,106	,034	-,027	-3,149	,002	-,173	-,040	,016	-,032	-,024	,798	1,253	
	Current job: Never enough time to get everything done in job	-,095	,028	-,029	-3,399	,001	-,149	-,040	,030	-,035	-,026	,792	1,262	
	Current job: Good opportunities for advancement	-,136	,030	-,041	-4,536	,000	-,195	-,077	-,220	-,046	-,035	,713	1,403	
	Job prevents you from giving time to partner/family, how often	-,063	,025	-,023	-2,542	,011	-,111	-,014	-,175	-,026	-,020	,728	1,374	
	I would enjoy working in current job even if did not need money	-,091	,027	-,030	-3,394	,001	-,143	-,038	-,168	-,035	-,026	,751	1,332	
	Part time (Less than 30hrs/week)	-,279	,112	-,029	-2,487	,013	-,500	-,059	,025	-,025	-,019	,448	2,230	
	How much influence trade unions have over decisions that affect working conditions/practices	-,001	,001	-,010	-1,164	,244	-,004	,001	-,031	-,012	-,009	,875	1,143	
	How difficult/easy for employer to replace you if you left	,008	,007	,009	1,115	,265	-,006	,021	-,006	,011	,009	,939	1,065	
	Work involve working evenings/nights, how often	-,016	,017	-,009	-,946	,344	-,050	,018	-,040	-,010	-,007	,640	1,563	
	Current job: Job is secure	-,020	,031	-,005	-,638	,523	-,080	,041	,118	-,007	-,005	,828	1,207	
	Current job: can decide time start/finish work	-,034	,030	-,009	-1,117	,264	-,093	,025	,050	-,011	-,009	,825	1,212	
	Work involve working at weekends, how often	,033	,023	,013	1,426	,154	-,012	,079	-,045	,015	,011	,671	1,490	
	Limited Contract (Limited and No Contract)	-,004	,075	,000	-,052	,959	-,151	,144	,042	-,001	,000	,835	1,198	
	Considering efforts and achievements in job I feel I get paid appropriately	-,041	,029	-,012	-1,397	,162	-,097	,016	-,189	-,014	-,011	,794	1,259	
	Work involve having to work overtime at short notice, how often	-,015	,018	-,008	-,831	,406	-,051	,021	-,031	-,008	-,006	,652	1,535	
	How much influence discussions have on decisions that affect working conditions/practices	-,060	,039	-,012	-1,520	,128	-,137	,017	,093	-,016	-,012	,906	1,104	
	Nordic country or Not	-,206	,151	-,011	-1,360	,174	-,502	,091	,055	-,014	-,010	,939	1,065	

a. Dependent Variable: Health Index

## SPSS SYNTAX

### REGRESSION

```
/DESCRIPTIVES MEAN STDDEV CORR SIG N
/MISSING PAIRWISE
/STATISTICS COEFF OUTS CI(95) R ANOVA COLLIN TOL CHANGE ZPP
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT HealthIndex
/METHOD=ENTER hinctnta stflife happy stfmjob agea gndr Cntry_Nordic vrtvwrk jbrqlm wgdpeft
  hlpcowk hlthrwk desfwrk jbscr wrkhrd nevdnjb oprtad bseftwk smblyjb rpljbd indiscd truinwk pdaprra
  wrywprb trdawrk jbprrfp stfjbot wkbndm Empl_Contract wkhtot Empl_SelfEmpl MainAct_Empl
  MainAct_Unempl MainAct_Education wrkengt wkovrtm wrkwe
/SCATTERPLOT=(*ZRESID ,*ZPRED)
/RESIDUALS NORMPROB(ZRESID)
/CASEWISE PLOT(ZRESID) OUTLIERS(3).
```

# APPENDIX B – Preparing the ESS Data

## *Creating dichotomous variables for regression*

For Regression models I have created “Dummy” variables out of those nominal variables that I wish to explore as predictors of scores in the Health Index. The following pages describe how variables were recoded into dichotomous “dummy” variables using SPSS software.

### **Creating Dummy Variable for Country – Nordic or Not**

```
RECODE cntry (DK=1) (NO=1) (FI=1) (SE=1) (MISSING=SYSMIS) (ELSE=0) INTO Cntry_Nordic.VARIABLE LABELS  
Cntry_Nordic 'Nordic country or Not'.EXECUTE.
```

### **Creating a Dummy Variable for Gender:**

```
RECODE gndr (1=0) (2=1) INTO Gender_0_1.  
VARIABLE LABELS Gender_0_1 'Dummy Gender'.  
EXECUTE.
```

### **Creating a Dummy Variable for variable - Limited Contract or Not**

```
RECODE wrkctra (1=0) (2 thru 3=1) INTO Empl_Contract.  
VARIABLE LABELS Empl_Contract 'Limited or Not (Limited and No Contract)'.  
EXECUTE.
```

### **Creating a Dummy for Variable Total hours normally worked. PT Work or Not**

```
RECODE wkhtot (MISSING=SYSMIS) (1 thru 30=1) (ELSE=0) INTO Empl_PartTime.  
VARIABLE LABELS Empl_PartTime 'PartTime or Not (Less than 30hrs/week)'.  
EXECUTE.
```

### **Creating Dummy for variable Employment Relation – Self employed or not**

```
RECODE emplrel (1=0) (2=1) (3=0) INTO Empl_SelfEmpl.  
VARIABLE LABELS Empl_SelfEmpl 'Self Employed or Not'.  
EXECUTE.
```

### **Creating a Dummy Variable for Main Activity – Unemployment/Employment/Education**

```
RECODE mnactic (1=1) (2 thru 9=0) INTO MainAct_Empl.  
VARIABLE LABELS MainAct_Empl 'Employed or Not'.  
EXECUTE.
```

```
RECODE mnactic (1=0) (2=0) (3 thru 4=1) (5 thru 9=0) INTO MainAct_Unempl.  
VARIABLE LABELS MainAct_Unempl 'Unemployed or Not (Looking and not looking)'.  
EXECUTE.
```

```
RECODE mnactic (1=0) (2=1) (3 thru 9=0) INTO MainAct_Education.  
VARIABLE LABELS MainAct_Education 'Education or Not'.  
EXECUTE.
```

# Constructing a Health Index

## Variables to be included:

Variable		Range	
HEALTH	- Subjective General Health	1 (Very good) +	to 5 (Very Bad) -
HLTHHMP	- Hampered in Activities	1 (Yes a lot) -	to 3 (No) +
GDSPRT	- Have felt cheerful and in good spirits last 2 weeks	1 (All of the time) +	to 6 (At no time) -
CLMRLX	- Have felt calm and relaxed last 2 weeks	1 (All of the time) +	to 6 (At no time) -
ACTVGRS	- Have felt active and vigorous last 2 weeks	1 (All of the time) +	to 6 (At no time) -

## The process of creating an Index:

1. Checking variables for Errors and outliers
2. Reversing variables – All questions need to be answered in the same “direction”. E.g. Higher scores measure better health.
3. Normalizing variables – Variables with different ranges of answers/scores would imply that those with higher ranges were given more weight in the index. To normalize/standardize variables include recalculating them into “Z-scores” having the same average and same dispersion.
4. Computing the Index.

### 1. Checking for variables for Errors (Weighed by combined weight):

		Subjective general health	Hampered in daily activities by illness/disability/infirmity/mental problem	Have felt active and vigorous last 2 weeks	Have felt cheerful and in good spirits last 2 weeks	Have felt calm and relaxed last 2 weeks
N	Valid	52231	51788	51985	51978	51977
	Missing	108	551	354	361	362
Range		4	2	5	5	5
Minimum		1	1	1	1	1
Maximum		5	3	6	6	6

**Interpretation of descriptive statistics:** Minimum and Maximum values for the Variables are within the range of possible scores. The shares of missing cases are low.

### 2. Reversing variables

As seen in the table of variables to be included in the Index only one variable (*hlthhmp*- Hampered in Activities) need to be reversed in order for lower scores to measure better Health. However, in order to make interpretation easier, it would be better to have higher Scores mean better health. We therefore need to reverse all variables except *hlthhmp*. This is done by computing new variables from those variables using SPSS.

### Reversing health into healthRev:

COMPUTE healthREV=6-health.

EXECUTE.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very good	9009	17.2	17.2	17.2
	Good	20768	39.7	39.8	57.0
	Fair	16976	32.4	32.5	89.5
	Bad	4620	8.8	8.8	98.4
	Very bad	858	1.6	1.6	100.0
	Total	52231	99.8	100.0	
Missing	Refusal	2	.0		
	Don't know	96	.2		
	No answer	10	.0		
	Total	108	.2		
Total		52339	100.0		

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	858	1.6	1.6	1.6
	2.00	4620	8.8	8.8	10.5
	3.00	16976	32.4	32.5	43.0
	4.00	20768	39.7	39.8	82.8
	5.00	9009	17.2	17.2	100.0
	Total	52231	99.8	100.0	
Missing	System	108	.2		
	Total	52339	100.0		

**Reversing gdsprt into gdsprtREV:**

*COMPUTE gdsprtREV=7-gdsprt.*

*EXECUTE.*

Have felt cheerful and in good spirits last 2 weeks					
	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	All of the time	5626	10.7	10.8	10.8
	Most of the time	22009	42.1	42.3	53.2
	More than half of the time	11511	22.0	22.1	75.3
	Less than half of the time	6340	12.1	12.2	87.5
	Some of the time	5490	10.5	10.6	98.1
	At no time	1003	1.9	1.9	100.0
	Total	51978	99.3	100.0	
Missing	Refusal	15	.0		
	Don't know	309	.6		
	No answer	37	.1		
	Total	361	.7		
Total	52339	100.0			

gdsprtREV					
	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	1.00	1003	1.9	1.9	1.9
	2.00	5490	10.5	10.6	12.5
	3.00	6340	12.1	12.2	24.7
	4.00	11511	22.0	22.1	46.8
	5.00	22009	42.1	42.3	89.2
	6.00	5626	10.7	10.8	100.0
Total	51978	99.3	100.0		
Missing	System	361	.7		
Total	52339	100.0			

**Reversing clmrkx into clmrkxREV:**

*COMPUTE clmrkxREV=7-clmrkx.*

*EXECUTE.*

Have felt calm and relaxed last 2 weeks					
	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	All of the time	4779	9.1	9.2	9.2
	Most of the time	18849	36.0	36.3	45.5
	More than half of the time	12508	23.9	24.1	69.5
	Less than half of the time	8068	15.4	15.5	85.0
	Some of the time	6201	11.8	11.9	97.0
	At no time	1572	3.0	3.0	100.0
	Total	51977	99.3	100.0	
Missing	Refusal	12	.0		
	Don't know	315	.6		
	No answer	35	.1		
	Total	362	.7		
Total	52339	100.0			

clmrkxREV					
	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	1.00	1572	3.0	3.0	3.0
	2.00	6201	11.8	11.9	15.0
	3.00	8068	15.4	15.5	30.5
	4.00	12508	23.9	24.1	54.5
	5.00	18849	36.0	36.3	90.8
	6.00	4779	9.1	9.2	100.0
Total	51977	99.3	100.0		
Missing	System	362	.7		
Total	52339	100.0			

**Reversing actvgrs into actvgrsREV:**

*COMPUTE actvgrsREV=7-actvgrs.*

*EXECUTE.*

Have felt active and vigorous last 2 weeks					
	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	All of the time	6190	11.8	11.9	11.9
	Most of the time	17389	33.2	33.4	45.4
	More than half of the time	12015	23.0	23.1	68.5
	Less than half of the time	7664	14.6	14.7	83.2
	Some of the time	6482	12.4	12.5	95.7
	At no time	2245	4.3	4.3	100.0
	Total	51985	99.3	100.0	
Missing	Refusal	11	.0		
	Don't know	308	.6		
	No answer	35	.1		
	Total	354	.7		
Total	52339	100.0			

actvgrsREV					
	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	1.00	2245	4.3	4.3	4.3
	2.00	6482	12.4	12.5	16.8
	3.00	7664	14.6	14.7	31.5
	4.00	12015	23.0	23.1	54.6
	5.00	17389	33.2	33.4	88.1
	6.00	6190	11.8	11.9	100.0
Total	51985	99.3	100.0		
Missing	System	354	.7		
Total	52339	100.0			

### 3. Normalizing variables

All the five variables (hlthhmp and the reversed new variables) intended for the Health Index now have higher Scores indicating better health. The next step is to normalize the scores of all these variables, giving them equal weight in the Index. This was done by using the following option in SPSS:

**Analyze => Descriptive Statistics => Descriptives.**

Adding all the five variables in the Variables field and ticking the box "Save standardized values as variables".

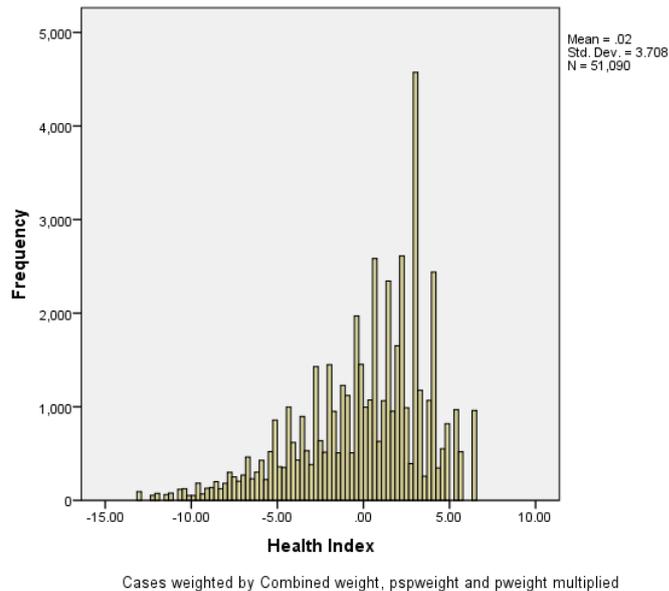
The new Z-score Variables were assigned the names: “ZhealthREV”, “Zhlthhmp”, “ZgdsprtREV”, “ZclmrkREV” and “ZactvgrsREV”.

#### 4. Computing the Index.

I now computed the HealthIndex by doing the following in SPSS:

```
COMPUTE HealthIndex=ZhealthREV + Zhlthhmp + ZgdsprtREV + ZclmrkREV + ZactvgrsREV.  
EXECUTE.
```

#### Histogram, mean and standard deviation of the Health Index.



The Health Index will be used in the coming analysis to investigate strengths of association/relationship with the index as a dependent variable and multiple other independent variables as predictors of the scores on the Health index. This is done by Regression analysis. Allowing us to interpret to what extent certain predictors increases/decreases Health scores in the index.

# APPENDIX C – Univariate analysis of included variables

## Table of Contents

### **Non-weighted frequencies in ESS cumulative dataset (All rounds)**

#### Page 2

ESS Round  
Subjective general health  
Hampered in daily activities  
Feelings about household income

### **Non-weighted frequencies In ESS round 5 dataset**

#### Page 3

Household's total net income,  
How happy are you,  
Life Satisfaction  
Work Satisfaction  
Age  
Gender  
Nordic country or not  
Current job, variety  
Current job, Learning new things

#### Page 4

Current job, Decide time to start/finish  
Current Job: Secure  
Current job: Very hard work  
Current job: Never enough time  
Current job: Wage depend on effort  
Current job: Support help from colleagues  
Current job: Risk of health/safety  
Current job: Good opportunities for advancement  
Difficult/easy for boss to know how much effort  
Difficulty/ease to get similar job

#### Page 5

Difficult/easy to be replaced  
Influence discussions have on decisions on work conditions  
How much influence trade unions have  
Paid proportionately to effort  
Worry about work when not working  
Too tired after work  
Job prevents from giving time to partner/family  
Satisfied with balance between job and other aspects

#### Page 6

Would enjoy current job if not needing money  
Limited contract  
Total hours normally worked  
Work involve working evenings  
Work involve working overtime at short notice  
Work involve working weekends  
Self-employed  
Employed  
Unemployed  
In education

## Non-weighted frequencies in ESS cumulative dataset (All rounds)

**ESS round**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2002	39320	13,0	13,0	13,0
2004	47831	15,8	15,8	28,7
2006	50504	16,7	16,7	45,4
2008	56785	18,7	18,7	64,1
2010	52339	17,3	17,3	81,4
2012	56476	18,6	18,6	100,0
Total	303253	100,0	100,0	

**Subjective general health**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Very good	53281	17,6	17,6	17,6
Good	124708	41,1	41,2	58,8
Fair	94321	31,1	31,2	90,0
Bad	25389	8,4	8,4	98,4
Very bad	4909	1,6	1,6	100,0
Total	302608	99,8	100,0	
Missing Refusal	45	,0		
Don't know	548	,2		
No answer	53	,0		
Total	646	,2		
Total	303253	100,0		

**Hampered in daily activities by illness/disability/infirmity/mental problem**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes a lot	18606	6,1	6,2	6,2
Yes to some extent	58246	19,2	19,4	25,6
No	223526	73,7	74,4	100,0
Total	300378	99,1	100,0	
Missing Refusal	141	,0		
Don't know	2020	,7		
No answer	714	,2		
Total	2875	,9		
Total	303253	100,0		

**Feeling about household's income nowadays**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Living comfortably on present income	65689	21,7	22,7	22,7
Coping on present income	129759	42,8	44,9	67,6
Difficult on present income	67918	22,4	23,5	91,1
Very difficult on present income	25778	8,5	8,9	100,0
Total	289144	95,3	100,0	
Missing Refusal	548	,2		
Don't know	3543	1,2		
No answer	5110	1,7		
System	4907	1,6		
Total	14109	4,7		
Total	303253	100,0		

**Descriptive Statistics**

	N	Range	Minimum	Maximum	Mean	Std. Deviation
ESS round	303253	5	1	6	3,67	1,666
Subjective general health	302608	4	1	5	2,35	,919
Hampered in daily activities by illness/disability/infirmity/mental problem	300378	2	1	3	2,68	,584
Feeling about household's income nowadays	289144	3	1	4	2,19	,885
Valid N (listwise)	286109					

# Non-weighted frequencies In ESS round 5 dataset

**Household's total net income, all sources**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	J - 1st decile	3672	7,0	9,0	9,0
	R - 2nd decile	4630	8,8	11,4	20,4
	C - 3rd decile	4372	8,4	10,8	31,2
	M - 4th decile	4459	8,5	11,0	42,2
	F - 5th decile	4354	8,3	10,7	52,9
	S - 6th decile	4280	8,2	10,5	63,5
	K - 7th decile	3925	7,5	9,7	73,1
	P - 8th decile	3983	7,6	9,8	82,9
	D - 9th decile	3348	6,4	8,2	91,2
	H - 10th decile	3584	6,8	8,8	100,0
	Total	40607	77,6	100,0	
Missing	Refusal	5888	11,2		
	Don't know	4840	9,2		
	No answer	102	,2		
	System	902	1,7		
	Total	11732	22,4		
Total		52339	100,0		

**How happy are you**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely unhappy	422	,8	,8	,8
	1	467	,9	,9	1,7
	2	859	1,6	1,7	3,4
	3	2029	3,9	3,9	7,3
	4	2247	4,3	4,3	11,6
	5	7112	13,6	13,7	25,4
	6	4607	8,8	8,9	34,3
	7	9204	17,6	17,8	52,0
	8	13033	24,9	25,2	77,2
	9	6831	13,1	13,2	90,4
	Extremely happy	4993	9,5	9,6	100,0
	Total	51804	99,0	100,0	
Missing	Refusal	8	,0		
	Don't know	379	,7		
	No answer	148	,3		
	Total	535	1,0		
Total		52339	100,0		

**How satisfied with life as a whole**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely dissatisfied	1236	2,4	2,4	2,4
	1	773	1,5	1,5	3,9
	2	1653	3,2	3,2	7,0
	3	3108	5,9	6,0	13,0
	4	2928	5,6	5,6	18,6
	5	7217	13,8	13,8	32,4
	6	4885	9,3	9,4	41,8
	7	8625	16,5	16,5	58,4
	8	11555	22,1	22,2	80,5
	9	5715	10,9	11,0	91,5
	Extremely satisfied	4432	8,5	8,5	100,0
	Total	52126	99,6	100,0	
Missing	Refusal	6	,0		
	Don't know	201	,4		
	No answer	5	,0		
	Total	212	,4		
Total		52339	100,0		

**How satisfied are you in your main job**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely dissatisfied	243	,5	,9	,9
	1	173	,3	,7	1,6
	2	442	,8	1,7	3,4
	3	725	1,4	2,8	6,2
	4	912	1,7	3,6	9,8
	5	2945	5,6	11,5	21,3
	6	2352	4,5	9,2	30,5
	7	4717	9,0	18,4	48,9
	8	6258	12,0	24,5	73,4
	9	3658	7,0	14,3	87,7
	Extremely satisfied	3155	6,0	12,3	100,0
	Total	25581	48,9	100,0	
Missing	Not applicable	26503	50,6		
	Refusal	10	,0		
	Don't know	143	,3		
	No answer	102	,2		
	Total	26758	51,1		
Total		52339	100,0		

**Gender**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	24832	47,4	47,4	47,4
	Female	27503	52,5	52,6	100,0
	Total	52336	100,0	100,0	
Missing	No answer	3	,0		
Total		52339	100,0		

**Descriptive Statistics**

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Age of respondent, calculated	52271	88	14	102	45,86	18,630
Valid N (listwise)	52271					

**Nordic country or Not**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	50266	96,0	96,0	96,0
	1,00	2073	4,0	4,0	100,0
Total		52339	100,0	100,0	

**Current job: Variety in work**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all true	2849	5,4	12,7	12,7
	A little true	6288	12,0	28,1	40,9
	Quite true	6583	12,6	29,5	70,3
	Very true	6634	12,7	29,7	100,0
	Total	22354	42,7	100,0	
Missing	Not applicable	29791	56,9		
	Refusal	7	,0		
	Don't know	123	,2		
	No answer	64	,1		
	Total	29985	57,3		
Total		52339	100,0		

**Current job: Job requires learning new things**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all true	3461	6,6	15,5	15,5
	A little true	6395	12,2	28,7	44,2
	Quite true	6445	12,3	28,9	73,1
	Very true	5991	11,4	26,9	100,0
	Total	22292	42,6	100,0	
Missing	Not applicable	29791	56,9		
	Refusal	12	,0		
	Don't know	163	,3		
	No answer	82	,2		
	Total	30047	57,4		
Total		52339	100,0		

**Current job: can decide time start/finish work**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all true	12177	23,3	54,7	54,7
	A little true	4816	9,2	21,6	76,3
	Quite true	2719	5,2	12,2	88,5
	Very true	2561	4,9	11,5	100,0
	Total	22274	42,6	100,0	
Missing	Not applicable	29791	56,9		
	Refusal	7	,0		
	Don't know	193	,4		
	No answer	74	,1		
	Total	30065	57,4		
Total		52339	100,0		

**Current job: Wage/salary depends on effort put into work**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all true	10589	20,2	47,5	47,5
	A little true	4910	9,4	22,0	69,6
	Quite true	4014	7,7	18,0	87,6
	Very true	2767	5,3	12,4	100,0
	Total	22281	42,6	100,0	
Missing	Not applicable	29791	56,9		
	Refusal	8	,0		
	Don't know	192	,4		
	No answer	68	,1		
	Total	30058	57,4		
Total		52339	100,0		

**Current job: Job is secure**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all true	3083	5,9	14,4	14,4
	A little true	5267	10,1	24,7	39,1
	Quite true	7114	13,6	33,3	72,4
	Very true	5903	11,3	27,6	100,0
	Total	21367	40,8	100,0	
Missing	Not applicable	29791	56,9		
	Refusal	9	,0		
	Don't know	1067	2,0		
	No answer	104	,2		
	Total	30972	59,2		
Total		52339	100,0		

**Current job: can get support/help from co-workers when needed**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all true	1236	2,4	5,6	5,6
	A little true	4289	8,2	19,3	24,9
	Quite true	8367	16,0	37,7	62,6
	Very true	8313	15,9	37,4	100,0
	Total	22205	42,4	100,0	
Missing	Not applicable	29791	56,9		
	Refusal	15	,0		
	Don't know	243	,5		
	No answer	85	,2		
	Total	30134	57,6		
Total		52339	100,0		

**Current job: Job requires work very hard**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree strongly	4900	9,4	21,9	21,9
	Agree	10404	19,9	46,6	68,5
	Neither agree nor disagree	4736	9,0	21,2	89,7
	Disagree	1854	3,5	8,3	98,0
	Disagree strongly	450	,9	2,0	100,0
	Total	22343	42,7	100,0	
Missing	Not applicable	29791	56,9		
	Refusal	7	,0		
	Don't know	129	,2		
	No answer	69	,1		
	Total	29995	57,3		
Total		52339	100,0		

**Current job: health/safety at risk because of work**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all true	10160	19,4	45,8	45,8
	A little true	6335	12,1	28,6	74,4
	Quite true	3310	6,3	14,9	89,3
	Very true	2376	4,5	10,7	100,0
	Total	22182	42,4	100,0	
Missing	Not applicable	29791	56,9		
	Refusal	11	,0		
	Don't know	287	,5		
	No answer	69	,1		
	Total	30157	57,6		
Total		52339	100,0		

**Current job: Never enough time to get everything done in job**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree strongly	2255	4,3	10,1	10,1
	Agree	5872	11,2	26,4	36,6
	Neither agree nor disagree	5256	10,0	23,6	60,2
	Disagree	6943	13,3	31,2	91,4
	Disagree strongly	1906	3,6	8,6	100,0
	Total	22231	42,5	100,0	
Missing	Not applicable	29791	56,9		
	Refusal	6	,0		
	Don't know	248	,5		
	No answer	63	,1		
	Total	30108	57,5		
Total		52339	100,0		

**Current job: Good opportunities for advancement**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree strongly	1122	2,1	5,1	5,1
	Agree	5339	10,2	24,5	29,6
	Neither agree nor disagree	6082	11,6	27,9	57,5
	Disagree	5999	11,5	27,5	85,0
	Disagree strongly	3271	6,3	15,0	100,0
	Total	21814	41,7	100,0	
Missing	Not applicable	29791	56,9		
	Refusal	13	,0		
	Don't know	656	1,3		
	No answer	65	,1		
	Total	30525	58,3		
Total		52339	100,0		

**How difficult/easy for immediate boss to know how much effort put into work**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely difficult	446	,9	2,1	2,1
	1	293	,6	1,4	3,4
	2	562	1,1	2,6	6,0
	3	794	1,5	3,7	9,7
	4	717	1,4	3,3	13,0
	5	2476	4,7	11,5	24,5
	6	1467	2,8	6,8	31,2
	7	2892	5,5	13,4	44,6
	8	4575	8,7	21,2	65,8
	9	2934	5,6	13,6	79,3
	Extremely easy	4468	8,5	20,7	100,0
	Total	21624	41,3	100,0	
Missing	Not applicable	29791	56,9		
	Refusal	9	,0		
	Don't know	833	1,6		
	No answer	83	,2		
	Total	30715	58,7		
Total		52339	100,0		

**How difficult/easy to get similar or better job if had to leave employer**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely difficult	2162	4,1	10,1	10,1
	1	1511	2,9	7,1	17,1
	2	2226	4,3	10,4	27,5
	3	2258	4,3	10,5	38,1
	4	1609	3,1	7,5	45,6
	5	3910	7,5	18,3	63,9
	6	1830	3,5	8,5	72,4
	7	2209	4,2	10,3	82,7
	8	2063	3,9	9,6	92,3
	9	798	1,5	3,7	96,1
	Extremely easy	843	1,6	3,9	100,0
	Total	21420	40,9	100,0	
Missing	Not applicable	29791	56,9		
	Refusal	9	,0		
	Don't know	1039	2,0		
	No answer	80	,2		
	Total	30919	59,1		
Total		52339	100,0		

**How difficult/easy for employer to replace you if you left**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely difficult	704	1,3	3,3	3,3
	1	568	1,1	2,7	6,0
	2	1346	2,6	6,3	12,3
	3	1754	3,4	8,2	20,5
	4	1674	3,2	7,8	28,3
	5	3770	7,2	17,7	46,0
	6	1967	3,6	8,7	54,7
	7	2670	5,1	12,5	67,2
	8	2743	5,2	12,8	80,1
	9	1526	2,9	7,1	87,2
	Extremely easy	2624	5,0	12,3	99,5
	Would not be replaced	105	,2	,5	100,0
	Total	21352	40,8	100,0	
Missing	Not applicable	29791	56,9		
	Refusal	13	,0		
	Don't know	1107	2,1		
	No answer	76	,1		
	Total	30986	59,2		
Total		52339	100,0		

**How much influence discussions have on decisions that affect working conditions/practices**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not much or no influence	1603	3,1	14,0	14,0
	Some influence	6268	12,0	54,9	68,9
	Quite a lot of influence	2845	5,4	24,9	93,8
	A great deal of influence	706	1,3	6,2	100,0
	Total	11422	21,8	100,0	
Missing	Not applicable	40607	77,6		
	Refusal	2	,0		
	Don't know	170	,3		
	No answer	137	,3		
	Total	40916	78,2		
Total		52339	100,0		

**How much influence trade unions have over decisions that affect working conditions/practices**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not much or no influence	7006	13,4	34,0	34,0
	Some influence	5177	9,9	25,2	59,2
	Quite a lot of influence	1763	3,4	8,6	67,8
	A great deal of influence	398	,8	1,9	69,7
	No trade unions/trade union members at workplace	6240	11,9	30,3	100,0
	Total	20584	39,3	100,0	
Missing	Not applicable	29791	56,9		
	Refusal	17	,0		
	Don't know	1843	3,5		
	No answer	104	,2		
	Total	31754	60,7		
Total		52339	100,0		

**Considering efforts and achievements in job I feel I get paid appropriately**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree strongly	1278	2,4	5,8	5,8
	Agree	7273	13,9	33,0	38,8
	Neither agree nor disagree	5202	9,9	23,6	62,4
	Disagree	6201	11,8	28,1	90,5
	Disagree strongly	2089	4,0	9,5	100,0
	Total	22043	42,1	100,0	
Missing	Not applicable	29791	56,9		
	Refusal	9	,0		
	Don't know	434	,8		
	No answer	63	,1		
	Total	30296	57,9		
Total		52339	100,0		

**Worry about work problems when not working, how often**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	4440	8,5	17,3	17,3
	Hardly ever	5077	9,7	19,8	37,2
	Sometimes	8857	16,9	34,6	71,7
	Often	5365	10,3	20,9	92,7
	Always	1872	3,6	7,3	100,0
	Total	25612	48,9	100,0	
Missing	Not applicable	26526	50,7		
	Refusal	15	,0		
	Don't know	120	,2		
	No answer	66	,1		
	Total	26727	51,1		
Total		52339	100,0		

**Too tired after work to enjoy things like do at home, how often**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2177	4,2	8,5	8,5
	Hardly ever	4533	8,7	17,7	26,2
	Sometimes	11288	21,6	44,0	70,2
	Often	6252	11,9	24,4	94,6
	Always	1384	2,6	5,4	100,0
	Total	25634	49,0	100,0	
Missing	Not applicable	26526	50,7		
	Refusal	5	,0		
	Don't know	110	,2		
	No answer	63	,1		
	Total	26704	51,0		
Total		52339	100,0		

**Job prevents you from giving time to partner/family, how often**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	3792	7,2	15,0	15,0
	Hardly ever	5152	9,8	20,3	35,3
	Sometimes	8505	16,2	33,6	68,9
	Often	4868	9,3	19,2	88,1
	Always	1137	2,2	4,5	92,6
	Don't have partner/family	1885	3,6	7,4	100,0
	Total	25339	48,4	100,0	
Missing	Not applicable	26503	50,6		
	Refusal	7	,0		
	Don't know	409	,8		
	No answer	81	,2		
	Total	27000	51,6		
Total		52339	100,0		

**Satisfied with balance between time on job and time on other aspects**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely dissatisfied	324	,6	1,3	1,3
	1	249	,5	1,0	2,3
	2	765	1,5	3,0	5,3
	3	1577	3,0	6,2	11,5
	4	1913	3,7	7,5	19,0
	5	5349	10,2	21,1	40,1
	6	3310	6,3	13,0	53,1
	7	4209	8,0	16,6	69,7
	8	4258	8,1	16,8	86,4
	9	1798	3,4	7,1	93,5
	Extremely satisfied	1644	3,1	6,5	100,0
	Total	25396	48,5	100,0	
Missing	Not applicable	26503	50,6		
	Refusal	12	,0		
	Don't know	332	,6		
	No answer	96	,2		
	Total	26943	51,5		
Total		52339	100,0		

**I would enjoy working in current job even if did not need money**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree strongly	2527	4,8	10,0	10,0
	Agree	8303	15,9	33,0	43,0
	Neither agree nor disagree	5031	9,6	20,0	63,0
	Disagree	5834	11,1	23,2	86,2
	Disagree strongly	3485	6,7	13,8	100,0
	Total	25181	48,1	100,0	
Missing	Not applicable	26503	50,6		
	Refusal	14	,0		
	Don't know	532	1,0		
	No answer	109	,2		
	Total	27158	51,9		
Total		52339	100,0		

**Limited Contract (Limited and No Contract)**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid ,00	31948	61,0	77,8	77,8
1,00	9106	17,4	22,2	100,0
Total	41054	78,4	100,0	
Missing System	11284	21,6		
Total	52339	100,0		

**Descriptive Statistics**

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Total hours normally worked per week in main job overtime included	41753	168	0	168	40,42	13,623
Valid N (listwise)	41753					

**Work involve working evenings/nights, how often**

		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	Never	11026	21,1	43,2	43,2	
	Less than once a month	2985	5,7	11,7	54,9	
	Once a month	1441	2,8	5,6	60,5	
	Several times a month	3975	7,6	15,6	76,1	
	Once a week	1130	2,2	4,4	80,5	
	Several times a week	3753	7,2	14,7	95,3	
	Every day	1211	2,3	4,7	100,0	
	Total	25521	48,8	100,0		
	Missing	Not applicable	26503	50,6		
		Refusal	7	,0		
Don't know		235	,4			
No answer		73	,1			
Total		26818	51,2			
Total		52339	100,0			

**Work involve having to work overtime at short notice, how often**

		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	Never	8609	16,4	34,2	34,2	
	Less than once a month	4489	8,6	17,8	52,0	
	Once a month	2307	4,4	9,2	61,2	
	Several times a month	4273	8,2	17,0	78,1	
	Once a week	1506	2,9	6,0	84,1	
	Several times a week	2780	5,3	11,0	95,2	
	Every day	1219	2,3	4,8	100,0	
	Total	25183	48,1	100,0		
	Missing	Not applicable	26503	50,6		
		Refusal	10	,0		
Don't know		557	1,1			
No answer		86	,2			
Total		27156	51,9			
Total		52339	100,0			

**Self Employed or Not**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	41543	79,4	90,0	90,0
	1,00	4593	8,8	10,0	100,0
	Total	46136	88,1	100,0	
Missing System	6203	11,9			
Total		52339	100,0		

**Employed or Not**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	26475	50,6	50,7	50,7
	1,00	25748	49,2	49,3	100,0
	Total	52223	99,8	100,0	
Missing System	116	,2			
Total		52339	100,0		

**Unemployed or Not (Looking and not looking)**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	48735	93,1	93,3	93,3
	1,00	3488	6,7	6,7	100,0
	Total	52223	99,8	100,0	
Missing System	116	,2			
Total		52339	100,0		

**Education or Not**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	46946	89,7	89,9	89,9
	1,00	5277	10,1	10,1	100,0
	Total	52223	99,8	100,0	
Missing System	116	,2			
Total		52339	100,0		

**Work involve working at weekends, how often**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	8281	15,8	32,5	32,5
	Less than once a month	4154	7,9	16,3	48,8
	Once a month	2651	5,1	10,4	59,2
	Several times a month	6513	12,4	25,6	84,8
	Every week	3880	7,4	15,2	100,0
	Total	25479	48,7	100,0	
	Missing	Not applicable	26503	50,6	
Refusal		11	,0		
Don't know		267	,5		
No answer		79	,2		
Total		26860	51,3		
Total		52339	100,0		