



Climate and sufficient consumption levels:

Policy implications of the current
knowledge and debate on sustainable
consumption levels, sufficiency and
degrowth

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Climate and Sufficient Consumption Levels:

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Abstract

A society's greenhouse gas emissions are closely related to its volumes of consumption. Efficiency gains and changes in the consumption mix are important, but will not be enough to reach sustainable levels of consumption-based emission.

This thesis examines the literature on degrowth and sufficient consumption levels to find out what the current knowledge and proposed policy strategies are. Unsolved issues and pitfalls in creating policy for reaching sustainable consumption levels are brought along into an interview survey among Swedish policy leader in the field of degrowth and sustainable consumption. This is to examine whether the Swedish debate differs from the international academic discourse, whether the Swedish respondents have any novel policy proposals, and whether Sweden is deemed to have any unique potentials or obstacles in implementing policies for reaching sustainable consumption levels.

Conclusions include the need for spreading a deepened growth-critical debate in Sweden and elsewhere. There are significant knowledge gaps in how to design and implement comprehensive policies for lowering consumption levels, and further research is needed in order to make them feasible. However, a heightened presence of sustainability issues in the public and political debate could go a long way towards making such policies democratically legitimate and politically practicable.

Contents

1.Introduction.....	4
1.1.Aims of this study.....	4
1.1.1.Research questions.....	6
1.2.Methods and outline.....	6
1.3.Frameworks and limitations of the study.....	9
2.Consumption and greenhouse gas emissions.....	11
2.1.Environmental load displacement.....	11
2.2.Carbon footprinting.....	12
2.3.Swedish consumption-based emissions.....	13
2.4.Potential of a changed consumption mix.....	14
2.4.1.Decoupling.....	15
2.4.2.Rebound effects	15
3.Restricting consumption and growth levels.....	17
3.1.Degrowth.....	17
3.2.Critiques of degrowth.....	19
3.3. Sufficiency.....	21
4.The consumption society.....	26
4.1.Market thinking: citizen vs. consumer.....	26
4.2.The drivers of consumption.....	28
4.3.A low-consumption, high-satisfaction society.....	30
5.Policies for lowering consumption levels.....	33
5.1.Sufficiency and policy for lowering consumption levels.....	33
5.2.Pitfalls of sufficiency as basis for policy.....	35
5.3.Policy strategies for lower consumption levels.....	37
5.4.Swedish policy on sustainable consumption.....	43
6.Implications of the literature review.....	45
7.Empirical findings.....	48
7.1.Sufficiency and sufficient levels of consumption.....	50
7.2.Policy issues.....	52
7.2.1.Rebound effects.....	52
7.2.2.Decreasing resource efficiency due to lower growth-levels.....	52
7.2.3.Public acceptance.....	53
7.2.4.Democratic legitimacy.....	54
7.3.Sweden.....	55
8.Analysis and discussion.....	57
9.Conclusions.....	62
References.....	64
Appendices.....	70
Appendix A: Interview guide.....	70
Appendix B: List of interview respondents.....	71

1. Introduction

It becomes increasingly clear that we live beyond our means on our planet. We consume more and more, not least in the rich parts of the world, and this development does not seem to slow down. There are boundaries as to how much resources can be consumed sustainably, some of these boundaries have most likely already been crossed (Rockström et al. 2009). Ultimately, human economic activities will have to be limited in some way. This conclusion is the basis for much academic debate, even the global business-world seems to have realised that the Earth's resources will not last forever (WBSCD 2010). Global resource use and greenhouse gas emissions are not decreasing while more and more people are attaining higher levels of consumption. Furthermore, rich-world consumption is leading to an export of environmental degradation to poorer parts of the world, not least when it comes to greenhouse gas emissions. The places that are already the poorest and most vulnerable are the ones predicted to be hit the hardest by the effects of global warming.

The goal of this study is to contribute to the knowledge on how a rich-world society can adjust to natural resource boundaries and still allow its people good lives. It recognizes the strong connection between economic growth, consumption and greenhouse gas emissions, and is placed in a context of degrowth, arguing that it most likely will not be possible to reach sustainable levels of emissions without lowering levels of consumption and thereby growth in rich countries. The main contribution of this study is a deeper understanding of the problems with and debate around how a rich western society like Sweden, which is the country in focus in this study, could decide on sufficient levels of consumption and implement boundaries. It achieves this through a literature review which is followed up by interviews among Swedish opinion leaders on the matter. The literature is used to form a picture of the international academic debate on degrowth, consumption levels and greenhouse gas emissions. The interviews pick up on loose threads from the literature, and investigate where the Swedish debate is positioned in relation to the international literature and if Sweden is seen as being in any special position, both when it comes to the debate and when it comes to actually take action for lower consumption levels.

1.1. Aims of this study

The overall goal of this thesis is to provide constructive insights into how a rich western-world

society can take the next step towards lowering consumption levels in order to minimize greenhouse gas emissions. A literature survey makes it clear that the consumption patterns of the rich parts and communities of the world have unsustainable effects on the environment, not least on climate change (for Swedish figures see for example: Carlsson-Kanyama et al. 2007; EPA 2010; WWF 2008). Climate change generally hit the less well-off the hardest, who globally have (and historically have had) the least impact on these changes. The literature also makes clear that there exist big potentials for sustaining, or even lifting, life satisfaction while lowering consumption in societies with a certain level of material living standards (Cooper 2005; Jackson 2011/2009; Nørgård 2012, 2006; Pepper et al. 2009; Rosnick & Weisbrot 2006; Sanne 2005, 2002; Soper 2007; Spangenberg 2010). A level of material well-being beyond which more does not necessarily mean better has long since been surpassed in many rich countries, including Sweden (Max-Neef 1995, 1992; Steinberger & Roberts 2010).

This leads to a discussion on sufficiency: i.e. on how to put boundaries on consumption on such a level that people's opportunities to live good lives are not undermined while natural sustainability boundaries remain uncrossed. The challenge is to restrain consumption levels in a democratic way that is accepted by the public, while keeping high employment levels, development and welfare. To make sense of such changes this study makes use of Princen's writing on sufficiency (2005, 2003). Princen discusses sufficiency in theoretical terms calling it “the sense that, as one does more and more of an activity, there can be enough and there can be too much” (Princen 2003 p. 43). His reasons that modern societies are guided by an efficiency principle, while sufficiency could be a guiding principle in order to attain sustainable lives that are fulfilling for those how lead them (Princen 2005). This is a way of structuring the understanding of the logics that drive consumption levels and economic growth in modern societies. Princen lets his concept of sufficiency become a logic for environmental and consumption policy. While sufficiency is debated in degrowth literature (Alcott 2010a, 2008, Boulanger 2010) it is interesting to use in this context, as a background in the discussion on forming policies to attain lower levels of consumption and greenhouse gas emissions. In addition to the theoretical literature on degrowth and sufficiency literature on policy proposals is reviewed.

Four major issues are identified for which the literature fails to give satisfying solutions. These four issues are:

1. How to make sure the lowered consumption levels actually have positive environmental effects, i.e. how to avoid lowered consumption in one place or sector

- leading to more consumption somewhere else (Alcott 2010a).
2. How to avoid stagnation in things like the development of green technologies with lower or reversed levels of growth and thereby less investments (van den Bergh 2011b).
 3. How to gain acceptance for lowered levels of material throughput in everyday consumption (Evans & Abrahamse 2009; Hamilton 2010; Pepper et al. 2009).
 4. How to uphold democratic values and standards when setting boundaries for consumption (Kallis & Martinez-Alier 2010).

These are mainly issues of policy making and they are, along with other broader issues of sufficiency and people's roles and power as consumers, brought into the empirical part of the study and form the basis for interview questions. The empirical part consists of interviews among Swedish opinion leaders on these matters of consumption and climate. By choosing respondents with robust knowledge of the issues of consumption and environment, and/or insights into Swedish policy-making in this area, the goal is to outline to which extent the Swedish debate follows the lines of the international academic discussion. The aim is to investigate which kinds of policies are conceived as possible and effective when it comes to reaching sufficient consumption levels, what the hopes are of seeing them realized, and what special circumstances are seen to exist in this regard when it comes to Sweden.

1.1.1. Research questions

- Given the current knowledge of the role of consumption levels for greenhouse gas emissions, what does the existing literature on degrowth and sufficiency say about potential policy strategies and pitfalls when trying to lower consumption levels in a modern rich society?
- Does the debate on lowering consumption levels in Sweden give other insights than the international debate, and is it in line with the international literature or does its focus differ?

1.2. Methods and outline

This study consists of two complementary parts with different methods and purposes. First is a

literature review, used to outline the debate on lowering consumption levels to reduce greenhouse gas emissions. The literature represents the international academic debate on the issues of restraining consumption levels to attain sustainability. This corresponds to the first of the research questions given in the last section. Second in this study is an empirical part which sets out to answer the second research question. It is an interview survey among Swedish opinion leaders participating in the debate on these issues. The goal is to give insights into how far the debate has come in Sweden, trying to make out what the next step in furthering these question could be. One ultimate goal of this study is to help guiding policy-making in the area of lowering consumption-based greenhouse gas emissions, and the interview survey gives insights more closely related to a specific country context. Understanding this context, i.e. what makes Sweden special, will help in making policy decisions and in focusing further research. Comparing the Swedish situation with the situation in other countries can contribute to understanding what strategies work best in certain contexts.

The literature examines relevant contemporary academic literature to give a picture of the state of the debate on how to create a society that lowers its consumption levels in order to reach sustainability. This is done to understand where there are gaps in the knowledge, and what the most contested issues are. Literature on consumption-based greenhouse gas emissions is used to give a picture of the problem. Literature on degrowth and sufficiency is reviewed to give a theoretical background on how rich societies could strive for other goals than growth. Literature on consumption, its role in society and in people's lives, contributes with suggestions on why people consume like they do, and on how they could live good lives with lower consumption levels. Then different kinds of policies are introduced, both ones suggested by sufficiency-theory, and other consumption-focused policies, tested and untested.

The themes for the interviews are gathered from the literature survey. The interviews included questions on sufficiency and consumption levels, drawing on the main themes from the theoretical literature. Several questions were discussing pitfalls identified in the literature, mainly from the different policy-proposals, but also from the critiques of degrowth and sufficiency. The questions gathered from the literature were not limited to a Swedish context, but often the respondents answered from an explicitly Swedish perspective. The answers to these questions hinted at how the Swedish debate goes and how it differs from the international literature. There were also some questions on the respondents' views on Sweden when it comes to limiting consumption levels. These were not gathered directly from the literature, but included to make use

of the respondents' particular insights into the Swedish situation. The interview guide can be found in appendix A.

The interviewees were chosen according to one or more of the following criteria: because of their presence in media discussing these questions; their involvement in politics on these matters; or them being researchers in the field. They were found through being noted authors or public figures within the field, or through networks such as *Steg 3* (approx. The Third Step) and *Radikalisera klimatpolitiken nu* (approx. Radicalise the Climate Politics Now), which have agendas that are critical towards continued growth for the sake of environmental sustainability.

The choice was to interview only people who are known to take a position for degrowth or limiting consumption levels. This comes from the goal of this study to explore what the next step in degrowth politics and research might be. Since the literature presents convincing arguments that consumption levels must be lowered in order to reach sustainability in the rich communities of the world, it is interesting to gather these people's views to see where they coincide with the international literature and where they might diverge.

The interviews were done in a semi-structured manner, with a questionnaire as a basis but with the freedom to pick up on interesting topics that the subjects brought up. The goal was also to pick up on any special knowledge that the subject might have due to their background, occupation or position. The interviews were done over telephone, they were recorded, and they all lasted between about 20 and 40 minutes.

Below is the outline and themes of the following chapters:

Table 1: Chapter outline and contents

Chapter	Contents
2. Consumption and emissions	Problem description: why consumption levels most likely must be put under boundaries.
3. Degrowth and sufficiency	Presents theories on how to limit consumption and growth levels.
4. The consumption society	Describes the role of consumption and how it affects societies and people's lives.
5. Policy theory and proposals	Discusses policies proposed by sufficiency literature, other literature on sustainable consumption and reviewing attempts that have been made.
6. Implications of the literature review	Summarizes the literature and points at weak or interesting issues where more knowledge is needed. These are used in the interview survey.

Chapter	Contents
7. Interview survey	Starts the empirical part of this study. It reviews the results of the interviews to show the big picture in a clear way while letting interesting details and differing opinions shine through.
8. Analysis and discussion	Couples the empirical results and the literature, discusses converging and diverging themes.
9. Conclusions	Summarizes the results, discusses implications for political action and for further research.

1.3. Frameworks and limitations of the study

Consumption is a driver behind many types of environmental change and degradation. Here the focus is on climate change and greenhouse gas emissions. Climate change itself is a driver behind many types of environmental problems like diminishing biodiversity and acidification of the oceans, and burning of fossil fuels have many other detrimental effects in addition to greenhouse gas emissions, like disturbing the nitrogen cycle and spreading of heavy metals. Therefore, examining the drivers of greenhouse gas emissions, as this study does, as well as questioning the focus on growth that exist in today's world, means looking at the cause behind many other types of environmental problems. The kinds of strategies that this study discusses, trying to lower the levels of many types of consumption can therefore be expected to have effects on other areas beside climate change. The focus on climate change and greenhouse gas emissions was chosen because of the way that climate change is integrated into many parts of modern human life. Looking at greenhouse gas emissions and lowering consumption to sustainable levels in this regard most likely also means working towards better sustainability within other areas as well.

This study focuses on how consumption functions as a driver behind greenhouse gas emissions. This involves looking into what roles consumption and the consumer play in modern societies in rich parts of the world. To understand how consumption levels can be restrained it is crucial to have an understanding of why people consume as they do, and why consumption levels are constantly rising in many parts of the world, including Sweden. Consumption is only one part of the chains of human economic activity, and it is only one aspect of how humans influence the environment. It is however a major driving force behind economic growth and environmental degradation, and is thus important to put into focus. The level of consumption is not often discussed in mainstream politics, not even when it comes to sustainability or emissions reductions. To look at

consumption rather than production when it comes to greenhouse gas emissions is also the most fair and just perspective, as it does not care for where emissions happen, but who makes them happen through their consumption.

An important perspective for this study is that of sufficiency, and in this study Princen's (2005, 2003) works on how sufficiency could be an organizing principle for modern societies form the basis for the discussion. Sufficiency sorts into the broader framework of degrowth, which strongly questions the benefits of GDP growth, which often is an overarching goal in modern societies. Degrowth writers ask valid questions about what our societies should strive for, whom it should benefit and in what ways. The concept of sufficiency helps criticising the logics behind the focus on economic growth, a focus for example no political party in Sweden questions today. A part of the reason for choosing sufficiency as a framework, is to understand how it holds up in policy making. Sufficiency is not the only conceivable organizing principle when it comes to sustainable consumption and degrowth, but it is chosen because implies setting boundaries on consumption, and it helps understanding where and how the boundaries could be set.

2. Consumption and greenhouse gas emissions

This chapter focuses on how consumption leads to greenhouse gas emissions, which is the problem this study is based on. In the first two sections two ways of thinking about consumption based greenhouse gas emissions are introduced: *environmental load displacement* and *carbon footprinting*. The former focuses on the environmental costs of consumption taken on by someone else than the consumer, the latter focuses on environmental space, i.e. how large a share someone's emissions is of the total sum of sustainable emissions.

The third section is a review of attempts to calculate *Swedish climate impact from a consumption perspective*, showing that the official production based statistics do not account for the climate impacts Swedish people actually cause. Then follows a section on *why we most likely cannot hope for changed consumption patterns and higher efficiencies to do the job of reaching sustainability*, but why restricting consumption levels must be a part of the solution.

2.1. Environmental load displacement

Environmental load displacement is a concept that highlights how material consumption can and often do have far away and unforeseen consequences. It is a way to try to connect how the consumption patterns and resource use in some parts of the world have environmental effects elsewhere. Environmental load displacement is what happens when consumption causes a detrimental environmental impact, however not in direct contact with the consumer, but somewhere else. A shift occurs that put environmental costs and suffering onto someone or some place that does not carry responsibility for the consumption.

Environmental load displacement builds on the notion that human economic activities rarely are without environmental effects, but these might occur in unexpected ways, and far away. The effects might be most visible when it comes to effects that are concentrated to a specific area, like deforestation or depletion of fisheries. Production and consumption at one place often requires resources from other places, and the extraction of those resources causes environmental degradation. Historic examples, though not climate-related, include how the silk trade from China, not least to Europe, was the driver behind large scale changes in land-use in South-east China (Marks 2007) or how the skewed power relations in the Roman slave economy lead to large scale

deforestation (Hughes 2007). (also see Hornborg et al. 2007 for more historic examples and theoretical discussions). This perspective helps us see how economic activity in one place can have far-reaching effects that might be hard to track and identify, especially in our globalized modern world (Lenzen et al. 2012; Nijdam et al. 2005; Shanahan & Carlsson-Kanyama 2005).

This phenomenon might not be quite as striking when it comes to climate change and greenhouse gas emissions. They are truly global issues, and the emissions affect the climate in the same ways regardless of where they originate. However, consumption in the rich parts of the world cause excess emissions in the poorer countries where the production is placed. Due to official statistics on emissions being production-based, the countries in which the emissions take place are seen as the ones responsible, even though the actual consumption might take place a world away. More often than not, rich countries are net importers of green house gas emissions, while poorer countries with large production and trade, are net exporters, even though there are exceptions (Aichele & Felbermayr 2012).

It is also clear that much of the projected detrimental effects of the coming global warming will occur in parts of the world that are poor and vulnerable and therefore not as resilient as a country like Sweden. It is the rich and resilient countries that cause, and historically been causing, most of the world's greenhouse gas emissions, especially if counted per capita. They are however not the ones who will have to deal with the most severe climate change effects (IPCC 2007). The perspective of environmental load displacement puts focus on these skewed flows of resources and environmental degradation.

2.2. Carbon footprinting

Carbon footprinting is a way of highlighting the injustice of per capita emissions. The concept originates from the viewpoint that we only have a finite world, and that the amount of emissions our planet can handle has limits if we want future generations to have a chance at good living conditions. We already see the climate warming up due to anthropogenic green house gas emissions (IPCC 2007), so we are working ourselves towards those limits. The environmental and carbon footprint movements are emphasizing this by assigning “footprints” to countries and their inhabitants according to how large share of the total available resources they claim. This is a means of making visible how much of earth's available environmental space each of us take up, what consequences our ways of life and consumption actually lead to, and it seems to have been doing it

quite well (Weidema et al. 2008).

Large domestic emissions and a large carbon footprint are tightly connected (Aichele & Felbermayr 2012), but the imports and exports of a country can conceal the real state of things. Carbon footprinting allows us to get insight into what our lifestyles actually mean in terms of green house gas emissions, to compare between countries and see that the differences between countries are huge.

2.3. Swedish consumption-based emissions

Here follows a review of a number of studies that has made attempts of calculating Sweden's greenhouse gas emissions due to consumption. This is not a simple issue, as the consumed goods must be traced to their origins. One must know where the goods were produced and how in order to calculate what emissions they caused. As seen below, a number of methods have been used, but it seems obvious that Swedish consumption accounts for more green house gas emissions than the official statistics show, all of the studies point towards Sweden effectively importing emissions, in that the consumption causes more emissions than the domestic production does.

The World Wide Fund for Nature carried out a study of Sweden's carbon footprint (WWF 2008). It concluded that Sweden's footprint is 17% higher than the emissions domestically produced minus exports. The Swedish Environment Protection Agency also made an assessment (EPA 2010). It showed that in 2003 Swedish greenhouse gas emissions due to domestic consumption were 95 Mtonnes of carbon dioxide equivalents while the emissions produced domestically in Sweden were 76 Mtonnes, thus Sweden imported emissions. Germany, Denmark and Finland were the countries from where Sweden imported the most green house gas emissions, but it seemed to be from countries in Eastern Europe and China that Sweden had the most green house gas intensive imports, i.e. large emissions per value of the goods (EPA 2010 p. 22). The authors remark on the uncertainties in the figures, there are gaps in the knowledge about production methods and exact origin for a many goods (EPA 2010 pp. 22-23 25-26). However, there does not seem to be any doubts that Sweden has been importing green house gas emissions due to consumption.

In another study Carlsson-Kanyama et al. (2007) compared different methods of accounting for import and consumption when calculating Sweden's green house gas emissions. They got results varying from 57 Mtonnes carbon dioxide per year when imports were accounted for as if they were produced in Sweden to 109 Mtonnes when data from the countries from which Sweden imported

were used. This during a period when Sweden's officially reported emissions were 54 Mtonnes per year.

Similar results can be found in Berglund (2011). The results from an input-output analysis regarding Sweden's consumption based green house gas emissions suggests that the emissions have risen by 20% during a period, 1999-2005 when the official statistics report a fall. This increase is said to be due to higher demand for imported goods. Another study also suggests that while Sweden's production based emissions have had a declining trend, the carbon footprint of the country has been trending upwards, as Sweden's import of carbon dioxide has risen from about 12% to almost 60% of the domestic emissions between 1995 and 2007 (Aichele & Felbermayr 2012).

What this points towards is the fact that people's lifestyles in Sweden are creating more and more climate impacts globally, even when official statistics used in negotiations say otherwise. This is reinforced by the fact that a range of phenomena is helping in keeping Swedish emissions relatively low, like widespread district heating and non-fossil electricity production. This puts even more emphasis on the role played by our consumption, as greening the energy supply will not nearly be enough to abolish anthropogenic green house gas emissions. The figures discussed above show that Sweden import emissions, and therefore effectively export climate change effects, if seen from an environmental load displacement perspective. This happens in two ways, the first being that other countries get the blame for emissions that has its cause in Swedish consumption, the other being that due to Swedish geography and it being a rich country with high resilience to climate change effects, the effects of its emissions will hit other places more severely, displacing the environmental burdens of Swedish consumption. From a carbon footprint point of view, Swedish emission levels are far beyond the 2 tonnes of CO₂-equivalents per capita that is often proposed as a sustainable level (Vetenskapliga rådet för klimatfrågor 2007).

2.4. Potential of a changed consumption mix

This section reviews literature that criticizes the notion that higher efficiencies and changes in the mix of consumed goods will be enough to reach sustainability. These are the dominating strategies for achieving sustainable consumption when one does not want to challenge the importance of economic growth. The two main arguments for why there must be a focus on lowering consumption levels are (1) decoupling, or the lack thereof, and (2) rebound and backfire effects, both presented below.

2.4.1. Decoupling

In this context decoupling means creating less greenhouse gas emissions per unit of monetary value consumed. This is believed by some to lead to a situation where the economy grows without emissions growing. However, we have as yet not seen a rate of decoupling anywhere near what is needed to achieve the emission reductions needed. If the GDP and population growths are supposed to continue with the rates that is projected for a business as usual situation, the carbon intensity per unit of GDP has to decrease almost ten times faster than today for CO₂ levels not to get higher than 450 ppm (Jackson 2011/2009 p. 92, 2009). It has also been argued that environmental sustainability and continued growth are extremely hard to combine because, among other things, the environmentally friendly alternatives must be at least as cheap as the conventional one, otherwise the growth rate will suffer (Hueting 2010).

What have been decoupling though, as shown by Steinberger and Roberts (2010) are human development and high standards of living on the one side and the carbon and energy needed to reach them on the other. Through more efficient technology less and less energy and carbon has been needed to reach high standards of living over a period of 30 years. The effects from higher carbon and energy consumption on development and quality of human life are significant when living standards are poor. However, this relation is associated with diminishing returns, and reach close to zero when living standards are very high. Today, enough energy is produced to enable all humans the possibility of a high level of development (Steinberger & Roberts 2010 p. 432). However, in rich communities much more energy is used than is needed for a good life (Druckman & Jackson 2010). This suggests that the energy consumption in rich parts of the world could be haltered while still maintaining high levels of development.

2.4.2. Rebound effects

When talking about creating climate-friendly consumption patterns it is also really important to be aware of rebound effects, the second big reason why the consumption mix and higher efficiencies will not be enough. Rebound happens when less consumption or higher efficiency of some product or service, leads to more consumption of something else. Consumption rebound effects are often divided into two types; direct and indirect rebound effects (Alfredsson 2004; Druckman et al. 2011; Jenkins et al. 2011; van den Bergh 2011a). Direct rebound effects occur when efficiency gains, say better fuel efficiency in cars, leads to higher consumption, i.e. more car travel. The indirect rebound effects happen through changes in the consumption mix, when lowered consumption in one area,

maybe through efficiency, maybe through voluntary efforts or some other mechanism, lead to higher disposable funds to spend in other areas that might not be environmentally friendly.

In addition to these effects, which are directly connected to the the consumer, there might very well be other, society wide effects, too (Alcott 2010a, 2008; Jenkins et al. 2011; Sanne 2001, 2000). These result from the parts of the economy being interconnected and affecting each other. Changes in price and demand in one area will affect prices and demand in other areas, leading to a policy or efficiency gain being less effective than anticipated. It might even happen that efficiency gains backfire and lead to a rise in total resource use and emissions due to lowered prices which spurs to more consumption (Alcott 2005; Druckman at al. 2011; Jenkins et al. 2011).

Alfredsson (2004) concludes that due to rebound effects, it is hard to achieve any significant reductions in greenhouse gas emissions due to consumption just by relying on changes in the consumption mix and on higher efficiencies. Girod and de Haan (2009), in a study off the most and the least emitting households in Switzerland, showed that on the same income levels different households cause very varying amounts of emissions due to different mixes in consumption. However, even the ones with the lowest emissions had emissions far beyond what can be seen as globally sustainable.

The slow or non-existent decoupling taken together with rebound and backfire effects strongly suggest that efficiency gains and changes in the consumption mix will have a hard time achieving sustainable levels of consumption-based greenhouse gas emissions, and the risk for rebound effects must remain in mind when creating policy on sustainable consumption. The next section looks into the discussions on setting boundaries in one way or the other, forcing consumption-levels down. It gives an overview of the concept of degrowth, and introduces sufficiency as a way of thinking that helps us seeing that we might be better off realising that more is not always better.

3. Restraining consumption and growth levels

This chapter is about how consumption levels, and closely related to that, GDP growth, are deeply integrated into modern western societies. It builds on the realisation that this is not sustainable and therefore has to change. First comes an exposé of the concept of *degrowth*. It is a field of study that looks into the needs and *potentials of haltering economic growth* in the rich parts of the world. Its background, standpoints and debates, and its adversaries, are discussed, trying make out what implications the degrowth literature has for actual political strategies to aimed at lowering consumption levels.

Then follows a section on *sufficiency*. The concept of sufficiency exist within the degrowth debate, as a tool for discussions on where and *how to set boundaries for or lives and consumption, and for balancing that against what is sustainable for the planet*. For this study it is used to make the discussion more stringent, proposing strategies for lowering consumption-based greenhouse gas emissions that takes into consideration the boundaries set by the Earth and finds ways to work inside these boundaries.

3.1. Degrowth

Degrowth is a field of study that recognizes what has been showed above, that mere changes in what is consumed and its efficiencies are not enough to reach sustainability (see Latouche 2010 for a short introduction of the word). Schneider et al. (2010) define what they call sustainable degrowth as “equitable downscaling of production and consumption that increases human well-being and enhances ecological conditions at the local and global level, in the short and long term” (Schneider et al. 2010 p. 512). Many dimensions are included in this definition, and it describes a win-win situation, where both people and the environment are better off, today and in the future. Martinez-Alier et al. (2010) describe the origins of degrowth-thinking as consisting of two parts, on the one hand the economical limits-to-growth argument, on the other the societal or cultural argument, that we are locked into growth-thinking and would probably do better with others rationales for our society. However, it is pointed out that everything in society does not have to be put under degrowth, culture and knowledge must still be able to flourish for example. Hence degrowth does not mean that the development in society stops, instead the development is to focus on better

instead of more.

A conference on sustainable degrowth in Paris in 2008, involving many scientists and scholars and also activists engaged in the field, resulted in a declaration on degrowth (Paris Degrowth Conference 2008) outlining what the contributors mean by degrowth, and should be a good synthesis of the governing lines of thought within this field. They assume among other things that the resources of the world are finite, and that GDP growth always entails using more resources. Therefore growth must be halted. The rich parts of the world are using unfairly large parts of the available resources and environmental space, and must therefore lower their levels of consumption and production. Among the poorest people of the world the levels of consumption must rise. Focus must be, according to the declaration, on “redistribution of income and wealth both within and between countries” (Paris Degrowth Conference 2008, p. 524). New rationales must be established in our society to ensure a focus on equity and good living conditions for all, things that the focus on economic growth has been unable to achieve.

The assumptions that underlie the discussions on degrowth thus seem to be (1) that GDP growth is inherently detrimental to the environment and that it is highly unlikely that sound environmental conditions can be reached while the economy grows (e.g. Hueting 2010) and (2) that the focus on economic growth in our societies make us overlook other goals that are at least as important, but also that it would be possible to build a society without the growth-focus and thereby reaching higher quality of life (van den Bergh 2010).

Sustainable degrowth writers make the point that degrowth does not imply a stagnation in innovation or culture or in development of the quality of human life, as long as other values than the mere material ones are recognized (Kallis 2011; Schneider et al. 2010). The degrowth movement, with its origins in France, is said to be a deeply democratic one, that wants to politicize the economy and creating spaces in society for people to be citizens and not consumers (Fournier 2008). Important to note is that degrowth, according to its proponents is not to be confused with a recession. A halt in growth in today's kind of system which is dependent on growth for stability is something completely different than a system built on the premises of no-growth (Spangenberg 2010, van Griethuysen 2010).

However, there is no consensus on how our societies are to establish degrowth and eventually a steady-state economy on a sustainable level (Kallis 2011), for example the declaration described above does not outline specific policies. It does point out the the importance of diversity, local democracy and community, and avoiding forced top-down instruments (Paris Degrowth

Conference 2008). Other proposals include adopting measures other than GDP, reduce working hours, introduce a basic income to all citizens, progressive taxation and worker, and other types of cooperatives (Alexander 2012; Phelan et al. 2012). Some of these proposals are discussed elsewhere in this study.

Martinez-Alier et al. (2010) points to degrowth being difficult to actually implement in policy as it is a quite confrontational line of thought that challenges standard societal institutions. Moreover, degrowth is supposedly not well enough defined to constitute a basis for real policy. A study of this among policy makers and business representatives in Finland (Berg & Hukkinen 2011a) showed that even though critique of the current growth paradigm was common, it was largely incoherent. When talking about critique of continued growth, the line of thought that was deemed to have the best chances of making into policy was that of eco-efficiency, which build on the notions of growth. Critique in line with degrowth was much more lacking when it came to describing a full picture and story of what should be done, and was therefore not seen as a functioning basis for policy.

3.2. Critiques of degrowth

The notion of degrowth is not uncontested, not even among scholars who otherwise agree on the the need to establish other societal goals beside growth. van den Bergh (2011b, 2010, 2009) argues that GDP and the growth thereof is such a bad measurement for progress in a society that it should be abandoned completely. Talking about degrowth is therefore not a productive way of achieving environmental sustainability, since decreased GDP is not a good measure for sustainability. Degrowing GDP could even make things worse. For example, is the argument, degrowth would lead to lower demand for new technology, leaving room for dirty and polluting technology that would otherwise have been left behind. If on the other hand GDP was ignored, this would leave more room for effective environmental policies, including strong international treaties. Such policies might very well hamper growth, but they are guaranteed to have positive environmental effects (van den Bergh 2011b). On the other hand, others say that the relation between GDP and resource throughput is so strong that it is important to know whether the GDP is growing or not in order to know if one is on the right path (Kallis 2011). If GDP is to be abandoned, or even complemented, as indicator of the the state and progress of modern societies, other indicators need to be introduced, and there are a plethora. Examples include: ecological footprints, Human

Development Index, or more subjective measurements of happiness or well-being. None of them has gained much influence however, and what is lacking might be a single comprehensive measurement that encompass both development and sustainability, footprinting only measures sustainability, HDI only development for example (Boulanger 2007).

Proponents of degrowth often set out to debunk what is perceived as the myth of the modern growth society, i.e. that growth is inherently good and that it can go on forever. In much the same way it seems as though proponents for growth often see degrowth, i.e. the perception that growth is bad for the environment and thus cannot go on forever, as a myth that must be debunked. The following review is based on two Swedish examples of this position (Andersson & Gunnarsson 2011; Radetzki 2001), which explicitly set out to counter the perceived myth of the adverse effects of growth, and are therefore meaningful to discuss in this context.

It is clear from the vocabulary in these works that there is a strict dichotomy between the pro-growth camp and the camp for degrowth. Unlike the degrowth camp the growth proponents do not see the scarceness of resources as a threat, in part because history has shown that people have remarkable abilities to find new resources and to use them evermore efficiently (Andersson & Gunnarsson 2011 chap. 2; Radetzki 2001 p. 29). Growth, it is argued, creates abundance and thus resources that can be used to correct the environmental damage that any economic activity might cause. Without growth resource use efficiency will not become better, regardless if the resource is finite or renewable. Therefore the (material) standard of living will automatically be lowered if the economy is limited to sustainable levels, technology will not become cleaner and sustainability will not be reached. Sustainability, according to these writers, will only be reached with the higher efficiencies that are intimately related to growth.

It is argued that countries with higher GDP on average have better environmental conditions, and that as people get more well off, they tend to start caring more about the environment, and change their consumption patterns accordingly (Radetzki 2001). Poorer people cannot afford this luxury. This would show that a higher GDP is good for the environment. Furthermore, at higher GDP levels people also tend to mix in a larger portion of services into their consumption, thereby de-materializing their consumption. With more growth and higher efficiencies, the argument continues, it will be possible to substitute more and more unsustainable products and production methods since new alternatives will arise. A higher GDP also makes us better at adapting to changes. So if for example climate change leads to unforeseen and sudden changes in the future, a higher standard of living makes it much easier for people to adapt and

continue their lives more or less unharmed, since they have more resources and innovative technology to use.

The degrowth camp recognizes that efficiency gains can be a good thing, but point towards rebound and backfire effects that can happen if resource use is not limited in some way. It is argued that the rate of decoupling that is needed for sustainability has not and most probably will not be reached. These things are described in section 2.4. The degrowth also recognizes that rich societies have higher resilience and more resources to tackle environmental degradation. They do however argue for redistribution of resources and for degrowing rich economies only, coupling fairness and sustainability.

Radetzki (2001) argues that history shows that when the environmental conditions due to some economic activity become bad enough, so that it is clear that its costs outweigh the gains, people react and work to set things right. The reason for the insufficient international action on climate change would be that the knowledge is lacking and effects are not yet severe enough, while the costs are perceived as too high (Radetzki 2001 pp. 51, 85-85). During the decade since this was written, our knowledge about the climate has increased considerably. Both regarding how anthropogenic emissions cause climate change and what the effects will be and about the costs which will most likely be much lower if action is taken now and not in the future. Not least the latest report from IPCC (2007) and the Stern review (Stern 2007) has shown these things and shaped much of the thinking on these issues. Nevertheless, global action to combat climate change is still severely lacking, and the international negotiations have more or less stagnated during the last years. These are strong arguments for a more proactive stance than the one currently taken by the pro-growth camp.

Next this study looks into sufficiency, as a way to structure the thinking around the logic of growing consumption. Sufficiency both offers an alternative societal logic which does not demand ever-growing resource use, and presents policy strategies which make sufficiency thinking more hands-on.

3.3. Sufficiency

In this study, the notion of sufficiency is used to make the degrowth critique of economic growth more coherent and logically consistent. It proposes ways to establish alternative goals for society which take natural resource boundaries into consideration, while offering possibilities for living

good lives with lower material consumption levels. In the fifth chapter this study returns to sufficiency to examine how to build policies on its basis, and discusses some pitfalls with such a strategy. In this section a theoretical groundwork as developed by Princen is examined. Princen's work is chosen because it discusses many issues under the same umbrella term and illustrates how they are connected. As will be seen later, Princen's work has been subject to critique from several central authors in the degrowth debate, and is a highly relevant author in this context.

In his works on consumption and sufficiency, Princen (2005, 2003, 2001, 1999) argues that there has been a lack of consumption perspective in the academic discussion on environment and resource use. According to Princen there are two ways to look at consumption, either as using products, i.e. as one side in a dichotomy between consumption and production, or as using up resources, seeing consumption as increasing entropy, i.e. degrading the environment (Princen 2001, 1999). The first view leads to questions of non-purchase, of when people choose to not purchase or use a product, or to provide for its utility outside of a market. This highlights the need to understand why people choose to satisfy their needs through a market and conventional production, and when they do not. The second way of seeing consumption highlights the ways human life is connected to nature and the environment, and is contained within its boundaries.

This view leads to the identification of two kinds of excess consumption: misconsumption and overconsumption (Princen 2001, 1999). Misconsumption happens on the individual level, when a person consumes too much for his or her own good, like eating or working too much. Overconsumption happens on the societal level when too much is consumed so that it endangers a population's future means to survive. These questions however, Princen argues, have not been easy to bring into public and political attention, because taking consumption seriously means questioning our ways of life and the principles by which we govern our societies. From these conclusions, Princen's further work on sufficiency (2005, 2003) are attempts on establishing principles for organizing policy and society which acknowledges the risks of excess consumption.

When talking about sufficiency and something being sufficient, it implies setting boundaries; "Sufficiency as an idea is straightforward [...]. It is the sense that, as one does more and more of an activity, there can be enough and there can be too much" (Princen 2003 p. 43). This leads to two connotations of the word in the context of this study, that invoke the two kinds of excess consumption mentioned above. These are (1) sufficient levels of consumption for attaining a reasonable standard of living (i.e. enough), and (2) sufficiently low levels of consumption for reaching sustainable resource use and levels of pollution and emissions (i.e. not too much). By

abiding these boundaries of enough and too much, a person or society could reach sustainability for itself. What follows is a discussion on how sufficiency, in theory, could be used as an organizing principle for society, in order to set boundaries and reach sustainability.

Princen concludes that the two predominant principles in contemporary environmental policy are what he calls cooperation and efficiency. Cooperation includes such things as “equal representation, public participation, full disclosure, information sharing and consensus” (Princen 2003 p. 39). Efficiency is about getting more from less, being able to produce more value with less resources, i.e. economic growth. However, these two principles are neutral to whether they are employed to reach environmental sustainability or not, and they are not exclusive to environmental policy. Princen suggests another set of principles can be put into and said to constitute an overarching principle of sufficiency. These sub-principles, described below, are to some extent used in environmental policy and international treaties today. They are however often marginalized and not given much scope, or made ineffective by the dominance of other principles such as that of efficiency. These sufficiency principles are not neutral to the environment, they implicitly take considerations of the boundaries that the natural world set for human lives and societies.

There are five of these sufficiency sub-principles according to Princen. They are (1) restraint, (2) the precautionary principle, (3) polluter pays, (4) zero and (5) reverse onus. Restraint means “using less than what is physically or technically or legally or financially possible” (Princen 2003 p. 46). It comes into play when short term gains are willingly overlooked in order not to cause (larger) losses in the future. The precautionary principle, which is often used today as a basis for policy action, means refraining from some activity, producing emissions for example, when there are worries the action might have negative impacts, even if there is not conclusive evidence. Polluter pays is the principle that the party responsible for the negative effects is the one responsible for the cleaning up, for compensating for the harm done. Zero as a principle means saying that if little of something is bad, there should be nothing of it, no compromises. Reverse onus is when the responsibility of proving that something is safe lies with the one taking action. Following the reverse onus it is not up to others to prove the harm of someone's greenhouse gas emissions.

In *The Logic of Sufficiency* (2005) Princen examines how sufficiency can be contrasted to the notion of efficiency, and how this can lead to novel ways of organizing society. According to Princen, sufficiency does not have to be any less rational than efficiency, even though the latter is often promoted as being the rational way of seeing things. Higher efficiency means more output with less input, and the attitude has been that efficiency is the rational choice since more for less is

always good. Princen however, states that the efficiency logic is highly political, since someone has to decide what to put in and what to take out (2005 p. 88). Through the twentieth century this has been about resources and money. Inputs like environmental costs and outputs like emissions and degradation has seldom been a part of the equation (p. 74). Efficiency can play a part in sufficiency and be good for the environment and for the ability of future people to fulfil their needs, but it has to be guided carefully (p. 107). The point is that efficiency as a principle has made its mark in many parts of society, not just in the factories where it clearly has its place (Princen 2005 ch. 3). And as the ratios have been set with maximized output in mind, environmental and human concerns have generally not had a high priority (ch. 4).

To demonstrate this thinking, and showing that when people get together with sufficiency in mind they can do well and create sustainability for themselves, Princen describes three principal examples and a range of less explored ones of people organizing life and business in such a way that they by themselves put boundaries on their activities (2005 chs. 6-8). Instead of maximizing output for example, they do less than they could, extract less resources than what they would be able to, in order not to deplete the source and making sure they have a safe income in the future as well. A lumber company choose not to build as many mills as they could in order to not be able to process more than the forest could handle (ch. 6), and a community of lobster fishers decide not to fish during half the year in order to let the stock recover (ch. 7). Or it can be about minimizing car access and travel by not building a bridge connecting a residential island to the mainland (ch. 8), even though the island is close to shore and it would substantially increase the possibility for car commuting. Instead the residents would put value in safe and quiet streets, seeing that better car commuting possibilities would undermine what was so special about the place they lived; sense of community, closeness to nature etc.

The next chapter looks deeper into the issues of consumption, the role people have as consumers in modern day societies, what drives consumption in growth-focused societies, and the role played by consumption levels in people's well-being. The themes from this chapter, of degrowth and Princen's sufficiency thinking will be visible. Not least the logic of sufficiency, and its relation to the hunt for more growth, to discover the underlying logics and rationales when talking about why markets have spread and gained influence in areas of life and society where they did not exist before, why people continue to work a lot and consume their incomes despite how it seems as though many would benefit and live richer lives if they cared less for material goods and more about other values, like free time and tending to relationships. Sufficiency thinking helps in seeing

how the focus to get more for less is a political one, as has been said above, someone has to decide what to put in and what to take out.

4. The consumption society

So far this study has discussed why looking at consumption levels and growth-rates is crucial when trying to decrease greenhouse gas emissions. This chapter brings insights into how consumption functions in modern societies, what roles consumption and the consumer play. Why do we consume as we do, and do we need to? And if not, are there any tips to be found on how to lower consumption levels? These insights into how growing consumption levels is an integral part of our societies and who we are within them is crucial when trying to understand how to break these patterns in order to reach sustainability.

The first section looks into *how markets and market thinking seem to be spreading into realms of society where they did not exist before*. This leads to people becoming consumers in more and more situations where they might rather have been citizens before, but the section also looks into the problems of drawing clear limits between these two roles. Second in this section is a review on literature writing about the *drivers of consumption*, that seem to be more complex than what is often suggested by mainstream economic theory. Third is a review of literature on the *implications on life-quality that a lowering of consumption levels in rich countries would have*.

4.1. Market thinking: citizen vs. consumer

When talking about consumption and the potential for lowering consumption levels, people can be viewed in two contrasting ways: either as self-enhancing consumers, or as collective citizens. Consumers exert power through their choices on the markets, meaning that markets will adjust to the demands of the consumers. Citizens go through traditional political channels, and there is a sense of common responsibility in the citizenship. This section starts out by reviewing arguments saying that people are becoming consumers in more and more situations, and that this is related to the growth-focus in modern societies. This leads to a discussion on implications for policy on sustainable consumption, and to arguments for why a consumer focus in environmental policy might be ineffective and why a citizen-perspective might be more fruitful.

To be able to see people as consumers there must be a market for them to be consumers on. Sandel (2012) writes about how markets have spread into areas where they did not belong before. More and more areas of life are affected by market thinking, thus money play a larger role in

deciding one's chances in life giving a rich person access to things that one of with less money does not have access to. Things like cutting lines, or pay extra to get into a good school, or pay to get a child through a surrogate. Sandel argues that we (or at least the USA) has “drifted from *having* a market economy to *being* a market society” (Sandel 2012 p. 10). Discussing greenhouse gas emissions and markets for buying and selling rights to pollute, either under the Kyoto protocol or individually by offsetting the CO₂ emitted during a transatlantic for example, Sandel's worry is that this market thinking will undermine the norms that many think should be the basis for environmental action. If one can pay to relieve oneself from moral responsibility of excess consumption, this might lead to more consumption, and not the collective action that is needed to reach sustainable emission levels (Sandel 2012 p. 77).

It has been suggested that consuming has become a part of our identity, especially since people in post-industrialized societies no longer build their identities around the work they do. A shift has taken place where people's production-based identities have been replaced by consumption-based ones (Hamilton 2010, Princen 2005 p. 81). This has been helped by the intrusion of markets and market logic into more and more regions of society, making it hard to ask people to change their consumption behaviour, as much of their identities might be bound to their way of consuming and how they are situated in the markets (Hamilton 2010).

This individualization of responsibility can be seen elsewhere too. Carbon footprinting is described in section 2.2. This way of viewing and counting green house gas emissions can be criticised for adding to this individualization. When someone for example calculates their personal greenhouse gas emissions with the help of one of the many tools that exist online, it is the responsibility as a consumer to lower one's impact that is being promoted. What can be done collectively as citizens is not given much attention, and therefore the collective responsibility for these issues is also put aside (Hamilton 2010, p. 574).

However, it has been argued that there is big potential in people's market behaviour when it comes to sustainability issues, that there are people who are willing to change their consumption behaviour and use their consumer power attain sustainability (Evans & Abrahamse 2009; Hamilton 2010; McDonald et al. 2006). Soper (2007) argues that there is in fact no consumer-citizen duality, because it is a common phenomenon that citizenship is expressed through consumption, like boycotting or other ways of assigning political meaning to consumption choices. Not unimportantly people might take pleasure in this, feeling good about making choices they see as beneficial for civic values like justice or preserving the environment. Other research show that

among people who strive to lead sustainable lifestyles in a western society there is a wide range of motivations and practices, making sustainable lifestyles a highly complex issue. These people do however couple the sustainability with other issues, for example of justice and health, but they insist that much has to be done on the societal level if true sustainability is to be achieved (Evans & Abrahamse 2009).

On the other hand, Berglund and Matti (2006) studies Swedish people's rationales for environmental action, contrasting the self-interested consumer with the more altruistic citizen. They find that much of Swedish environmental policy is focused on people's roles as consumers, but that this might be misdirected. Instead, what is found is that people's values and rationales for environmental action have more in common with the citizen role, and that people find altruistic reasoning important when it comes to acting for the environment, something that seems to not be taken into regard in the policy documents.

When regarding people as citizens, and trying promote environmental action as being collective and normative, it is assumed that norms rather than self-interest will lead to the most effective changes in behaviour (Dobson 2007). The thought is that norms and attitudes guide behaviour, and therefore environmental policies should focus on that. It is argued that when environmental policies are focused directly on behaviour and self interest, i.e. treat people as consumers, long term changes will probably not occur in the same way they would if the focus was on the deeper roots of these behaviours.

This study focuses on consumption and policies for lowering consumption levels. The consumer-citizen debate is important in this context because it questions whether the responsibilities lie upon the individuals, or whether society as a whole need to and should promote changes in consumption. It also raises questions of whether policies should use market based instruments, often with arguments of cost efficiency, or whether the markets should be left out on grounds of morality and justice. These issues will be revisited in section 5.3 when discussing what policy strategies, and also when discussing the findings of the interviews in chapter 8.

4.2. The drivers of consumption

Many have argued, as was seen above, that modern western societies are societies of consumption and growth, and that the growth-focus fuels consumption. This leads to an examination of the drivers of consumption, which are said to include more than the mere needs people have. Instead

people consume as much as they do because they are trapped in societal institutions of different kinds (Jackson 2009/2011, 2008, 2005; Mont & Power 2010; Nørgård 2012, 2006; Princen 2005; Sanne 2005, 2002; Soper 2006; Wilkinson & Pickett 2011/2009). There might also be needs that go beyond the what is most often recognized by classical economics and include people's values and ethics (Power & Mont 2010; Pepper et al. 2009; Soper 2007; Berglund & Matti 2006; McDonald et al. 2006).

As seen above, Princen in his work on sufficiency writes about efficiency as the governing principle of contemporary societies. Efficiency, it is suggested, has seemingly rational and scientific origins, and has led to streamlining, heightened productivity, intensification etc. in many parts of society, not least for consumers. Following this logic consumers are to be efficient, choose what is best for them and producers are to follow, only producing what the consumers demand (Princen 2005).

Mont and Power (2010) put together an overview of knowledge on consumer behaviour and the forces behind it, discussing its complexities. They span things like the policies in place, the infrastructure and the advertising. Maybe most important however, is the logic in the economic system where consumers are seen as sovereign and their insatiable needs are to guide production and drive growth, which is imperative to neoclassical economic theory. This view of the consumer as insatiable, they conclude, drives the system towards unsustainability. It must also be understood, is the message, that consumer behaviour is deeply complicated and that people have many different reasons for consuming, including values and norms, class and demographic group belonging, and not least routine (Power & Mont 2010). This leads to a questioning of the idea that sustainable consumption can be achieved if relying on consumers to make the right decisions themselves. Instead, society-wide changes are called for in order to change norms, aspirations, habits and thereby consumption behaviour.

Some authors point to the fact that the focus on GDP growth lead to consumerism (Nørgård 2012, 2006; Sanne 2005, 2002). Growth means higher production efficiency, producing more with less labour. Therefore more consumption is needed for demand to keep up so that employment rates can be kept on a satisfying level. Growth capitalism work in interplay with other institutions in society, like government, advertising, religion and work ethics to create a situation where consumerism is constantly reinforced and celebrated, as was seen in the last section. To this can be added the suggestion that the fact that much of the production that used to take place in now affluent countries has moved to low-wage countries has undermined the productions based

identities people used to have in their jobs, and they have been replaced by identities based on consumption (Hamilton 2010, Princen 2005 p. 81). This is supposed to have led to individualization, the intrusion of market efficiency-thinking on to more and more parts of life and society, and advertising creating a “permanent state of unfulfilled desire” (Hamilton 2010 p. 573). An experiment related to this suggests that the level of material affluence which people expect themselves and others to have, influence the risk one is willing to take to achieve this outcome. With constant messages of the importance of consumption people get less willing lowering their level of material well-being (Matthey 2010). We also seem to define ourselves and acquire our societal status on the basis of what we consume (Jackson 2011/2009; Wilkinson & Pickett 2011/2009). This leads to a situation that perpetually stimulates evermore consumption and growth, and it has been suggested that this is at the core of the unsustainability of our societies (Jackson 2011/2009; Mont & Power 2010).

With the complexity of consumption patterns, and its relation to the growth-paradigm in mind, the next section reviews research on life satisfaction, happiness, health and other measures of a successful society, and their relation to consumption levels.

4.3. A low-consumption, high-satisfaction society

The questioning of the sovereignty of consumers, meaning that other forces than the actual needs and wants of consumers play a large role in shaping consumption, leads to the inquiry of what a society with other patterns or levels of consumption would look like.

Various theories of development downplay the role of material standards, saying that above a certain level, when someone has their basic needs covered, other values play a larger role when it comes to creating and leading a fulfilling life. In *Development as Freedom* (1999), Sen argues that it is the capabilities and freedoms of a person that enables a good life. A person enjoys freedom when he or she possesses the capabilities necessary to lead a life that he or she values. This includes having access to funds that make it possible to fulfil one's basic needs, and realise other life goals, such as education. However, money is seen merely as an instrument that depending on situation varies in effectiveness when it comes to creating capabilities (Sen 1999 pp. 87-88). Money is not an effective mean when it comes to creating meaningful relationships, cultural experiences or belonging, in other words: many things that are important for people to live lives that they value can not be bought with money. Money and growth, beyond an certain level, is therefore at best

secondary in the strife for meaningful lives.

Max-Neef (1995, 1991) proposes a view on development where human needs in focus, where fulfilling human needs are not merely a goal but a driver. When understanding human needs as a system in constant interaction, there is no straight path along which development must move. Then, economic growth is no longer meaningful as a goal itself, it might follow the fulfilment of human needs, and it might not. Max-Neef proposes a threshold hypothesis, where when certain material needs are fulfilled, other values become more important and continued growth loses its value for human development. According to Max-Neef, this has since long been the situation in the rich parts of the world where GDP has continued to grow while the values of many indicators of well-being have not. A methodology is continuing to be developed to allow for measuring and understanding fulfilment of needs according to this view (Cruz et al. 2009).

Wilkinson and Pickett (2011/2009) in their book on equality and how more equal societies and its people are generally better off, discuss consumer society. Their conclusion is that a mentality in a society in which we position ourselves through consuming creates a situation where the inequalities are always evident, where the not-haves will always be reminded that that is what they are through others flaunting their acquired positions. The authors refer to research which suggests that having one's societal position and status called into question is the biggest stress factor for most people (Dickerson & Kemeny 2004). Thus having a society where status is gained through consumption will fuel consumption levels. More equality would reduce this stress and thereby consumption, and Wilkinson and Pickett argue that it is possible to have high development while maintaining a low level of consumption.

Probably the most common way in which lower levels of consumption is explicitly coupled with greater life satisfaction in the literature, is through shorter working hours, i.e. less income but more leisure (Jackson 2011/2009; Nørgård 2012; Pepper et al. 2009; Rosnick & Weisbrot 2006; Sanne 2005, 2002; Spangenberg 2010). Other suggestions on ways in which lower consumption levels in rich societies can lead to a raise in quality of life and satisfaction include slower consumption and more long lived products (Cooper 2005), more what is called “amateur economy” benefiting from the satisfaction many people find in creating goods on a hobby basis (Nørgård 2012), giving value to the enjoyment inherent to consuming sustainably, i.e. “alternative hedonism” as coined by Soper (2007) and acknowledging that the growth-driven consumption of today is not satisfying people (Nørgård 2006; Sanne 2005).

A study published by the Swedish Environmental Protection Agency (Holmberg et al. 2011)

collect knowledge on what a societal adjustment to sustainable climate impacts could mean for the quality of life for Swedish citizens. The report look into three dimension of change: (1) fewer working hours, (2) higher share of consumption going to services, and (3) development of sustainable cities. With fewer hours of work people will make less money and therefore consume less (Holmberg at al. 2011 p. 44). The effects on well-being are not unambiguous however, and what is mainly discussed is not directly connected to lower consumption. But it is pointed out that when people are asked what they would like their future to be like, things like family and free time are in focus, rather than higher levels of consumption, except for travelling (p. 45). Another point is that people feel better when they act in line with their values, and that consumption choices are connected to values and social factors (pp. 65-66).

It thus seems to be a viable assumption that there are possibilities for lowering the levels of consumption in rich societies like Sweden while maintaining high qualities of life. It would most likely require a rethinking of the goals we set for our societies, where immaterial values are given higher priority. Below follows a review of suggestions on how to get people to consume less.

5. Policies for lowering consumption levels

So far the literature has made it clear that something has to be done about consumption levels, and that lower consumption levels in the rich parts of the world do not necessarily have negative impacts on life-quality. Limiting consumption involves deciding what is sufficient, both to live good lives and for these lives to be sustainable. The consumer-citizen dichotomy points to the complexities involved in designing policies for lowering consumption levels, as people have different motifs and rationales, which can be both conflicting and intertwined.

This chapter looks into suggestions on how to set and reach sufficient limits to consumption. First it *returns to Princen and sufficiency*, looking into how the points raised there can be translated into policy. Second is a look into *critiques of sufficiency as a basis for policy*. Third is a *review of literature on sustainable consumption policy*, giving examples of what exist only as proposals and what has been tried. Fourth is a section that *looks into Swedish politics* in the area of consumption and greenhouse gas emissions, to give a background to the interviews with Swedish opinion leaders reported on in chapter 7 and discussed in chapter 8 of this study.

5.1. Sufficiency and policy for lowering consumption levels

As was seen in section 3.3, sufficiency entail setting boundaries for human economic activities. It involves a number of different approaches, including a set of five sub-principles which already influence politics on environment and sufficiency, like precautionary and polluter pays principles. However, taken further, sufficiency particularly entails questioning the efficiency principle which is Princen sees as guiding much of modern societies, and would mean a great rethinking of how to organize societies and economic activities.

This section starts by looking into how Princen's five sufficiency sub-principles can be translated into policies for lowering consumption levels and decreasing consumption based greenhouse gas emissions. Admittedly, some of them might be more applicable to issues of consumption than others, also depending on whether the focus is on individuals or on societal measures, and where in the chain of economic activity they are implemented. This review helps in placing policy proposals from other literature and later from the interviewees into context.

Below the sub-principles are listed, along with examples of fitting policies on climate and

consumption:

- Restraint: some kind of caps on products, resources or pollution. Cap-and-trade schemes would be a policy-example with basis in this principle, which has been implemented on CO₂ on production level in the EU with the EU ETS. Individual quotas of some kind would mean a distinct connection to consumption issues.
- Precautionary principle: this includes banning materials and activities which have a high probability of negatively affecting the environment. The ban on ozone depleting chemicals under the Montreal Protocol is an example of this principle in practice. This meant that many consumer products had to be changed, and this principle could be imagined to be more widely used for greenhouse gasses as well. The precautionary principle is only implemented after negative effects have been more or less proved, making it reactive, not proactive.
- Polluter pays: this principle is about making sure that the ones responsible for some kind of degradation actually are the ones paying the price. This can include taxes, like the CO₂ taxes that Sweden has had implemented since the early 1990's. Taken further, and in the spirit of environmental load displacement (see section 2.1), this principle could also manifest in compensating the ones actually affected by the environmental degradation caused by an economic activity. For example, a tax on CO₂ in Sweden does not in itself strengthen the ability to cope with climate change among the less affluent who will be affected, but could be redistributed in order to do that.
- Zero principle: this means taking no risks, not allowing anything of what would be bad in larger quantities. This would probably entail the very unlikely scenario of total bans on any, or most, consumption causing greenhouse gas emissions.
- Reverse onus: this principle is hard to apply to both private consumption and climate change. This is because we know that climate change is happening and the causes are known to be anthropogenic greenhouse gas emissions. The reverse onus is about having to prove that some new activity is not harmful, and most consumption is harmful to the climate in some way. Therefore it is difficult to envision any policies based on reverse onus in this context.

Princen's concept of sufficiency also reaches deeper and poses it as a major organizing principle for

society, i.e. when the logic of efficiency is pushed aside and sufficiency takes at least some of its place. The examples of sufficiency as a governing principle that Princen describes in *The Logic of Sufficiency* (2005) invoke the thinking of Elinor Ostrom on how to successfully govern common resource systems (Ostrom 2009/1990). It involves people coming together and to create rules for resource extraction, where everybody involved has a say but outsiders are excluded from extracting. While Ostrom's principles are limited to local systems, Princen discusses the underlying thinking of sufficiency which could be imagined on a larger scale, like the global atmosphere and climate system. Scaling this thinking up would involve thinking of the atmosphere as a common, that we all share and have a responsibility for, and deciding together that the predominant efficiency ratios that are the driving force behind emissions are not valid, and that we would rather see other values than materialistic and those of perpetual growth.

On an individual level sufficiency as a governing principle would also entail a re-imagining of people's motives and their needs and wants. It would mean a step away from the famed homo economicus, i.e. the consumer described in section 4.1, towards something else with other rationales and other logics where more is not always better. Crivits et al. (2010), in a comparison of eco-efficiency, de-commodification and sufficiency as strategies for consumers (see Boulanger 2010 for an introduction of these concepts), suggest that a consumer within the sufficiency rationale must always be self-reflexive. It involves questioning one's needs to consume, and there are altruistic elements to one's consumption choices under the sufficiency paradigm because of the realization that consumption is complex and in interplay with other processes of society. It is concluded that this kind of awareness might be too much to ask of people (Crivits et al. 2010, p. 1195).

The next section reviews critique that Princen's sufficiency concept has received, were it to be used as a basis for policy.

5.2. Pitfalls of sufficiency as basis for policy

This section reviews some critiques against building sustainability policies on sufficiency thinking. When discussing above the examples Princen gives of sufficiency-governed activities in *The Logic of Sufficiency* (2005), it was mentioned that they were local and well-defined within geographical boundaries. While possible to imagine, little is said as to how to scale up these principles to a country or to the entire global climate system. The forest and lobster stock were sustainable only as long the people using and governing the system could keep outsiders from extracting, I.e. felling

and fishing. It was discussed above how these systems have much in common with how Elinor Ostrom describes functioning commons (2009/1990). However, she is careful to point out that what she describes are local systems, and that scaling her principles up will be very difficult. This seems like somewhat of a double-edged sword, that Princen's sufficiency thinking leads to coherence to Ostrom's principles on a small scale, which is positive, but how to fit it to a larger system is difficult to say, even though it is possible to imagine sufficiency thinking as governing larger parts of society.

Out of Princen's examples, the one that is most relevant to this study is that of self-imposed car-lessness. A community choosing a common lifestyle prioritizing other things than efficiency. However, it does not say much of what the money saved on not driving a car was spent on. If it was spent on going on holiday by air-travel for example, the climate gains would be highly questionable, in line with the rebound effects discussed above.

In connection to this and the problem of implementation on a larger scale, Alcott criticises what he calls the sufficiency strategy (2008 p. 771) for not being able to lower actual impacts due to rebound effects. He makes use of the $I=PAT$ formula to show this (2010a, 2008). The $I=PAT$ is a way of looking at environmental impact (I) as made up of population (P), affluence (A) and technology (T). Thus the amount of environmental degradation that takes place is decided by the number of people, how well-off they are (materially) and how efficiently, with what technology, the products they consume are produced. Any change in the P, A or T will affect the other, making the outcomes of any right-side strategy, uncertain at best, as opposed to left-side strategies when aiming directly at the I (Alcott 2010a). For example: if population size is falling, or not increasing as fast, this lowers the demand for efficient technology, and T might rise. If technology gets more efficient this admits rises in affluence and population, so that the gains from more efficiency will not be as big. Most important for this study is the connection between the lower prices that would follow the drop in demand from a part of the population choosing to consume less, thereby lowering their affluence. The lower prices would probably mean higher consumption among some other group (Alcott 2010a p. 554-555). For Alcott this leads to the conclusion that if the environmental impact is to be lowered it has to be done through the amount of resources being extracted and used. This could be done by setting caps on resource extraction and emissions, through rations or taxes (Alcott 2010a).

This however, has been questioned on account of democratic and political infeasibility, as caps would be difficult to create and maintain, and the risk for undemocratic procedures in

enforcing the caps should not be disregarded (Kallis & Martinez-Alier 2010; Schneider et al. 2010 p. 514). The fear these authors express is for it being overly complex to implement caps in reality, even though it might seem easy enough in theory. It opens up for arbitrary measures and expert rule, that should not be welcome in democratic societies. They do not deny the potential of caps of different kinds, but are unsure whether they can be more effective than other kinds of measures, because of the probably high implementation costs. Alcott answers (2010b) that he indeed recognizes the complexities involved in implementing caps, and that they would surely be unpopular, but that through democratic decision-making a society can put coercive measures on itself, without losing its democratic legitimacy.

Boulanger (2010) identifies three strategies for reaching sustainable consumption, eco-efficiency, sufficiency and de-commoditization. Because of rebound effects eco-efficiency can only go so far, and therefore rationing is needed. Sufficiency is the way to go about that, lowering consumption levels to just enough for creating the best living conditions. However, in line with Alcott's reasoning above, this would also lead to rebound effects. Therefore, says Boulanger, is the third strategy, de-commoditization is essential. It entails redefining the economy, reducing the focus on and impact of commodities. This includes a more local economy, and rethinking what actually gives satisfaction.

With these critiques in mind, Princen's sufficiency thinking constitute an important basis for the theoretical thinking in this study. It is an effective and quite consistent way of questioning the growth-paradigm that seems to be the predominant one. Further, Alcott's scepticism above builds on the notion that only a part of economic system applies sufficiency thinking. This is of course relevant, but a country like Sweden could also be perceived as a forerunner, potentially showing the world that radically different ways of organizing society and politics can have many positive effects. Below follows a discussion on how the sufficiency thinking will be used in the empirical analysis.

5.3. Policy strategies for lower consumption levels

This section goes through some theory on policy for sustainable consumption levels, describes some common policy proposals from the literature, both tested and untested. This is to give a picture of the situation, both of the state of things in the political world and in research.

Mont and Dalhammar (2008) identify three categories of policy on sustainable

consumption: administrative, economic and informative. These all include both mandatory and voluntary instruments. It is concluded that within the EU there is no or very little policy that actually targets consumption. Much of the environmental policies in place target production and products' life-cycle effects, but not actual consumption patterns and levels, even though some policies in place claim to do that. There are some policies that pinpoint certain consumption issues, mostly administrative policies like bans or restrictions on certain goods. However there is strong opposition to interfere with markets in such ways. The authors see some economic instruments, like the CO₂-tax in Sweden, but the progress in the area is slow. Informative tools include rules on marketing, of which there are some, like rules on environmental claims a producer can make about its product, and voluntary measures are common, like different types of eco-labeling (Mont & Dalhammar 2008).

Furthermore, the authors suggest that the implementation of more far-reaching policies on sustainable consumption is made difficult by neoclassical economic assumptions and growth imperatives, a belief in technological solutions and failure by markets to recognize consumers choice-making processes that go beyond the seemingly rational (Mont & Dalhammar 2008). The fact that few coherent visions exist and are spread of how a society with lower consumption patterns could be designed seem to stand in the way of implementing policies with such goals (Berg & Hukkinen 2011a), and a pioneering process of trying to build a programme for sustainable consumption seem to have generated many uses for the involved, such as deeper knowledge and network building, but had a hard time reaching new and actually effective policy (Berg & Hukkinen 2011b).

As has been described above in section 4.1, one's view of people as consumers or as citizens has consequences when trying to design policies for sustainable consumption. One's stance on this decides whether people's power to change their consumption levels lie in their personal life-style choices, or in working towards common agreements on boundaries. Below are presented some policy proposals. A distinction is made between ones that focus on the consumer side, i.e. what consumption choices people make and how to influence them, and proposals more in line more in line with the citizen thought, where a society comes together to put restrictions on itself. However, as was seen above, the lines between these two rationales are often blurred.

This study started out by presenting arguments that merely changes in consumption mixes will not be enough to reach sustainable consumption. It is however obvious that all kinds of consumption do not have the same climate impact. Different people within a society have different

climate impacts due to their mix of consumption (Carlsson-Kanyama et al. 2005; Girod & de Haan 2009; Rätty & Carlsson-Kanyama 2009). By consuming more of some things and less of others, people do have different climate impacts. Such priorities will most likely not be enough, a relatively small carbon footprint in a rich country like Sweden for example, still lies beyond what can be deemed sustainable. The differences that do exist do however lead to questions of priority, i.e. which kinds of consumption is most important to deal with first. It seems as though three areas could be identified as more crucial than others when it comes to action and policy on sustainable consumption: housing, food and travel (SOU 2005:51 ; Spangenberg & Lorek 2002). These are deemed to be the most greenhouse gas intensive areas of consumption, and should therefore be subject to extra attention, such as taxation which makes it expensive to keep consumer habits with high climate impacts. In practice the goal would be to guide people's consumption without implementing caps.

Making the wrong decisions expensive is one way to try and affect consumption choices without implementing direct restrictions. Trying to change norms or making people aware of the effects their consumption choices might have, putting hope in people to make sustainable consumption decisions themselves, is another common thought (Evans & Abrahamse 2009; Hamilton 2010; McDonald et al. 2006; Pepper et al. 2009).

Trying to understand why and how some people try to change their consumption patterns, Evans (2011) compares thrift and frugality, two ways for a person to be sparing. Most people are motivated by thrift, which is connected to economic scarcity, but it is those who are motivated by frugality, which is more connected to moral convictions, that actually might achieve a higher level of sustainability in their consumption. When it comes to sustainable consumption however, there seems to be large knowledge gaps in how to achieve a shift in consumer culture towards a less materialistic one and how such a shift would actually affect resource use and the environment (Mont & Plepys 2008).

Soper (2008) argues that because we are locked into a culture where consumption is such a big part of life, where consumer goods and the act of consumption is seen as something positive and desirable, what is needed is a revision of this aesthetic. A raised awareness of how consumption of goods, even of goods that are not inherently dangerous, not toxic for example, have effects on the environment. This could lead to a change where it is not longer seen as positive, or as the duty it is sometimes portrayed, to consume, but a necessity that could and should be kept on a low level (Soper 2008).

These proposals, from implementing new taxes to changing norms, all rely on changing consumer demands. Prices are an effective incentive on markets, might be that norms could be too. The next set of policy proposals put less faith in the strength of consumers to choose sustainably, but want to limit the scope of consumption, either by lowering incomes or by capping the supply through rations.

In section 4.3 it was seen that decreasing consumption levels by lowering incomes through shorter work-hours is a common proposal in the literature on sustainable consumption and degrowth. The argument is that the standard full-time employment could be redefined at lower levels in the rich world by decreasing work-hours per week, but also implementing longer vacations or longer parental leave. This would mean more leisure time, which is seen as positive for the quality of life, and more people could be employed by sharing the workload. It would mean a slowing down of the economy, trading efficiency gains for free time (Jackson 2011/2009; Nørgård 2012; Pepper et al. 2009; Rosnick & Weisbrot 2006; Sanne 2005, 2002; Spangenberg 2010). Even some authors who are sceptical to the effects of setting boundaries on consumption see decreased working time as an effective policy. However, the importance of equality in the reforms towards less work and lower incomes is stressed, so as to avoid growing income inequalities (van den Bergh 2011b; Alcott 2010a).

France implemented a thirty-five hour work-week in steps between the years 1998 and 2000. The goal was to create work sharing to keep unemployment down, increase work-performance and to increase welfare through more leisure (MAEE 2007). During the following years the implementation of the reform was weakened through new legislation in 2003 and 2005 (MAEE 2007). The results of the shorter work-week seem to have been mixed. From the beginning the number of hours worked per employee decreased, but the mobility on the job market increased with more people being fired as well as hired, and some, more men than women, took two jobs to get more income (Estevão & Sá 2008). The effects on the labour market seem to have been limited, with less jobs created than was expected (Estevão & Sá 2008, Hayden 2006). Some evidence point towards the 35-hour reform having been without positive effects at all when it comes to job creation. (Chemin & Wasmer 2009).

The effects on welfare seem to have been unevenly distributed between groups. People with higher wages and large flexibility in when the new free-time could be taken out were generally more positive to the changes, while people with low incomes, with unpredictable work-hours and who suffered from more stress due to higher work loads suffered from the reforms in some aspects

(Estevão & Sá 2008; Hayden 2006; Fagnani & Letablier 2004). Gender seems to have mattered in how the reform was received. Generally women got lower increases in hourly wages, but they were overall more pleased with the new conditions (Estevão & Sá 2008), but this depended to a large extent on their working conditions and whether they were used to long hours before.

The effects on consumption by the 35-hours reform are difficult to discern. It could be seen as part in a bigger French movement away from materialism towards sustainable consumption, but one should be sceptical towards such interpretations as it was not growth-critique but high levels of unemployment that made it possible to implement (Sanches 2005). The fact that hourly wages increased and the habit of taking two jobs got more common, especially among men, suggest that the effects on overall consumption levels might have been limited.

The other common proposal when it comes to setting boundaries and forcing consumption levels down is setting caps and implementing rations. The version of this which is most closely related to consumption among individuals is some form of personal quotas, often put under the label of personal carbon trading or personal carbon allowances. The concept was conceived in the UK and much of the work on personal carbon trading has been made there. Several schemes have been proposed, with common features such as capping allowed emissions in a society, for the whole economy or certain sectors, and regularly handing out allowances to individuals or households. The allowances can then be traded, making it possible for someone with low consumption-based emissions, either through consumption choices or low incomes to sell allowances on a market (Fawcett & Parag 2010).

Proponents for personal carbon trading see possibilities for lowering emissions through at least three mechanisms for behavioural change: (1) economic incentives due to less and less emissions-creating products and services being allowed into the markets, (2) awareness of the severity of the climate situation rising through such a binding system and (3) the rise of new social norms (Parag & Strickland 2010), and some evidence for effects beyond the mere price incentives can be found (Chapstick & Lewis 2010). It is seen as a potentially fair system, as high emissions and high incomes go hand in hand, but a strict per capita allocation might not be fair due to people's different needs due to varying life conditions (Parag & Strickland 2010; Starkey 2012a). Other difficulties arise due to a carbon trading scheme effectively turn emissions into a currency, and people need information as to their budget status and how much services and goods cost in terms of carbon, a big challenge of information as to who should create it and how to spread it (Parag & Strickland 2010).

Various questions have been raised as to the political feasibility of personal carbon trading schemes. They include issues of acceptance for such a policy scheme which is new and untested, where much conventional thinking on responsibility for environmental issues is tested, and media, further research and new norms would be needed (Parag & Eyre 2010). Evidence for potential acceptance of a personal carbon trading scheme are mixed (Fawcett 2010; Jagers et al. 2010; Starkey 2012b; Wallace et al. 2010). Without public support for such policies the efficiency of such a scheme can be questioned (Starkey 2012b). Issues of enforcement, i.e. giving penalties to those who go beyond their allowances, have been raised. The levels of penalty fees could in reality guide the price of allowances, and the design of enforcement can affect cost-effectiveness (Eyre 2010). The case does not seem to be clear for personal carbon trading, as issues of acceptance, implementation costs, effectiveness and so on have not been resolved and there is a lack of evidence from real world implementation.

Here has been reviewed a number of policy approaches, along the consumer-citizen divide, however these boundaries are not always clear. Taxation has elements of capping when setting tax-levels on the basis of desired outcomes, and personal carbon trading, although limiting the amount of emissions quite strictly, is a market based instrument with the ambition of promoting people's willingness to change consumption behaviour. Connecting back to sufficiency, they generally target different aspects of what Princen describes. The consumer-side strategies generally target norms, what Princen would call the feeling of having enough or even too much. Environmental taxation would be grounded in the understanding that consumption levels are too high, but not do much for people's feelings of common responsibility and that more is not always better. Fewer working hours could maybe inspire a re-evaluation of things in life, giving higher priority to things like family life, something that the French example hint at as many people there reported higher life satisfaction as they felt that they had more time for their families. Personal carbon trading, while a market based tool where the price-conscious could use the system for maximizing self-enhancement, would cap emissions, a very sufficiency-conscious strategy, and potentially inspire insights into how one's consumption is connected to a global system of climate change.

What is clear is that there exist few if any examples of successful effective policies for sustainable consumption levels in a rich-world community. Taxation might be the strategy most close at hand for many policy makers, and higher prices are often an effective incentive. Creating new norms could be a way forward, but there are few examples of how to actually do it. Decreasing work-hours is an effective strategy in theory, but as the French example shows it is difficult to do so

in a way that does not negatively affect groups who are already marginalized. Also, hourly wages rose and people started taking more than one job, effects that would work against the intended effects on sustainability. Personal carbon trading has so far not been tested, and while attractive and efficient in theory many questions of implementation persist. Next follows a review of the situation on sustainable consumption policy in Sweden, to set the stage for the empirical part in chapters 7 and 8.

5.4. Swedish policy on sustainable consumption

This section is a brief review of what policies exist in Sweden when it comes to sustainable consumption, in an effort to place it in a sufficiency context. In 2009 the Swedish parliament voted for the governments climate bill *En sammanhållen klimat- och energipolitik* (translates to “A Coherent Climate and Energy Politics”) (Prop 2008/09:162). The goals are ambitious, that Sweden is to be greenhouse gas neutral in 2050, that global warming shall not exceed 2°C and CO₂ levels are not to rise higher than 400 ppm. The means for achieving this are however classic in the sense that they do not seem to question the role of growth and consumption levels. Rather it is new technologies and higher efficiencies that are supposed to solve the problems and abolish Swedish emissions. On counting consumption based emissions the only thing that is said is that Sweden follow what has been ratified in international conventions (Prop 2008/09:162 p. 127). It should be noted that at least two of the five principles for creating sufficiency-based policies, which are discussed in sections 3.3 and 5.1 are already present to some extent in Swedish policy. The precautionary principle is the overall guiding principle for Swedish environmental law, and the polluter pays principle is evident not least in the CO₂ tax that was introduced in the 1990s.

In 2005 a report to the Swedish government (SOU 2005:51), *Bilen, Biffen, Bostaden*, “The Car, The Beef, the Housing” in English, was released and gained public attention. It identifies three major areas where public action for change in lifestyles and behaviour can have great positive impacts on sustainability: travelling, food and living. It suggests action along two main tracks, the first is to raise the share of environmentally friendly goods in the consumption mix, the second is to lower the share of goods altogether and raise the share of services which demand few resources, like cultural experiences, education and so on. It explicitly states that there would be a third track, to lower the level of consumption overall through shorter working hours, but it chooses not to make any policy suggestions along this track (SOU 2005:51 p. 29).

The same year, the government released *Think Twice! - An Action Plan for Sustainable Household Consumption* (Ministry of Agriculture, Food and Consumer Affairs Sweden 2005) where themes from the report above are recognizable. The action plan includes an overview of actions which are already taken by the Swedish government when it comes to sustainable eating, travelling and living. It suggests action to enable and promote motivation for sustainable consumption, and policy for trying to further people's commitment to consuming more sustainably. A review of three programmes for sustainable consumption (Berg 2011), in Finland, the UK and the Swedish *Think Twice!*-programme, makes use of Princen and makes use of the three principles in the analysis, i.e. deliberation, efficiency and sufficiency. While it is found that none of the programmes are strong enough to have any meaningful impact, the Swedish programme, is the one where sufficiency thinking is most visible, but it is inconsistent. The Swedish programme is also found to be the most top-down, with the highest occurrence of state regulation. However, the Swedish programme was abandoned in 2007 after a change of government after the elections in 2006.

During the year 2012, Naturvårdsverket (NVV), the Swedish Environmental Protection Agency, has been commissioned to create a basis for Swedish climate policy under goals set by the EU, in order to reach zero net-emissions by 2050. The final report is to be released at the end of 2012, but an early report (NVV 2012) reviews various scenarios of potential emission reductions in different sectors, to find potential ways forward. The focus is on international carbon trading under the Kyoto protocol, and on efficiency gains. More fuel efficient cars, more transport by trains, higher standards for new buildings and retrofitting of new ones, climate neutral energy productions and overall fast development of new technologies are examples of ways forward in the report. Little or nothing is mentioned of risks for rebound effects or the effects of consumer demand or of trying to lower consumption levels. These things might be included in some of the scenarios that the report is based on, but in that case nothing has been let through into what it supposed to become basis for Swedish policy making, while higher efficiencies are given all the focus.

Outside of the government there are some initiatives that want to put focus on the severity of the climate challenges and who reach the conclusion that growth critique and less material consumption is of the essence. Networks like *Steg 3* and *Radikalisera klimatpolitiken nu*, to which many of the interviewees in this study are connected, have been visible in the debates during the last few years. However, it seems as though their thoughts have so far had little impact on the actual climate politics. The next chapters sums up the literature review and draw implications, to lead over to the empirical part of this study.

6. Implications of the literature review

This chapter is a discussion on the literature that has been reviewed above, on what it says, and what it seems to lack. This chapter functions as a transition into the empirical part of the study, which is based on the findings in the literature.

This study builds on the realisation that when looking at consumption-based greenhouse gas emissions, the implications are quite different from when looking at the production side. Rich countries like Sweden suddenly cause more emissions than is normally reported, putting focus on how lifestyles and consumption in rich communities take up disproportionately large environmental space, they leave too large footprints, and they have consequences far away, through connections which are difficult to get a grasp on. The role of consumption is highlighted by research that shows that consumption levels will have to fall if sustainability is to be reached. The next phase was to understand the societal logics behind ever-rising consumption levels. Literature on degrowth discusses this, but offers few answers as to how a change is to be made. Sufficiency deepens the understanding of the growth-focus in modern societies, and offers a theoretical base on which to build strategies for sustainable consumption.

A review of literature on how the modern consumption-society functions gave insights as to what must be tackled in order to turn away from the path of growing consumption volumes. Growing consumption is described as such an integral part of society that it seems as though a total remake of how politics is done and of the goals that is set for societal development is needed. A look into policy strategies in the literature gives some suggestions, but it might be the lack of actual examples from reality, where lowering consumption on a societal scale has been tried, that hinders the literature to give more than mere suggestions. This is highlighted by the look into the Swedish policy situation, where it is evident that the political interest is practically non-existent when it comes to trying strategies that take natural boundaries into account and are not about higher efficiencies or changed consumption mixes.

Below four issues or pitfalls which the literature points out but fails to give solutions to are identified. These are of special relevance to policy-making concerning sustainable consumption levels, and they form the basis for questions in the interviews in chapter 7. The four issues are:

1. The risk for rebound and backfire effects. This has been discussed in various places and contexts earlier in this study (see for example: Alcott 2010,2008; Jenkins et al.

2011; Sanne 2001,2000; van den Bergh 2011a). It is much debated in the degrowth literature, and should not be taken lightly. A strategy or policy with the best intentions can backfire and in the end increase resource use and emissions. What is often proposed is to limit the resource use of the economy. Discussed above is the possibly most prominent strategy proposition on limiting climate-destructive consumption: personal carbon quotas and trading. The effects of such a policy is difficult to predict due to lack of examples of real-world implementation, and it has been criticised on the grounds of political impracticalities (Eyre 2010; Parag & Eyre 2010; Starkey 2012).

2. The risk for decreasing investments and thereby lower efficiencies when growth halts due to lower consumption levels. This is at the core of the critique on degrowth which says that degrowing the economy might not lead to positive environmental effects (van den Bergh 2011b) or will even be inherently detrimental for sustainability because growth leads efficiency-gains and abundance (Andersson & Gunnarsson 2011; Radetzki 2001).
3. The challenge of getting the public on-board with lowering consumption levels in order to live sustainably. There are some evidence that some people might voluntarily down-shift because of ethical convictions (Evans & Abrahamse 2009; Hamilton 2010; Pepper et al. 2009), and doing these ethical consumption choices could even be found pleasurable and driven by new norms (Soper 2008,2007). Otherwise the common proposal is to lower working since it is believed to be desired by many people (Jackson 2011/2009; Nørgård 2012; Pepper et al. 2009; Rosnick & Weisbrot 2006; Sanne 2005, 2002; Spangenberg 2010). As has been seen with the example in France, it is difficult to implement such a reform and have positive effects on sustainability as well as high satisfaction and acceptance (Estevão & Sá 2008; Hayden 2006; Fagnani & Letablier 2004)
4. Issues of democracy and democratic legitimacy when setting boundaries on consumption levels and growth, thus intruding in markets. The degrowth literature recognizes the difficulties of implementing limits on economies in the name of sustainability (Kallis & Martinez-Alier 2010; Schneider et al. 2010). Looking for example at personal carbon trading, research on its potential acceptance by the public show mixed results (Fawcett 2010; Jagers et al. 2010; Starkey 2012b; Wallace

et al. 2010) which limits its eventual legitimacy.

Along with these, further issues which also make a basis for interview questions are how to view sufficiency and sufficient consumption levels in general, looking back at Princen (2005,2003), and also who is responsible for attaining them, mirroring the discussion on the citizen-consumer dichotomy (Dobson 2007; Berglund & Matti 2006; Soper 2007). These questions set the theoretical basis for the policy-focus of the four issues above. Also, questions about Sweden were asked, examining how Sweden and its potentials and circumstances are viewed in relation to these matters. In the next chapter reports on the findings of the interview survey.

7. Empirical findings

This part of the study consists of a number of interviews made with Swedish opinion leaders in the area of climate, consumption and growth critique. The interviews were made with the literature study above as basis, in order to elaborate on its findings. It is an attempt to gain insights into how people working with these questions in Sweden today see the situation, whether they see that the existing policies take sufficiency into account in any way, if they see possibilities for implementing sufficiency based policies, and about their visions for how to bring about the changes necessary, i.e. what tactics are the most reliable.

In the last chapter four main pitfalls in relation to policy-making were identified, where the degrowth literature gives little guidance. They were (1) how to avoid rebound effects, (2) how to avoid stagnation in green technology when levels of growth and investment get lower, (3) how to reach acceptance among the public for a policy that puts boundaries to consumption and (4) democratic issues with market interventions. Other questions raised had to do with the subjects' views on sufficiency in how to balance the opportunities for a good life with the needs of the planet, the responsibility when it comes to individuals' consumption levels, whether it lies on the individual or on the state and society. Also, the situation in Sweden and the potential and circumstances for policies of restraint were discussed. The interview guide used is found in appendix A and a list of the interviewees in appendix B.

The findings are sorted as follows: first are general thoughts on sufficiency, on how to set boundaries and on responsibility issues. Second comes the four policy issues. Third is described what the interviewees had to say specifically about Sweden, not least as a potential forerunner. In the text the most important points are marked in *italics*. First in this chapter is a table summarizing the important points. They are sorted into common views, for which there were an almost or complete consensus, and specific remarks, which were expressed by one or a few of the respondents. These sometimes deepen a line of thought, sometimes diverge from or contradict the common views.

Table 2: Summary of interview responses

Issue	Common views	Specific remarks
Sufficiency	<ul style="list-style-type: none"> - What is done today is not sufficient for reaching sustainability. - Swedish levels of consumption are enough for a good life. - Growth and consumption have lost their meanings for creating higher standards of living. - Sufficiency is relative. A society and its institutions guides consumption levels. 	<ul style="list-style-type: none"> - Sufficiency was strongly connected to equality and fairness by some, who saw redistribution of resources as an important part of policies for sustainable consumption. - Some pointed to the importance of asking questions of what a good life is and how to achieve it, and whether growth is an effective means to that end.
Responsibility	<ul style="list-style-type: none"> - Shared responsibility between consumers and the state/society. - Consumers can exert some power through their choices. - The economic system makes it nearly impossible to have any impact on sustainability. 	<ul style="list-style-type: none"> - A complex process where public opinion and political discourse are in interplay. - Only a minority will voluntarily change their consumption habits to any significant extent.
Rebound effects	<ul style="list-style-type: none"> - System-wide boundaries are needed, not letting unsustainable resources into the economy. 	<ul style="list-style-type: none"> - Some focused on taxes as they saw quotas or other strict limits as politically infeasible.
Decreasing investments	<ul style="list-style-type: none"> - Little worry regarding this issue. - Limited resources, hopefully achieved politically and not through depletion, will lead to investments in clean and efficient technology. 	<ul style="list-style-type: none"> - The economic system could very well be geared towards more investment in green technology. - New technology is no fix for tomorrow's problems.
Acceptance	<ul style="list-style-type: none"> - There is too little discussion of growth-issues. A more visible political debate could reinforce public opinion to put demands on policy-action. - Decreased work-hours would be an attractive trade-off for lower consumption. 	<ul style="list-style-type: none"> - People are willing to make sacrifices if they are done commonly and equally. - People need to learn what growth actually is. - Lower work-hours would lead to lower taxes, which would put strains on welfare systems.
Democratic legitimacy	<ul style="list-style-type: none"> - Intruding into markets is not so much a democratic problem, as the markets are undemocratic to begin with. - Democracy could instead be strengthened through greater control of resource distribution. - Politicians must seek mandate among voters to intrude in markets in order to attain sustainability. 	<ul style="list-style-type: none"> - Personal carbon trading would be too intrusive into individuals' affairs. - Shame on the democratic world if it can't solve these issues, leaving leeway for authoritarian forces. - A strengthening of global democratic institutions is crucial to solve global sustainability issues.

Issue	Common views	Specific remarks
Sweden's policy situation and potentials	<ul style="list-style-type: none"> - Besides perhaps the CO₂-tax there are no sufficiency based policies in Sweden. - High social and political trust which should help with collective action. - Lack of public and political debate should mean that Sweden has a long way to go. 	<ul style="list-style-type: none"> - Myth that Sweden's political trust will be helpful in the future. - High living standards and education levels should constitute a good basis for action. - Geographical circumstances can be helpful e.g. thanks to resource-abundance and long coastline, detrimental due to low population density and long distances.
Sweden as forerunner	<ul style="list-style-type: none"> - Sweden should be a forerunner, of ethical, historical and justice reasons. - It is more important to set a good example than to worry about global rebound effects or lost competitive force. 	<ul style="list-style-type: none"> - Taking too many steps ahead alone would be dangerous.

7.1. Sufficiency and sufficient levels of consumption

When asked about their views about how to define sufficiency, and balance sufficient consumption levels to live a good life and what is sustainable, there was a *consensus among the interviewees that the action taken today is not sufficient to reach sustainability when it comes to consumption-based greenhouse gas emissions*. In relation to this many talked about how today's tactic of relying on efficiency gains and green technology has obviously failed. As one respondent put it: "I think that the level of consumption that we now have above all in the global middle class is not sustainable in the long run. And it is not enough to produce green technology [...] because in many countries the volume of consumption increases faster than the green technology". While efficiencies and technology overall were seen to be important, rebound effects were seen to neutralise the gains, and some even pointed towards how efficiency gains lead to higher resource use due to lower prices, i.e. backfire effects. *There was agreement that the levels of consumption that prevail in Sweden and comparable countries are enough, i.e. sufficient, to lead lives with high quality*. As one respondent commented: "we can eat better than pre-industrialized kings every day if we want to". This led to the conclusion that therefore some sort of restrictions must be set.

Many brought forward the view that at the general level today, in a country like Sweden, higher consumption levels do not lead to higher satisfaction. One comment was: "the crucial question [...] is what is development? [...] The strive for better lives, for better housing, descent

food, to get away from poverty, to get education, healthcare en so on, has given growth and better lives. [...] And the question is if whether we have reached a level where a better life could be to work less, invest more in culture and social presence than in consumption”.

However, a common viewpoint was that *sufficiency, in the sense of what is enough for a good life, is very relative*. It depends on what people see around them, “what is sufficient is to at least not have less than the neighbours” as one interview commented. It was seen to a large extent as a question of equality, because even in Sweden today many have a situation where their funds do not cover basic needs, and the resources need to be more evenly distributed. It was pointed out that in Sweden today it is nearly impossible to live a life close to the norm, and still be considered sustainable from an emissions point of view. That is one does not need to spend much money in Sweden today to surpass the maybe 1 or 2 tons of CO₂ per capita that can be considered sustainable on a global level. Commenting on how to change what is considered a normal lifestyle, and putting a boundaries on the basis of sufficiency, some, as mentioned above, talked about really questioning the goals we have in life and society today, and asking about what a good life really is how to achieve it. Some were more confrontational, saying that people will be forced to get used to another lifestyle with lower throughput of energy and material, as the high metabolism of today will not be possible in the future. Others, who did not put as much focus on lifestyle issues talked about putting boundaries on the economic system, only allowing input from sustainable resources.

When asked about the issue of responsibility for individuals' consumption levels, the consensus was that it is a shared responsibility between the individuals and the state and society. Some pointed to the fact that this is a complicated relationship, where the people elect their politicians, but where politicians have a lot of power when it comes to setting the agenda, and thereby affecting what people care about when they vote. “These are very dialectic processes, very reciprocal. If you can show that it is necessary for a continuous good life and for [...] your children and grandchildren that we do this [...] then more people will want to take responsibility” one respondent said. Many talked about the lack of debate in Sweden, and how this undermines such a process. The conclusion for most seemed to be that some sort policy is needed, that has the specific goal of keeping consumption levels down, whether it be taxes, rationing or something else. The reasoning, taken together, is described in the next paragraph.

The overall view was that people have some power as consumers, both in lowering their own impacts and showing through their consumer choices in what direction they think things should move, by choosing the climate-friendly alternative. However, most answered that people live

in a society with certain expectations, one where the main political goal always is GDP growth, where we are expected to consume and where capitalism always will use the resources that are available. One respondent said: “The capitalistic economy [...] is a way to make use of resources as much as possible [...] and if someone chooses not to use them, then they become vacant and someone else uses them”. Few believed that it is possible for more than a minority of the population to change their lifestyles on their own initiative. Many seemed to agree that people will consume their income, and even if they did not and put in a bank account, the money would be used for investments that would also contribute to emissions. The common conclusion of what would be needed were for people to lower their incomes, but that it is something that can not be expected of more than a small minority. Policy is therefore needed, and some talked about an overhaul of the economic system, as growth and consumption is built into the system.

7.2. Policy issues

7.2.1. Rebound effects

Regarding rebound effects, the common answer was that what is needed are restraints through budgets, quotas or some other measure that would set boundaries for the entire system. One comment was: “It's about not letting unsustainable stuff into the economic system”, another: “The easiest way to lower the rate of growth is to put limits to resource use and emissions. It's not growth in itself that is damaging [...] but a decrease in our material resources makes growth harder to achieve. Then there is no obvious risk for backlash as long as limits are successfully upheld”. If things like these were done, and the reliance on higher efficiencies was abandoned, the respondents did not see a problem with rebound effects, at least not within a society. Some put more hope in taxes, as they were seen as more politically feasible than setting limits and easier to implement than personal quotas for example. Overall however there was little willingness as to speculate in more detail on how these various measures should be constructed. The scope of the interviews might have restricted very detailed speculations, but the respondents talked about different strategies in quite general terms and left out any well-formed visions if they had any.

7.2.2. Decreasing resource efficiency due to lower growth-levels

The other main pitfall identified when it comes to actual climate effectiveness of degrowth is that of less investment in green and efficient technology due to a shrunken economy. *Few of the*

respondents expressed much worry about this, some doubted the validity of the argument and whether someone had actually done calculations on it. Instead, many found it hard to believe that the resource efficiency specifically will be suffering in such a situation. *To the contrary, it was common to describe a situation where efficiency become more crucial when restraints are put on the inflow of material into the economy.* In a scenario like that, seemed to be the idea, the share of investments in green technology should instead rise. One respondent commented: “New energy technology will grow if the demand increases. I mean, if we in Europe were to implement large taxes on fossil fuels [...] then of course a lot more money would be invested in new technology”.

Some also pointed towards how many things in the economic system today could be steered towards green investment and investments in welfare. For example that globally, much more subsidies go into fossil fuels than green energy, that common capital, like pension funds, could to a larger extent be directed into green and ethical investments, and that the financial system could be directed to work for green investments. In this context some also expressed doubts about new technology, and that we will need new ways of thinking that do not rely on modern inventions, because historically introduction of new and efficient technology has only accelerated the resource use due to cheaper products.

7.2.3. Public acceptance

The views regarding the issue of public acceptance of decreased consumption levels were quite disparate among the interviewed group. Some believed that many people will be willing to do substantial sacrifices if these issues were brought to the agenda and the severity of the situation were better understood. Many talked about how there is no political discussion around these issues, and how badly economic growth is understood among the public. As one respondent commented: “the view is that it is good when [the GDP] increases and bad when it decreases [...]. People need to relate to it and learn about what it means: in what way does my life gets better from growth increasing by two percent”. There was a conviction that people do not question the benefits of growth because in general the knowledge about what growth is is lacking. Respondents pointed to that the knowledge is very much lacking on how growth affects society and how the correlation between growth and well-being is very weak in a country like Sweden. *There seemed to be quite a lot of frustration among the interviewed about how no or very few politicians in Sweden talk about these issues and ask questions about what a good life is and whether more growth is the best path to get there.* “Often people say that this in not an important issue among voters, and therefore it is not

a priority. But at the same time research show [...] that people are very worried about climate change [...], so there is much gnawing anxiety among large parts of the Swedish people” one interviewee said.

Some put focus on the spirit of community and said that as long as people see that the sacrifices are made collectively, and not hitting already vulnerable groups, than many would be willing. Some stated the equality of such a project as highly important, wanting to include some sort of redistribution into the process. Some were more sceptical about how large these groups would be, and expressed doubt about how many would actually be willing to give up these privileges, especially since the overconsumption is such an integrated part in the society. A least one seemed to put more hope into an awakened crisis awareness, perhaps due to the existing (or worsened) financial crisis, where people realise that it would be fatal to try to go back to the way things had used to be.

Many were attracted to the trade-off between material consumption and other values like free time that could occur with shorter working hours and less consumption, and meant that such a reform could gain considerable support. This could lead to less stress among the ones with employment, and less stress among those who could gain employment due to work-sharing effects. However, some pointed to how lower tax revenues and thereby a shrinking welfare system could work against it when equality and higher life-quality were to be an argument for policies of shorter working hours.

7.2.4. Democratic legitimacy

When talking about issues of democracy and democratic legitimacy when setting boundaries and intruding in markets, *many interviewees instead put focus on how today's markets are undemocratic.* The markets were said to have influences, not least globally, that go beyond democratic mandates, so to set up market restrictions were generally not seen as troublesome from this point of view. *Instead, many pointed towards how such reforms could instead be strengthening democracy, not least in the sense of equality and influence over distribution.* As one respondent put it: “to delegate this question to the markets is a very unequal and unjust way to handle the situation. The rationing happen through money, the one with most money get access to the resources. [Implementing rations] is a way to limit the market in an area that is important for all people, so that this injustice does not arise”. Some were worried about the breaches of integrity that would follow a system with individual quotas, like personal emissions trading, while others seemed less worried

and said that many purchases we do already tracked through our credit cards, and the difference would not be that big.

One point of view that was brought forward was that it would be a big shame if the democratic world, Sweden included, could not solve these problems, while a state like China could potentially dictate a development towards sustainable consumption and green technology. This could potentially act as an argument for a non-democratic rule when the situation gets worse and more realise the urgency of action: “If the scientists are right [...] and everything point towards that they are, and we don't do anything, then democracy will be threatened. Because we will see many more refugees, we will get many large social problems, and we might have to brake in panic. Then will come the calls for [authoritarian leaders]” one respondent commented. Some also pointed towards how global these issues are, and the importance of strengthening the democracy in international institutions like the UN and the EU, and pushing them to take the lead.

Some however pointed towards the need for a deeper democratic mandate for politicians to carry through intrusions into markets for the sake of sustainable consumption levels. However, this would most likely need to begin with political parties in Sweden talking about these issues, and seeking that mandate through putting these issues on the agenda.

7.3. Sweden

Several issues were discussed in the interviews regarding the subjects' opinions of what specific circumstances would affect Sweden in trying to reform policy in such a way that consumption levels were lowered.

The interviewees were asked whether they could think of any established policies in Sweden today, that act to restrict consumption levels in order to lower greenhouse gas emissions. Many could not. Some mentioned the tax on fossil fuels that Sweden has had in plays since the early 1990s. One pointed towards an increasing debate around the rising meat consumption, but said that actual policy on the issue seemed far away. The majority only saw how Swedish politics continue to strive towards higher levels of growth and efficiency, and not show any regard to the influence of consumption levels.

When asked about Sweden's potential for implementing consumption restricting policies, several interviewees mentioned Sweden's history of high social trust and high trust towards politicians. This was interpreted as a good basis for collective action that could work as a positive

force towards reforms for lowered consumption levels. It was noted among the respondents that this trust and social capital had been undermined and had decreased during the last couple of decades. However, it was said, Sweden still measures comparatively high in relation to other countries, and could benefit from it. On the other hand, it was pointed out by others that this trust had fallen too low and that it would be to fool oneself to think that there is still something unique to Sweden in this regard. Instead they talked about studies that showed that Swedish people are now some of the most individualistic in the world, and this could hamper the possibilities for collective action. The generally high education level among Swedish citizens were however brought forward as a good basis for building knowledge and spread political opinion on these matters, along with the high living standards, so if someone is going to feel responsible and act, it should be Swedes.

Many pointed out a perceived lack of political debate on these issues, something several respondents repeated during their interviews. Some pointed towards not least southern Europe, where debates on what is to come after today's consumption-driven society is more widely present. The conclusion was that without such a debate, it is hard to believe that any big changes will be able to take place, when there has been no real talks about what the future might bring.

Some talked about Sweden's geographical circumstances. On the one hand there is the long coast with large potential for wind power and other types of renewable energy extraction. Sweden is also resource rich in other ways that some pointed towards to be helpful in this regard, and the population density is low making it easier to support the population. On the other hand, it was pointed out that this low population density and the large distances, especially in the north of Sweden hampers the development of a climate-friendly transport sector, not least making it hard to reach everyone with good and efficient public transport.

Regarding the potential for Sweden to be a forerunner, to take action and be a role model in international debate on climate action, most were positive. The arguments differed, from being an ethical and historical imperative to a country like Sweden, to arguments of justice, that our footprints are too high. *Some pointed towards the effects of a setting good example, that for Sweden this would outplay the risk for global rebound effects and lost competitive force.* The Swedish CO₂-tax was pointed out as an example of a policy where many warned for very negative effects prior to its implementation, but which nowadays are seen as a success. There were some scepticism though, that a country like Sweden cannot run too far ahead, that would be dangerous and ineffective, but if Sweden could take action and together with some other countries lead the way, that would be positive.

8. Analysis and discussion

This chapter couples the results from the interviews with what was seen in the literature review. The aim is to examine to what extent the Swedish debate corresponds with the international academic literature. It discusses how the Swedish opinion leaders perceive the issues and pitfalls identified in the literature, and whether the respondents' opinions on the Swedish situation and opportunities is in line with the ideas of the international degrowth literature. The respondents are of course not isolated from the international discourse, and do participate in the international debate to varying degrees. The expected results are therefore not to find that the Swedish debate is dominated by ideas that do not seem to be present internationally. This is reinforced by the interview questions having their basis in the literature. However, this study is based on the evidence of the need for decreased consumption levels in the rich world. The international literature, both theoretical and descriptive of real-world experiences leave many gaps as to how to proceed. Any novel ideas or insights among the Swedish respondents could help the political process forward, while if they are seen to agree with the international literature it would give further incentives to continue the research on how to create and implement policies for lowered consumption levels, not least in a Swedish setting.

Looking at the interview responses, the dominating view was that the general Swede possess resources beyond what is needed to live a good life and that people could most likely build good lives with lower consumption levels. There was agreement that the action that is taken to reach sustainable consumption is not strong enough, and that setting some sort of boundaries will be necessary. What levels of consumption that are sufficient, or how to decide on them, no one seemed willing to speculate about in detail. The relativity of sufficient levels of consumption are in order to live a good or decent lives is something that several respondents discussed, and it is a recurring theme in the literature on the drivers of consumption society. Both the interviewees and the literature suggest (Max-Neef 1995, 1991; Steinberger & Roberts 2010) that there is a certain level of consumption beyond which it is people's expectations and relative wealth that drives consumption (Hamilton 2010; Matthey 2010; Wilkinson & Pickett 2011/2009). It is a shift where less and less of the value of the stuff one buys comes from its intrinsic properties. More and more of the value is instead drawn from a hunt for relative status in society and other things which are propelled by a focus on growth.

The call among the respondents for a deepened debate on what people actually need and want in their lives, on how to build a good life is much in line with the literature on human and societal development that has been reviewed here (Sen 1999; Princen 2005). It was pointed out that the realisation that it is virtually impossible to live a sustainable life in Sweden today need to spread. It was agreed among the respondents that there is little or no focus on matters of scale in the current debate on sustainable consumption, i.e. no focus on how much, only on what, how efficiently it was produced and to what price. However, like much of the literature the answers from the interviewees lacked clear directions on how to move forward. Since a transition into a low-consumption society is such a daunting task, and one which demands questioning of basic political and societal goals, it is not strange that the respondents call for a deepened debate. With the research literature leaving many unanswered questions and real-world experience show mixed results, it is not strange that the Swedish opinion leaders would not or could not give clear directions, but instead called for a further political and public conversation.

When talking about responsibility for consumption levels, all respondents gave versions on the answer that it is shared. They said that individuals have responsibility for the choices they make, but that they can only do so much while living within the prevailing system. In these answers the consumer-citizen duality (see section 4.1) is visible. Among the respondents the focus, with few exceptions, were on the role of the state and society and that politicians must take much more responsibility for these issues. This could be connected to how some described the Swedish society as one of high political trust and social capital, and of sense of community. If this is a true description of the Swedish society it could mean that the citizen-perspective is more practicable when creating policy there, like Berglund and Matti (2006) suggests, while the consumer perspective is more fruitful for societies with lower political trust and higher focus on individuals' and their choices.

When it comes to the issues of rebound effects and lower efficiencies due to decreasing investments in green technology, there seemed to be quite little concern. Many of the respondents talked about putting boundaries on the economic system, and saw this as a feasible strategy, if not the only strategy. The argument seemed to be that with an economic system that does not include unsustainable resources, neither rebound effects nor lower efficiencies would be a problem. On one hand they might have acknowledged the difficulties that such a strategy would involve, on the other hand they saw the severity of the climate sustainability issues, and therefore put more focus on the need to act. This is seen also in the common view that it is more important for a country like

Sweden to restrict its economy than to worry about global rebound effects. Thereby they circumvented concerns present in the literature (Alcott 2010a,2008). In a similar manner the respondents avoided the issues of lower efficiencies due to decreased investments described by some authors (van den Bergh 2011b; Radetzki 2001). The reasoning was that if boundaries are put on the economy it is not likely to be green technologies that loses all of its investments. Instead they were of the conviction that with less resources the race for using them more efficiently should intensify.

These answers could be interpreted as a quite confrontational attitude among the respondents, where the arguments of those opposing boundaries on the economy are to some extent cast aside. This could be because of a conviction that it is more important to act and show initiative than to wait for all the pitfalls to be sorted out. This goes against what was said above in this chapter about the respondents wanting to wait for the outcomes of a deepened political debate. It seems at though at least some of the respondents feel that if more people were to learn about the importance of life-style issues and growth when it comes to climate sustainability, more would be willing to support economic boundaries. Thus the problem is not seen as the lack of knowledge on how to successfully implement such policies, but rather the lack of insight into their necessity. The novel policy-ideas that a furthered debate might bring are in this context not as important as a wider support for action.

On the issue of getting the public on board and supportive of consumption-limiting policies, it was striking once again how many respondents described a lack of debate in Sweden. They expressed a concern that without a debate it is very difficult to raise awareness of these issues, an awareness that is seen as crucial. Some, but not all, of the respondents were optimistic of the potentials of lifting the positive sides of lower consumption levels. They hoped for the will to down-shift that some authors describe (Evans & Abrahamse 2009; Hamilton 2010; Pepper et al. 2009), but decreased work-hours was the most common proposal, which mirrors the literature (Jackson 2011/2009; Nørgård 2012; Pepper et al. 2009; Rosnick & Weisbrot 2006; Sanne 2005, 2002; Spangenberg 2010). Several of the respondents pointed out that few people will be willing to lower their incomes in this way, if they are not part of a broad societal shift. The feeling of doing things together and taking common responsibility was described as crucial, again describing (Swedish) people more as citizens than consumers.

Regarding democratic issues of setting boundaries and intruding on the freedom of markets that is discussed in the degrowth literature (Kallis & Martinez-Alier 2010; Schneider et al. 2010 p.

514), the answers among respondents were varied. While some had not regarded these issues much at all, others expressed a view that today's markets function undemocratically so democracy could instead be strengthened by implementing restrictions. If the allocation of resources were based on equality and fairness it could balance the skewness that markets were seen to have created, something that has been an argument for personal carbon trading (Parag & Strickland 2010; Starkey 2012a). Some interviewees called for a deepening of the democratic processes, and seemed to want to combine many kinds of change: for the environment, for equality and just distribution of resources, for heightened democratic influence and for a more well-functioning economic and market system. These issues were seen as connected. This is very much in line with a lot of the literature that describe how consumption is driven in part by relative inequalities on the markets (Hamilton 2010; Sanne 2005; Wilkinson & Pickett 2011/2009). This points towards that the interviewees take a critical position regarding the potentials of markets to solve issues of sustainability and equality. Whether this stems from political convictions will be left unsaid. However, since the many political debaters have the principle of free markets at heart, and market-logics seem to be a spreading phenomenon (Sandel 2012), it might mean that there is a great risk for confrontation. If it leads to locked positions in the debate it might lessen its productivity, hindering support for action for restrictions on consumption levels. Intruding into the freedom of markets is of course a common thing in modern democratic societies. However, Sweden has seen many markets deregulating during the last couple of decades, a trend which might be hard to turn around, and openly questioning the place of markets will meet opposition.

When discussing special circumstances in Sweden, a common point was that of Swedish people's high social trust and sense of community, and that this could help in taking action. However, many talked about this trust being on decline, some saying that it is already gone, that Sweden no longer is special in this regard. As was discussed above, the level of political trust in a society is likely to have implications for policy making for reaching sustainable consumption levels. Sweden's potentials as a forerunner were overall seen as good. There was disagreement among the interviewees on the extent to which a country like Sweden could go before others like it, but if it were done with moderation and afterthought the consensus was that it would be a positive strategy. This reinforces what was seen before, that for many of the interviewees showing initiative is more important than waiting for all the facts, despite the known pitfalls.

The common opinion that Sweden lack a debate on degrowth and on limiting consumption levels should not go unquestioned. The respondents are of course involved in the debate and take

strong positions. To be of the conviction that a matter at the core of one's interest is not given enough attention in society is likely not uncommon, regardless of one's interests. Some of the respondents referred to other European countries, often ones which have been hit hard by the recent recession, where they saw a more lively and visible debate. That could perhaps be explained by Sweden being a relatively small country where the academic debate is not as broad as in a larger country. It could also be the case that one has more nuanced insights into the country where one lives, and that the respondents gave disproportional significance to the debates happening abroad.

Overall it can be concluded that many of the ideas present in the international literature are common among the Swedish opinion leaders who were interviewed for this study. They had a conviction that action is needed and that the material metabolism of a country like Sweden needs to be limited. The gaps in the knowledge that the literature leaves have not been filled by the interviews. They showed a general attitude that it is more important to take action and show initiative and work out the problems along the way. Along with this goes an attitude of questioning many societal institutions and political logics which are seen as unsustainable, not least the logics of free markets. This was apparent among several respondents who had few reservations when it came to limit the influence of markets and question how much of the economic system is run today.

9. Conclusions

This study builds on the premise that boundaries on resource use and consumption are needed in order to reach sustainability in the rich parts of world. This entail leaving the focus on economic growth. It set out to reach a deeper understanding of how such shifts could be carried out, and there exist few examples where policies have been designed with the goal of limiting consumption and growth, and there are many gaps in the knowledge on how such policies should be designed. The Swedish opinion leaders interviewed here had few clear ideas on how to tackle the issues that the literature identifies. They did however seem to lean towards the case for common political action rather than focusing on the consumer choices of individuals, giving much weight to the influence of a growth-centred system and the difficulties for individuals who want to go against the norms of ever-increasing consumption.

The lack of clear policy strategies and real-world examples, both in the literature on degrowth and consumption and among the interview respondents makes a case that more policy research is needed before taking big policy-steps. Much of the literature and many of the respondents called for overhauling large parts of the economic system. However, the alternatives are not very well worked out, and the risks are high in moving too fast. Rising unemployment and economic inequalities are likely results if what happens resembles a recession within today's system. Help could probably be found within the sufficiency thinking presented in this study, and the various principles it entails. Some of them are already in play in environmental politics, at least in Sweden. Implementing policies which follow a sufficiency logic instead of an efficiency one, could be a way forward, making them more and more rigid along the way. This way a shift in political priorities could take place without it happening all too fast.

The call for further debate, in Sweden and likely elsewhere, and for lifting these issues to the agenda is crucial. The shifts that the degrowth and sufficiency agendas suggest are to deep not to involve larger parts of the population in the decision-making and deepening the democratic processes. These shifts could never be done in a democratically legitimate manner without the understanding and support from the general public. As many of the interview respondents pointed out, it would demand collective action in one form or the other, and it is likely much easier to take individual responsibility if there is trust that everyone does the same. If the changes would have positive trade-offs, like more leisure time and less stress, more people would probably be on board.

As has been pointed out there is a great need for further research. This study makes a case for the need to understand how to promote acceptance of lowered growth and consumption levels. It would be needed among the public, and the interview results point towards a need of acceptance among politicians politicians as well, at least in Sweden. The interviewees where in agreement that as of today no established political party questions the need for further economic growth. Thus more knowledge is needed on the Swedish policy-making processes on these topics, to understand where degrowth-positive politicians meet obstacles and how they could work around them. Questions to answer include: are politicians locked into a system of growth-focus? Do they generally lack understanding of issues of growth? Do they feel that the alternatives are too obscure to be able to build policy on them? Do they feel that they lack support from voters on these matters? There is a dire need for research aiming at understanding how these issues could be brought to the political agenda.

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Appendices

Appendix A: Interview guide

- What does sufficiency mean to you when it comes to the relation between private consumption and greenhouse gas emissions?
- What responsibility does an individual have to make sure his or her consumption does not have unsustainable consequences for the climate?
- Is there any area in Swedish politics today where you see that sufficiency is applied on private consumption?
- Do you see any conflicts between democratic values and implementing policies for lowered consumption levels through market-intrusions?
- What is needed in order to reach broad public acceptance for lowered consumption levels?
- How can we make sure that politics for lowered consumption levels actually have positive environmental effects and avoid rebound effects? Within Sweden? Globally?
- How can it be avoided that a lowering of economic growth that would follow lowered consumption levels does not lead to an increase in emissions due to decreasing investment in green technologies?
- What circumstances are specific to Sweden when it comes to politics for lowering consumption levels?

Appendix B: List of interview respondents

- Anonymous growth-analyst at a Swedish government agency.
- Annika Carlsson-Kanyama – researcher at FOI: Swedish Defence Research Agency.
- Stefan Edman – former advisor to the Swedish government, author of *Bilen, biffen, bostaden: Hållbara laster – smartare konsumtion*.
- David Jonstad – Writer on the subject of climate and consumption and chief editor of the climate magazine *Effekt*.
- Sara Karlsson – member of the Swedish parliament for the Social Democratic Party.
- Mikael Malmaeus – researcher at IVL: Swedish Environmental Research Institute, and writer on degrowth for Cogito, a Swedish environmental think tank.
- Birger Schlaug – former spokesperson of and member of parliament for the Swedish Green Party, debater and writer on issues of environment, climate and consumption.



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