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Sustainable Consumption: Leisure Time or Income?

Individuals' preferences and effects on consumption patterns

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"Time does not reach us (is not sufficient),

Or we to it,

We remain behind by running too much,

No longer is the day enough,

To live barely half an hour"

Julio Cortázar, 1984. Salvo el Crepúsculo [Saving Twilight]

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Abstract

During the next years, environmental pressures due to consumption are expected to continue increasing, driven by per capita income increases and resource intensive lifestyles. Although significant income and consumption increases have been experienced, the average level of subjective well being has remained stable over time.

This research explores the individual's choice between income and material goods over leisure time in affluent societies. It considers an analysis of working preferences and subjective well being. Within this context, it attempts to identify possible policy options.

The choice seems to be influenced mainly by a rise of material aspirations and the not easy way to 'choose' how many hours to work. Working time reductions preferences are generally not easy to achieve, but the existence of collective bargaining helps. Moreover it is observed a constant rise in material aspirations, which provides a sense of insatiability. Furthermore, it appears to exist a strong association in the society between income and material goods with quality of life measures, disregarding non material aspects of well being. In general, sustainable consumption policies are not focused on the volume aspect of consumption, but mainly on the product quality.

Executive Summary

Background for the Research

During the last decades significant improvements have been achieved in the environmental area. Product and technological innovations have helped reduce the energy and material intensity of many consumer goods. Nevertheless, pressures in the environment still persist. Increases in consumption volumes and the 'rebound effect' have overwhelmed resource productivity. And, environmental pressures due to consumption are estimated to continue increasing during the next years, driven by increasing per capita income and resource and pollution intensive lifestyles (OECD, 2001).

Easterlin (1974) found that at one point in time, the perception of well being is positively related with income. However, when considering increases of income over a long period of time, no increases in subjective well being levels are found. This finding questions the neo classical economic assumption which directly links utility with consumption and presents an important challenge for addressing the environmental problems caused by the current consumption patterns.

Since long ago, the idea that technological improvements and productivity increases would bring a reduction in labor has been present. However, this prediction has not taken place, at least in a significant extent.

Considering that important drivers of current consumption patterns are income increases and resource intensive lifestyles, a promising policy for sustainable development could be working time reduction. It is therefore important to understand the reasons why a significant reduction in paid work has not occurred, considering that subjective well being has remained constant over time.

Reductions in working hours due to productivity increases were predicted considering a saturation of wants or background of needs to be satisfied. If there is not a saturation of wants, then, an important point is to understand which possible mechanisms are contributing to the rising of material desires.

Schor (1991, 1995) is one researcher that has questioned why there have been more income increases instead of leisure time. She suggested that employers set the schedules and when productivity rises, they pass along the gains as an increase in wage rather than reducing their working time (Ropke, 1999). Getting to now the individuals' preferences regarding working time and income is fundamental to understand the position of the employees and to assess an introduction of a working time reduction (WTR) policy.

Research Objective and Focus

This research is done within the context of sustainable consumption. The objective of this thesis is to explore in affluent societies the choice between income and leisure time considering that, on average, the level of well being has remained stable over time. And, within this context, identify possible policies regarding sustainable consumption.

This thesis attempts to answer the following two main research questions:

Which are possible factors contributing to the increase of material desires and consumption?

Which are the working and income preferences in Europe? Are there any influential factors determining working time reduction preferences and their achievement?

Additionally, a complementary research question has been explored:

What kind of policies within the context of sustainable consumption could address the conflict between short and long term relation of income and subjective well being (Easterlin Paradox)? Does a WTR policy contribute to address this conflict?

The scope is affluent countries, where material needs are widely achieved and productivity increases could be transformed to increases in leisure time. European countries are the focus for data analysis, which corresponds to the period between mid 1980's and late 1990's. The focus of this study is on the length of working time considering that the decision between income and leisure time comes from paid work.

Initially, the concept of subjective well being as a measure of quality of life is introduced and the Easterlin Paradox is explained. Consumption, time use and leisure concepts are reviewed in relation to their contribution to subjective well being. Working preferences of European countries were reviewed and analyzed. Also, suggested policies on sustainable consumption were reviewed to identify possible areas for policy development.

Research Questions, Findings and Conclusions

The first research question is: ***which are possible factors contributing to the increase of material desires and consumption?*** The answer to this question was mainly found in the relation between consumption and subjective well being. Much of the explanations lie in psychological and human behavior literature. Important findings suggest that the context in which consumption takes place has an important role. This means that the aspirations of the individual and his or her relative position with respect to the others or to a norm are fundamental in the perception of well being. The continuous rising of the standard to compare with and the struggle to be better off in the relative position seems to be the main mechanisms by which the materials desires increase. These aspects are reinforced by the vast amount of information received every day linking income and material goods with happiness and success, especially through advertising. It seems that advertising and other components of modern marketing contribute to shape tastes, wishes and desires according to the interests of the producers. In this way, preferences and desires of the consumers are not given, but created within the economy. This gives rise to a limitation of the consumer sovereignty assumed in neoclassical economics.

The second research question is: ***which are the working and income preferences in Europe? Are there any influential factors determining working time reduction preferences and their achievement?*** The answer to this question was explored in surveys carried out in the European Union regarding working time and income preferences. Since mid 1980s the expressed preferences for a reduction in working time have been increasing, becoming the dominant inclination in 1998. Income appears to have an important influence on shaping the preferences. Other aspects which seem to influence are the introduction of a WTR policy and numbers of hours worked. Career prospects, employers' opposition and conflicting interests with economic growth policies appear to be important barriers to achieve WTR preferences. On the other hand, collective bargaining seems to help in the achievement of the employees' preferences. In general, employees with higher educational level or positions work longer hours and might face more pressures for career prospects due to the stronger opposition of the employers. Thus, introducing or strengthening a collective bargaining

among white collars can be useful to achieve their stated working preferences. Government support to labor unions and dialogue between the employers and employees is recommended.

The third research question is: ***what kind of policies within the context of sustainable consumption could address the conflict between short and long term relation of income and subjective well being (Easterlin Paradox)? Does a WTR policy contribute to address this conflict?*** The answer to this question considers the difference between decision utility (ex ante) and experienced utility (ex post) of the individual with respect to income and consumption increases. Conflicts arise from the fact that in this way efforts are put towards short term satisfactions of independent actors rather than long term well being for the society as a whole. From a review of suggested policies from UNEP, EU and OECD in the context of sustainable consumption it was found that the main focus was on product quality. However, considering the increasing consumption volumes and the pressures on the environment, it is necessary to look beyond 'green' or 'cleaner' consumption. Moreover, it is important to recognize the limited ability of material consumption to provide long term well being. Usually, the quantitative aspect of unsustainable consumption is regarded as controversial. This controversy probably arises from the strong association in the society between income and material goods with quality of life measures, disregarding non material aspects of well being. Within this mental model it is difficult to address the environmental problems arising from the big consumption volumes. Currently, there are no drivers or incentives in the system that could lead to a decrease in the consumption volumes. It is therefore recommended policies that can also contribute to balance people's conception of material and non material aspects of well being. Within this context, a WTR policy could help by promoting the availability of leisure time and family life as part of quality of life measures while at the same time reducing income increases. Other area suggested for policy development is linked with advertising, considering its role in fostering consumption and also as a communication channel. At the end this is a political decision, and are the citizens-consumers who will have to change lifestyles and consumption patterns. Information and education which can make us reflect of our current lifestyles, consumption patterns and aspects of well being is suggested. To overcome the government being considered as too 'paternalistic', communication and stakeholder dialogue could be done involving trade unions, political parties and NGOs.

Further research is recommended to understand which aspects in the society help to shape stronger preferences for a shorter working time. And, assess how more time availability could affect overall material consumption, especially considering the use of leisure time and the resources involved in it. Finally, further research is proposed to analyze which policies may be feasible to introduce regarding advertising and to identify ways to communicate the environmental consequences of the increasing consumption volumes and the lack of ability of material consumption to provide long term well being.

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1 Introduction

In 2002, the World Summit for Sustainable Development (WSSD) recognized the changing of the current unsustainable patterns of production and consumption as one of the three 'overarching' objectives (United Nations, 2002). It is estimated that overall, the current levels of production and consumption are 25% higher than the ecological capacity, thus, eroding the earth's natural capital (European Commission, 2002). During the last decades significant progress has been achieved in the environmental field. Solutions have been centered in technological and efficiency improvements, such as pollution prevention, cleaner production and waste minimization. Product and technological innovations have helped reduce the energy and material intensity of many consumer goods. Nevertheless, pressures in the environment still persist. Increases in consumption volumes and the 'rebound effect'[1] have overwhelmed resource productivity. Therefore, consumption patterns have gained importance on the environmental agenda. As UNEP-DTIE (2002) states, "*consumption patterns appear to be moving in ways that continue to threaten sustainable development*". And, environmental pressures due to consumption are estimated to continue increasing during the next years, driven by increasing per capita income and resource and pollution intensive lifestyles (OECD, 2001).

In 1974, Richard Easterlin found that, at a point in time subjective well being and income are positively related; yet, over time this relation disappears, i.e. there has been no increase in subjective well being measures although the significant income increases. This contradiction is known as the 'Easterlin Paradox' and questions the neo classical economic assumption which directly links utility with consumption.

Since long ago, the idea that technological improvements would bring a reduction in labor has been present. John Stuart Mill (around 1860) stated that considering a 'saturation of wants', increases in productivity can result in the easily satisfaction of all material wants of next generations, envisioning reductions in hours of paid work (Gershuny & Fisher, 1999). Fifty years later, in the same line with Mill, Keynes stated that technological progress and productivity increases against a background of needs to satisfy would lead to an increase in leisure time (Gershuny & Fisher, 1999). Over time, various academics have been relating technological progress with the availability of more leisure time. However, this prediction has not taken place, at least in a significant extent.

Considering that important drivers of current consumption patterns are income increases and resource intensive lifestyles, a promising policy for sustainable development could be working time reduction, leading to lower income increases and market consumption. Further understanding of the reasons why a significant working time reduction has not occurred, considering that subjective well being has remained constant over time, is the topic of this research. Also, a discussion of the possibilities for an introduction of related policies is presented.

1.1 Background

Reductions in working hours due to productivity increases were predicted considering a saturation of wants or background of needs to be satisfied. In relation to the previous assumption there is an important distinction to make. For example, (Max-Neef, Elizalde, & Hopenhayn, 1991) argue that human needs as such are limited and stable over time, however,

[1] The 'rebound effect' is when improvements in energy and resource productivity, leading to a decrease in costs, are followed by an increase in consumption volumes.

what varies are the ways to satisfy those needs. Similarly, economist Sen refers to 'functionings'[2] instead of needs (Segal, 2004). This distinction allows us to identify that (material) desires have a final purpose to satisfy. This purpose can be called in one way functioning or, in another, human need. Thus, the increase in material goods does not necessarily entail satisfaction of more needs. Culture, technological development and affluence levels might play an important role in the way these needs are satisfied. For example, TV, mobile phone, access to internet and computer, can be considered as part of daily life today, although they have been rather recently developed. The increase in material levels are reflected in, for example, minimum living standards, poverty lines and material aspirations. If there is not a saturation of wants, then, an important point is to understand which possible mechanisms are contributing to the rising of material desires.

Schor (1991, 1995) is one researcher that has been questioning why we have chosen more income instead of leisure time, especially studying the USA and Japan. Mainly, she suggests that employers set the schedules and when productivity rises, they pass along the gains as an increase in wage rather than reducing their working time (Ropke, 1999). Is the working structure so strong that individuals cannot realize their preferences? Or, do individuals really want to work as much as they do? Understanding the individuals' preferences is fundamental for assessing the possible introduction of a working time reduction (WTR) policy.

The difference between short and long term income relation with subjective well being (SWB) noted by Easterlin is an important challenge for addressing the environmental problems caused by the current consumption patterns. It raises some interesting considerations: Do we make working and income choices based on short term thinking? Could we anticipate long term outcomes at the time of making those choices?

In addition to the potential reduction in working time, Keynes also raised some concerns about leisure: How to use our increasing leisure time? *"…how to occupy the leisure, …, to live wisely and agreeable and well"* (quoted in Hirata, 2001). From an environmental perspective, increases in resource intensive leisure activities may lead to additional environmental problems. On the other hand, people's preferences and appreciation of leisure activities compared to other uses of time has an important role in the decision between paid work and leisure.

Exploring and further understanding the abovementioned aspects and their possible influence on the choice between time and income is the topic of this research.

1.1.1 Terminology

It is sometimes difficult to provide an exact meaning of the following terms. Therefore, the definitions presented reflect how the terms are understood and used in this research.

Needs: is used to connote the intrinsic human needs in a broad term. The classification of needs proposed by Max Neef (Max-Neef et al., 1991) includes subsistence, protection, affection, understanding, participation, idleness, creation, identity and freedom. Similarly, intrinsic human needs are exemplified in Maslow's hierarchy: material needs include physiological, security and safety; social and psychological needs include belongingness, self and others esteem; and, moral needs include love, truth, justice and meaningfulness. Maslow's hierarchy of needs is presented in Figure 4-5.

[2] 'Functioning' can be understood as a similar concept to 'functional unit' in life cycle analysis thinking.

Functioning: when referring to an action (including goods and services) which allows the individual to live in a certain way (Sen, 1984).

Desires: is used, interchangeable with *wants* and *aspirations*, when addressing material goods and services used or considered necessary for the satisfaction of needs.

Well being: the state of being happy, healthy and prosperous (Encyclopaedia Britannica, 2004).

Social welfare: is used to connote what is available in the society for all the people, e.g. level of free education, public health, etc. This term is used interchangeable with *wealth in the society.*

1.2 Objective

The objective of this thesis is to explore in affluent societies the choice between income and material goods over 'free' or leisure time considering that, on average, the level of well being has remained stable over time. And, within this context, identify possible policies regarding sustainable consumption.

In order to meet this objective, this thesis attempts to answer the following two main research questions:

i. Which are possible factors contributing to the increase of material desires and consumption?

ii. Which are the working and income preferences in Europe? Are there any influential factors determining working time reduction preferences and their achievement?

Additionally, a complementary research question has been explored:

iii. What kind of policies within the context of sustainable consumption could address the conflict between short and long term relation of income and subjective well being (Easterlin Paradox)? Does a WTR policy contribute to address this conflict?

1.3 Scope and Limitations

This research is done within the context of sustainable consumption. The scope is affluent countries, where material needs are widely achieved and productivity increases could be transformed to increases in leisure time. European countries are the focus for data analysis. The data analyzed corresponds to the period between mid 1980's to late 1990's.

The focus of this study is on the length of working time. The nature of possible pressures and health problems arising from an intense workday are not analyzed, though stress and conflicts are taken into account as an influencing factor for decision making.

The scope for analysis of the decision between income and time only considers income that comes from paid work. Thus, other forms of getting money are excluded.

1.4 Methodology

To explore the choice between material goods and leisure time, literature review was conducted in two main topics: subjective well being and working preferences. All data utilized was secondary, except for a marginal use of original results of a survey on working preferences. Internet and books are the main literature review sources.

Literature review about quality of life, subjective well being, happiness, consumption, leisure and time use was conducted. Subjective well being was reviewed in relation to income, consumption, leisure and time use. Electronic journals especially consulted were Journal on Happiness Studies, Journal of Economic Behavior and Organization, Social Indicators Research and Journal of Economic Psychology. Furthermore, the web page of the 'World Database of Happiness' was consulted and references on the related topics were selected. Finally, European countries' measures of subjective well being were taken from Standard Eurobarometer reports.

Working trends and preferences were reviewed for European countries. The main sources of information were studies carried out by the European Foundation for the Improvement of Living and Working Conditions (EFILWC) and Organization of Economic Cooperation and Development (OECD). Recent events and further information on the topic was obtained in the European Industrial Relations Observatory (EIRO), where on line news and articles are found. The studies were found on internet and were chosen regarding the comparability among European countries and the additional socio demographic information provided.

Working preferences were analyzed according to subjective well being findings. Sustainable consumption policies and initiatives from the OECD, UNEP and European Union were reviewed to identify possible spaces for policy introduction. This was a qualitative analysis and is further used for discussion and conclusions.

1.5 Outline

Chapter 1: Introduction. This chapter gives an introduction to the topic and why the thesis was written. It describes how the research was carried out, the methodology used, the focus areas and the limitations of the thesis.

Chapter 2: Well Being. This chapter introduces the concept of subjective well being as a measure of quality of life. Then, the Easterlin Paradox is explained, showing the different relations between subjective well being and income. Other concepts which may be linked to the decision between income and free time are presented: consumption, time use and leisure. A scheme of the relation between income and subjective well being and possible shifts is developed and presented at the end of the chapter.

Chapter 3: Working Trends and Preferences. This chapter presents the average working time trends in European countries during the last three decades and some concepts related to the labor market. Working preferences obtained through surveys and specific circumstances in the different countries are the central part of the chapter. A dynamic perspective of the labor market is also presented. Finally, the chapter ends with examples of different working time reduction policies.

Chapter 4: Analysis. This chapter includes an analysis of the expressed working preferences according to SWB findings, incorporating the differences that may rise from an ex ante (decision utility) and an ex post (experience utility) evaluation of income and consumption increases. This is followed by a discussion and a policy review related to consumption patterns. Then, sensitivity of the wording of the questions and psychological factors associated with surveys are presented. Finally, the chapter ends with a discussion about the possible effects of working time reduction on the environment.

Chapter 5: Conclusions. This chapter concludes the research. It returns to the research questions and answers them. Suggestions on possible policies at a general level are presented as well as points for further research.

2 Well Being

Quality of life concerns is probably one of the main objectives in modern society as it has been in all time periods. From Aristotle to Kant, philosophers have been questioning which may be the fundamentals of a good life and a good society. Aristotle's concept of *eudaimonia* encouraged people to realize their full potentialities in order to achieve a good life, while "*Kant called individuals to achieve a good society by acting in a moral way such that their actions could be the basis of universal laws*" (Diener & Suh, 1997). It is interesting to note that Aristotle refers to a good life from an individual perspective, whereas Kant is referring to a good society. Opposite to Aristotle, eastern philosophers stressed the virtue of restraining individual desires (Diener & Suh, 1997), which from our 'western' perspective may be difficult to understand. Clearly, the essentials for a good life are not easy to find and there is not a recipe for it. Moreover, it is also recognized that there are more goals in a society than just what is commonly understood as well being or feeling good. These can include justice and human development (Lane, 2000) or contributions to the society[3] (Veenhoven, 2000).

As presented previously, Mill and Keynes predicted that economic development and progress would lead to more leisure, probably considering it as an improvement in quality of life. Nowadays, an important part of quality of life assessment is done using mainly economic indicators. However, there are also some concerns about this simplification. As stated by (Diener & Suh, 1997), "*at a time when industrialization is transforming the lifestyles and values of every society on earth, scientific knowledge regarding human well being is fundamental to determine whether material affluence should be the dominant concern in attaining a desirable quality of life*". In the next section, wider concepts of quality of life measures are presented.

2.1 Quality of Life Measures

After industrialization and more intensively after World War II, at the political level, economic indices have been predominating well being assessment. However, during the last few decades two new approaches to determine quality of life have been developed: social indicators and subjective well being measures (Diener & Suh, 1997).

Brock (1993) (quoted in (Diener & Suh, 1997); (Veenhoven, 2000)), suggested three main philosophical ways to determine quality of life:

i. Characteristics of the good life dictated by normative ideals.

ii. Satisfaction of preferences, assuming that people will select what most enhances their quality of life (basis for much of modern economic thinking).

iii. Experience and feelings of individuals.

Diener and Shu (1997) suggest that a more appropriate way (than just economic indices) to estimate the quality of life in a society should include ***social indicators***, ***subjective well being measures*** and ***economic indices***. These three aspects are related with Brock's philosophical ways to determine quality of life. *Economic indices* reflect the ability of people to select market goods and services. *Social indicators* can be considered as normative ideals of a society. *Subjective well being* corresponds to a personal judgment of well being. Each of these

[3] Veenhoven calls the contributions to the society 'utility of life' and includes them as part of quality of life factors. His quality of life factors are presented in the next section.

aspects has advantages and disadvantages but used together they complement each other (Diener & Suh, 1997).

A study of Campbell, Converse and Rodgers indicated that objective indicators, such as social and economic indices, were only modestly correlated with people's reported levels of *subjective well being* (Diener & Suh, 1997). Thus, the importance of assessing the personal perception of well being has risen. And moreover, who can evaluate better the own state of well being and preferences of what is important than the own individual?

Another researcher in this area, (Veenhoven, 2000), has identified different aspects related to quality of life: (i) chances and outcomes; and (ii) outer and inner qualities, which combined result in a two by two matrix, presented in Figure 2-1. Chances and outcomes make the distinction between the opportunities available for a good life and the experience of a good life itself, which could also be referred as means and end. The other aspect differentiates the state of the surroundings from the state of the individual.

	Outer qualities	Inner qualities
Life chances	Livability of environment	Life-ability of the person
Life results	Utility of life	Appreciation of life

Source: (Veenhoven, 2000)

Figure 2-1 Four qualities of life

Veenhoven (2000), to avoid confusions due to wording, describes conceptually the components of quality of life:

Chances – potentials of life quality

Livability of the Environment: refers to the living conditions external to the individual, i.e. the characteristics of the environment. Some examples of this quality standard are environmental indicators, equality, social security, economic indices, etc. More details for this and the other aspects are presented in Figure A-1 in Appendix A.

Life-Ability of the Person: this term refers to the inner life chances or features of the individual, i.e. how well he or she is equipped to cope with the problems of life or exploit the opportunities (or using a biological term, 'adaptive potential'). Some standards are physical and mental health, knowledge and skills.

Results – judged by their value (subjective character)

Utility of Life: this aspect stands for the fact that a good life is also good for something more than itself, which presumes some higher values (e.g. transcendental, meaning of life). Some examples are caring for children, friends and being a good citizen. Mill (1861) highlighted the importance for him of this aspect in his famous phrase where he stated that 'he preferred an unhappy Socrates than a happy fool'.

Appreciation of Life: this aspect corresponds to the individual's personal evaluation of his or her quality of life, what is known as 'subjective well-being', 'life-satisfaction' or 'happiness'.

As presented above, quality of life issues comprise many different aspects and are very difficult to evaluate. There are objective terms, though normative, which can be regarded as the existing opportunities. Also, there are personal and society's appreciations, which have a subjective character and evaluate what has been actually experienced. The lack of correlation between objective indices and SWB measures found by researchers may be due to the fact that objective indices lack to appraise the fit between them and the individual (Veenhoven, 2000). Particularly, this study is aimed to understand the individual choice between time spent in paid work and leisure. As this trade off is seen as a personal choice, individuals' SWB measures and correlations will be the focus for the study and the analysis. Though, the other indices are used as references.

2.2 Subjective Well Being (SWB)

"What is the highest of all goods achievable by actions?...both the general run of man and people of superior refinement say that it is happiness…but with regard to what happiness is, they differ" (Aristotle, Nichomachean Ethics, Book 1, Chapter 4)

The concept of subjective well being (SWB) corresponds to our own evaluation of life, related to our own experience. It is obtained through an interview. It is aimed to understand how a person feels about life in the context of his or her own standards (Diener & Suh, 1997). SWB has three interrelated aspects: life satisfaction, pleasant affect and unpleasant affect. Affects represent moods and emotions whereas life satisfaction refers to a cognitive sense (Diener & Suh, 1997). It can be understood as how 'happy' or 'satisfied' is an individual. Example of survey questions are presented in Appendix A. Questions with the word 'happy' are usually more related with affective measures, whereas the ones with 'satisfied' are related to cognitive evaluations (Diener 1984, 1994; Veenhoven 1991b, 1997; quoted in Hirata 2001). However, both aspects of SWB were found to be significantly correlated and for the purpose of this study, both of them will be considered as SWB measures as a whole.

According to a number of researchers (Andrews & Withey, 1976; Campbell, 1981; Campbell, Converse & Rodgers, 1976; Cantril, 1965; Veroff, Douvan & Kulka, 1981), the most important concerns of daily life influencing SWB are: material living levels, family circumstances, health and job attributes (Easterlin, 2001b).

The main advantages of SWB measures is that they are based on the individual's personal experiences and not on what others may think is relevant (indirect measures) and that it is measured in a common dimension which makes it easily comparable (Diener & Suh, 1997). Moreover, it reflects the psychological aspects of well being, which are not reflected in 'objective' indicators. Schneider in 1976 pointed out the important difference between the physical and psychological aspects of well being (Diener & Suh, 1997). Nevertheless, SWB measures also have downsides. People's adaptability to the circumstances (Veenhoven, 2000;

Diener & Suh, 1997) and personality influences are the main drawbacks of this type of assessment (Diener & Suh, 1997). Another important aspect to have in consideration is the existence of a positive bias of the answers given by the respondent (Eckersley, 2000). Besides, SWB is a personal judgment and does not necessarily reflect the well being of the society as a whole.

Usually, SWB measures are gathered jointly with other socio demographic data, which is later used to find correlations (e.g. age, gender, income, level of education, etc). When a correlation repeats in different samples it becomes robust, although it is important to keep in mind that we are talking of statistics and averages. A correlation does not imply a cause effect character, the different samples must be further analyzed to find, if existing, a cause effect relation. In general, explanations to the correlations found are hypothesized and the data is analyzed to find support or reject the previously stated hypothesis. The extent and robustness of the correlation and further explanatory variables are measured through the R^2 and significance among the different variables analyzed[4].

There are some studies which link higher subjective well being measures with higher economic performance (mainly measured with GDP, GNP or GNI per capita). So then, why should we measure other things, which are much more demanding, rather than only use economic indicators? It is fundamental to further understand the relation between them and the analysis may provide relevant information for policy developments. In the next section, correlations of subjective well being and income in different perspectives are presented, introducing the Easterlin paradox. In section 2.4 consumption, leisure and time use and their influence in well being are presented. A summary and the main findings are presented in section 2.5.

2.3 SWB and Income: the Easterlin Paradox

There are many ways of analyzing the relation between income and subjective well being and the results show different relations among these two variables. The relation between income and SWB has been studied in a specific point in time and throughout a longer period. The puzzling finding is that when incorporating the time dimension, the correlation between income and SWB found in the static analysis disappears. This is known as the Easterlin Paradox. Following, the most common studies on SWB and income are presented.

2.3.1 SWB and income at a point in time

At a point in time studies can be done at individual or at country level. Studies at individual level are called c*ross sectional correlations for individuals*, and analyze the relation between income and various form of SWB (e.g. happiness, life satisfaction and positive effect) within a country or region in a specific point in time. Studies at country level are called *across nation studies,* and take average income and SWB measures of different countries at a point in time.

Within country studies at individual level present positive correlations between income and SWB. These correlations are considered to be rather small when compared to across nation studies. In general, the correlations observed are between (0.12-0.20), although higher correlations are observed in poorer countries (0.35-0.45). Studies results are shown in the Table 2-1.

[4] R^2 measures how successful the fit is in explaining the variation of the data. It is between 0 and 1, being a better fit when it is closer to 1. (Hhttp://www.mathworks.com/access/helpdesk/help/toolbox/curvefit/ch_fitt9.htmlH, accessed 02/09/04).

Table 2-1 Correlations within nations between income and subjective well being

Citation	Place	Correlations	Concept
Diener and Oishi (2000)	19 nations	0.13 (mean r, range -0.02 to 0.38)	Life satisfaction
Schyns (1997)	W. Germany and Russian Federation	0.06 to 0.15 0.17 to 0.27	Life satisfaction Life satisfaction
Lachman and Weaver (1998)	United States	0.18 and 0.18	Life satisfaction
Blanchflower et al. (1993)	United States (log income)	0.15 0.14	Men, happiness Women, happiness
Hagerty (2000)	United States	0.18	Happiness
Diener et al. (1993)	United States	0.13 (circa 1973) 0.12 (circa 1983)	Affect balance Affect balance
Mullis (1992)	United States males	0.17	Happy with life and domains
Keith (1985)	U.S. older divorced and separated	0.23 0.21	Women and men: both "satisfaction with level of living"
Conner et al. (1985)	Retired professors from Iowa, U.S.A.	0.24	Life satisfaction
Brinkerhoff et al. (1997)	Village in India	0.22 0.35	Happiness Aggregate satisfaction
Biswas-Diener and Diener (2000)	Poor areas of Calcutta	0.45	Life satisfaction

Source: (Diener & Biswas-Diener, 2002)

Although this correlation can be considered statistically rather small, happiness perception within country does vary according to income. Table 2-2 shows the differences in SWB measures between the different income groups. At higher income levels, a higher percentage of the respondents say to be 'very happy'.

Table 2-2 Distribution of Happiness at Various Levels of Income (percentage)

Level of income (in $1,000)	Very happy	Fairly happy	Not very happy	No answer
All classes	43	48	6	3
15,000 +	56	37	4	3
10-15,000	49	46	3	2
7-10,000	47	46	5	2
5-7,000	38	52	7	3
3-5,000	33	54	7	6
Under 3,000	29	55	13	3

Notes: (1) Data corresponds to the United States in 1970.

(2) Data was first published by Easterlin in 1974.

Source: (Easterlin, 2001a)

There are a number of across nation studies which report stronger correlations between average SWB and income of the nation. In Table 2-3 are presented some of these studies and the correlations reported.

Table 2-3 Correlations across nations of income and mean subjective well being

Reference	Number of nations	Correlations
Veenhoven (1991) Cantril´s 1965 sample	14	0.51
Based on Gallup sample	9	0.59
Diener et al. (1995)	55	0.59
Inkeles and Diamond (1980) Cantril's 1965 sample, controlled for education	10	0.55 to 0.61
Ouweneel and Veenhoven (1991)	28	0.62
Diener and C. Diener (1995a)	34	0.64
Schyns (1998a)	40	0.64
Diener and Oishi (2000)	42	0.69
Inglehart and Klingemann (2000)	64	0.70

Note: All correlations are significant at $p<0.05$ (one-tailed) or less.

Source: (Diener & Biswas-Diener, 2002)

Although the income SWB correlation across nations is significant, the correlation appears not to be a linear one. When the relation between SWB and income is presented graphically, it shows that wealth increases at lower income levels raise much more the SWB than when this wealth increase is in already rich nations. In other words, the wealth of nation appears to have diminishing returns with respect to SWB. As shown in Figure 2-2, in affluent societies average incomes do not show a clear correlation with SWB measures. It is important to remember that the focus of this study is on these countries.

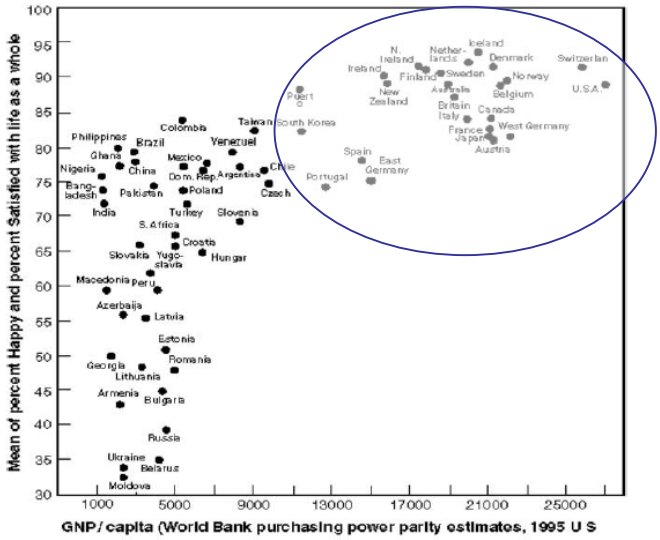

Figure 1. Subjective well-being by level of economic development. Source: World Values Surveys; GNP/capita purchasing power estimates from World Bank, World Development Report, 1997. $R = 0.70$, $N = 65$, $p < 0.0000$.

Source: (Garhammer, 2002)

Figure 2-2 Subjective well being by level of economic development

As presented above, at a point in time, income has a positive relation with subjective well being, i.e. in average, higher SWB measures are observed at higher income levels. More often, the correlation is assumed to be higher incomes leading to higher SWB. However, there are a few studies that also suggest an influence from the other direction as well, i.e. higher SWB leading to higher incomes. In the present study, it is analyzed the first cause and effect relationship: how income affects SWB. One possibility is that income directly influences SWB, i.e. everything kept the same a person with higher income will be more satisfied. Another option is that income is related with other desirable aspects (usually called moderating variables) and influences SWB through them (e.g. education, being employed, justice, peace, etc).

Which are possible moderator variables at individual level <u>within nations</u>? Commonly studied moderator variables are marital status, occupation, employment, age, sex, educational level, family and friends. Studies' results show that income still influences SWB after controlling these moderating variables. However, these other factors do have a certain influence in the correlation, but the extent of the effect varies. (Diener & Biswas-Diener, 2002) have summarized the following findings:

Table 2-4 Moderators variables of the income – SWB relation

Possible moderator	Finding
Educational level	Tomes (1986) found that education had very small effects.
Employment	Tomes (1986) found that unemployment had a large negative impact, especially for men.
Gender	Adelmann (1987) found that income was significantly correlated to men but not for women. Ross and Huber (1985) found that a husband's personal earnings directly decreased the probability of depression, whereas not for wives.
Marriage	Tomes (1986) found that marriage had moderate to large effects. Schafer (1982) found that low income was a predictor of depression among single women, but not among married. Johnson (1977) reported that economic strain predicted depression but marriage buffered this effect to some degree. Marriage acted as a buffer to preponderance to depression due to economic strains.
Age	Income effects on SWB were found to be weaker in college students than adults (Veenhoven, 1995; Diener & Oshi, 2000). George (1992) found that the relation of income and SWB appears weaker for the elderly.
Wealth in the nation	Veenhoven (1991) found that correlations between income and SWB were stronger in poorer countries. Sychns (1998) and Diener and Diener (1995b) found that financial satisfaction was stronger correlated to life satisfaction in poorer nations.

Why is the income SWB correlation <u>within nation</u> weaker in richer countries? Researchers suggest that an important moderator is the existing wealth in the society, which makes the correlation stronger in poor countries (Diener & Biswas-Diener, 2002). Explanations to this moderator effect are the possibilities for fulfillment of basic needs, significant income inequalities in poor countries and the fact that richer nations have better

social welfare protections (Diener & Biswas-Diener, 2002). Moreover, material desires are more flexible once more people move beyond the level of abject poverty (Diener & Biswas-Diener, 2002). Considering the significant influence that social wealth can have in SWB, it is not only important to quantify the average country income, but also other aspects related with it, such as state expenditures on public goods, social protection and income distribution.

Why richer nations present in average a higher SWB in across nation studies? One explanation suggested is that high income countries have other desirable characteristics besides material goods such as human rights, greater equality, higher literacy rates, longevity, health, lower crime, and democracy (Diener & Biswas-Diener, 2002). The existence of public goods in wealthier nations such as public schools, highways, water and sewage systems, hospitals and parks may rise the SWB of all the individuals of the society (Diener & Biswas-Diener, 2002). However, higher income countries could also have non desirable aspects, such as intense competitiveness, materialism and less time for leisure and socializing (Diener & Biswas-Diener, 2002). Once again, it appears that wealth in the society plays an important role in experiencing well being.

Wealthier nations also tend to be more individualistic and it was found that individualistic societies tend to have higher SWB (with strong correlations). However only some attempts to control this variable have been done without much reliability (Diener & Biswas-Diener, 2002). Individualistic people may be more prone to report happiness to the interviewer and, in general, positivism of the people in a society may increase with income as well (Diener & Biswas-Diener, 2002). Another explanation given by Ahuvia (1999) refers to the fact that achieving what one wants (without social pressures) will lead to higher satisfaction and this is easier in individualistic societies (Hirata, 2001). Although more individualistic can be considered to have more freedom and options, it also presents some negative aspects and may be related, for example, to a higher rate of suicides. Due to limitations on this topic, this aspect is not going to be considered for the analysis in this study.

Another explanation may be that the goals and ideals are taken from the richest countries, and thus, the poorer the country, the larger the gap between the existing reality and the expectations. With globalization, advertising and communication, the lifestyles of affluent societies become easily widespread, though not the chances for their attainment. And poorer individuals and countries may try to emulate these patterns without much success, becoming less happy.

Some researchers also point out the importance of cultural differences in the perception of well being and happiness. In the Eurobarometer measures of life satisfaction, significant country differences are observed. It is suggested that a "*certain degree of satisfaction or dissatisfaction is a feature of each national culture – and perhaps of some regional cultures too - within which individuals tend to adjust their aspiration to their circumstances: the norm is to be relatively satisfied, in other dissatisfied*" (Commission of the European Communities, 1985: 27). This statement reflects two important aspects. One is the role that cultural differences might have in the results of SWB measures. And, the other is that this cultural difference is reflected in how the aspirations are shaped (or not) according to the actual situation. Considering that European countries belong to a larger group, the European Union, general standards may easily spread and become the norm for all the countries. In this case, countries farther away from the norm are more likely to be less satisfied.

Which is the role of financial satisfaction? Financial satisfaction is considered one aspect of life satisfaction as a whole. It is difficult to distinguish if income has direct effects on SWB (i.e. daily consumption pleasures of greater income) or is mediated by a positive judgment of

one's income expressed in financial satisfaction (Diener & Biswas-Diener, 2002). Satisfaction with the own financial situation may be due considering income as a mean of consumption, wider the choices and/or as a sign of success or status. In the first place, financial satisfaction as a mean of consumption is related to how much of the market goods and services the person desires can be purchased. On the other hand, a good financial situation may allow the individual to choose a better job or quit one that is not satisfactory (Praag, Frijters, & Ferrer-i-Carbonell, 2003). In this way, income widens the possibilities to choose according to the own preferences. Also, income can be seen as a sign of how much the worker is valued by the employer (Praag et al., 2003). Considering that higher incomes can also have a status connotation, income may become a valuable symbol in itself and not only as a means of consumption. As Scitovsky points out "*When profits or earnings are all a man has to show for his work, he transfers to them his pride of achievement and regards them as a symbol and measure of society's appreciation of what he does for society*" (Scitovsky, 1992: 207). In this sentence he is referring to the interpretation of the Puritan ethics (also called Protestant ethics), which considers work as the most important aspect of life and, nowadays, earnings are the way of appraising it.

Studies show that financial satisfaction has a stronger correlation with income than global life satisfaction (Diener & Biswas-Diener, 2002). However, its importance in life satisfaction can differ among countries. Schyns (2000) did a study comparing West Germany and Russia and found that in Germany financial satisfaction had a greater role in life satisfaction than in Russia, where the direct effect of income was more significant (Diener & Biswas-Diener, 2002). Thus, in Russia the daily pleasures of consumption may be more important in SWB measures. Probably, in poorer countries and with more income distribution inequalities, income has a greater direct effect in SWB due to the fact that life circumstances and chances from the rich strongly differ from the ones of the poor. This effect could be accentuated if basic material needs are not widely satisfied. As this study is focused on affluent societies, it will be considered that income acts rather in an indirect way towards life satisfaction, at least when taking into account the marginal reduction of income involved in the option of a working time reduction.

2.3.2 SWB and income over time

This type of studies can be done at individual or national level. Studies at individual level are rather rare and reported results have not yet reflected a constant clear pattern. In this section, national level findings are presented.

Studies considering changes in national income levels through a period of time show little or no change in SWB although the income of the country increased significantly (Blanchflower and Oswald, 1997, 1999; Diener and Oishi, 2000 quoted in (Diener & Biswas-Diener, 2002). This finding corresponds to data analysis for U.S.A. and Japan. Also, life satisfaction in Europe, reported in the Eurobarometer since the beginning of the 1970's, has remained stable in Europe as a whole and also at individual countries. On average, life satisfaction measures in Europe report an 80% of people satisfied (European Commission, 1998).

As shown in Figure 2-3, the average SWB level in Japan had no significant change although the average income of the country (measured in GDP per capita) increased around five fold.

Notes: (1) Income figures are corrected for inflation.
(2) There is a 3% increase in SWB in the figure.
Source: (Diener & Biswas-Diener, 2002)

Figure 2-3 Economic growth and SWB in Japan

Which may be possible explanations for the lack of significant correlation between income and SWB in the long run? It is possible to identify mainly two, not mutually excluding, explanations. One is related with the personal desires and the other, with changes in the external environment. In the first place, there seems to be an adaptive mechanism to the new commodities leading to an increase in desires. As Diener et. al. (2000) argue, although income increases might produce short term increases in SWB, it seems that people adapt over time and material desires and expectations increase as well. Something that once was a luxury no longer is, and now becomes part of our daily 'necessities'. In the first place, comparison with our own past experience creates a standard to improve and comparison with the others may, as well, influence. Moreover, technological development and the invention of new goods and services create new desires and make a 'normal' life more expensive. This increase in desires does not only occur at individual level, but is reflected in what is (socially) considered a 'minimum' living standard. For example, Rainwater (1999) noted that in the United States the perceived income to 'get along' rose in the same proportion as GDP per capita (Easterlin, 2001b). Easterlin (1995) suggests that the norms on which judgments of material well being are based increase along with the income growth of the society (Diener & Suh, 1997). He reports findings from an individual perspective that over the life cycle SWB remains constant, despite substantial income and material consumption growth (Easterlin, 2001b). The acknowledgement of these variations of standards throughout time and different cultures is not recent. Adam Smith had pointed out that across cultures and periods of history, it has been of great importance for the personal well being the possibility of people to be able to 'appear in public without shame' (Segal, 2004).

However, not only existing standards and desires may influence. It is also probable that while income increases, other aspects of life may worsen. Examples of these domains are intensive competitiveness, relations and time with family and friends, and environmental quality. Some

of these aspects are reflected in 'alternative' economic indices such as Index of Sustainable Economic Welfare (ISEW) or Genuine Progress Index (GPI).

The lack of correlation between income and SWB over time considering the existing correlation at a point in time is called the 'Easterlin Paradox'. Unfortunately, there is not empirical data to analyze what happens with SWB if income remains stable or decreases over time[5]. Explanations to this paradox will be explored in related aspects such as consumption, time use and leisure, and their relation with well being.

2.4 Consumption, Leisure, Time and Subjective Well Being

In this section, aspects of life that may influence the choice between time and income are presented. Income is directly related to the possibility of market consumption. Leisure has two main aspects. One relates with the individuals' valuation of leisure activities and the other with the amount of resources required for leisure activities. Time use studies are used to find possible ways in which people decide on their allocation of time among different possibilities. Finally, a model of possible shifts in the income-SWB relation is developed.

2.4.1 Consumption and SWB

As presented previously, the relation of income and SWB appears strongly influenced by consumption desires and their increase over time. Understanding more about what might be triggering this is the objective of this section. In principle there can be identified three different aspects. These can be explained as positional consumption, an increase in wants and increase in the cost for attaining the same level of satisfaction (or functioning). In reality these different mechanisms could act at the same time and may be difficult to separate from each other.

Considerable evidence suggests that utility derived from consumption strongly depends on the context (Frank, 1989). This does not mean that all utility is relative, but considering that the research is focused on affluent societies, where most of the primary necessities are fulfilled, this source of utility is of much importance for this study. Examples of consumption aimed to improve the personal situation in relative terms (similar to a ranking) are: military race and purchasing of armament, purchasing big secure or faster cars and long working hours looking for a promotion (Frank, 1997). This type of consumption is called **positional consumption.** The personal decision can be exemplified with game theory and prisoner's dilemma, where the outcome depends on what the other does. For example, let's take the situation when two persons are thinking of buying a bigger and more secure car.

1) A: bigger car B: bigger car	2) A: bigger car B: smaller car
3) A: smaller car B: bigger car	4) A: smaller car B: smaller car

Figure 2-4 Prisoner's dilemma in positional consumption

In case of accident, situation 1) and 4) would have the same outcome. As individuals do not know what the other will do, he or she will try to maximize their own situation by buying a bigger car. The outcome will be 1), A and B buying a bigger car. This means that extra

[5] Some studies have been done in relation to income decreases during recessions, retirement, voluntary work decreases and fired people. Some of these findings are presented in Appendix A.

resources are spent to obtain the same outcome. Thus, there is a loss for the society as a whole. This problem cannot be solved at individual level (Frank, 1997), cooperation among the actors or some kind of agreement may be helpful.

Positional consumption, to be better off in a relative perspective, does not only increase the SWB of the individual himself, but also negatively all the others in their peer group who become worse off than before. It can be considered as a 'zero sum' situation, when one wins others necessarily loose. This dependence of utility is called by Frank (1989) positional externalities and he suggests progressive tax consumption (Frank, 1997).

Another way in which material consumption aspirations increase is through a **direct increase in wants**. This can be linked to the process of the individuals' adaptation to the new goods and services, social demonstration, advertising and development of new products.

From an environmental perspective, the conflicts arising due to the current unsustainable consumption patterns would be a sufficient reason to find a solution to this dilemma[6]. However, Frank (1997) was questioning if the loss of resources for the society as a whole could be spent in a way as to produce long lasting well being. Mainly, he describes two types of processes, one that is exposed to **total adaptation**, such as consumption of material goods, and other that is subject to **partial adaptation**, such as the exposure to noise and congestion, practicing physical exercise and having social relations. The term adaptation is related to the capacity of the activities described above to provide well being (or nuisance) when making it at a constant level. Total adaptation means that people tend to get used to the increased level of material goods consumed, after which no further increases of well being are derived from it. Partial adaptation means that people do not adapt completely to nuisances such as noise and congestion. In this case, the increases in well being are related to the avoidance of such nuisances. Similarly, physical exercise and social relations[7] continue to provide well being over time, even if they are done at a constant level. It is interesting to note that physical exercise and social relations necessarily require time resources, while the avoiding of noise and congestion imply material and organizational assets. Frank (1997) argues that an investment of resources in partial adaptation activities will produce long lasting well being increases. And thus, avoid the loss of resources in the society due to total adaptation consumption.

An increase in consumption desires could also take place due to external changes in the surroundings or circumstances. Environmental degradation, scarce resources and development of new products can contribute to the increase of resources required for attaining the same level of satisfaction (same individuals' '*functionings*'). For example, it can happen that along with increases in wealth, a deterioration of other desirable characteristics occurs, e.g. noise pollution increases and congestion. Considering this deterioration, more resources will be required to maintain the previous satisfaction level, e.g. affording a quieter place may become more costly (double windows or a house in a more expensive neighborhood). Additionally, over time and with increase in income, positional goods can become more expensive (similar to a bid). Technological development may influence in this aspect as well, for example, nowadays mobile phones, for many people have become part of the daily communication devices. As (Segal, 2004) points out, the level of needs satisfaction in any society depends on two factors, the level of income and the '*social efficiency of money*'. Social efficiency of money corresponds to how many '*functionings*' you can satisfy with a specific

[6] In the long run, environmental improvements are aimed to improve the well being.

[7] Social relations is a term used to connote family and friends activities.

income. Thus, an increase in desires may take place due to external changes which make the attainment of the ***functionings*** **more costly**.

2.4.2 Time and SWB

Time is becoming a scarce resource. Studies ranking the preferences and relative importance of different components of SWB confirm the importance of social relations and time has an important role in developing and strengthening them. Furthermore, time use limitations suggest a trade off between time spent in paid work and time spent with family and friends. The different valuations to make the trade off will depend on the individual preferences.

(Lane, 2000) suggests that income and, what he calls, 'companionship'[8] have diminishing returns (declining marginal utility) relative to each other. This means that both resources present diminishing returns according to their availability in relation to the other. Mainly he points out two ways in which the power of money to yield satisfaction decreases as it becomes more abundant: satiation and opportunity cost. He suggests that the most important explanation behind diminishing returns of income is the opportunity cost, and thus, strengthens the importance of 'companionship' (Lane, 2000). As presented before, the possibility of 'satiation' is most probably overcome with the rise in material desires. In addition, (Lane, 2000) states that the power to yield satisfaction of these two competing goods depends on the 'taste' of the individual. It would be interesting to explore how the 'taste' is shaped in the individuals and in the society.

If it were not because of time limitations, income increases through paid work would be less likely to be discarded. However, considering the existence of time constrains, a choice may be done between time spent earning income and leisure time. To further understand this trade off, some concepts of time use are presented.

Time dairy studies usually use the following classifications for time use (European Foundation for the Improvement of Living and Working Conditions, 2003): (i) paid work; (ii) unpaid work; (iii) consumption and leisure; and (iv) personal care.

Excluding time for personal care, which in general does not or should not[9], vary too much, the other three possibilities for time use are substitutable up to a certain limit. Activities may belong to more than one of these divisions. Also, there may be some volume or time limits up to which the substitutable activities may be enjoyable or preferred, after which they can change to disutility.

The main trade off to be analyzed is between time spent in paid work and leisure/consumption activities. As (Scitovsky, 1992) points out, an essential part of well being is derived from non market activities. However, it is also important to note that much leisure and, of course, consumption activities need the spending of money. This aspect makes the analysis more complex. If leisure time becomes more material and resource intensive, then more paid work is needed to afford it, and thus, less leisure time is available. On one hand, income can make more attractive leisure time; on the other hand, more income requires more paid work.

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[8] This term is similar to social relations.

[9] However, there are some studies that suggest a time squeeze in this area such as a tendency to eat faster and sleep less (Garhammer, 2002). But, these aspects are out of the scope of this study.

In economic terms, for utility maximization the marginal revenue of time is the same for all the alternative uses (Becker, 1965 quoted in (Lindvall, 1989)). Highly appreciated uses of time off work would increase the valuation of leisure time. On the other hand, if you do not have much to do, the opportunity cost of not working becomes very high. But this does not have to be a static situation. More interesting and valuable uses of leisure time may rise with more time available, especially when more people are in the same situation.

2.4.3 Leisure and SWB

From an environmental perspective, increases in resource intensive leisure activities may lead to additional environmental problems. On the other hand, people's preferences of leisure activities over others have an important role in deciding to spend more time in paid work or leisure.

Leisure's influence on well being is not easy to determine. Mainly, two studies related with leisure were reviewed. The first one involves a direct ranking of everyday activities and the other a study in which leisure is considered as part of life satisfaction domains. Considering the limited scope of the sources, the study findings will be considered as indicatives and not as generalized correlations.

To measure the utility associated to activities of everyday life, (Juster, 1990) proposed a direct measure of utility. This consists of asking people to assign a value between 0 and 10 to different activities, being '0' a dislike, '5' indifference and '10' enjoyment. The term used to connote the utility is 'process benefits'.

Time use and process benefits surveys were done in the U.S.A. in 1975 and 1982. (Juster, 1990) pointed out the following findings:

i. Activities that are interactive tend to dominate the top half of the rankings, less interactive, or not at all, are on the bottom.

ii. The process benefits of paid employment outrank all but few leisure activities[10].

iii. Process benefits of unpaid work in home (with exception of childcare) tend to rank at the bottom, with a mean value less than paid work.

The different activities surveyed, the process benefits reported and time spent in those activities in 1975 are presented in Table A-2 in Appendix A. In the table, it is interesting to note that the activities related with children have a higher ranking, though illogically, significant less time is spent on them. On the contrary, watching TV has a low process benefit but considerable more amount of time is spent on it. One possible explanation is that activities are more valued because less time is spent on them and, on the contrary, less value is assigned to more abundant ones. However, further research would be interesting to have a better idea of the situation.

A study done in Germany by (Praag et al., 2003) reported the following findings in relation to satisfaction with leisure:

[10] However, the distinction between leisure activities and unpaid work is sometimes not so easy to make. Thus, activities related with children, considered as unpaid work, could have an important overlapping with leisure.

i. The number of working hours has a strong negative effect on leisure satisfaction, while the number of hours spent on leisure has a small positive effect.

ii. Household income is not a strong factor for leisure satisfaction, but the level effects are always positive.

iii. More education leads to less satisfaction with leisure.

iv. It seems that there is a tendency for people to enjoy their leisure time most when they live alone. Both, the presence of adults and that of children have a negative effect on leisure satisfaction.

v. Males enjoy their leisure more than females.

2.5 Summary and Findings

Income has a positive influence on SWB measures within and across countries at a point in time. The correlation appears to have diminishing returns, i.e. at higher income levels differences in income reflect smaller differences in SWB than at lower income levels. In the long run, the influence of income, or more precisely income increases, disappears, i.e. an increase in income over a long period of time does not make people happier. This contradiction is called **'Easterlin Paradox'**.

At a point in time, social wealth seems to have an important role as an indirect pathway to the correlation between income and SWB across nations. Cultural differences and the shaping of aspirations are, as well, pointed out as influencing factors. At a point in time studies also suggest that, in affluent societies, income acts rather in an indirect way in the SWB-income correlation, i.e. **psychological aspects** might play an important role (Diener & Biswas-Diener, 2002). These psychological factors include relative position (or social comparison) and material aspirations. Moreover, income in itself may become a symbol of status. On the other hand, future financial security could have an important role, Bulmahn (1996) reported that worries about the future explain half of the extent of life satisfaction (Garhammer, 2002).

In the long run, an increase in material desires takes place, which has been pointed out as a possible explanation of the 'Easterlin Paradox'. The **increase in material desires** can be triggered by positional consumption, development of new products, advertising, hedonic adaptation, social demonstration and emulation. *Hedonic adaptation* is understood as the reduction of the hedonic (SWB relevant) response to a constant or repeated stimulus (Frederick and Lowenstein 1999: 302; quoted in (Hirata, 2001: 39-40)). *Demonstration* of consumption by other people in the society may cause an increase in desires by simple awareness and concrete exposure to increasing levels of consumption (Hirata, 2001). Additionally, the attainment of a stable level of satisfaction can become more costly due to external effects, such as environmental degradation. Development of new products has an important role, arising desires for new goods and services and changing the way in which previous satisfactions were made (e.g. mobile phones and communication). However, it is important to note that technological development also presents the possibility of creating new products which replace material intensive ones.

Time and income appear to be two competing assets. Moreover, both of them have a diminishing return character, i.e. provide decreasing marginal benefits. Time acts as a mean to achieve important aspects of well being such as family and other social relations. Moreover, it is also associated to activities which may provide long term SWB (characterized by partial

adaptation), such as physical exercise. Time allocation is usually divided in paid work, unpaid work, leisure and consumption activities and personal care.

Leisure seems to contribute to SWB mainly through socializing activities and especially involving actions with children. It is also important to note that paid work is an important source of (process) benefits. Unpaid work activities are the less liked by the individuals. Income appears not to have an important role on leisure satisfaction, while hours spent in paid work have a negative correlation with it. However, the number of hours spent in leisure activities only has a small positive correlation with leisure satisfaction. Although the two studies reviewed are not sufficient to make generalizations, they will be used as a reference.

Subjective well being is a **personal judgment** of our own situation using our own standards. In simple terms, the result will depend on the **objective situation** as well on the own **values and goals.** Values represent the judgment with which the situation is evaluated and the goals are established. Goals are what the individual wants to achieve, and thus serve as a reference for evaluation. In other terms, subjective well being can also be related to how many of the existing aspirations have been achieved.

As the income-SWB relation appears not to be static, different curves variations are presented in Figure 2-5. In the short term, a person is in one curve, and moves along it, and in the long run he or she might change to another curve. In Figure 2-5, the four main directions for the possible movement are drawn. Each of these shifts is explained as follows:

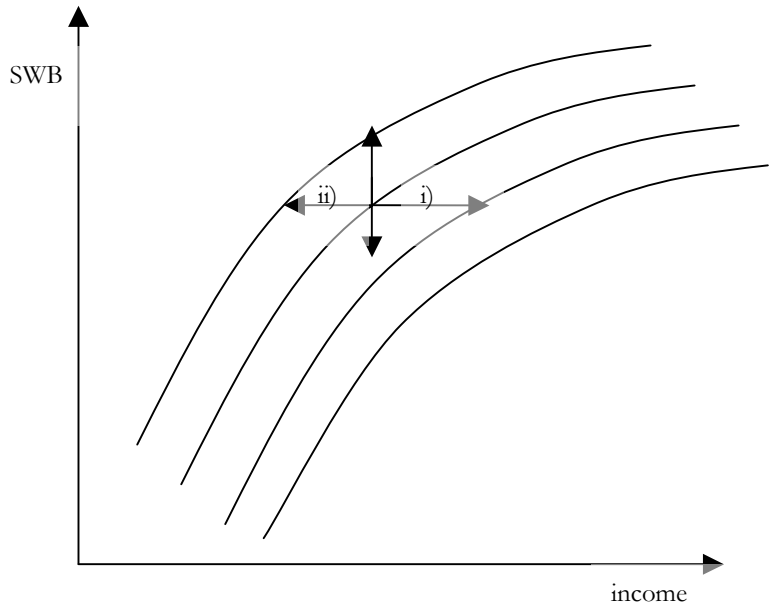


Figure 2-5 Short and long term income – SWB curves

i. **Income increases and SWB remains the same**: as material desires rise along with increases in consumption, the increase in income does not reflect any rise in SWB measures. This aspect may be represented as a horizontal shift to the right curve (→).

ii. **Income decreases and SWB remains the same**: this movement could be observed if a desire for time use rises and income is traded for more leisure time. For example, when someone decides to reduce his or her working time and the new use of time, instead of paid work, brings as much benefits as the forgone income. The movement is horizontally to the left (←).

iii. **SWB increases and income remains the same**: societal improvements such as public goods, human rights, access to education, etc. can cause an upward vertical movement with the corresponding increase in SWB without the need of more income. Also, technological improvements and productivity increases (without an increase in desires) could make the attainment of existing aspirations less costly. In the Figure, this shift is represented with an upward movement.

iv. **SWB decreases and income remains the same**: external factors, such as noise, congestion, competition or air pollution may increase the 'real' cost of maintaining the same level of SWB (e.g. live in a quieter place) and thus the individual will desire more income to just 'stay the same'. Positional externalities of other people's consumption may as well be included here. In the Figure, this situation is represented with a down vertical movement.

During the last years, there have been significant productivity increases, which could have brought a shift represented by (iii). However, the potential increases of them have been overwhelmed by rises in desires (i) and with the rising of the costs of the 'everyday' life, movement type (iv). In Figure 2-5, the 'Easterlin Paradox' is represented by a movement type (i), where, in the long run, income increases does not produce higher SWB.

Considering the current situation of the economic activity, where income increases is an important driver of the current unsustainable consumption patterns, desirable long term shifts would be type (ii), without disregarding the possibility of an increase in SWB.

Exploring the possibilities for a shift type (ii), i.e. **less income and same SWB level**, through a reduction in working time is the topic of the next chapter.

3 Working Trends and Preferences

Although having a job is an unquestionable source of well being, long working hours can have the opposite effect. Concerns about 'work and life balance' are becoming more and more important. Although these concerns have been recognized, the 'other' aspects of life (besides work) are not clearly understood (European Foundation for the Improvement of Living and Working Conditions, 2003). Mainly family is identified with consensus as one of the factors, and many times family issues are on the political agenda. Other factors such as leisure, socializing or use of free time are still not clearly linked to the concept of 'work and life balance'[11] or well being.

Paid work, besides providing income, is also a source of social interaction and can give a sense of self-worth (European Foundation for the Improvement of Living and Working Conditions, 2003). However, statistics from European surveys show that, in 1996, only one third of the European work force was in jobs of high intrinsic job quality. And regarding commitment, only an 8% stated that they would not leave for a job with more pay (Gallie, 1996). Which are the working preferences in Europe? Which is the role of income in these preferences?

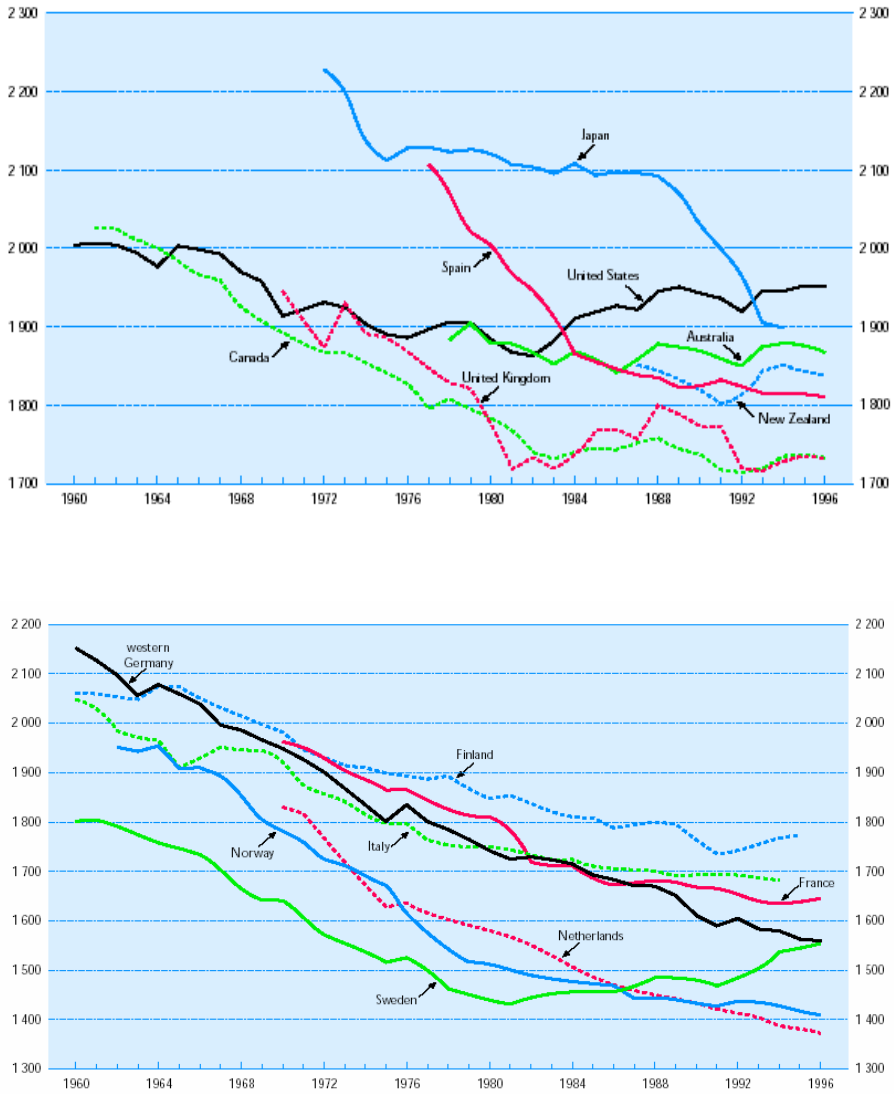
In this chapter, working trends and time preferences in European countries are presented with the aim to explore the trade off between time and income. The identification of working time reduction preferences is the main focus. The different country situations will be studied to identify other influencing factors in addition to income.

3.1 Working Trends and Concepts

Working trends are taken from studies done by the Organization of Economic Cooperation and Development (OECD) in industrialized countries.

Since the 1960s, average working hours per person in employment show a tendency to decrease with time. This may be linked to productivity increases as a result of technological development and reorganizations, and trade unions push for a shorter week. This long term declining trend has been slowing down (with Germany, Japan and Netherlands being the main exceptions), and in some countries there has even been a rising trend (OECD, 1998). Averages per person working hours' trends for OECD countries from 1960 to 1995 are presented in Figure 3-1.

[11] Attempts to estimate the relative importance and value of leisure activities have been done through leisure industries statistics (items sold and employment) and social science questionnaires of participation in such activities. However, the actual enjoyment and quality of leisure time still remains unclear (European Foundation for the Improvement of Living and Working Conditions, 2003).



Source: OECD annual hours database (OECD, 1998)

Figure 3-1 Average annual hours actually worked per person in employment

It is important to note that these trends include self employed, full and part time jobs[12]. Considering that part time jobs have significantly increased in the majority of countries (OECD, 1998), the average of working hours is expected to decrease. However, a reduction in average working hours does not mean a reduction in total work volume, which is influenced by the employment rate as well[13]. Table B-1, in Appendix B, shows the influence of full and part time jobs in the average working time reductions between 1985 and 1994.

[12] The averages are the result of dividing the total number of hours worked over the year by the average number of people in employment (including self employed, part and full time). Data for Italy and the Netherlands correspond to dependent employment (OECD, 1998).

[13] Employment rate corresponds to the percentage of the population in age allowed to work (15-64 years) who actually participates in the labor market.

Which may be the reasons behind the different working hours' trends? Countries which continue having a decreasing trend can be explained by legal action (e.g. France, Japan and Portugal) or by negotiations between the social partners (e.g. Germany and the Netherlands) (Evans, Lippoldt, & Marianna, 2001). The increase in Sweden can be attributable to women working longer hours in part time jobs and a decrease in absence due to the last recession (OECD, 1998). The long working hours of Swedish women may also be influenced by the existence of good childcare facilities which allow them to spend more time in paid work. In the UK, the raise can be related to the increase of self employed during the 1980s, which in general have longer working hours (OECD, 1998). Also, there are productivity issues which attempt to explain the slowing down of the trends, although not a very clear link can be identified. On one hand, OECD (1998), stated that reductions in average working hours without reductions in earnings has been limited by the slowing down of the hourly labor productivity increases. But also, productivity increases may come from the other direction, and there are some examples where a reduction in working hours is followed by productivity increases (OECD, 1998). Usually, productivity increases following a WTR are linked to flexibility which allows firms to adapt the production to the demand variations and to annualisation, which decreases overtime payments. For the purpose of this study, more than these external causes, the employees' preferences and possible reasons behind them are going to be analyzed.

3.2 Employees' Working Preferences

Working preferences are taken from studies done by OECD in industrialized countries and also by the European Foundation for Improvement of Living and Working Conditions (EFILWC) focused on the European Union and Norway.

The OECD study presents surveys from the years 1985 and 1994, commissioned by the European Commission. The EFILWCO report presents information based on a 1998 survey including more than 30,000 people (active and inactive in the labor market). The study consists of an analysis of the data seeking to understand the role that the national, institutional and economic settings play in the determination of the labor market participation and preferences (Bielenski, Bosch, & Wagner, 2002). Additionally, the original data of the EFILWCO survey is consulted for clarification or specific analysis.

This section presents the preferences of the current labor force (the employed) and, separately, the whole population in age allowed to work, which is considered as possible enters to the labor market.

3.2.1 Working Preferences: employed over a period of time

In this chapter, working times and earnings preferences of the employed are presented. The main analysis is centered in understanding the role of income. However, other aspects, such as the length of the working week and recent change are, as well, considered as influencing. Additionally, how these preferences influence the establishment of new working trends is later discussed.

The trade off between income and working hours was asked in the surveys, the results are shown in Figures 3-2 and 3-3. It is important to note that in the two studies the questions posed or the hypothetical situations stated to the respondents were different, that is why the answers are not presented jointly. In the first two surveys, the maintaining of the current situation is not possible. The option is to receive an increase in payment for the same number of hours or keep the same pay for a reduction in working hours. In 1998, the question was

about how much they would like to work considering their necessities for living. The percentage of people willing to keep their actual situation (+- 1 hour) is not showed in the graph. Further analysis of the questions posed is presented in chapter 4.

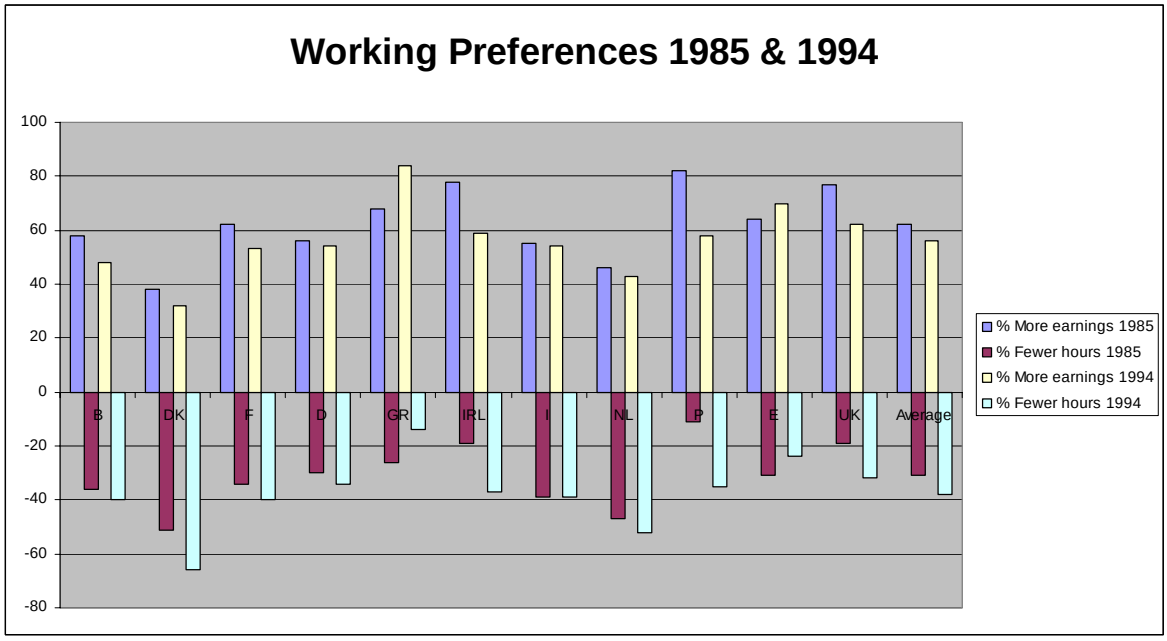
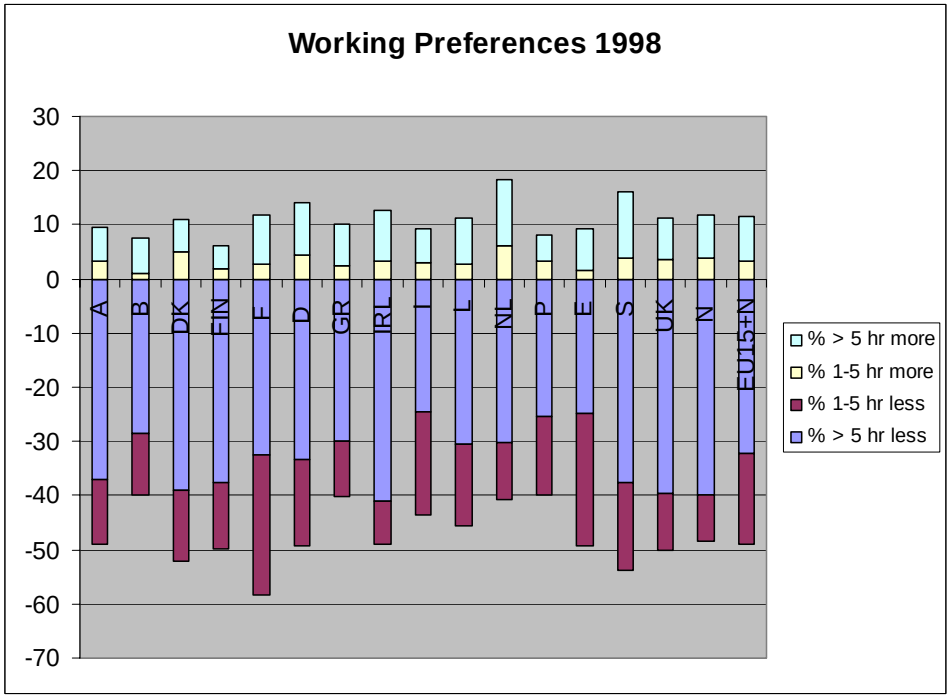


Figure 3-2 Working time and income preferences in 1985 and 1994



Source: Elaboration based on (Bielenski et al., 2002) and original survey results.

Figure 3-3 Working preferences in 1998

First, a comparison between the first two similar surveys will be done. Important factors, initially considered, that may influence the preferences are actual working time (and recent

change) and average income, for which GDP – PPP per capita will be used. The average incomes of the countries are presented in Table B-2 in Appendix B. Figure 3-2 shows that, overall, the majority of people prefer increased incomes than fewer working hours. Except for Denmark and the Netherlands where the majority is in favor of fewer hours. Also, in general, there is a slight increase of the preference for fewer working hours between 1985 and 1994. However, Spain and Greece are the exceptions, while Italian preferences remained the same.

Danish and Dutch employees have relatively shorter average working hours than the rest of the countries. Thus, this aspect is not considered as influencing their preferences. Average working hours and percentage of men and women working more than 45 hours are presented in Figures B-2 and B-3 in the Appendix. The more marked preference for a WTR of the Danish and Dutch, in both surveys, could be possible explained by their relative high incomes per capita. Denmark has the highest GDP-PPP of the countries surveyed. Also, Denmark and the Netherlands rank quite high in quality of life standards, such as HWI and HDI (Prescott-Allen, 2001); (UNDP, 1998). Dutch workers experienced a 10% reduction between 1985 and 1994, while the Danish average did not change significantly. Additionally, a decrease in the percentage of employees working more than 45 hours a week has taken place in the Netherlands but, on the contrary, the Danish percentage increased (though it is not very high compared to the rest of Europe). The Dutch average working time reduction can be attributable to an important increase in part time jobs, as presented in Table B-1 in the Appendix.

Although, it seems that at least part of the Dutch working time reduction preferences could have been achieved, there is still room for more reductions. Moreover, it could also be that, in general, people are satisfied with the WTR, suggesting a positive ex post evaluation of the new working scheme. Looking at the economic perspective, it could be suggested that with good economic results people can afford and are willing to work less hours. Additionally, considering the relatively high average incomes of the Dutch and Danish, it seems that shorter average working hours do not represent a barrier for a good economic performance.

On the other side, Spain and Greece are the only countries in which the preference for more earnings has increased between 1985 and 1994. A possible explanation to this may be that those countries have relative lower incomes and their incorporation to the European Union (1986 for Spain and Portugal and 1981 for Greece[14]) could have brought new standards to compare with. However, it is still unclear why Portugal, also with a low GDP-PPP, presents a strong preference on the opposite direction. One possible explanation is that Portugal has the highest average working hours and there are still around 30% of men working more than 45 hours per week. But, average working hours of the Greeks and Spanish are not drastically lower and the percentage of Spanish and Greek working more than 45 hours a week are 12 and 21% respectively. Another factor that may influence is the high women employment rate in Portugal, whereas in Greece and Spain it is lower.

Another possible explanation is that in Portugal there were changes to a five days working week (OECD, 1998), and WTR policies. A reduction of the weekly working hours through collective bargaining was introduced in 1990, with the aim to progressively (until 1995) decrease the working week from 44 to 40 hours (Perista, 2000?). However, the collective bargaining did not have much success and a legal limit of 40 hours per week was introduced in 1996 (Perista, 2000?). Thus, the expressed preferences for fewer working hours of the Portuguese may be explained by the lack of success of the policy against the expectations and

[14] Hhttp://europa.eu.int/abc/history/index_en.htmH accessed (16/09/04)

wish for a shorter schedule. Although the policy introduced did not succeed for completely, an important decrease between 1986 and 1994 in the percentage of employees (men and women) working more than 45 hours is observed. And, extreme long working hour's reductions, for at least some, could have influenced the preferences for fewer working hours as well. This could suggest, similarly to the case of the Netherlands, a favorable legal working time reduction evaluation during the time of the negotiations and after some have experienced a reduction.

How working preferences influence the change in the trends? According to OECD (1998), the correlation between the expressed working preferences in 1985 and the experienced change between 1985 and 1994 is relatively small (-0.35). However, countries with stronger preferences for a reduction did experience more reduction in working hours. OECD (1998) also points out that for those countries where **collective bargaining** is more developed, a faster decline in working time is observed. It seems that individuals' preferences are easier to achieve when there is an established way of negotiating.

A direct comparison between the three surveys is not possible due to the difference in the statement of the question and, thus, hypothetical situation for the respondent. In the 1998 survey, it is considered a reduction in working hours linked to less earnings and, similarly, more hours worked increase the earnings (as stated on the question, though not trade off is explicitly mentioned). One way to adjust the stated preferences is to assume that half of the people willing to keep their actual situation would be in favor of more earnings and the other half would prefer fewer hours. Another possibility is to take the relative percentages of the equivalent options for 'more earnings' and 'fewer hours', which would be increase in working time and decrease of working time. The two ways show a significant increase for a preference of a WTR. Lastly, the most conservative comparison is between the preferences for 'fewer hours' in 1985 and 1994 with the preferences for less working hours in 1998. Also this comparison gives a general increase of the preferences for a WTR from 31% in 1985, 38% in 1994 and 49% in 1998. Though it may be also important to note that in the first two surveys the average is unweighted.

Overall the European countries surveyed, the preferences for working time reductions are increasing, though important country differences still prevail. Additionally to income reasons, countries' patterns of change in weekly working hours can be explained due to the different institutional arrangements of each country (Evans et al., 2001). The institutional arrangements include taxing schemes, existence and characteristics of child care facilities and part time schemes. Country differences that may influence the working preferences will be analyzed in the next section using the data of the EFILWC survey and study for the year 1998.

3.2.2 Working Preferences: a closer look and country differences

Working preferences by gender and extreme lengths (short and long) of their current working time are presented in Table 3-1. Working preferences divided by country are presented in Figure 3-3 above. Further division by gender and country is shown in Figures B-6 and B-7 in Appendix B. As shown in Table 3-1, 54% of all men and 42% of women in dependent employment would like to work fewer hours. On the contrary, 15% of women and 9% of men would prefer to work longer hours. It is important to note that women already work fewer hours (32.9 hours) than men (41.4 hours), and thus, their preferences for a shorter working week may be already attained. In general, people with very short working hours would like to increase them and likewise, long working time employees express a wish for a decrease (Bielenski et al., 2002). However, there is still one fifth of those working over 45 hours and half of those working less than 20 hours that would like to maintain their current situation, and smaller percentages would even like to work respectively longer and shorter hours.

Explanations for these extreme preferences may lie on the household income as a whole, on the existence and characteristics of childcare structure (Bielenski et al., 2002) and intrinsic job enjoyment.

Table 3-1 Difference between actual and preferred working time at individual level

	Respondent prefers to work…					
	More than 5 hours less	1-5 hours less	Approx. same hours	1-5 hours more	More than 5 hours more	Total
All persons in employment	35%	15%	38%	3%	8%	100%
Dependent employment	33%	16%	39%	4%	8%	100%
Women	30%	12%	42%	4%	11%	100%
Men	34%	20%	37%	3%	6%	100%
Dependent employees currently working >45 hours	69%	9%	19%	1%	2%	100%
Dependent employees currently working <20 hours	2%	3%	48%	7%	41%	100%

Source: (Bielenski et al., 2002)

Household financial situation at individual level. One question in the survey addressed the perceived financial situation of the interviewee[15]. Statistical analysis showed that household's perceived financial situation can be related to **current working times** in only few countries and its relation is observed in opposite directions (Bielenski et al., 2002). In Italy and Portugal, a perceived good situation is expressed by individuals with shorter working times. While in Austria Denmark, United Kingdom and Ireland, a positive judgment of the financial situation is given by people with longer working hours (Bielenski et al., 2002). Possible explanations to these differing patterns may be in the work organization and hierarchy. For example, in Portugal and Italy (also Greece and Spain), low skilled (and income) workers have longer working times, while in the rest of the countries, working hours increase with the level of education (Bielenski et al., 2002). Thus, poorer people in Italy and Portugal may work long hours trying to improve their economic situation and still be unsatisfied with it. Moreover, assuming that in general longer working hours would lead to higher incomes, low correlations may still persist due to the fact that satisfaction with the personal financial situation does not depend on an absolute level of income but rather on a relative comparison.

However, Bielenski and Hartmann (2000) stated that household perceived financial situation has a decisive influence on the **preferred working hours** (quoted in Bielenski et al. 2002). In France, Germany, Portugal, Spain and Sweden, a good financial situation tends to shift preferences towards shorter working times and this can be considered as an indicator of prosperity and well being (Bielenski et al., 2002). Shorter working hours are more affordable in Germany and Sweden, probably because of higher income levels. France Portugal and Spain tend to have greater income inequalities and are the high earners those who express a preference for a reduction in working time (Bielenski et al., 2002). In the rest of the countries no significant correlation is observed (Bielenski et al., 2002).

[15] Taking into account all the income that the members of your household receive from different sources: Would you say that your household is financially well off, that you just manage or that you have difficulties?

Although the question regarding working preferences has an implicit trade off between working time and money, affordability of part time working was questioned as well[16]. In Europe as a whole, only 18% of full timers stated that they could afford to work part time without problems. There are important country differences, in Finland and Netherlands this percentage is 33%, in Denmark 30%, while in Greece and France is 10% and 11% respectively (Bielenski et al., 2002). The low affordability expressed in Greece is likely to be linked to the low rates of pay, while in France it may be the wide earnings inequality gap (with many workers being close to the minimum wage) (Bielenski et al., 2002). On the contrary, Denmark, Finland and the Netherlands have, on average, higher incomes. Moreover, the Netherlands has a well established part time working scheme. On the other hand, 44% of full timers stated that they could not afford part time work, while 32% said it could be feasible but would require them to reduce their expenditures (Bielenski et al., 2002). However, it is also important to notice that those that said that they are able to afford part time working would also have to reduce their expenditures, though the importance of this reduction depends on income from other sources.

Working preferences and financial situation for couples (about 70% of the respondents). In this situation, the perceived financial situation is related to the actual and preferred working hours, as presented in Table 3-2. In Table B-4, in the Appendix, are presented the current and preferred working hours of couples for the different countries. One of the drawbacks of the way how the couple working preferences were obtained is that the respondent was asked how many hours he or she would prefer that his or her partner would work. This statement does not necessarily have to coincide with the actual preferences of the partner.

Table 3-2 Working hours of both partners and household financial situation

	Actual Situation (hours)	Preference (hours)
All couples	62	61
Financial situation		
Comfortable	66	61
Adequate	59	61
Difficult	53	64

Source: (Bielenski et al., 2002)

Participation of both spouses in the labor market is related to a better financial situation. On the contrary, in families with financial difficulties often is the man the main financial provider (Bielenski et al., 2002). Couples stating that they are 'comfortable' tend to prefer less hours in paid work (around 5 hours less), while couples with perceived financial difficulties would like to increase their time in paid work (11 hours more). It seems that after a certain point of affluence, which may be also related with longer hours of paid work, people start valuing more the time off work. However, an 'adequate' financial perception, is associated with a slightly preference of an increase in working hours, converging with the preferences of the 'comfortable'. It is also important to note that the working preferences of people with different financial perception tend to converge, presenting only 3 hours of difference, while the actual difference is 13 hours.

[16] The question asked was: 'In financial terms, would you say that you could afford to work part time?' Would it be: (a) no problem for you and your family; (b) require you to cut down expenses; (c) not possible at all.

Countries couple working patterns were classified by Bielenski et al. (2002) in three main groups: (1) countries such as Sweden and Denmark with high female employment and short individual but long couple working time; (2) Countries like Spain with low female employment, low household but long individual working times. Most of the countries fall in between these two distinctions, but there are also some exceptions, such as (3) Portugal with long individual and household working hours and Netherlands with both short individual and household working time.

As shown in Table B-4 in the Appendix, Portugal is still expressing preferences for longer working time although their already long schedule. (Bielenski et al., 2002) explain these preferences based on the significant participation of women in the labor force and the, by far, lowest hourly rate in Europe. It seems that the low incomes per capita play a major role in the working time preferences of the Portuguese. However, the preferences for a WTR has increased compared to the previous surveys.

The Dutch preferences continue to be inclined for a shorter working time, though not so much for reductions. It is important to note that in the Netherlands WTR started in 1982, when trade unions demanded shorter working time for reasons of job sharing (Tijdens, 2000). Collective bargaining is strong and WTR has been increasingly negotiated on an individual basis between the employee and employer (Tijdens, 2000). Considering the experienced reductions, a valuable aspect for analysis is the actual perception of a WTR as a closer reality in the Dutch expressed preferences.

In all the countries there is a preference for a less marked difference of working time between the couples (Bielenski et al., 2002). Moreover, when an egalitarian distribution of paid work is achieved, both partners tend to develop preferences for shorter working times (Bielenski et al., 2002).

Educational level. On average, higher educational levels are linked to longer working hours and, at the same time, with stronger working time reduction preferences (Bielenski et al., 2002). Working preferences, according to educational standard, are presented in Table 3-3. This tendency could be explained by the working conditions and new performance requirements in knowledge intensive industries and services (Bielenski et al., 2002). Additionally, higher incomes of the employees with higher educational level may play an important role.

Table 3-3 Current and preferred working hours by standard of general education

	Primary or secondary I	Secondary II	Third level
Current working hours	37.3	37.5	38.7
Preferred working hours	34.5	33.8	33.6
Difference between preferred and current working hours	-2.8	-3.7	-5.1
Range(1) on basis of current working hours	(9.2)	9.1	7.8
Range(1) on basis of preferred working hours	(7.5)	6.1	3.8

Note: (1) Difference between the country with the longest and the country with shortest average weekly hours.
(2) Base: dependent employees, hours per week
Source: (Bielenski et al., 2002)

A study carried out in Finland confirms the high time pressures and long working hours of highly educated professionals, managers and experts, which may be the cause of the preferences for a WTR. The study also reported that women of all ages were more prompt to report conflicts with work and life balance (Julkunen, Nätti, & Anttila, 2004). Thus, it appears that the presence of children does not have a special influence in these conflicts. These long working hours present both, voluntary and mandatory characteristics (Julkunen et al., 2004). The main reasons for extending the working time include the nature of the job (providing challenges, enthusiasm and a sense of commitment), career prospects, and work organization. However, the majority of people recognized that work was not the primary focus in life (Julkunen et al., 2004).

Which were the reasons stated for a shorter working time preference? Part time workers were asked about their reasons for working a shorter schedule. A very small percentage of them said that they do so to have more time for themselves. The majority of voluntary and involuntary part time workers cited the need of time to look after children, care for other family members and fulfillment of other domestic obligations (Bielenski et al., 2002). This may be explained by a voluntary search for work and family balance or involuntary due to constrain imposed by family requirements. Other reasons for being a part time worker are the difficulty to find a full time job and being a student (Bielenski et al., 2002).

Also, full timers were asked if they would prefer to work part time, and those giving a positive answer were questioned why. The majority of them expressed their will to have 'more time for myself and my own activities' (77%) and secondly, 'to reduce stresses and strains of full time work' (Bielenski et al., 2002). Other reasons include time for children (47%), other household duties (34%) and care of family members (34%). Soft reasons, such as having more time for oneself and reducing workloads may be more important in full time workers since 'hard' reasons such as child care and household duties are already done by other persons (Bielenski et al., 2002). The observed differences may be explained by the fact that fixed time constrains are usually associated with higher optional value (Lindvall, 1989). In this case, familiar duties ('hard' reasons) will have a higher associated substitution cost. Additionally, (Bielenski et al., 2002) argue that soft reasons also become more important with affluence, when people can afford shorter working hours and they are perceived as an indicator of well being.

An important aspect is to understand how shorter working hours become to be perceived as indicator of well being. Is there any other element in the society which supports and enhances this indication of well being? For example, with legislation supporting parental leave (as in the Nordic countries), an important role and value is assigned by the government to time spent in family chores. And then, this value may be transferred to the individuals, which later on may assign a higher value to the time spent with children. Or maybe traditionally, shorter working hours has been a status sign, like in Portugal, Italy, Greece and Spain, where there are the low skilled workers who work longer.

Career prospects and social protection. Although surveys suggest part time working as an attractive future choice (though not very short hours), it is also associated with lower earnings and training levels when compared with full time jobs (Evans et al., 2001). In this survey, on average, 47% of the respondents (ranging from 55% in Germany to 31% in Denmark) stated that part time working could affect their career prospects (Bielenski et al., 2002). In general, long working hours are a positive signal to the eyes of the employer and could facilitate promotions and the assignment of the more interesting tasks. Moreover, when there is a positional good, in this case a job position, employees would tend to work longer hours even though they would prefer not to do it (Frank, 1997). Additionally, managerial duties are

understood as more difficult to divide between different employers, and thus strongly opposed by the employer, which can further influence career prospects.

The majority of the countries are making the social benefits non discriminatory between part and full time, if they were. Thus, the general perception of disadvantage in this aspect for part time workers might be just a perception of a previous situation.

Self employed. As presented in Table 3-4, self employed have in average a significantly longer working week. It could be thought that this rather extended time is a voluntary choice due to the fact that they have more freedom in utilizing their time and could also be assumed a higher intrinsic job satisfaction. However, considering the strong reduction preferences stated by them, there must be something else that is influencing their current working times, and their choice is not completely free. One possible explanation may be the strong market competition forces that push the self employed, usually small and economically weak service sector enterprises (Bielenski et al., 2002), to work more hours than they would like to. Intense competition environment could also be extended to the industry level, and thus, explain in part the usually opposition to working time reduction policies.

Table 3-4 Working preferences of self employed

Type of employee	Actual working hours	Preferred working hours
Self employed	48.2	38.4
Dependent employee	37.7	34.0
Total	39.0	34.5

Source: Elaboration based on (Bielenski et al., 2002)

3.2.3 Working Preferences: dynamic analysis

In this section, the working preferences of all the population in working age are presented. All the data was taken from the EFILWC survey and study. As the labor market is constantly changing, a dynamic analysis can be useful to understand the possible effects of a WTR policy. From a static point of view, a reduction of working time would imply less work. However, it is important to consider the possibility that shorter working hours become attractive to people outside of the labor market, and thus the work volume could even increase.

Working preferences were asked to all the respondents[17], employed and unemployed. The results show that there are countries where the overall preferences of the **total work volume** remain more or less the same[18]: Belgium, Finland, Ireland, Netherlands, United Kingdom, Norway, Portugal and Sweden; countries which the volume would have to rise: France, Greece, Italy and Spain; and countries with a preferred decrease: Austria, Denmark and Luxembourg.

The most influencing factor affecting the current and preferred total work volume is the **participation of women** in the labor force (Bielenski et al., 2002). Another influencing factor is the general **employment situation** in the country, with preferences for a greater increase in work volume associated with bad employment situation (e.g. unemployment rates and easiness

[17] The question asked is the following: "Provided that you (and your partner) could make a free choice so far as working hours are concerned and taking into account the need to earn your living: How many hours (per week) would you prefer to work?"

[18] Considering 5% as a significant change in preferences.

to find a job) (Bielenski et al., 2002). **Hourly rates** also influence the working preferences. With higher hourly rates being associated to smaller increases or even decrease of total work volume (Bielenski et al., 2002).

Table 3-5 Current and preferred working hours considering employed and unemployed

Country	Current	Preferred	Difference (%)	Employment Rate (%)	GDP-PPP (per capita) 1998
Austria	29.7	28.1	-5.4	70	24017
Belgium	23.9	24	0.4	63	24478
Denmark	29.5	26.9	-8.8	79	25273
Finland	26.9	26.5	-1.5	68	21962
France	23.6	24.9	5.5	62	21922
Germany	26.0	26.4	1.5	67	22972
Greece	21.6	23.8	10.2	49	14609
Ireland	28.1	28.2	0.4	69	22776
Italy	18.6	22.2	19.4	48	21761
Luxembourg	28.1	26.6	-5.3	72	38969
Netherlands	24.4	24.1	-1.2	70	23090
Norway	30.0	28.6	-4.7	80	28004
Portugal	27.1	27.5	1.5	66	15517
Spain	17.7	23.4	32.2	45	16981
Sweden	30.2	29.6	-2.0	78	21621
United Kingdom	26.4	25.1	-4.9	69	21301

Source: Elaboration based on (Bielenski et al., 2002) and (WRI, 2004)

It is important to note that the current and preferred working hours are representing the total work volume, part and full time, and does not mean that people actually work or prefer to work such amount of hours per week.

Taking into account the aggregate preferences of the 16 European countries, the employment rate would have to increase from 63% to 74%, with a more marked increase in women employment (24.1%) especially in Greece, Italy and Spain (Bielenski et al., 2002). An increase in the employment rate may not be so easy to achieve considering that the preferences for reduction do not, most probably, match with the preferences of augment. This mismatch could be at country level or type of job.

Conflicting interests can arise from working time reduction and economic growth policies, especially when the unemployment rates are low such as in Austria, Denmark, Luxembourg, United Kingdom and Norway (Bielenski et al., 2002). Thus, employers may be reluctant to shorten the working hours, especially to those employees with managerial duties whose tasks are more difficult to divide and which are not commonly displaced by technological improvements.

Globalization and trade policies could make more difficult the situation for the industry sector. Recently in Europe, some conflicts between WTR policies and competitiveness have risen. Clearly, working time reduction policies are not easy to introduce in companies facing strong international competition. Some recent events are presented below.

Last February, the Swedish engineer industry made proposals involving possible cut in real wages and halting of the progressive working time cuts begun in 1998 (Berg, 2004). The engineering industry contains many of the export companies, especially sensitive to external competition (Berg, 2004). Moreover, in recent years the industry has faced problems of decreasing profitability and a number of workers have become redundant (Berg, 2004).

German companies' conflicts are reflected in the following publication. *"In June 2004, the German Metalworkers' Union (IG Metall), reached an agreement with the Siemens electronics group to increase weekly working hours from 35 to 40 at two mobile phone plants, with no extra pay for the workers involved. The agreement is an attempt to prevent jobs being 'exported' from Germany. On 24 June 2004, a plan by the German-based electronics group, Siemens, to move 2,000 jobs from North Rhine-Westphalia to Hungary was cancelled as a result of the conclusion of a 'supplementary agreement'.*

About 50 German companies appear to have concluded such supplementary agreements to improve competitiveness at the firm level, while a similar number are seeking to do so" (Funk, 2003).

3.2.4 Working Preferences: summary and findings

One very important finding is that people like to work. People already working still want to continue working and from those who are not on the labor force, there are many that would like to join. However, the extent of the time they would like to work varies according to their personal, and country situation and culture.

The first finding arising from the survey is that there is effectively a gap between the current and preferred working times. Preferences for a reduction in working time have been increasing since mid 1980s, becoming the dominant inclination in 1998.

The institutional framework, such as tax (dis)incentives, childcare facilities, part time work schemes, and traditional division of labor of each country, has an important influence on the working patterns. Preferred working times are strongly influenced by actual working time. This could be explained by the fact that the current situation is partly already 'chosen' and the current working hours are used as reference (Bielenski et al., 2002). People adapt to the existing situation and possibilities. Nevertheless, the gap between the current and preferred hours suggests a desire to change.

Results suggest that **household income** influences the working preferences. It appears that the link is stronger if the household income and working preferences are considered as a whole. Additionally to income issues, other aspects have been found to influence working preferences, such as the presence of children, gender, job satisfaction and women employment rate. Although, overall, the **presence of children** influences the working preferences, significant country differences are observed. In Denmark, Finland and Portugal, the difference between women with and without children is less than one hour, while in the Netherlands and Ireland is respectively 7.4 and 9.3 hours (Bielenski et al., 2002). Commonly, people who declare that they work because they **like their job** tend to have a preference for considerable longer hours (Bielenski et al., 2002).

In general, **women employment** could be considered as more flexible, i.e. is the woman who adapts to the existing conditions. However, economic reasons play an important role and even if the institutional framework is not supportive, women may enter the labor market, e.g. Portugal. On the other hand, although the Swedish and Danish women have good childcare facilities and may have good chances to reconcile paid work and family life, they still state

preferences for WTR. At least in these countries, it appears that there is more than just reconciling paid work and family tasks.

Higher **educational level** is associated with longer working hours at the same time that the WTR preferences of this group are stronger. The nature of the work, career prospects and work organization appear to be important reasons behind the extended week. At high educational levels, time pressure rather than money seems to be the main conflicts between work and family balance (Julkunen et al., 2004). At the same time, the tasks done by these types of employees are understood as more difficult to divide and, thus, employers may oppose to WTR.

Career prospects seem to be an important concern in case of reduction in the working time. Employees with managerial duties and non manual workers present a higher tendency of career prospects damage with part time working.

The **reasons stated** for currently working shorter time can be considered to be **'hard'**, such as family constrains. However, expressed reduction preferences have **'soft'** reasons behind, such as having more time for myself and own activities. The difference in the reasons shows the adaptability of people to the existing situations as well.

Unexpectedly, the **self employed** show a preference for a strong WTR. Although, we could think that they could more easily make a 'free' choice, it seems that other aspects push them to work longer than what they would like to. Intense **competition** seems to be a probable explanation.

Considering a **dynamic perspective** of what a WTR policy may derive, two main situations can be distinguished. There are countries where the employment rate is low and unemployment high, where a WTR can help to address unemployment and also incentive more people to enter the labor force. On the other hand, there are countries with high employment rates, where conflicting interests may rise due to a shortage of labor.

Generally, WTR policies are opposed by the **industry sector**. The main reasons are the increase in fixed costs (labor and reorganizations) and, in countries with low unemployment rates, a shortage of labor.

3.3 Governmental Policies on Working Time

In some countries, direct governmental regulation of working time dominates the working trends, while in other countries collective bargaining is more important, e.g. Netherlands. In any case, collective bargaining is supported by governmental regulation. Policies introduced may be voluntary (through incentives) or mandatory.

Governmental policies on working time include regulation of the duration of normal working time, overtime (limits and its rate of pay), contributions for the social security, flexibility and incentives (OECD, 1998), unemployment benefits and taxing schemes.

Commonly, WTR policies aimed to decrease unemployment are accompanied by incentives from the government. Subsidies to encourage reduction in working time are generally reductions in payroll taxes and social security contributions (OECD, 1998). However, incentives to the employee also exist. Training and sabbatical leave policies incentive employees to make a career break by granting an allowance similar to an unemployment benefit. Following, there are some general examples of working time reduction policies. The

implementation and detailed regulations will vary according to the existing regulatory framework of the country and other related purposes of the policy.

Time off in lieu: allows taking off time in exchange of overtime worked. Accounting of regulated working hours over a whole year is called annualisation. This type of reduction may not be well received by low wage employees, where the extra payment of overtime represents an important part of the monthly income.

Legal working time reduction: this could be achieved by a reduction in weekly working hours; by introducing a 4 days week; by lengthening the vacations period or public holidays.

Leave policies: correspond to a period of time, between 3 and 12 months, when the employee is able to make a break and stop working. The reasons for this leave include parental, training and sabbatical. Sabbaticals and trainings are usually restricted by an agreement between the employer and employee and the hiring of an unemployed, and thus, the allowance does not become a cost for the government.

Early retirement: correspond to the possibility of partially retire, i.e. working less hours, or totally retire. However, due to the aging of the population in Europe and pensions conflicts, this type of policy is becoming less used.

Incentives for part time work: in this case, the employer receives a proportion of unemployment benefits corresponding to the difference between full and part time.

4 Analysis

We only have 24 hours a day and we must allocate this time among the possible uses of it. On one hand, more leisure seems attractive but by working longer we can get more income with which to buy consumer goods. In economic terms, this decision is represented by the following equilibrium.

"*An individual will want to work until the marginal utility derived from the goods an extra hour of work will provide is just equal to the marginal utility from the last hour of leisure*" (Begg, Fischer, & Dornbusch, 2000).

However, further analysis is needed to understand what is behind 'utility' and how the choice can be made. For this purpose, the working preferences of the European countries, presented in chapter 3, will be analyzed considering the different relations between subjective well being, income, time, leisure and consumption. Questionnaire analysis and wording of the question is presented as well. Finally, possible effects of a WTR policy on the environment will be discussed.

4.1 Subjective Well Being and Working Preferences

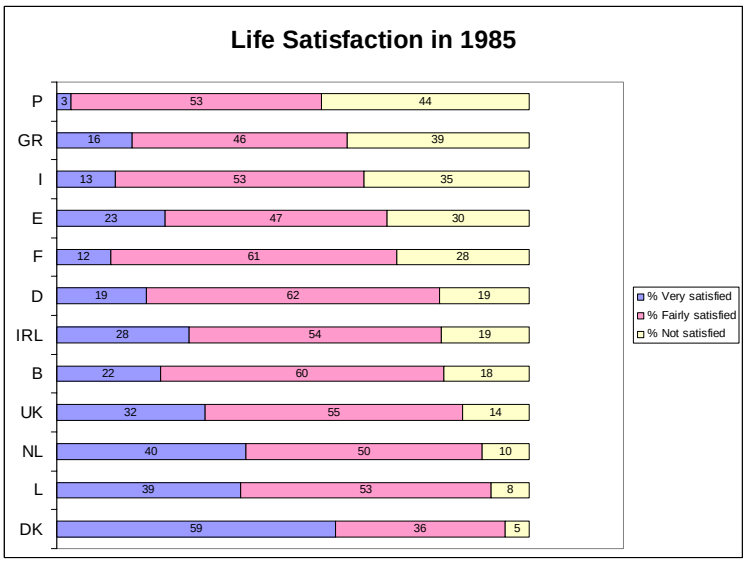
In this section, the expressed working preferences will be analyzed considering SWB findings. The analysis includes preferences at country level and a theoretical decision making at individual level.

In order to make a **country level comparison** between working and income preferences, the following SWB findings are considered:

i. Although at higher income levels the correlation between the wealth of the nation and mean reports of SWB is not so clear, considering only countries of the European Union, it appears that at least a weak correlation exists.

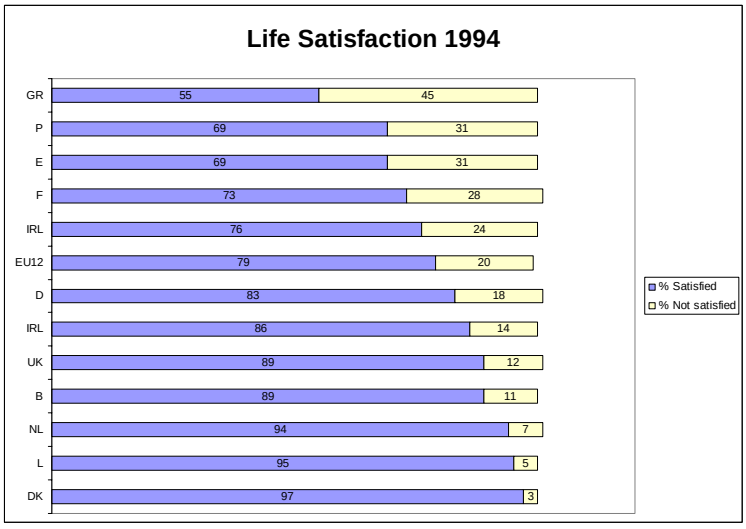
ii. Economic growth in the last decades in Europe has been accompanied by little (or no) rise in SWB.

To analyze the working preferences including the SWB perspective, 'Life Satisfaction' measures reported in Eurobarometer for the years 1985, 1994 and 1998 will be used. These are presented in Figures 4-1, 4-2 and 4-3. Average country incomes in GDP per capita are presented in Table B-2 in Appendix B. Working preference are presented in Figures 3-2 and 3-3.



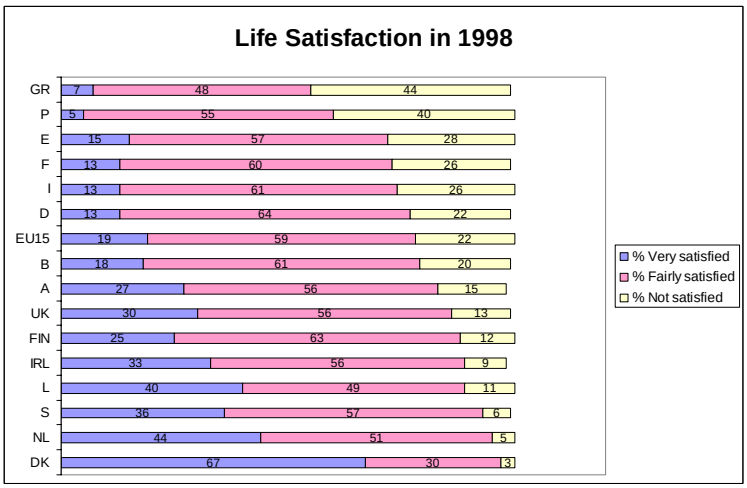
Source: (Commission of the European Communities, 1985)

Figure 4-1 Life Satisfaction in Europe in 1985



Source: (European Commission, 1994)

Figure 4-2 Life Satisfaction in Europe in 1994



Source: (European Commission, 1998)

Figure 4-3 Life Satisfaction in Europe in 1998

In 1985, the countries with stronger preferences for a WTR coincide with the ones with higher life satisfaction, including 'very satisfied' and 'fairly satisfied'. These correspond to Netherlands and Denmark. On the other hand, the inhabitants of Portugal, the country with the weakest WTR preference, are at the same time, in average, less satisfied with life. Though, it is important to note that more than half of the population are satisfied with life. Considering the average income per capita and its correlation with 'Life Satisfaction', working preferences seem to be explained, mainly, due to income matters. As presented in chapter 2, relative incomes play an important role in the income – SWB correlation. And, as having as a general reference European Union standards, the poorest countries may feel behind.

In 1994, still the countries with stronger WTR preferences continue to be Netherlands and Denmark and, again, they present the highest life satisfaction levels. On the other hand, Greece and Spain have the weakest preferences for a WTR and are among the countries which express the lowest satisfaction levels in Europe. Considering the average income per capita, working preferences seem to be explained, once again, due to income matters. However, Portugal appears to be an exception. Although Portugal's relatively lower per capita income, between 1985 and 1994 it shows an increase in its preferences for WTR and also in the share of people satisfied with life (a 10% increase in the share 'very' and 'fairly' satisfied). In this case, it seems that there are other factors influencing their working preferences, and probably life satisfaction. As presented before, a reduction in extremely long working hours may have contributed to increase life satisfaction and the introduction of the WTR policy may have influenced the preferences for shortening the week. In the same line, Garhammer (2002) points out that pace in life in the Southern European countries is slower than in the U.S.A. and Scandinavia, but Portugal is an exception. Probably, due to the relative low incomes and high employment rates, they do not have as much leisure time as in other southern European countries. Maybe not only the relative lower incomes can be linked to the relative lower SWB of the Portuguese, but also the lack of leisure time.

In 1998, although 'Life Satisfaction' measures remain similar to the previous years, working preferences toward a reduction have increased. Countries with high life satisfaction levels and strong WTR preferences are Denmark and Sweden. On the contrary, countries with low life satisfaction levels and weak preferences for a WTR are Greece and Portugal. At the same time, these working preferences might as well be explained by relative income of the countries.

However, there are two other different cases. One is the Netherlands, with a high life satisfaction level and a weak preference for WTR. And the other is France, with a strong inclination for WTR and low life satisfaction level. The Dutch position could be explained by the average short working time and the reduction experienced in the recent years, of which they seem satisfied with. The French strong preference for a WTR seems to be influenced by the introduction at that time of WTR policies.

In summary, **stronger WTR preferences** could be associated with high and low 'Life Satisfaction' levels. Though, it is more common to be expressed by countries with higher life satisfaction levels, where it may also be linked to higher average incomes. In countries expressing lower satisfaction levels, strong WTR preferences could be associated with longer working hours and introduction of WTR policies. Likewise, **weak WTR preferences** could be related to low and high life satisfaction levels. However, it is more common to observe it in countries with lower life satisfaction levels, where relative income may play an important role. At high life satisfaction levels it may be associated to an experienced reduction of working time and short working hours.

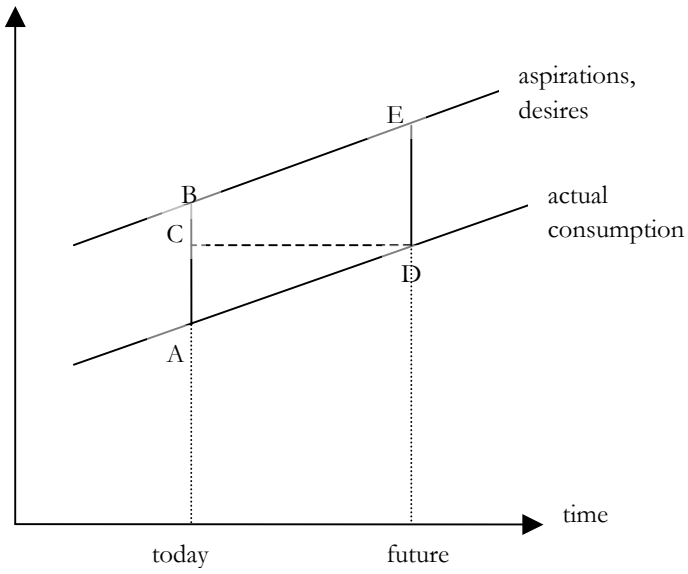
Over a period of time, SWB measures remain stable in Europe as a whole and at country level. Countries' relative position of life satisfaction among whole Europe is stable; countries more and less satisfied seem to be the same over time. However, working time reduction preferences over time appear to vary according to other factors such as experienced reduction leading to shorter working times and introduction of WTR policies. Nevertheless, these are just examples and a generalization is not possible with the limited amount of data.

As presented in chapter 2, studies suggest that, in affluent societies, income acts rather in an indirect way and psychological aspects such as relative position and aspirations play an important role. **Individual level** decisions will be analyzed considering the existence of relative position and increase in material aspirations over a period of time.

In working preferences at individual level, **relative position** can be reflected in the perception that shorter working hours can conflict with career prospects[19]. This situation can be analyzed using the prisoner's dilemma scheme, presented previously in Figure 2-4. From an individual perspective, it is rational to work longer hours to be better off than the others. However, the outcome depends on what the others do. If everybody acts rationally and tries to secure their own position by working longer, in the long run there would be no special advantage for any of the employees and all will end up working longer time.

When making a decision on working time, an individual would tend to think that more income will increase his/her well being by satisfying more of his/her aspirations. However, the individuals' material **aspirations appear to rise** over time, leading to no increases of SWB in the long term. (Easterlin, 2001b) argues that an increase in desires takes place as income rises and, what psychologists call, *'decision utility'* (ex ante, before income rises) turn out not to have the expected welfare effects (*'experienced utility',* ex post). Judgments at the time of the decision do not anticipate the rise in desires. This situation is schematized in Figure 4-4.

[19] As presented in chapter 2, relative position also influences consumption directly. Other people's consumption becomes a frame of reference.



Source: elaboration based on (Easterlin, 2001b)

Figure 4-4 Increases in aspirations and its effect on ex ante and ex post valuations

In other terms, subjective well being reflects how many of the individual's aspirations have been achieved. Thus, a smaller gap between material aspirations and actual consumption would imply higher SWB. In Figure 4-4, only material aspirations are represented, where income is a mean to achieve them. Today, an individual's SWB will be halted in proportion to the gap between A and B. Today, thinking about the future, an individual would tend to think that an increase in consumption to level C, will lead to a smaller gap (represented by CB). However, it has been observed that over time desires rise as well (point E). Thus, the gap between future aspirations and achievements (ED) does not necessarily decrease[20], which could explain the observed stable SWB.

4.2 Discussion

Working preferences, barriers and facilitators to achieve them

At first two general findings related to working preferences can be identified: (1) people like to work; (2) preferences for a WTR have been increasing since 1985, becoming the dominant one in 1998. At household and at country level, income appears to play an important role in shaping the preferences. However, other important aspects are worth discussing.

Women employment can be understood as more flexible, adapting to the economic situation and the institutional framework, e.g. existence of childcare facilities. Probably, in countries with low women employment rates, a WTR could facilitate women to enter the labor market. This could be explained by the rather dislike of unpaid work and the satisfaction derived from paid work. However, in Sweden and Denmark, countries with high women employment rates

[20] In fact, (Easterlin, 2001b) found, in his study, that the gap remains more or less constant over time and argues that increases in income play an important role in increasing the aspirations.

and favorable conditions for reconciling paid work and family life, there is a preference for reducing the hours spent in paid work. Thus, this suggests that, at least in these countries, there is something more than just reconciling paid work with family life. It is important to note the high income levels, social welfare and progressive income taxes in these countries, which make longer hours less attractive. Moreover, these countries have introduced leave policies, including parental leaves which allow parents to stay with their young children. Could, in the long run, the introduction of these types of policies influence the preferences and lifestyles? Maybe, after experiencing the benefits of a parental leave and considering the feedback that such policy has on the population, the preferences could be influenced as well. The priorities of the Danish in relation to working and earnings preferences can also be reflected in their trade unions' collective bargaining concerns. As, (Blumensaadt & Moler, 2000) state, Denmark has a long tradition of collective bargaining and the latest issues in negotiations have been centered in length of holidays, flexible working hours, family friendly working places and work environment.

It seems that the **introduction of new WTR legislation**, e.g. in France, Portugal and the Netherlands, can have an influence on the strengthening of the preferences for a shorter working week. On one hand, a policy could raise expectations for a shorter week and thus strengthen the preferences. On the other hand, the experience of a reduction can influence the preferences as well. For example, in 1994 Bell Canada asked its technicians if they would accept a cut in pay of 8% in salary with the corresponding decrease in working time. At that moment, only 10% answered favorably, however, four months after the application of the reduction, only 15.4% wanted to return to the previous longer hours (Hayden, 1999).

Career prospects appear to create concerns when thinking of reducing the working hours. This worry has more influence on higher job positions, where the tasks are more difficult to divide or replace and where the employer shows a stronger opposition to reduce the working time. Long working hours are, usually, seen as a sign of commitment and, on the other hand, employees feel responsibility and obligations towards the company. It is important to achieve a general WTR including all types of employees, not only for the less skilled workers for which it may be easier.

Although employees, in general, show a positive attitude towards a working time reduction, a significant rejection is stated by the employers. **Employers' opposition** to WTR policies is neither uncommon nor new. This opposition might be due to a shortage of labor and/or an increase in fixed costs (labor and reorganizations), factors which reduce competitiveness. Nowadays, the main concern from the industry sector is the intense international competition. With globalization, trade policies and intense competition, the industry sector faces big challenges in **competitiveness** and is more difficult to maintain their current position. Firms in the productive sector have the option of shifting their production activities to other countries, for example Eastern Europe.

In a **dynamic perspective** of the effects that a WTR may cause, two different situations are observed. There are countries with low employment rates where the introduction of WTR policies can help **create new jobs** and facilitate the introduction of, usually, the women to the labor market. On the other side, there are countries with high employment rates and low unemployment, where a decrease in working hours is feared to cause bottlenecks and **shortages of labor**. In these countries, a conflict between economic growth policies and WTR is likely to arise. As stated by (Evans et al., 2001), a reduction in volume of labor input into the economy may reduce output. In this situation, the government is likely to oppose as well. For example, in Denmark now the government wants to make people work more and has tightened previous leave policies; and, concerns about the consequences that a drop in

private consumption may cause in the decrease of tax revenues for the state budget have been raised (Blumensaadt & Moler, 2000). Although, is in this situation where a WTR may start to influence absolute volumes of consumption, there are still other conflicts to resolve before decreasing consumption levels.

Collective bargaining seems to play a major role in the reduction of working time. Countries with long tradition of negotiating have better chances of achieving their preferences. This is repetitively confirmed in the country reports of the 16 European countries. Thus, the development of collective bargaining in countries where it is not a tradition, e.g. France, Portugal and Spain (Evans et al., 2001), could help to attain the working preferences. It is important to note that the introduction of the 35 hours working week in France incorporated incentives for collective bargaining, and in this way, start to create a tradition.

Increase of material desires and consumption

Considering the currently predominating neoclassical economic thought that more consumption will make us better off, with the significant increases in consumption experienced in the last decades, an increase in SWB measures would have been expected. Yet, there have been no increases in well being perceptions, at least as stated in 'life satisfaction' and 'happiness' measures. It appears that the significant rise in material aspirations has overwhelmed the increases in material consumption. As presented in chapter 2, consumption influence on well being depends on the context, aspirations and relative position play an important role. Increases in material aspirations can be triggered by **positional consumption, development of new products, hedonic adaptation, social demonstration and emulation**. *Hedonic adaptation* is understood as the reduction of the hedonic (SWB relevant) response to a constant or repeated stimulus (Frederick and Lowenstein 1999: 302; quoted in (Hirata, 2001: 39-40)). *Demonstration* of consumption by other people in the society may cause an increase in desires by simple awareness and concrete exposure to increasing levels of consumption (Hirata, 2001). Additionally, the attainment of a stable level of satisfaction could have become **more costly** due to external effects, such as environmental degradation, the existence of positional goods and new products.

How do 'normative ideals' influence SWB perceptions? For example, nowadays, economic activity and material affluence is strongly attached to our norms and thus their role in our perception of well being may be fundamental. As (Easterlin, 2001b) suggests, norms on which judgments of material well being are based seem to increase along with the income growth of the society. Poverty norms and minimum living standards reflect the increasing levels of consumption. Significant differences between affluent and poor societies' definitions of poverty lines can be observed. These differences may well be "*explained by the fact that in affluent societies, the poverty norm has long ago ceased to reflect a physiological minimum for survival and has become instead a minimum social standard of decency*" (Scitovsky, 1992: 116).

Money and material things are already part of our culture (Csikszentmihalyi, 1999). Polls aimed to estimate the minimum amount of money to achieve an 'acceptable standard of living' show that responses raise year to year (Frank, 1999: 73-74). It is not surprising that people mention more income as an important influence of SWB or that it will affect their happiness considering the huge amount of information received every day of its significance in life (e.g. advertisement, news, politicians and current classification of developed and developing countries).

Advertising is commonly regarded as an important driver of the increasing consumption volumes. It is also recognized that the amount of information about the product an

advertisement communicates is insignificant compared to the psychological attributes it embodies.

"Good advertising does not just circulate information. It penetrates the public mind with desires and belief"
- Leo Burnett -

"It is not necessary to advertise food to hungry people, fuel to cold people, or houses to the homeless"
- John Kenneth Galbraith –[21]

Not disregarding the other channels which tend to link income and consumption with well being, a discussion of how advertising might influence a raise in material desires is presented. In very general terms, advertising could enhance consumption by: (1) prompting comparisons which leave the consumer dissatisfied and continually increase expectations for acceptable standards of living (or what 'ought to be') (Kiron, 1997b); (2) fostering the connection between the pursuit of personal success and happiness with consumption of goods and services (Kiron, 1997b). As presented in chapter 2, relative position is very important in the relation between income and SWB. Thus, raising the standards of what 'ought to be' would tend to increase aspirations of material goods and make the individual adapt easier to the increasing consumption levels. Not only happiness is being associated with goods and services. Through advertising, goods are linked to self-esteem, status, friendship and love. In a deeper level, advertising assigns symbolic meanings to goods, and change their function from primarily satisfiers of wants to being primarily communicators of meanings (Kiron, 1997b). This means that goods are important not only for what they do but for what they signify (Jackson, 2004). The symbolic role of commodities is not new. However, nowadays satisfaction of socio-psychological aspects of life with material goods tends to last very short, because continuously new products are being developed and showed to the consumers (Kiron, 1997a).

The extent to which advertising is shaping consumerists tendencies and cultures is open to debate. The question is centered in weather advertising is reflecting or actively creating wants through manipulating the symbolic meaning attached to products (Kiron, 1997b). A way in which the influence of advertising appears to be more clearly understood is when making the distinction between functionings (or needs) and wants. As Jackson (2004) points out, in our society some absolutely vital social and psychological functionings (or needs) are mediated through our interaction with consumer goods. Thus, it seems that through advertising symbolic meanings are assigned to material goods and then, these are used to satisfy social or psychological aspects of life.

One important aspect of advertising is that the goods are usually presented to consumers without a link neither to the origins in nature or to the consequences of its consumption on the environment (Kiron, 1997b). This lack of linkage could provide space for policy introduction with the aim to raise awareness of the whole life cycle of the product. Nevertheless, the communication of the quality of the product, the how it is produced and *what it is*, addresses only part of the current consumption patterns' consequences. The linkage between the *how much*, i.e. environmental consequences of the consumption volumes is left out. For example, in the U.S. more than a billion dollars is spent each year on generic advertisements promoting the consumption of commodities. Generic advertisement is designed to increase the 'size of the pie' (without affecting the 'share of the pie') (Chakravarti

[21] Hhttp://www.ad-mad.co.uk/quotes/desire.htmH (accessed on 15/09/04)

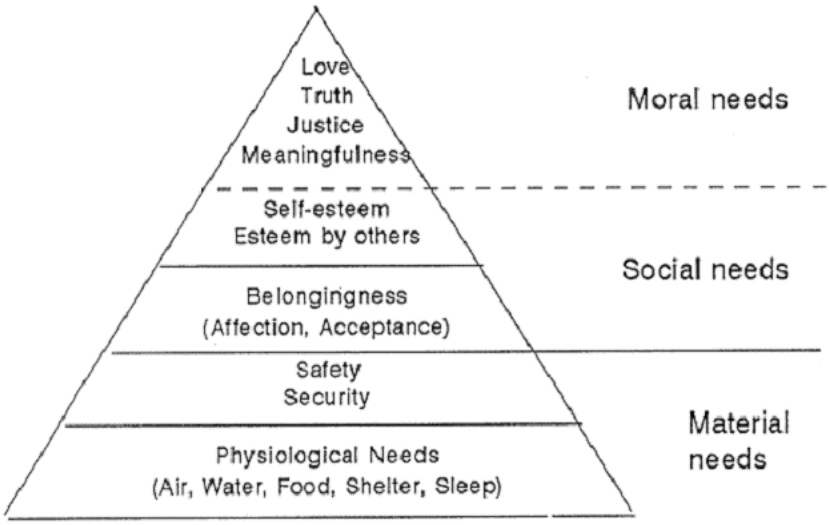
& Janiszewski, 2004). It seems unlikely that the industry by itself would be willing to address the problem of 'how much' to consume. It is definitely against business rules.

Advertising restrictions of tobacco and alcohol have been introduced in some countries. However, stronger incentives may be found in these types of products such as health problems, which make it easier to introduce and, probably, have a better result regarding to the decrease in consumption volumes. Proactively, advertising targeted to children under 12 has been banned in some Nordic countries (Jackson, 2004).

Considering the amount of resources available to industry and the government sector, it seems that environmental awareness of consumption patterns may be difficult to communicate using the same channel. By 1980 advertising expenditures in the United States reached about 2% of the gross national product, in Canada about 1.2%, Japan 0.88%, and West Germany 0.87% (Encyclopaedia Britannica, 2004). In 1994, 148 billion dollars were spent in advertising in the U.S.A., this amount is greater than all but the 20 highest GDPs of the world in 1990 (Kiron, 1997b). To get an idea of the numbers of the advertising industry, Procter & Gamble's advertising budget (aimed at promoting consumption) is 34 times greater[22] than the entire budget of the UNEP (Hunter, Salzman and Zaelke, 2002). Moreover, sustainability is not easy to market because, usually, it does not have personal attributes attached to it (Jackson, 2004). And, nobody profits from advertising sustainability. In general, many of the environmental consequences could be regarded as externalities, not directly affecting the individual, at least in a significant proportion. Environmental problems related to health concerns may be easier to address, e.g. banning of certain chemicals.

A discussion of how the significant increases in material consumption and stable well being are understood from a **perspective of 'human needs'** is presented. A broader conception of well being includes the satisfaction of intrinsic human needs. Maslow (1954) characterized human needs as hierarchical and represented them in a pyramid, as shown in Figure 4-5. In his conception, human needs are divided in material, social and moral. The hierarchy suggests that first we will tend to satisfy the lower levels of the pyramid and then go up. Research in human needs has also been done by (Max-Neef et al., 1991). His identification of needs can be considered similar to the one of Maslow, and correspond to subsistence, protection, affection, understanding, participation, idleness, creation, identity and freedom. Two main concepts are going to be considered for the analysis: (i) intrinsic human needs are limited and one way to classify them is material, social and moral; (ii) there are infinite ways of satisfying needs (Max-Neef et al., 1991). These needs are the same for all cultures and time periods, but what varies is the ways in which these needs are satisfied, what Max Neef (1991) calls 'satisfiers'. Material needs, such as physiological, safety and security, inherently require material resources, whereas social and moral needs, in principle, do not.

[22] In 1998 figures.



Source: (Jackson & Marks, 1999)

Figure 4-5 Maslow's hierarchy of human needs

When analyzing consumption patterns for the last four decades in the United Kingdom, (Jackson & Marks, 1999) pointed out two ways in which increasing consumption does not contribute to the well being of the nation: (i) increases in consumption as an attempt to satisfy social and psychological (non material) needs rather than material needs; (ii) increasing consumption may hinder the satisfaction of certain needs (Jackson & Marks, 1999). Congruently with the previous explanations, as presented in chapter 2, the role of income in affluent societies appears to act rather in an indirect way in the income-SWB correlation (i.e. through relative position and aspirations). It seems that after satisfying material needs, income and material consumption are used to satisfy other aspects of the human nature, such as belongingness, self esteem and esteem by others. In the same line, intense competition, long working hours and conflicts between 'work and life balance', might hinder other human needs such as (financial) security, sleep and lack of time for developing social bonds.

As (Jackson & Marks, 1999: 439) conclude after reviewing consumption patterns in the UK for the last decades: *"modern society is seriously adrift in its pursuit of human well-being"*. Considering that there are a limited amount of human needs and infinite ways to satisfy them, the question is to find a combination of ways which provides long term well being with a small amount of material resources.

Short and long term income and consumption choices

Considering that an individual is not able to anticipate the increases in aspirations and relative position has an important influence in SWB perceptions, it is rational for the individuals to try to increase their income and consumption levels. The lack of ability to anticipate future outcomes could be compared to a situation with long run effects like smoking, where long term damages are well documented. If the individual does not know that smoking has long term health risks, he would take just a short term decision. However, if the person is informed, it is more likely that he or she can think in the long term consequences as well. Another aspect in regard to decisions between more time and income is the positive externalities that arise from, for example, the time spent with children. In this case, for the parents the time spent may be enjoyable and provide certain well being but it is also important

to consider that this time is important for the children as well. The previously mentioned situations are examples in which the **information available** to the individuals is of great importance and could help to foresee the long term consequences.

Information and awareness rising is a common recommended policy to address unsustainable consumption patterns. Suggested policies for addressing consumption patterns from OECD, European Union and UNEP are presented in Appendix C. From these proposals it is observed that, commonly, policies are centered on the product and its impacts on the environment throughout the whole life cycle. Product development and markets for products with less environmental impact are encouraged. For example, 'green procurement' in the government is recommended with the aim to create markets and give the example to the public. Information about the product, e.g. using ecolabels, is suggested to allow consumers to make informed and responsible choices.

UNEP and McCann-Erickson launched a project involving advertising and sustainable consumption: *"Can Sustainability Sell?"* It aims to convince the industry that "*far from depressing sales, sustainable principles could be essential to protect both brand health and future profitability"* (UNEP, 2002: 1). The project involved a study to gain a better insight into how young people view 'sustainable consumption' (McCann-Erickson, 2002). One very interesting finding is that young consumers are 'hedonistic idealists' ((McCann-Erickson, 2002); Longhurst, 2003). This strange paradox, as they call it, means that on one hand youngsters want to end poverty, stop violence and racism, get rid of pollution and think that everybody should be equal. But, on the other hand, they want to dress in the nicest clothes, drive a great car, talk on the latest mobile phone and watch their new DVD (WARC, 2003: 46). This contradiction reflects the conflicting information received by people, and why it is often difficult to observe changes in behavior in relation to consumption patterns. Information concerns are also pointed out by OECD. The complexity of environmental information (in the market and media), the skepticism of the public and the credibility of most information sources seems to be linked to the decreasing interest of the public on environmental issues (OECD, 2001). On one hand, environmental concerns are raised but, on the other, advertising and media are fostering a strong link between material goods and happiness.

The strategy launched by UNEP and McCann-Erickson can encourage environmentally sound products, which is good but not enough. Considering that environmental pressures still persist due to the increasing volumes of consumption and rebound effect, the quantity aspect of unsustainable consumption patterns should not be kept out of focus. An illustrative example of how advertising campaigns can increase consumption volumes and keep on stressing the environment can be found in a Norwegian newspaper. In the article the information director of the Municipal Waste Company in Bergen (BIR), Kjersti Kildhal, was interviewed about the lately observed increases in waste volumes. He stated that when there was a campaign at e.g. Bohus and Ikea (two furniture companies), it could be observed an increasing traffic at the recycling centers. Moreover, he continued, we are committed to work for waste reduction, but the truth is that this is practicable impossible as long as the consumption growth is as big as it is today[23].

[23] http://bt.no/okonomi/article300760 (accessed on 21/10/04).

What is sustainable consumption?

"*The use of goods and services that respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the lifecycle, so as not to jeopardize the needs of future generations*" (UNCSD, 1999).

In simple terms, consumption patterns can be associated with *quality* (what is being consumed) and *quantity* (how much is being consumed). In Figure 4-6, the share of more environmentally sound products is represented in green. Common policies address the enlargement of this share in the market, while consumption volumes continue to increase.

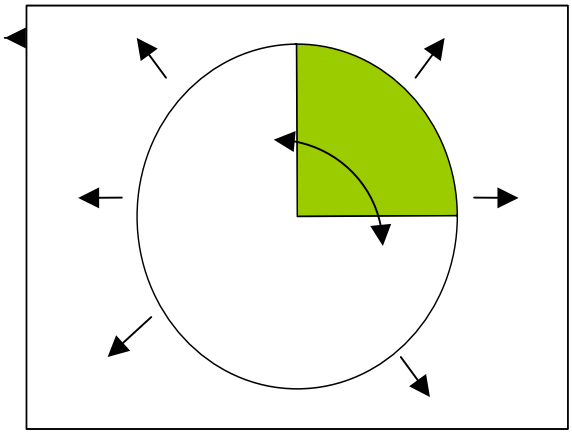


Figure 4-6 Consumption volume and share of more 'environmentally sound products'

Although, consumption patterns are recognized as conflicting with environmental improvement goals, policies in this area are not widespread and are usually regarded as very controversial. Controversies arise from the questioning of our current lifestyles and the conflict with economic growth policies and the industry sector. Quantity issues are the most sensitive to the public, industry and government. This may be because of the existing strong association of income, consumption and material goods with well being. Thus, policies aimed at balancing the preferences between material consumption and non material aspects of well being are recommended.

Within this context, a reduction in working time could be a promoter of social change and lead to a different perspective (mindset) of what a 'good life' means. The introduction of different types of WTR policies could help contributing to raise the value of alternative uses of time (e.g. parental leave and time spent with children) and providing a feedback of priorities different to income and consumption. Although, it may be difficult to anticipate the long term consequences, the expressed working preferences show an important inclination towards a reduction in working hours. Giving support to collective bargaining can help the employees to achieve their preferences and promotes dialogue. In the case of career prospects it seems that a generalized collective reduction in working time in the company would be an option. One way to promote generalized reductions at company level is to include all employees in the WTR policies, which is not always done. For example, in the last WTR policy in France,

managers and other high working positions were excluded, although an important number of them were willing to be included.

A crucial aspect is the role and value of alternative **uses of time**. As time and income appear to be two competing assets, increasing the value of alternative uses of time is a way to support the choice for a WTR. Time acts as a mean to achieve important aspects of well being, mainly with activities with the family and also friends. An important aspect is to understand how shorter working hours become to be perceived as indicator of well being. It seems that, at least, in Denmark and the Netherlands, time has gained importance over income. Understanding in which circumstances the preference of time over income prevails is fundamental to complement and facilitate the introduction of a working time reduction policy.

Although non material resources form part of quality of life measures, usually they are not widely considered. The **communication** of the importance of these non material aspects as quality of life measures **to the public is fundamental**. This could, in a certain extent, counteract the vast information received everyday motivating consumption (e.g. advertising) and the importance assigned to economic indices (e.g. GDP) as measures of quality of life. Information and awareness rising aimed to make people reflect of what happens in the long run with consumption and subjective well being measures is recommended. To overcome the government being considered as too 'paternalistic' or intrusive in the private lives of the people, communication and stakeholder dialogue could be done involving trade unions, political parties and NGOs.

"*So the question becomes: do we want preferences to be manipulated unconsciously, either by a dictatorial government or by big businesses acting through advertising? Or do we want to formulate them consciously based on social dialogue and consensus with a higher goal in mind*?" (Costanza, Cumberland, Daly, Goodland, & Norgaard, 1997: 142).

4.3 Questionnaire analysis

Employees' preferences were obtained through attitude surveys and must be interpreted cautiously. They are very sensitive to the precise wording of the questions, individual circumstances and economic climate (Nätti, 1995 quoted in OECD). Expressed preferences may differ from a real option due to a more careful and realistic consideration of the situation, e.g. with real costs and benefits. Moreover, similar surveys with different wording of the questions lead to different hypothetical situations, and thus, answers. Even, the context or order of the questions can have an influence.

Differences between willingness to pay (WTP) and willingness to accept (WTA)

Expressed preferences are likely to vary according to the hypothetical situation of which the individual has to make a choice. One of these differences is between a potential gain and a potential lost. Psychological and economic reasons indicate that losses are felt more intensively than gains (Turner, Pearce, & Bateman, 1994). This means that if you find money on the street and then you lose it, you are unhappier than before finding it.

The European survey carried out in 1994[24], presented in the OECD study, had the following question: "*If the choice were offered in the next pay round between an increase in pay for the same hours of work and a shorter working time for the same pay you get now, which would you prefer?*" The options for

[24] There is not explicit information about the question posed in 1985. However, as the data were presented jointly it was assumed that it was a similar one.

the respondents were: "*increase in pay*" or "*shorter working time*" (Evans et al., 2001). In this case, there is no option of staying in the same situation in relation to working time and income. It is done in a way that the respondent does not lose any part of the current income, but he or she takes the decision in relation to future theoretical increases. There is an implicit gain for the employee. And thus, both answers to this question could be compared to willingness to accept (WTA) in stated preferences surveys.

In the EFILWC survey of 1998, individuals were asked about their current and preferred working hours, the questions posed were:

"In total, how many hours per week do you work at present – on average?"

"Provided that you (and your partner) could make a free choice so far as working hours are concerned and taking into account the need to earn your living: How many hours per week would you prefer to work at present?"

In this survey, the question for the respondent was completely open ended. But the fact that the previous question was about the current working time make it easier for the individual to compare. The trade off between earning and working time was not directly mentioned, just suggested. In this case, the possibility of maintaining the actual situation does exist. Working less implies a monetary cost, which, as psychological studies have found, has a stronger impact on the respondent than monetary gains.

Considering the above mentioned differences, the stated preferences for a WTR of the 1998 survey are, in theory, lower than if they would have been stated as in 1994.

Considering a policy introduction, a WTR without decreases in income is likely to be more accepted by the public. This does not mean that all the costs are borne by the employer. Government subsidies can be used when including decrease in unemployment rate objectives and wage freezes can be introduced to the employees, which will affect future income increases.

Interpretation of the results

It has to be done considering that expressed preferences might have been done without a serious consideration of the costs involved and in the case of a real option a more careful review consideration will be done (Bielenski et al., 2002). This is a very common fact, where the expressed preferences differ from the realized choices. Specific conditions and figures could make the respondent make a choice closer to the one expected in reality. Thus, in countries with an on going debate or introduction of WTR policies, e.g. France at that time, it may be easier for the respondents to make a more realistic evaluation of the costs and benefits associated. In the French case, for example, the great majority of the WTR would take place without a loss in pay, but considering wage freezes.

4.4 Working Time Reduction and the Environment

Working time reduction can be linked to two important conflicts in modern society. The first one is the environmental problems due to the current unsustainable consumption patterns, being income increases and current resource intensive lifestyles important drivers. The other aspect, indirectly related to consumption, is unemployment. During the last decades unemployment has been intensified by the ongoing displacement of jobs due to technologic improvements and productivity increases.

In the short run, a WTR could contribute to **reduce unemployment** rates by distributing the same amount of work among more people, what is known as 'job sharing'. In other terms, smaller production increases are needed to deal with unemployment, and thus, less environmental impacts due to consumption can be expected. A more complex explanation of how employment, output and productivity increases are related is presented in a model developed by SERI and Wuppertal Institute. The *minimum condition of socio-environmental sustainability* (Spangenberg, Omann, & Hinterberger, 1999b), as it is called, is presented in Appendix C.

Production growth or redistribution to cope unemployment: two examples. Employment rate increases can be obtained through an increase in work volume (i.e. growth in production) or by redistributing the current work volume in more people. Recent employment growth in the Netherlands is an example of redistribution of work, while keeping the total work volume more or less constant (Bielenski et al., 2002). On the other side, in the United States employment growth is based on rapid expansion in the total volume of work, and thus, the economy (ILO, 1996:16 quoted in (Bielenski et al., 2002). In the Netherlands, a decrease in average working time is observed, while the U.S. has experienced an increase. The approach to be taken will depend on the current situation in the country and other complementary policies or goals. Addressing unemployment with work redistribution and shortening the working time is not out of criticisms. However, a good response might even cause a change in the current way of thinking.

In response to an 'underproduction' critic of the Dutch short working hours, the former Prime Minister Ruud Lubbers noted:

"*It is true that the Dutch are not aiming to maximize gross national product per capita. Rather, we are seeking to attain a high quality of life, a just, participatory and sustainable society that is cohesive…While the Dutch economy is very efficient per working hour, the number of working hours per citizen is rather limited…We like it that way. Needless to say, there is more room for all those important aspects of our lives that are not part of our jobs, for which we are not paid and for which there is never enough time*" (Hayden, 1999).

In the long run, a WTR could influence **income increases**, and thus consumption volumes. Current income and future income increases could be traded for increases in leisure time. Moreover, a change in **preferences and lifestyle** could also be expected.

In relation to the current situation in the European countries analyzed, at least three situations can be identified: (1) a WTR may cause an increase in the employment rate, and thus, increases of overall income and consumption. Productivity increases may also foster increases of production (and income) and thus, consumption; (2) with a WTR part of the income increases is exchanged for time (this could be called relative decrease of consumption); (3) a WTR may cause a decrease in total incomes, and thus, consumption. The first situation might be experienced by, for example, a country with low employment rates, such as Spain and Greece. Reorganizations leading to productivity increases and the introduction of more people to the labor force could increase the existing consumption volumes. The second situation could happen when part of the ongoing increases in consumption is exchanged by leisure time, and thus, consumption increases would be less than without a WTR. The third situation is when a decrease in working hours leads to an absolute drop in consumption. This situation could be experienced by, for example, a country with a high employment rate and a strong preference for WTR, such as Denmark.

WTR cannot straight forward be linked to environmental improvements. A common drawback pointed out is that **leisure activities** are an important cause behind many environmental problems (e.g. traveling and sport equipment goods). Shorter working hours combined with resource intensive leisure activities would not lead to the expected improvements in the environment. As (Sachs, Loske, & Linz, 1998: 54-55) point out, in Germany the leisure sector is the third most resource intensive sector and accounts for a 13% and is increasingly structured by material and energy intensive goods. Another aspect is that the industry will strongly refuse WTR if it does not bring benefits, such as productivity increases, some kind of governmental incentive or growth of the leisure industry. This position is understandable. However, productivity increases accompanied by increase in desires and/or commoditization of leisure can run in opposite direction to environmental improvements through WTR policies.

Considering time to consume the scarce resource, Linder (1970) argues that to optimize the use of time spent in consuming goods, people will tend to increase the amount of goods consumed and decrease the amount of time spent with each (Kiron, 1997a). This situation leads to a resource intense leisure time. However, considering the actual economic system, production and consumption patterns, with more time and less income, leisure would tend to be less resource intensive.

In the short term, WTR could be used as a way to address unemployment with less production growth and therefore less consumption growth. However, the most promising and long term results of a WTR policy directed to address the environmental problems arising from current consumption patterns is when income and consumption are actually traded by increases in leisure time. Moreover, a change in the preference function (mindset) could be triggered by experiencing an increase in the availability of intangible aspects of life, such as leisure time and by the feedback that such policy could have in the public. Therefore, the desired consideration of non material aspects as part of well being could be encouraged.

5 Conclusions

This research was conducted to explore the choice between income and leisure time in affluent societies considering that, on average, the level of well being has remained stable over time. The answer seems to be a combination of a **rise of material aspirations** and the **not easy way to 'choose' how many hours to work.**

Realizing the preferences for a shorter working time might not be so easy. The choice of how many hours to work is restricted to other aspects of the labor market and institutional structure (e.g. childcare facilities). For example, the decision might concern enter or not the labor market; or else, to work part or full time. Moreover, it is restricted by the availability of the options offered by (and the requirements of) the employer and type of work. An important facilitator for realizing the working preferences appears to be the existence of a tradition of **collective bargaining**. Currently, employees with higher educational level or positions work longer hours and might face more pressures for career prospects due to the stronger opposition of the employers. Thus, introducing or strengthening a collective bargaining tradition among white collars can be useful to achieve the stated working preferences of these employees. In general, government support to labor unions and dialogue between the employers and employees is recommended.

Considering that important drivers of the current increasing volumes of consumption are income increases and resource intensive lifestyles, the introduction of a WTR policy appears to be an encouraging strategy. Working preferences surveys show that an important number of employees are inclined towards a reduction in their working time[25]. High incomes, social welfare and progressive income taxes are likely to accompany preferences for a shorter working week.

In some countries, WTR policies are introduced as a way to reduce unemployment. In Scandinavian countries, the focus is commonly on improving the quality of life. In the short run, working time reduction policies can help address unemployment with lower production growth, and thus, less consumption. However, the most promising aspect is in the long run, when income decreases (or lower increases) can contribute to decrease the current trends of consumption. Moreover, a very important aspect is that WTR policies can be an important generator of social change and may influence the **people's perception of what makes a 'good life'**. Usually, positive ex post valuations of WTR policies are expressed, some even including (small) income decreases.

The other aspect influencing the choice between leisure and income is the significant **rise in material aspirations** observed. According to neoclassical economics, consumers' preferences are given, i.e. are external to the economic system. However, this assumption has also been questioned. Galbraith was one of the first economists who has pointed out the *"limitation of the sovereignty of the consumer in the modern market economy"* (Figura, 2003: 16). According to Galbraith, tastes, wishes and desires are shaped by advertising and other components of modern marketing according to the interests of the producers (Figura, 2003). In this way, preferences and desires of the consumers are not given, but created within the economy.

The increase in material desires appear to be intensified by advertising and other channels of communication which enhance the importance of material aspirations in happiness, well being

[25] Though, it is important to consider that these are expressed preferences in a specific situation (personal and country). The actual choice may differ after reconsideration in a real situation or if the specific situation changes.

and quality of life. Apart from advertising, there are economic policies aimed to continuously increase production and consumption, providing an important feedback to the public. News, articles and information showed in TV, radio, newspaper and magazines usually enhance the importance of economic indices and foster the link between consumption and well being. Additionally, corporate public relations can also help to shape our consumer culture and perception of environmental problems, also described as "greenwash" or "brownlash" (Hunter et al., 2002).

In the same line, the philosopher Marcuse points out the constrains imposed on the individuals by the existing productive system. *"In this society, the productive system tends to become totalitarian in the way that it determines not only the occupations, aptitudes and attitudes socially needed, but also the personal needs and aspirations"* (Marcuse, 1968: 25-26).

In summary, it can be said that we, consumers, are continuously being influenced by external forces when making our consumption choices. Conflicts arise from the fact that in this way efforts are put towards **short term satisfactions** of independent actors rather than long term well being for the society as a whole.

The economic structure (and society) is based on a system that requires increasing consumption levels. As a retailing analyst stated shortly after World War II:

"Our enormously productive economy...demands that we make consumption our way of life, that we convert the buying and selling of goods into rituals...We need things consumed, burned up, worn out, replaced and discarded at an ever increasing rate" (Hunter et al., 2002: 47).

Although this statement was said long ago, it still reflects much of the dominant thinking and structure of the current economic system. *"The dominant economic paradigm has accepted a goal of increasing consumption with no built-in concept of enough"* (Goodwin, Ackerman & Kiron, 1997). Within this mental model it is difficult to address the environmental problems arising from the current consumption patterns. There are **no drivers in the system which could lead to a decrease of the consumption volumes**; nobody would profit from it. As Marcuse states: *"The contemporary society seems to be able of contain the social change, a qualitative change that would establish essentially different institutions, a new direction of the productive process, new forms of human existence"* (Marcuse, 1968: 22).

Who has the incentives for reducing consumption volumes? From the industry perspective, business rules and profit seeking imply increasing production and consumption volumes, intensified by an intense competition. We, as consumers, are continuously prompted to consume more and more. On the other hand, governments want to be reelected and restricting consumption within the current mental model would not be very popular. One of the problems is that policies in this area are perceived very controversial. Policies addressing the psychological factors of consumption are generally regarded as 'paternalistic' or interfering with 'privacy' issues. Sustainable consumption policies are focused on the product quality (or 'cleaner consumption'), but no efforts have been directed to the consumption volumes. In general, policies are oriented to how people can *'consume differently'* and preferences are assumed as given (OECD, 2002). As presented previously, this assumption is subjected to doubts. Similarly, UNEP's initiatives towards sustainable consumption are neither focused on consumption volumes, but as others, on the product quality. Considering the increasing consumption volumes and the pressures on the environment, it is necessary to look beyond 'green' or 'cleaner' consumption. Moreover, it is important to recognize the limited ability of material consumption to provide long term well being. Further policy development is needed.

It is necessary to find a way to counterbalance the existing driving forces promoting consumption. An important goal is to **balance the preferences between material consumption and other aspects of well being**, which nowadays appear to be strongly inclined towards income and consumption. Policies aimed at strengthening family and community life, such as parental leave or other kind of WTR, are recommended. This is a way to increase the alternative value of time use and, at the same time, communicate the importance of the non material aspects of well being. Also, improving quality of work and leisure could help to address the increasing consumption volumes (Hunter et al., 2002).

At the end this is a political decision, and are the citizens-consumers who will have to change lifestyles and consumption patterns. Information and education which can make us reflect of our current lifestyles, consumption patterns and aspects of well being is needed. To overcome the government being considered as too 'paternalistic' or intrusive in the private lives of the people, communication and stakeholder dialogue could be done involving trade unions, political parties and NGOs. Government support to NGO's focused on decreasing consumption volumes is recommended. However, currently there are not many organizations focused on decreasing consumption volumes. One of the public campaigns addressing this point is the "Buy Nothing Day", which proposes to celebrate a day without buying anything. Buy Nothing Day started in 1993 and was created by the founders of *Adbusters*[26]. Now it is an international event celebrated every year at the end of November in over 55 countries. Their message is to communicate that we, *as consumers, should question the products we buy and the companies who produce them. The idea is to make people stop and think about what and how much they buy and the effects on the environment and developing countries (BND, 2004).* Some questions proposed for reflection are presented in Appendix C.

The introduction of policies related with advertising could be an important step towards more sustainable consumption patterns. Policies in this area could include some kind of advertising restrictions (similar to the ones applied to alcohol and tobacco or children under 12), making mandatory the provision of a complete information about the products and their impacts on the environment, market more sustainable products and promote a decrease in consumption volumes through public campaigns. Considering the enormous expenditures of the advertising industry, it is very difficult for the government or environmental organization to counterbalance the current flow of information in the media. Thus, the introduction of mandatory environmental advertisements in the media could be useful. This was the strategy proposed by an Indian Supreme Court. Citizens should be informed and educated about environmental issues to fulfill their Constitutional duty to protect and enhance the environment. Thus, the Court suggested that every cinema, theater, radio, TV station and other media sources should show environmental public service announcements produced by the Ministry of the Environment (Hunter et al., 2002). Further research in this area is proposed.

5.1 Further Research

Netherlands and Denmark seems to have a marked preference for reducing their working time. The level of income could play an important role, but, why other European countries with high incomes do not present such a marked preference? There might be some other influencing factors in the society that contribute to the shaping of these preferences. Further research on the identification of possible factors and conditions triggering these preferences

[26] Based in Vancouver, Canada, Adbusters is a not-for-profit, reader-supported, 120,000-circulation magazine concerned about the erosion of our physical and cultural environments by commercial forces (Adbusters, 2004). They also organize once a year the *TV Turnoff Week*.

might be helpful for consumption policies. In the same line, further research might be needed to anticipate how WTR policies can be considered a generator of social change.

Considering that working time reduction results in more leisure time, it may also be interesting to analyze what do we do with leisure time. Can it be considered an existence of 'leisure' problem, as Keynes suggested? Taking into account the tendency of market relations to invade and reshape large portions of non-market sectors of society (Cogoy, 1995), it may be more difficult to afford leisure. And thus, it may become more difficult to find what to do in our leisure time. Moreover, more leisure time with an increasing resource intensive leisure market will not help resolve environmental degradation associated with consumption. How more time availability and less income (increases) could affect overall material consumption? How can it be achieved a less resource an material intense leisure?

Finally, more research is needed to support and introduce regulations related with advertising and develop a program to provide information to the public about the environmental consequences of the increasing consumption volumes. How can advertising and public relations be regulated such as to decrease consumption volumes? Is it feasible to introduce mandatory public service announcement in the media related to the environmental consequences of consumption? Which other ways to inform the public, such as schools, universities, public campaigns such as the 'Buy Nothing Day' and others could be identified?

Bibliography

Adbusters, 2004. http://www.adbusters.org/network/about_us.html (accessed 25/10/04).

Begg, D., Fischer, S., & Dornbusch, R. (2000). *Economics* (Sixth ed.): Mc Graw-Hill.

Berg, A. (2004). *Engineering employers and unions make proposals for new agreement.* http://www.eiro.eurofound.eu.int/2004/01/feature/se0401104f.html [2004, 20/07]

Bielenski, H., Bosch, G., & Wagner, A. (2002). *Working Time Preferences in Sixteen European Countries* (No. ISBN-92-897-0177-3): European Foundation for the Improvement of Living and Working Conditions.

Blumensaadt, C., & Moler, K. (2000). *Employment options for the Future - National working paper - Denmark.*

BND, 2004. http://www.buynothingday.co.uk (accessed 25/10/04).

Chakravarti, A., & Janiszewski, C. (2004). The Influence of Generic Advertising on Brand Preferences. *Journal of Consumer Research, 30*(4), 487-502.

Commission of the European Communities. (1985). *Eurobarometer: Public Opinion of the European Community* (No. 24). Brussels: Commission of the European Communities.

Costanza, R., Cumberland, J., Daly, H., Goodland, R., & Norgaard, R. (1997). *An Introduction to Ecological Economics* (First ed.). Boca Raton: St. Lucie Press.

Csikszentmihalyi, M. (1999). If We are so Rich, Why aren't We Happy? *American Psychologist, 54*(10), 821-827.

Diener, E., & Biswas-Diener, R. (2002). Will Money Increase Subjective Well-Being? *Social Indicators Research, 57*, 119-169.

Diener, E., & Suh, E. (1997). Measuring Quality of Life: Economic, Social and Subjective Indicators. *Social Indicators Research, 40*, 189-216.

Easterlin, R. (2001a). *Growth Triumphant: The Twenty-first Century in Historical Perspective* (Fourth ed.): The University of Michigan Press.

Easterlin, R. (2001b). Life Cycle Welfare: Evidence and Conjeture. *The Journal of Socio-Economics.*

Encyclopaedia Britannica. (2004). *Encyclopedia Britannica Online.* http://search.eb.com/dictionary [2004, 15/06]

European Commission. (1994). *Eurobarometer: Public Opinion in the European Union* (Standard Eurobarometer No. 41): European Commission.

European Commission. (1998). *Standard Eurobarometer* (No. 49). Brussels: European Commission.

European Commission. (2002). *The EU at the WSSD, 2002: Sustainable Production and Consumption.* Brussels: European Commission.

European Foundation for the Improvement of Living and Working Conditions. (2003). *Chapter 5: Use of Time and Quality of Life*: European Foundation for the Improvement of Living and Working Conditions.

Evans, J., Lippoldt, D., & Marianna, P. (2001). *Trends in Working Hours in OECD Countries* (Occasional Papers No. 45): OECD.

Figura, I. (2003). Profiles of World Economists: John Kenneth Galbraith. *BIATEC 11(2).* (http://www.nbs.sk/BIATEC/BIA06_03/15_19.PDF).

Frank, R. (1989). Frames of reference and the quality of life. *The American Economic Review, 79*(2), 80-85.

Frank, R. (1997). The Frame of Reference as a Public Good. *The Economic Journal, 107*, 1832-1847.

Frank, R. (1999). *Luxury Fever: Why Money Fails to Satisfy in an Era of Excess* (First ed.). New York: The Free Press.

Funk, L. (2003). *IG Metall suffers defeat over 35-hour week in East German metalworking.* http://www.eiro.eurofound.eu.int/2003/07/feature/de0307204f.html [2004, 20/07]

Gallie, D. (1996). *Employment, Unemployment and the Quality of Life: The Employment in Europe Survey 1996* (Eurobarometer 44.3): European Commission.

Garhammer, M. (2002). Pace of Life and Enjoyment of Life. *Journal of Happiness Studies*(3), 217-256.

Gershuny, J., & Fisher, K. (1999). Leisure in the UK Across the 20th Century. In A. H. Halsey (Ed.), *British Social Trends: the Twentieth Century*. London: Macmillian Publishers Ltd.

Goodwin, N, Ackerman, F, & Kiron, D (Eds.) (1997). *The Consumer Society* (First ed.). Washington: Island Press.

Hayden, A. (1999). *Sharing the Work, Sparing the Planet* (First ed.). Toronto: Between the Lines.

Hirata, J. (2001). *Happiness and Economics: Enriching theory with empirical psychology.* Maastricht University, Maastricht.

Hunter, D., Salzman, J. & Zaelke, D. 2002. Chapter Two: The Root Causes. In *International Environmental Law and Policy* (Second ed.). New York: Foundation Press.

Jackson, T. (2004). *Consumer Paradise? Unsustainable consumption in cultural and socio-psychological context.* Paper presented at the International Workshop on Driving Forces of and Barriers to Sustainable Consumption, University of Leeds, Leeds, UK.

Jackson, T., & Marks, N. (1999). Consumption, sustainable welfare and human needs - with reference to UK expenditure patterns between 1954 and 1994. *Ecological Economics, 28*, 421-441.

Julkunen, R., Nätti, J., & Anttila, T. (2004). *Educated employees prone to time pressures and long working hours.* http://www.eurofound.eu.int/ewco/2004/07/FI0407NU05.htm [2004, 26/07]

Juster, T. (1990). Rethinking Utility Theory. *The Journal of Behavioral Economics.*

Kiron, D. (1997a). Consumption in the Affluent Society. In N. Goodwin, F. Ackerman & D. Kiron (Eds.), *The Consumer Society* (First ed., pp. 37-75). Washington: Island Press.

Kiron, D. (1997b). Perpetuating Consumer Culture: Media, Advertising, and Wants Creation. In N. Goodwin, F. Ackerman & D. Kiron (Eds.), *The Consumer Society* (First ed., pp. 229-268). Washington: Island Press.

Lane, R. (2000). Diminishing Returns to Income, Companionship and Happiness. *Journal of Happiness Studies*(1), 103-119.

Lindvall, J. (1989). *Expensive Time and Busy Money.* Linköping University, Linköping.

Longhurst, M. (2003). Advertising and Sustainability: A new Paradigm. World Advertising Research Center. (http://www.trial.warc.com/Information/AboutUs.asp)

Marcuse, H. 1968. *El Hombre Unidimensional : Ensayo sobre la ideología de la sociedad industrial avanzada.* [One Dimensional Man]. Barcelona: Seix Barral.

Max-Neef, M., Elizalde, A., & Hopenhayn, M. (1991). *Human Scale Development: Conception, Application and Further Reflections*. London: Apex.

McCann-Erickson. (2002). *Can Sustainability Sell?* : UNEP.

OECD. (1998). *Employment Outlook 1998: Chapter 5. Working Hours: Latest Trends and Policy Initiatives*: OECD.

OECD. (2001). *Environmental Outlook*: OECD.

OECD. (2002). *Policies to Promote Sustainable Consumption: An Overview*. OECD.

Perista, H. (2000?). *Employment options of the future: National working paper on actual and preferred working hours - Portugal*: Centro de Estudios para a Intervencao Social [Study Center for Social Intervention].

Praag, B. M. S. v., Frijters, P., & Ferrer-i-Carbonell, A. (2003). The Anatomy of Subjective Well Being. *Journal of Economic Behavior & Organization, 51*, 29-49.

Prescott-Allen, R. (2001). *The Well Being of Nations: A Country by Country Index of Quality of Life and Environment* (First ed.): Island Press.

Ropke, I. (1999). The Dynamics of Willingness to Consume. *Ecological Economics, 28*, 399-420.

Sachs, W., Loske, R., & Linz, M. (1998). *Greening the North: A Post-Industrial Blueprint for Ecology and Equity*: Zed Books.

Scitovsky, T. (1992). *The Joyless Economy: The Psychology of Human Satisfaction* (Revised ed.). New York: Oxford University Press.

Segal, J. M. (2004, March 5-6, 2004). *How Much Money Do We Need in the Affluent Society?* Paper presented at the International Workshop on Driving Forces of and Barriers to Sustainable Consumption, University of Leeds, Leeds, UK.

Spangenberg, J., Omann, I., & Hinterberger, F. (1999a). *Sustainability, Growth and Employment in an alternative European Economic Policy.* Paper presented at the 5th Workshop on alternative economic policy for Europe, Brussels.

Spangenberg, J., Omann, I., & Hinterberger, F. (1999b). *Sustainability, growth and employment in an alternative European economic policy: Theory, policy and scenarios for employment and the environment.* Paper presented at the 5th Workshop on alternative economic policy for Europe, Brussels.

Tijdens, K. (2000). *Employment Options for the Future: Actual and Preferred Working Hours. National Working Paper for the Netherlands.* Amsterdam: University of Amsterdam.

Turner, K., Pearce, D., & Bateman, I. (1994). Valuing concern for nature. In *Environmental Economics: an elementary introduction* (pp. 108-139): Harvester Wheatsheaf.

UNCSD. (1999). *Report on the Seventh Session on Commission on Sustainable Development.* New York: UNCSD.

UNDP. (1998). *Human Development Report 1998*: United Nations Development Program (UNDP).

UNEP. (2002). *Advertising Industry and United Nations Environmental Programme Join Forces to Promote Better Consumption* (Information Note): UNEP.

United Nations. (2002). *World Summit on Sustainable Development: Plan for Implementation.* http://www.johannesburgsummit.org/html/documents/summit_docs/2309_planfinal.htm [2004, 20/09]

Veenhoven, R. (2000). The Four Qualities of Life - Ordering Concepts and Measures of the Good Life. *Journal of Happiness Studies*(1), 1-39.

WRI. (2004). *Earth Trends: The Environmental Information Portal.* http://earthtrends.wri.org/ [2004, 01/07]

Abbreviations

A	Austria
B	Belgium
D	Germany
DK	Denmark
E	Spain
EFILWC	European Foundation for the Improvement of Living and Working Conditions
EU	European Union
F	France
FIN	Finland
GDP	Gross Domestic Product
GNP	Gross National Product
GNI	Gross National Income
GPI	Genuine Progress Indicator
GR	Greece
HDI	Human Development Index
HWI	Human Wellbeing Index
I	Italy
IRL	Ireland
ISEW	Index of Sustainable Economic Welfare
L	Luxembourg
NL	Netherlands
OECD	Organization of Economic Cooperation and Development
P	Portugal
PPP	Purchasing Power Parity (PPP is also used for the Pollution Pays Principle)
S	Sweden
SERI	Sustainable Europe Research Institute
SWB	Subjective Well Being
UK	United Kingdom
UNCSD	United Nations Commission on Sustainable Development
UNDP	United Nations Development Program
WSSD	World Summit for Sustainable Development
WTR	Working Time Reduction

Appendix A

Examples of quality of life quadrants in the classification made by Veenhoven (2000).

Table A-1 Some sub-meanings within quality-quadrants

	Outer qualities	Inner qualities
Life chances	**Livability of environment** *Ecological:* e.g. moderate climate, clean air, spacious housing *Social:* e.g. freedom, equality and brotherhood *Economical:* e.g. wealthy nation, generous social security, smooth economic development *Cultural:* e.g. flourishing arts and sciences, mass education *Others.*	**Life-ability of the person** *Physical health:* negative: free of disease; positive: energetic, resilient *Mental health:* negative: free of mental defects; positive: autonomous, creative *Knowledge:* e.g. literacy, schooling *Skills*: e.g. intelligence manners *Art of living:* e.g. varied lifestyle, differential taste *Others.*
Life results	**Utility of life** *External utility:* for intimates: e.g. rearing children, cares for friends; for society: e.g. being a good citizen; for mankind: e.g. leaving an invention *Moral perfection:* e.g. authenticity, compassion, originality *Others.*	**Appreciation of life** *Appraisal of life aspects:* e.g. satisfaction with job, satisfaction with variety. *Prevailing moods:* depression, ennui, zest *Overall appraisals:* affective: general mood level; cognitive: contentment with life *Others.*

Source: (Veenhoven, 2000)

Common questions used to assess subjective well being are[27]:

Overall happiness - happiness in life

'Taking all the things together, would you say you are: very happy, quite happy, not very happy, not at all happy'.

Overall happiness - satisfaction with life

'Overall, how satisfied are you with your present life? Very satisfied, fairly satisfied, neither satisfied nor dissatisfied, fairly dissatisfied, very dissatisfied'

[27] The questions were taken from the World Database of Happiness web page. Hhttp://www2.eur.nl/fsw/research/happiness/hap_nat/nat_fp.htmH (accessed on August 13 2004).

'All things considered, how satisfied are you with your life as a whole now?' Satisfied(10)…Dissatisfied(1). High (7 - 10); medium (4 - 6); low (1 - 3)

Cantril's ladder rating: *'Suppose the top of the ladder represents the best possible life for you and the bottom of the ladder the worst possible life. Where on this ladder do you feel you personally stand at the present time? '*

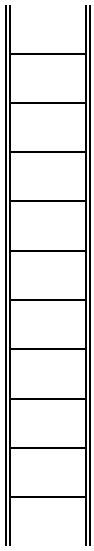


Figure A-1 Cantril's ladder rating of life satisfaction

Hedonic level of affect

'How do you feel currently? Is your level of well being: very low, rather low, moderate, high, very high?'

Some Findings on Income Decreases (Diener & Biswas-Diener, 2002)

i. Declines in income due to recession can cause SWB declines. Data evidence of income and well being was shown by Inglehart and Rabier (1986) for Belgium.

ii. People suffer more marital and mental health problems during recessions. Possibly, people do not reduce their material desires as faster as they increase them;

iii. Studies on retirement have been done by Diener et al., 1993, which show that people are usually 'prepared' and no significant influences on SWB are experienced by income decreases;

iv. There is also an important difference between the people that voluntary decide to work less and those fired.

Leisure and SWB

Table A-2 Process benefits measurements in U.S.A. in 1975 and 1982

		Mean Process Benefits		Reliability	Time spent in
Activity	N	1975	1982	Proportion	1975 (hr/day)
Talking with children	312	9.16	8.98	0.80	0.07
Care of children	312	8.87	8.74	0.82	0.50
Trips with children	311	8.87	8.72	0.74	0.03
Games with children	308	8.62	8.24	0.74	0.05
Talking with friends	678	8.38	8.27	0.66	0.28
Going on trips, outings	657	8.24	8.17	0.67	0.75
Job	397	8.02	7.79	0.72	5.03
Home entertainment	662	7.76	7.54	0.62	0.79
Reading books, magazines	668	7.60	7.49	0.67	0.31
Going to church	631	7.23	7.28	0.66	0.17
Reading newspapers	675	7.17	7.10	0.63	0.24
Making things for house	635	6.78	6.47	0.57	0.17
Playing sports	606	6.76	6.23	0.56	0.12
Going to movies, plays	629	6.65	6.38	0.52	0.10
Gardening	642	6.55	6.27	0.60	0.15
Cooking	668	6.17	6.13	0.60	0.70
Television	677	5.93	6.00	0.62	2.01
Other shopping	673	5.69	5.30	0.57	0.02
Housing repairs and alterations	635	5.11	4.94	0.57	0.19
Work, school organizations	587	5.00	5.13	0.50	0.27
Grocery shopping	673	4.57	4.55	0.56	0.34
Cleaning house	672	4.22	4.18	0.57	1.13

Source: (Juster, 1990)

Appendix B

Table B-1 Contribution of part time employment to recent changes in average annual working hours

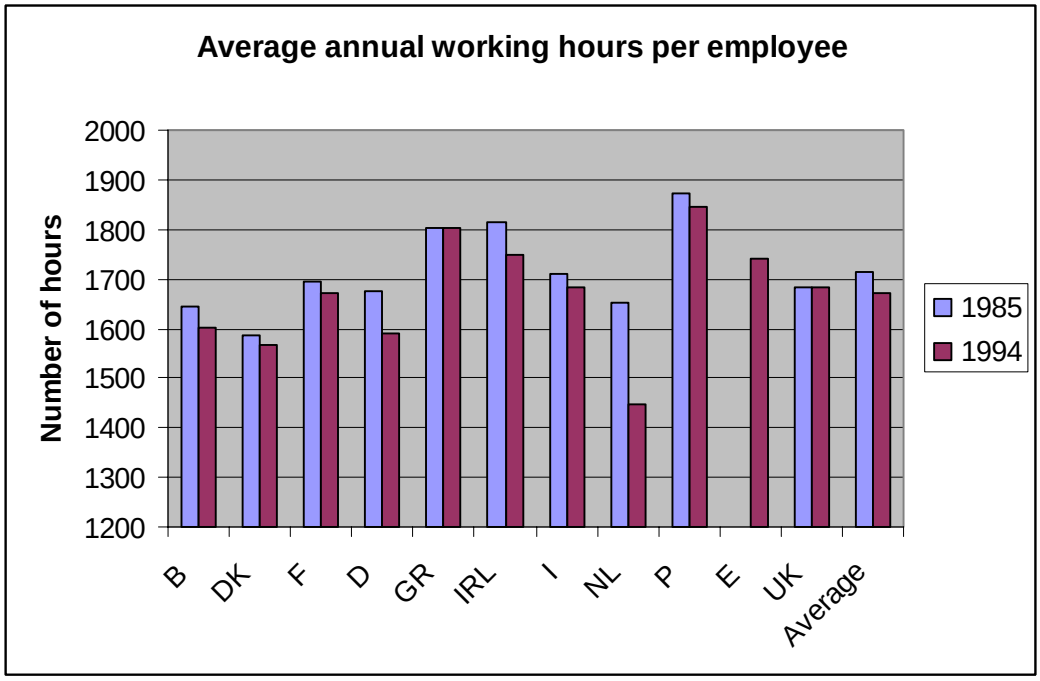
		Overall change in hours	Change attributable to:		
			Change in hours of full-timers	Change in hours of part-timers	Change in share of part-timers
Belgium	1983-1993	–7.5	–2.5	0.2	–4.9
Canada[b]	1983-1993	–1.1	0.7	0.5	–2.3
Denmark	1985-1993	–6.6	–7.1	–0.9	1.4
France	1983-1993	–4.1	0.4	0.7	–4.4
Germany	1983-1993	–10.9	–6.1	–0.9	–3.9
Greece	1983-1993	–1.0	–1.6	–0.4	1.3
Ireland	1983-1993	–7.4	–1.0	–0.4	–6.0
Italy	1983-1993	–3.7	–3.0	0.4	–0.9
Luxembourg	1983-1993	–2.1	–0.9	–0.1	–1.1
Netherlands	1987-1993	–6.6	0.0	3.2	–11.3
Portugal	1986-1993	–6.9	–6.5	0.6	–0.3
Spain	1987-1993	–6.0	–3.8	–0.4	–1.8
Sweden[b]	1987-1994	7.7	1.8	3.6	2.3
United Kingdom	1983-1993	–1.5	3.8	–0.5	–5.0
United States[b]	1983-1993	7.3	4.7	1.3	1.2
Unweighted average of above countries	1983-1993	–3.1	–1.4	0.5	–1.7

a) The following formula is used to decompose the total change in hours:
$H - h = (pr)(HP - hp) + (1 - pr)(HF - hf) - (PR - pr)(hf - hp) + (PR - pr)[(HP - hp) - (HF - hf)]$
where $H = (1 - PR)(HF) + (PR)(HP)$ and $h = (1 - pr)(hf) + (pr)(hp)$
h and *H* are the overall average hours of work in the first and second years, respectively, *hp* and *hf* are the average hours of part-time and full-time workers, in the first year, and *pr* is the proportion of part-time workers, in the first year, etc. The last term, not shown in the table, is the interaction term, which is generally small. It explains the difference between the first column and the sum of the other three. The figures shown are the sum of year-on-year changes, except where indicated.

b) The results for Canada, Sweden and the United States are based solely on the two years shown and on the assumption that the ratio of annual hours of part-time workers to those of full-time workers is equal to the corresponding ratio for usual weekly hours (actual hours in the case of the United States). For Canada and Sweden, the results refer to all persons in employment.

Sources: EUROSTAT (1995a) for the European Union countries. For the other countries, the annual hours data are from the OECD Annual Hours Database. Supplementary data for Canada were taken from *The Labour Force*, various issues. For Sweden, data were supplied by Statistics Sweden. For the United States, data were taken from *Employment and Earnings*, various issues.

Source: OECD, 1998



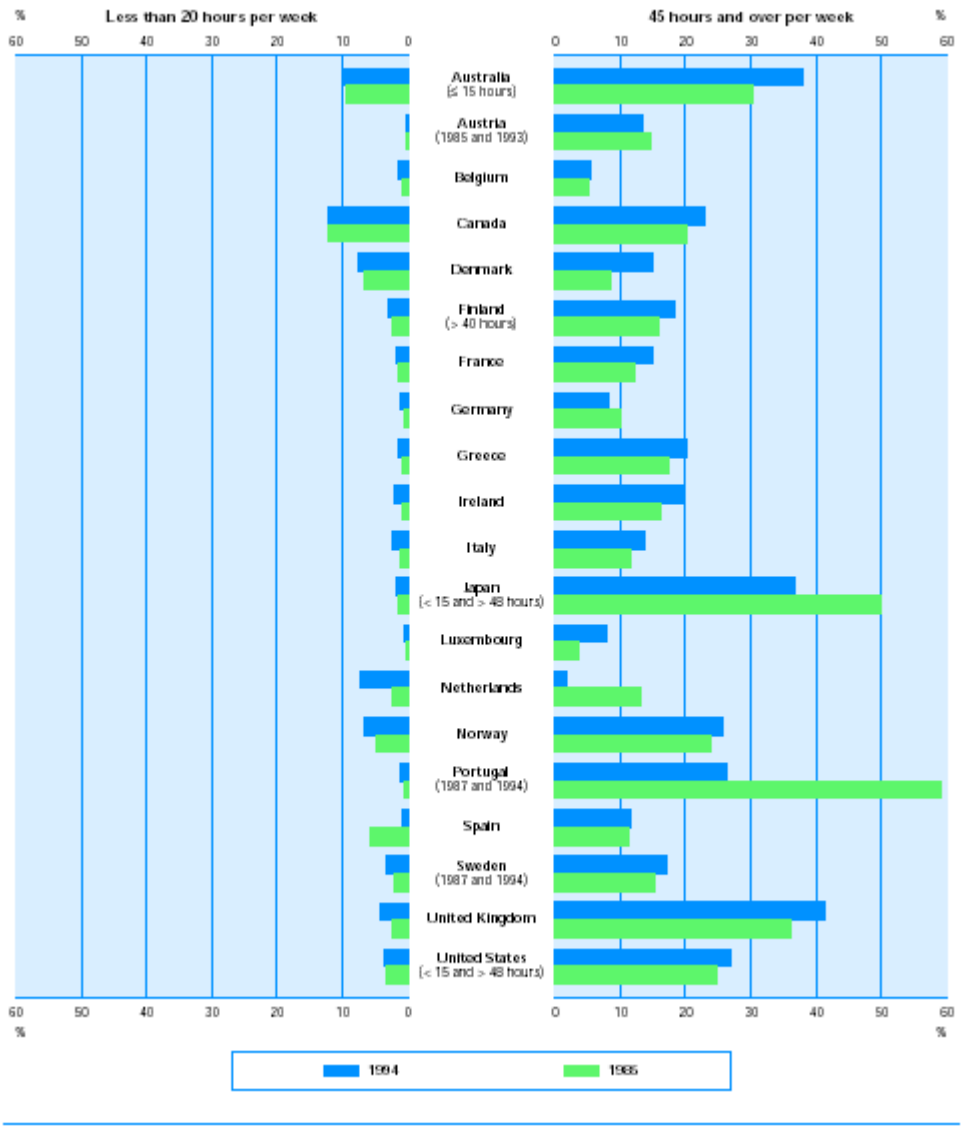
Source: (OECD, 1998)

Figure B-1 Average working hours per employee in 1985 and 1994

Table B-2 Gross domestic product per capita in purchasing power parity in 1985, 1994 and 1998

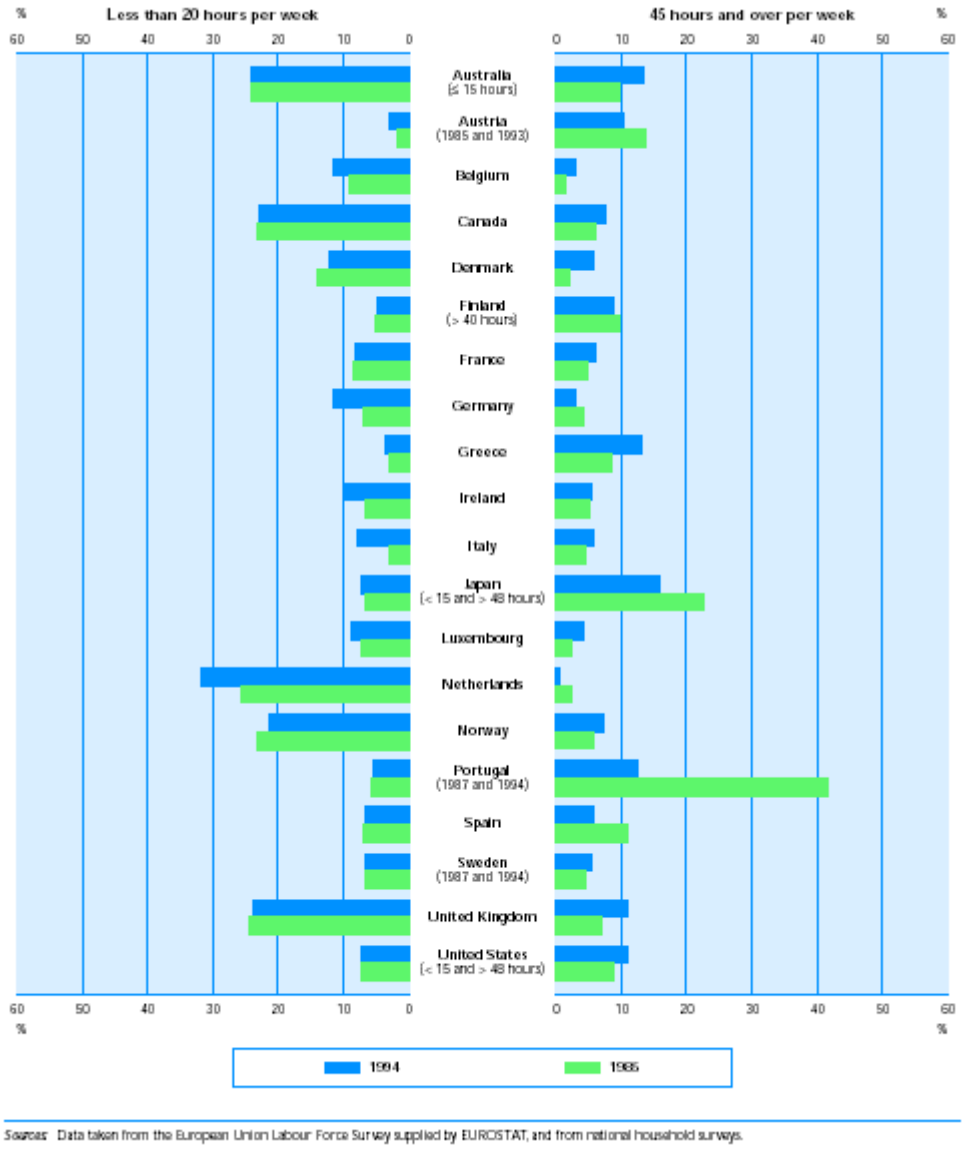
Country	GDP-PPP (international dollars per capita)		
	1985	1994	1998
Austria	13163	21726	24017
Belgium	13637	21615	24478
Denmark	15010	22452	25273
Finland	12337	18207	21962
France	12701	20113	21922
Germany	13112	21121	22972
Greece	9030	12800	14609
Ireland	8053	15653	22776
Italy	12163	19795	21761
Luxembourg	12432	30372	38969
Netherlands	12443	20160	23090
Norway	14675	23992	28004
Portugal	7207	12990	15517
Spain	8444	14552	16981
Sweden	13237	19321	21621
United Kingdom	11627	18777	21301

Source: World Resource Institute



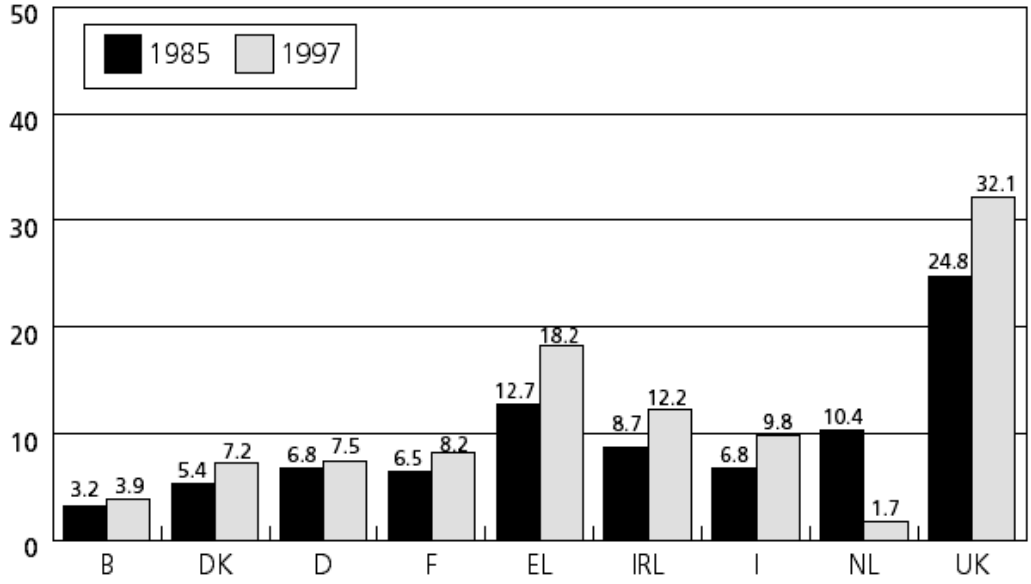
Source: (OECD, 1998)

Figure B-2 Proportion of men workers working short and long usual hours in 1985 and 1994



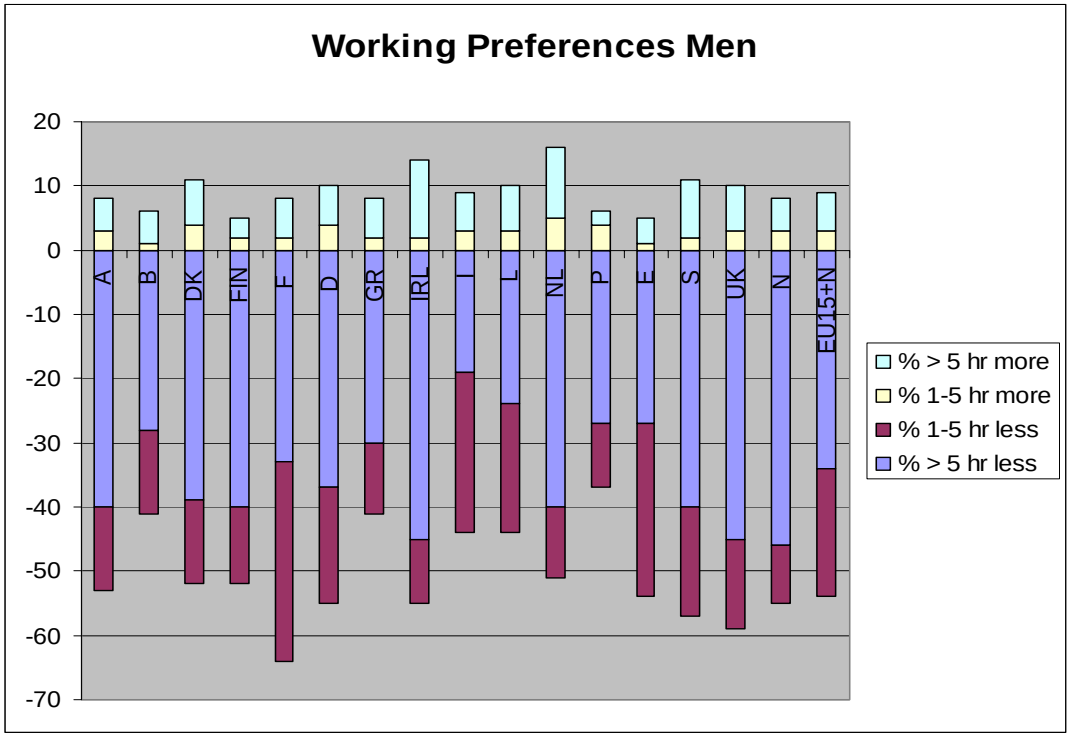
Source: (OECD, 1998)

Figure B-3 Proportion of women working short and long usual hours in 1985 and 1994



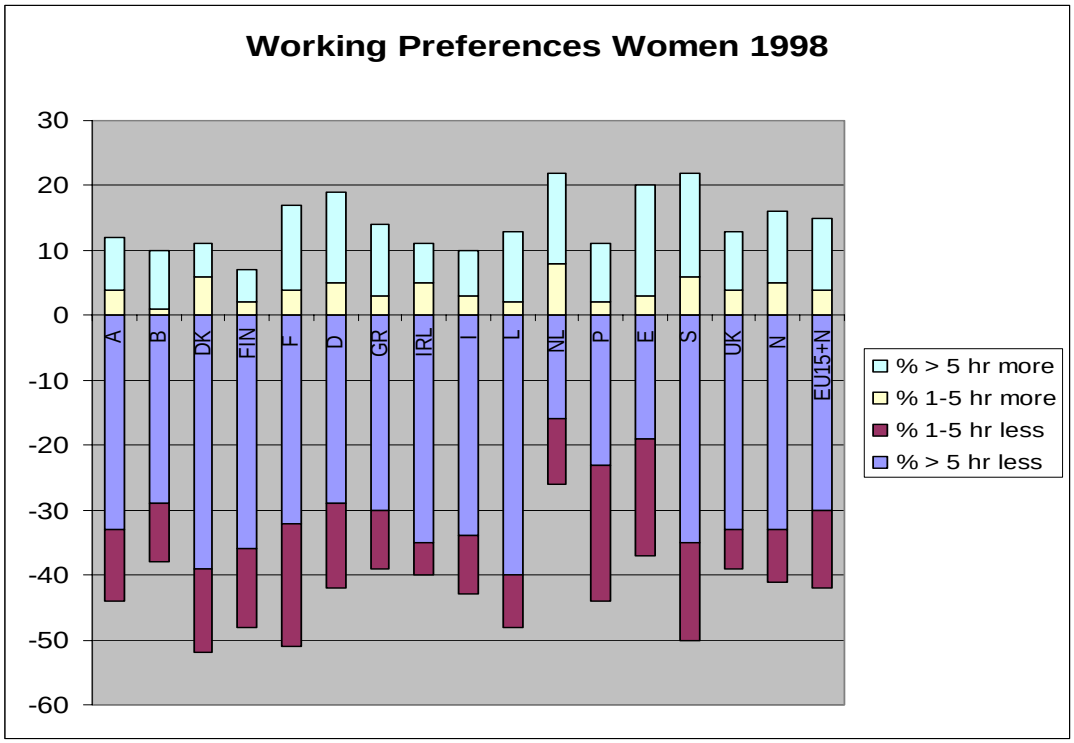
Source: (Bielenski et al., 2002)

Figure B-4 Share of full time employees who worked more than 45 hours per week 1985&1997



Source: (Bielenski et al., 2002)

Figure B-5 Working preferences of men in 1998



Source: (Bielenski et al., 2002)

Figure B-6 Working preferences of women in 1998

Table B-3 Average current and preferred working times for dependent employees (hours per week)

Country	All			Men			Women		
	Actual	Preferred	Difference	Actual	Preferred	Difference	Actual	Preferred	Difference
A	41.1	36.3	-4.8	45.2	39.6	-5.6	35.7	32.1	-3.6
B	37.5	34.3	-3.2	40.4	36.8	-3.1	33.5	31.1	-2.4
DK	36.4	32.4	-4.0	38.8	34.9	-4.0	33.8	29.7	-4.1
FIN	39.1	34.2	-4.9	41.5	35.9	-5.6	37.3	33.0	-4.3
F	38.0	34.3	-3.7	40.7	35.9	-4.8	34.4	32.1	-2.3
D	37.5	33.7	-3.8	42.1	36.8	-5.3	32.2	30.1	-2.1
EL	39.8	36.6	-3.2	42.4	38.6	-3.8	35.7	33.7	-2.0
IRL	38.9	34.5	-4.4	42.3	37.4	-4.9	34.4	30.6	-3.8
I	37.4	34.4	-3.0	39.5	36.8	-2.7	34.2	30.5	-3.7
L	38.6	35.1	-3.5	41.4	38.2	-3.2	34.3	30.5	-3.8
NL	33.7	31.5	-2.2	39.3	35.7	-3.5	25.9	25.6	-0.3
P	39.7	36.4	-3.3	42.5	38.4	-4.1	36.1	33.6	-2.5
E	39.3	36.1	-3.2	41.1	36.9	-4.2	34.9	34.2	-0.7
S	38.1	34.4	-3.7	41.1	36.4	-4.7	34.9	32.4	-2.5
UK	37.3	32.9	-4.4	43.1	37.3	-5.8	31.1	28.2	-2.9
NOR	36.7	32.6	-4.1	40.9	35.3	-5.6	32.1	29.7	-2.4
EU15+NOR	37.7	34.0	-3.7	41.4	36.8	-4.6	32.9	30.4	-2.5
Range	7.4	5.1		6.4	4.7		11.4	8.6	

Source: (Bielenski et al., 2002)

Table B-4 Actual and preferred working hours of both partners

	Average current weekly hours	Average preferred weekly hours	Difference
Austria	66.6	62.1	-4.5
Belgium	65.4	62.0	-3.4
Denmark	68.5	61.8	-6.7
Finland	67.7	66.3	-1.4
France	62.4	62.2	-0.2
Germany	60.8	59.6	-0.8
Greece	65.1	67.3	2.2
Ireland	61.8	58.3	-3.5
Italy	58.0	58.9	0.9
Luxembourg	58.0	55.8	-2.2
Netherlands	58.3	55.9	-2.4
Portugal	69.1	70.8	1.7
Spain	54.4	66.0	11.6
Sweden	69.3	65.9	-3.4
United Kingdom	66.4	58.8	-7.6
Norway	66.4	63.4	-3.0
EU15 + NOR	62.0	61.0	-1.0
Range*	14.9	15.0	-

Average weekly working hours of both partners together (not employed = 0 h)
*Difference between the highest and the lowest number of hours

Source: (Bielenski et al., 2002)

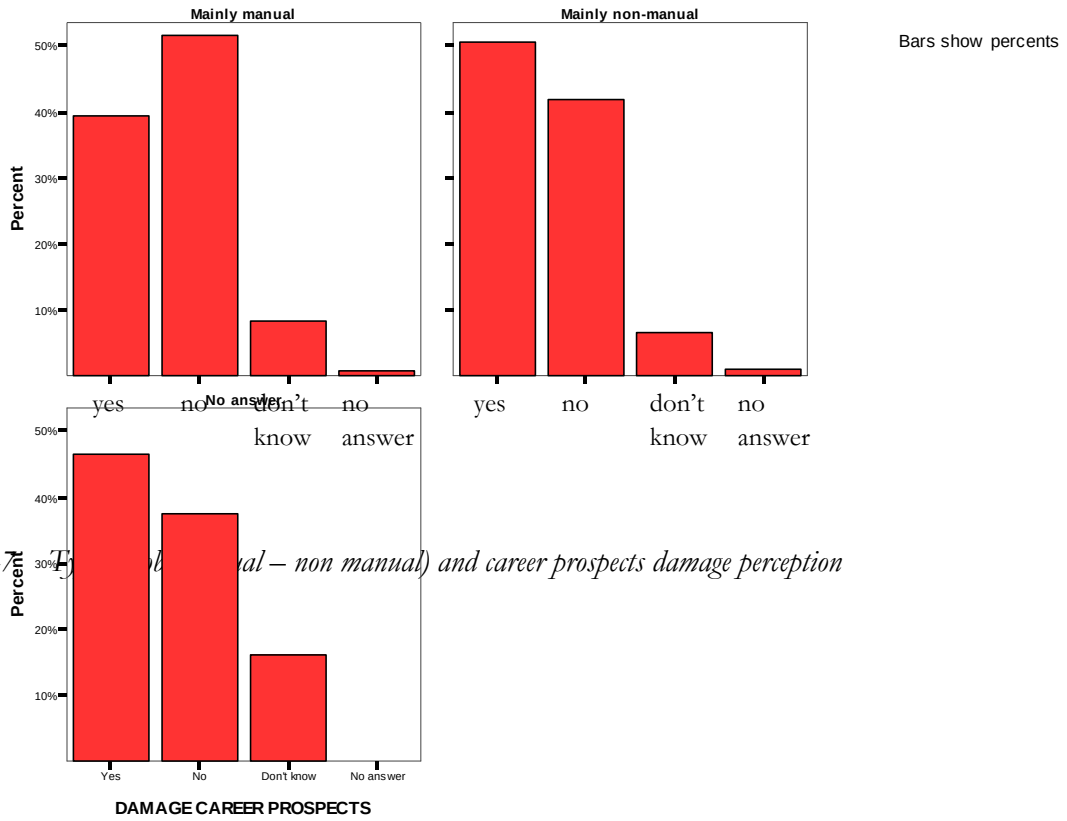


Figure B-7 Ty[illegible]al – non manual) and career prospects damage perception

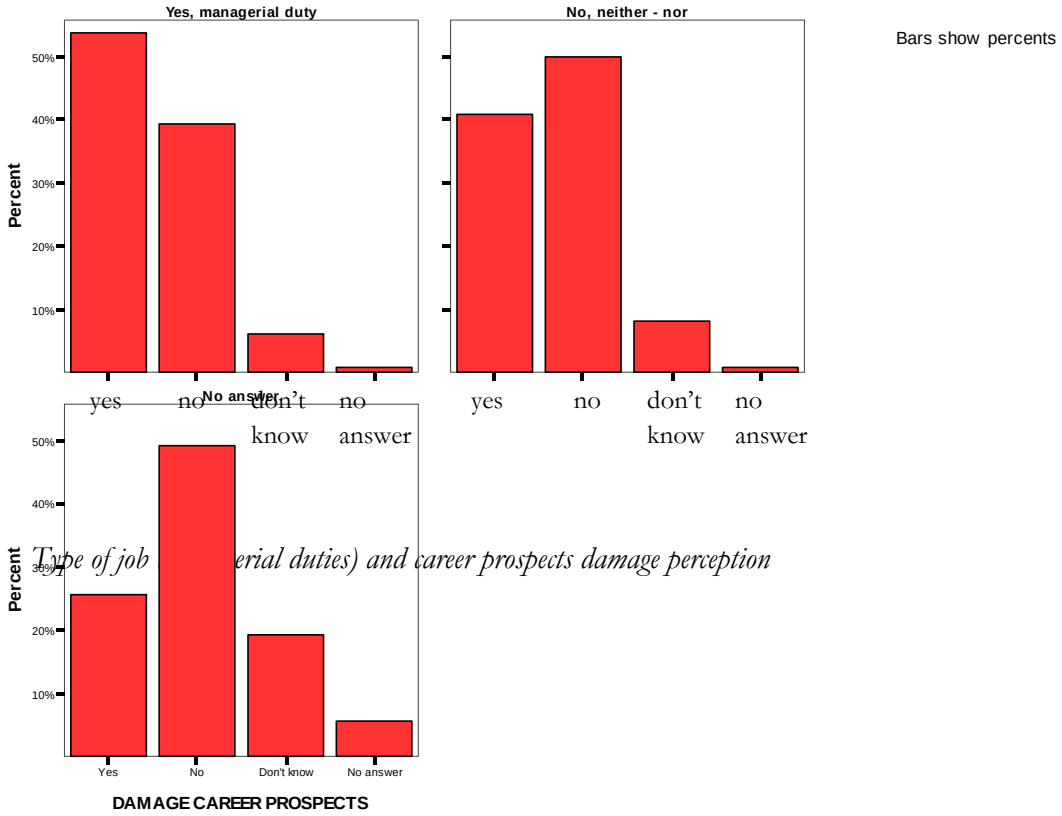


Figure B-8 Type of job (managerial duties) and career prospects damage perception

Appendix C

Existing Policies for Addressing Consumption Patterns

Strategies to address the current unsustainable consumption patterns proposed by (OECD, 2001) include:

i. Draw clear links between environmental quality objectives and consumption patterns;

ii. Technological and product innovation;

iii. Provide strong signals where market fails to do so;

iv. Stimulate public awareness and action.

The last objective is regarded as the most difficult challenge and presents two main conflicts. The first one is to recognize the broader connections between consumer lifestyles and associated pressures on the environment (OECD, 2001). The second challenge is related to the decreasing interest of the public due to the complexity of environmental information (in the market and media) and the credibility of information sources (OECD, 2001).

The European Commission is focusing efforts to address the current unsustainable consumption patterns on the following aspects (European Commission, 2002):

i. Getting consumer prices to reflect more closely the ecological footprints of the products consumed;

ii. Investing on science and technology to exploit new opportunities as consumption patterns change;

iii. Improving information to reveal the true sustainability of the products we consume and to allow the consumers to make informed and responsible choices.

UNEP's SC programme started in 1998 and its primary objective is to explore underlying needs of consumption patterns, both in developed as developing countries, and to use these as sources of innovation for business, governments and NGO's[28].

- Innovation for business by inspiring mainstreaming Cleaner Production and the development of new products and services that meet today's request for quality of life.
- Innovation for governments by inspiring them to put frameworks in place that facilitate/enable consumers and producers to change consumption and production patterns.

[28] The information was taken from the web page of UNEP: Hhttp://www.uneptie.org/pc/sustain/about-us/about-us.htm#1H (accessed on 15/09/04).

- Innovation for NGO's and all other stakeholders to communicate more and better about sustainability with the public at large.

Information, inspiration and infrastructure are key for mainstreaming the implementation of Agenda 21. The UNEP Sustainable Consumption programme focuses on:

- delivering reliable information on consumption, products and the environment (Youth, SC.net, Indicators, Life Cycle Initiative, Global Consumer Survey, Advertising);
- training and networking activities that inspire stakeholders all around the globe to do their bit (Regional Initiative, WSSD, toolkits);
- infrastructure: promote better products and services (Cleaner Production Programme, Design & Product Service Systems [PSS]) and help governments to develop and implement sustainable consumption policy frameworks (UN Consumer Guidelines project).

Minimum condition of socio-environmental sustainability

Based on total material requirements and considering the environmental and social dimensions of sustainability, (Spangenberg, Omann, & Hinterberger, 1999a) propose a number of relations leading to the *minimum condition for socio-environmental sustainability*. The social dimension is linked with the availability of labor in the society, i.e. the creation of jobs. The environmental dimension starts with the assumption that the throughput of materials in the economy should not continue increasing (for an absolute decoupling).

The output of the economy is represented by Y; R is the total volume of resources used; Y/R is the resource productivity (frequently referred as eco-efficiency). Then, considering the assumption the first criterion is: $\mathbf{dY < d(Y/R)}$

The labor productivity, measured as the average per capita production, is represented by Y/L; where L is the total number of people employed. The number of people employed (L) increases only if during a period the economy grows faster than the average production per capita: $\mathbf{dY > d(Y/L)}$

The *minimum condition for socio-environmental sustainability* proposed is: $\mathbf{d(Y/L) < dY < d(Y/R)}$

The hourly productivity is represented by Y/h and the numbers of hours per capita as h/L; Then, $Y/L = Y/h * h/L$ and $d(Y/L) = d(Y/h * h/L)$.

To keep the labor productivity increases (Y/L) below total output growth (Y), to have job creation, the hourly productivity increases (Y/h) must be kept below the increases of output (dY); or the number of hours per worker (h/L) must decrease such as to offset hourly productivity increases.

Public Campaigns for Sustainable Consumption: Buy Nothing Day

Some questions that make people reflect before buying something proposed in this campaign are[29]:

Do I need it?
How many do I already have?
How much will I use it?
How long will it last?
Could I borrow it from a friend or family member?
Can I do without it?
Am I able to clean and/or maintain it myself?
Am I willing to?
Will I be able to repair it?
Have I researched it to get the best quality for the best price?
How will I dispose of it when I'm done using it?
Are the resources that went into it renewable or nonrenewable?
Is it made or recycled materials, and is it recyclable?
Is there anything that I already own that I could substitute for it?

[29] Hhttp://www.buynothingday.co.ukH (accessed 25/10/04).