



Sustainable Entrepreneurship: Institutional profile and cross-country comparison Denmark & US

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Abstract

Sustainable entrepreneurship is a relatively new subject. The problem is that not much is known about the occurrence of sustainable entrepreneurship in different economic systems. Furthermore, not much is known about the correct type of policy towards sustainable entrepreneurship. In this research, first, an overview of literature on sustainable entrepreneurship is given. This part discusses sources of opportunity and challenges for the sustainable entrepreneur. Second, an institutional profile of Denmark and the US is made. The different economic systems and government policy of these countries indicate the difference between a liberal market economy and a coordinated market economy. The last part explores data from survey carried out by the European Commission, Flash Eurobarometer 342: “SMEs, resource efficiency and green markets.” The goal of this research is to explore whether the occurrence of sustainable entrepreneurship is higher in a liberal market economy than in a coordinated market economy. The source of opportunity, due to the liberal market economy is expected to be higher in the US. This is because of a larger amount of market failure that can be addressed by the sustainable entrepreneur. Another goal is to find out the differences in the policy desired by entrepreneurs in these different market economies. It is expected that in a liberal market economy, the sustainable entrepreneurs, have different desires of types of support than in a coordinated market economy. This is because of the different types of policy carried out in these economies. This goal looks more at the challenges for the sustainable entrepreneur. For both goals, the data from the survey is used to explore whether there are indications of institutional differences between the countries that may be related to the occurrence of sustainable entrepreneurship. The main findings show that there is no indication of more sustainable entrepreneurship in the US. Sustainable entrepreneurship is operationalized as: a company has to have a minimum annual turnover of 51% of green products or services. Data has shown that Denmark has a higher rate of sustainable entrepreneurship. The challenges for the entrepreneur like resource availability and assistance seem to outweigh the sources of opportunity. The active policy measurers and the very low uncertainty rate, in Denmark, have probably lowered the barrier for the sustainable entrepreneur. Furthermore the data shows that ‘demand from customers’ is the most important reason to offer green products or services. Here lies a challenge for policy makers. The results for differences in desired policy show, that US companies need more financial support and help with identifying potential markets or customers for green products or services than Denmark. It can be noted that Danish companies don’t often receive support from public or private parties, for offering green products or services.

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1: Introduction

The foundation of sustainable entrepreneurship is found in (social) entrepreneurship. Sustainable entrepreneurs create social and/or environmental value (Austin *et al.* 2006). The problem is that there is little knowledge about important variables that influence sustainable entrepreneurship. Most literature is descriptive; it lacks empirical evidence on what kind of influence the institutional profiles have on sustainable entrepreneurship. This research tries to fill the gap. It aims to explore differences in sustainable entrepreneurship and desired policy in two different economic systems: a liberal market economy and a coordinated market economy. To research this, data from the US and Denmark is explored. Furthermore, the US is known for their very passive policy and Denmark for a very active policy towards green markets. Recently, new data was released concerning green markets and SMEs. By means of descriptive statistics, this research aims to gain more insight into sustainable entrepreneurship. This data comes out of a survey carried out under supervision of the European Commission, Flash Eurobarometer 342: “SMEs, resource efficiency and green markets.” The different institutional profiles of Denmark and the US, could explain possible differences in levels of sustainable entrepreneurship. These institutional profiles are the basis for the exploration of the data. Institutional profiles are expected to be of influence on the source of opportunity and challenges for the sustainable entrepreneur. As stated further a liberal market economy can increase the source of opportunity for an entrepreneur (Mair 2010). The liberal market is very open towards entrepreneurs and besides, the entrepreneur can address social/environmental needs that the government doesn't provide. That is why, the first research question is: ‘Is the occurrence of sustainable entrepreneurship higher in liberal market economies than in coordinated market economies?’ To explore the differences in policy in the different market economies, the second question looks at differences in desired policy in the two countries. The second research question is: ‘Are the different types of economic systems of influence on the type of support desired by sustainable entrepreneurs?’

The contribution of this research is to gain more insight into the differences between market economies for sustainable entrepreneurship. With these differences, governments can improve their policy towards sustainable entrepreneurship. The results show that possible challenges of sustainable entrepreneurs outweigh the sources of opportunity in the US. The results indicate more sustainable entrepreneurship in Denmark. This could be explained by the active policy measures in Denmark and lower uncertainty avoidance. However, results also show that a

major part of (sustainable) entrepreneurs in Denmark do not use support to offer green products or services. Differences between the countries in desired support show that the US companies would like more financial support and assistance with identifying markets/customers, whereas the Danish companies desire, next to financial support, mostly no extra support. This suggests that there is very likely a difference in desired type of support in the different countries.

This research is structured as follows. First of all, an overview of literature on sustainable entrepreneurs is given. Secondly, the institutional profiles of the countries are put forward: this will consist of differences in policy, kinds of economy and (entrepreneurial) culture. Finally, the data from these countries will be explored and discussed.

Chapter 2

The first part of chapter 2 gives an overview of the literature on sustainable entrepreneurship. It contains a definition of sustainable entrepreneurship and shows the different trends in sustainable entrepreneurship literature. Starting with an overview of environmental degradation and sustainable development, in which lie the basis for the sustainable entrepreneur. Second, there will be a comparison with the social entrepreneur, because the sustainable entrepreneur can be considered part of social entrepreneurship. Furthermore the sources of opportunities and challenges for the sustainable entrepreneur in different literature will be brought forward.

2.1: Ecology and sustainable development

The environmental issues are of increasing concern. The environmental degradation puts our future generations in danger. Mankind is to blame for the danger in which he has put the world's eco system (Cohen & Winn 2007). A couple of examples of these problems are deforestation, destruction of the rainforest and associated loss of biodiversity, pollution, and excessive consumption of fresh water (Cohen & Winn 2007). These problems are reflected in the environmental market such as trends in renewable energy, fuel cells, green building, natural foods and carbon emissions (Dean & McMullen 2007). Due to the increasing interest of the last 30 years for these problems, a term that takes all of these problems into account has been invented: "sustainable development". This term was devised by the World Commission on environment and the Development of the United Nations in 1987. This possible definition

views “sustainable development as a process of technological development and organizational change that are in harmony with each other for both current and future generations” (Crals & Vereeck 2005, pp. 173-174). Another more updated view of sustainable development addresses the balance between economic health, social equity and environmental resilience. This balance offers long term perspectives and opportunities for companies and organizations (Cohen & Winn 2007). Sustainable development forms the basis for the term sustainable entrepreneurship, but first the term entrepreneur has to be defined before the term sustainable entrepreneur can be deduced.

2.2: Sustainable entrepreneurship

The historical base of entrepreneurship is, among others, defined by Say (1803) and Schumpeter (1942). At first Say stated in the early 19th century that the entrepreneur creates an economic shift which contributes to higher productivity and yield. The entrepreneur is someone who creates value. In the 20th century, Schumpeter discussed the entrepreneurial spirit and the identifying of a commercial opportunity. A successful entrepreneur innovates, the innovation will lead to ‘creative destruction’ (Martin & Osberg 2007). To continue on this, an entrepreneur is somebody who takes risks, conceives new business opportunities, looks outside the box, incubates ideas and champions the adoption of ideas. The entrepreneur gathers the resources needed to bring on the idea to commercial reality, this in contrast to an owner-manager who runs his company on a day-to-day basis. This point has been made by several authors (Schaper 2010; Martin & Osberg 2007; Austin *et al.* 2006). There are four elements that are important for entrepreneurial activity. These elements come together in the P.C.D.O. model (Austin *et al.* 2006). The first element is ‘people’, this contains personal characteristics. Examples are skills, attitudes, contacts, goals and values of the entrepreneur. The second element is ‘context’, the factors that are beyond the direct control of the entrepreneur. Examples are macro economy, tax, regulations and socio-political structure. The third element is ‘Deal’, this includes bargaining. Some examples are autonomy, social recognition, economic benefits and decision rights (Martin & Osberg 2007; Austin *et al.* 2006). Finally there is ‘opportunity’, which is defined “as any activity requiring the investment of scarce resources in hopes of a future return” (Austin *et al.* 2006, p. 5). For this research, the context in which an entrepreneur moves is the most important. The institutional profiles, as will be explained later, are mostly out of the control of the entrepreneur. In short, it means that the context of the entrepreneur is the focus of this research.

However, first a definition for sustainable' entrepreneurship has to be made. Sustainable entrepreneurship is a fairly new subject and is a part of another type: social entrepreneurship. Because of the resemblance with social entrepreneurs, a clear distinction between social and sustainable entrepreneurship has to be made (Austin *et al.* 2006). The social entrepreneur can be defined as an "innovative, social value creating business activity that can occur within or across the non-profit, business, or government sectors" (Austin *et al.* 2006, p. 2). The organizational form is usually based on the most attractive form to gain resources for the social mission. Furthermore, Dacin *et al.* (2010) argue the differences between authors that write about social entrepreneurship. Two important differences in literature like economic outcome and participating in commercial activity of the social entrepreneur. First, looking at economic outcome, some ignore this while defining social entrepreneurship. Others do associate economic outcomes with social entrepreneurship but it 'can't be more important' than the social mission. Second, to gain extra income non-profits are increasingly participating in commercial activity. Due to a change of attitude towards this commercial activity by non-profits, it is more widely accepted. Also it creates more independence for the nonprofits and it is easier to access financial resources through the for-profit side (Dees 1998). If this is compared with the sustainable entrepreneur, the sustainable entrepreneur is fully commercially (profit) driven. The social entrepreneur is depicted as a non-profit organization. Another important difference between the two forms of entrepreneurship is that the social entrepreneur is more focused on the social aspect. The sustainable entrepreneur catches the environmental and social part. Sustainable entrepreneurs can improve the quality of life with a 'for profit' objective. Moreover it gains a competitive advantage through offering an innovative solution to environmental degradation. Thus sustainable entrepreneurship can be defined as: "the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce." (Crals & Vereeck 2005, p. 1). There is a profitable opportunity to satisfy these humanitarian and ecological needs. In a narrower sense it is the research of "how opportunities to bring into existence 'future' goods and services are discovered, created, and exploited, by whom, and with what economic, psychological, social, and *environmental* consequences" (Cohen and Winn 2007, p. 35). Next to the environmental aspect the sustainable entrepreneurship has important social influence. Example is the reduction of pollution which increases the quality of life. The profit part of the sustainable entrepreneur focused on getting the highest result for the company. The profit is used to allocate and add

value to employment, investments in machines, infrastructure, sponsoring and labor participation.

To conclude, despite that the social entrepreneur is increasingly committing to commercial activity it is mainly focused on the immaterial contribution to the economy. As opposed to the sustainable entrepreneur which has an immaterial and material contribution towards the economy. (Crals & Vereeck 2005).

Yet, before this research goes further with the sources of opportunity for sustainable entrepreneurs. Different ways to address environmental degradation have to be discussed. This helps to distinguish between different forms of 'green' SME's, because not every firm that goes 'green' can be defined as a sustainable entrepreneur. There are four other ways to address environmental problems (York & Venkataraman 2010). First, there is the visible hand which includes regulations and control by the government. However, during the last 25 years a lot of new regulations have been implemented, but, despite that, the environment is still degrading. Second, there is the influence from NGOs, this is called stakeholder activism. An example is the lobbying for preservation of natural resources. Third, there are the corporations who can take action themselves by more ethical action which is called corporate social responsibility (CSR). This means that corporate businesses are responsible for problems they have or have association with, but this is often more focused on doing 'less bad' than doing good. Finally there are other forms of corporate action which include cost savings and differentiation. This form is focused on gaining competitive advantages by means of adapting environmentally friendly practices (York & Venkataraman 2010). For all SME's a form of sustainable entrepreneurship is a way to gain competitive advantage. If companies don't participate they could gain bad publicity. There is a clear distinction to be made between SMEs with production process and human resource management that focuses on gaining the image as a 'green supplier'. It is the way to gain competitive advantage through 'greening' (Hall *et al.* 2010; Crals & Vereeck 2005). More importantly is the innovative SME with the mission to create value for sustainable development with products and services. The only way of gaining economic growth and creating societal benefits is through these entrepreneurial actions (Crals & Vereeck 2005).

2.3: Sources of opportunity for the sustainable entrepreneur

Now, the difference in SME's and their reason behind 'greening' has been discussed. This part goes further with two possible sources of opportunity for sustainable entrepreneurs. Here, the focus is on the opportunity for the entrepreneur, to address market imperfections and uncertainty. The model of York & Venkataraman (2010) consists of taking on uncertainty, providing innovation and engagement in the allocation of scarce resources. There is uncertainty about the environment and the best ways to solve problems. Entrepreneurs are willing to accept true uncertainty and create an alternative future by innovation. Incumbent firms are not very innovation driven because of the opportunity cost of their current investment, while entrepreneurs deal with a great part of uncertainty, for which they will be rewarded with a premium. Success will occur after a lot of trial and error, a lot of entrepreneurs will fail because of high uncertainty (York & Venkataraman 2010). Due to innovation, an unsustainable practice is solved and the whole current industry will undergo a mutation. This is what Schumpeter, at the beginning of the 20th century, called 'creative destruction'. This destruction of the unsustainable practice takes time. The industry will be not so easy to change, that is why it will take time to implement (sustainable) innovation into the market. From a neoclassical view the market consist of actors that maximize their utility, the market mechanism will form a balance between the supply and demand of goods and services. This is called the steady state equilibrium. More recently, criticism has found that actors are not fully rational. (Austin *et al.* 2006; Cohen & Winn 2007) So that this steady state can't be fulfilled over a long period of time. Problems are uncertainty and transaction costs that occur through the actor's decision making. There can be uncertainty and market failure; this creates opportunity for the entrepreneur. Uncertainty as described before is an opportunity for the entrepreneur. For social and commercial entrepreneurship, market failure is a source of opportunity (Austin *et al.* 2006).

Environmental degradation can be described as a form of market failure. The need to stop the degradation that is not taken care of by the government can therefore be dealt with by the sustainable entrepreneur. Normal entrepreneurs don't solve this market failure; they can even foster environmental degrading. There is an opportunity for the sustainable entrepreneur to participate in the market for the degrading environment. The market tends to desire more environmental friendly products or services and the desire to pay for these products is also increasing. At least five different market failures are at play in relation to sustainable

entrepreneurship: public goods, externalities, monopoly power, inappropriate government intervention, and imperfect information (Dean & McMullen 2007). In this research the focus lies on inappropriate government intervention and imperfect information. The government can intervene inappropriately when there is Pareto inefficiency in the economic system. Pareto efficiency is “no redistribution of goods or productive resources can improve the position of one individual without making at least one other individual worse off” (Dean & McMullen 2007, p. 54). The market can’t make all the individuals just better off by trading. The government can try to improve this by policy; this can decrease the inefficiency of the market. However, modification of government subsidies, taxes and other incentives can raise opportunity for entrepreneurs. This is only possible if support to industries that are causing environmental degradation is decreased, so the entrepreneur can compete within the existing industry. Lobbying from the incumbent firms and politicians that have interest in these companies makes changing policy difficult (Dean & McMullen 2007). In addition, there is imperfect information on the market, this implies information asymmetries between producer and consumer. The information contains two parts, the knowledge of the supplier about supply and demand condition and the customer knowledge about the nature of the product or service attributes. The producer-focused informational entrepreneur focuses on customer needs and preferences or supply possibilities. There are contextual changes like technology and social changes that influence the competitive environment. Imperfect information exists because environmentally superior technology is unknown to the suppliers. Opportunity for the entrepreneur is to discover customer needs for environmental products and services. Second, there is customer-focused informational entrepreneurship, the customers have imperfect information about products or service attributes. If information regarding product or service attributes is increased, the opportunities for entrepreneurs also increase. The entrepreneurs must try to inform the customers regarding the environmental attributes of products and services. Examples are: better information about health and environmental effect of methods of production, product contents, product use, and post-consumer disposal (Dean & McMullen 2007). Asymmetric information results in the uncertainty of demand. Large companies fail to contribute to environmental problems due to the uncertainty of demand, but large companies also need to find other suppliers that can deliver green product and services. The whole network has to be changed and this is often very costly and tough to accomplish. Small companies however start from scratch. (York & Venkataraman 2010).

2.4: Challenges for sustainable entrepreneurs

Next to opportunities, there exist several challenges for sustainable entrepreneurs. This part shows a list of challenges that SMEs have before committing to sustainable development (Crals & Vereeck 2005). This list overlaps with some standard entrepreneurial challenges but has to be viewed from a sustainable development perspective. A couple of important challenges are discussed in this review:

- Lack of resources, time and money
- Lack of capabilities, skills and knowledge
- Lack of awareness of issues, risks, regulations

The source for these challenges lies in the kind of policy support a government executes. Below are a couple of sources for SME supporting systems problems (Crals & Vereeck 2005)

- Not correctly tailored to the needs of SMEs
- Insufficiently applicable for specific industries
- Too passive, superficial, lacking in quality and expensive
- Too time consuming, inflexible or poorly targeted/promoted

Finally there is an overemphasis on environmental management systems and certification, this causes lack of commitment to eco-efficiency/design and sustainable production. The problem is the focus on cost saving and not on creating the best solutions for the environment, health, safety and quality. A possible solution is to create regional partnership so businesses can share their ideas and knowledge (Crals & Vereeck 2005).

Chapter 3

As discussed, opportunities increase for the sustainable entrepreneur when there is more market failure. To explore if there are differences between economic systems in their level of sustainable entrepreneurship, formal institutional profiles are taken into account. The institutional profiles of these countries can give an indication of the occurrence of sustainable entrepreneurship in different countries. To explore if there are differences in economic systems, Denmark and the US are used. These countries represent a liberal market economy and coordinated market economy. This is explained later.

3.1: Institutional profile

Before institutional theory and entrepreneurship is combined, institutional theory has to be defined. Institutional theory is: social institutions affect the outcome of the combination of

economic organisations (firms, networks and markets). These different combinations provide different economic outcomes (growth, innovation) (Brammer *et al.* 2012). These institutions are usually defined “as formal or informal rules, regulations, norms, and understandings that constrain and enable behaviour” (Brammer *et al.* 2012, p. 4).

This institutional theory can be combined with entrepreneurship. The article of Busenitz *et al.* (2000) argued that an institutional profile of a country can unlock entrepreneurial phenomena. “The interaction between institutions and organizations that shapes the institutional evolution of an economy. If institutions are the rules of the game, organizations and their entrepreneurs are the players” (North 1993, p. 361). Organizations consist out of political bodies (parties), economic bodies (firms, trade unions), social bodies (churches, associations) and educational bodies (schools, universities). The rise of these organizations is caused by the way an institutional forms their rules (North 1993). “The formal and informal rules set the incentive structure for societies and specifically economies” (North 1993, p. 360). These incentives structure laid the base for entrepreneurship. If the set formal and informal rules of the country reward entrepreneurship, it is more likely that entrepreneurship will occur in this country (North 1993). To unlock the entrepreneurship phenomena in Denmark and the US, a model of institutional profiles is used. (Busenitz *et al.* 2000). This consists of a three-dimensional model with a regulatory, cognitive and normative dimension. In this research the emphasis lies on the regulatory and normative dimension. The cognitive dimension will be explained but is not used in the countries institutional profile analysis. This includes the different kind of regulations, laws and governmental support policies towards new business ventures. The regulatory dimension can be related to the context sphere previously discussed while defining entrepreneurship. Entrepreneurs do have a direct impact on this dimension, only through lobbying. Other examples of the regulatory dimension are if firms can easily gain access to resources for sustainable entrepreneurs, if there are government-sponsored programs, special privileges and other kinds of policy that encourage individuals to make their investment or protect risk. The cognitive dimension consists of the knowledge and skills possessed by the people in a country that have effect on the creation of new (environmental) business. This can be called the social knowledge of a country. Furthermore it contains the knowledge of environmental problems and how to address these problems. If entrepreneurs do not possess the knowledge to address this market failure there can never be a solution for environmental degradation. The normative dimension measures the value system of a country. In the case of entrepreneurial activity, examples are a countries culture, values, beliefs and norms towards

entrepreneurship. How do they value creativity and innovative thinking (Busenitz *et al.* 2000). Before describing the different institutional profiles of the US and Denmark, this literature review goes deeper into the regulatory dimension and the different types of policy used to stimulate the offer of green products and services.

3.2: Environmental policy types

Different policies in different countries generate different outcomes for green markets. The article from Daugbjerg & Sønderskov (2012) explains different kinds of policies in different countries. Policymaking is difficult because the problems they address are usually complex and policy processes are not perfectly adapted to the situation. Implementing the policy is, though, only a part of the ‘multifaceted problem’ that can be addressed. That is why a combination of policies is necessary in order to combine their strengths and diminish their weaknesses. In figure 1, different types of support are shown. There are two sides of the instrument, supply side instruments that target motivated producers to supply new products to meet consumer demand. The demand side instruments focus on creating demand to increase the market for suppliers. Furthermore there are 4 kinds of instruments that a government can use to create incentives. First there is an informative instrument, it gives more information to the market (addresses the asymmetric information problem if used properly). Second, there is the government that can create rules and carry out authority, which is called a regulatory instrument. As a third instrument there is the economic instrument that consists of taxes and subsidies, and the last instrument composes the organization, which means that the government can set up supporting organizations for assistance with offering green products and services.

Table 3.1: Policy instruments

Emphasis on demand-side instruments	Emphasis on supply-side instruments	
	Low	High
Low	I: Passive market development policy	II: Supply-driven policy
High	III: Demand- creation policy	IV: Active market development policy

(Source: Daugbjerg & Sønderskov, 2012)

Obviously there are differences between the countries and their use of policy instruments. In table 2.1, low and high are the levels of emphasis on instruments used. Starting with the low emphasis on both sides of the instruments, this is called a passive market development policy. This type creates only the basic needs such as standard environmental production licenses,

eco-labelling, small subsidies and limited intervening in customer demand policy. Eco-labelling is according to Crals & Vereeck (2005) available in different types. There are two important types; the first one is a voluntary program by an independent labeling authority which sets a criterion for the life cycle approach of the products made. The other type is a part of the ISO quality management standard, which sets the requirements for environmental friendly produced goods. Furthermore the second policy structure is a discussed, supply-driven policy; this generally includes all four instruments. It aims to increase knowledge of environmental production standards, and research institutions that provide this information, set up rules for production standards and use subsidies or higher taxes for non environmental friendly production methods. There is only a limited demand policy which leads to only a limited consumption increase. To some extent there will be an increase of demand. This means that because of competition on the market, the product price will decrease. The third type aims at demand creating policy, here demand is increased which results in an increased supply. This is done by directly or indirectly increasing the demand for environmental products. Some examples are government-sponsored information, marketing campaigns, production standards, consumer subsidies and compulsory purchasing. Because of the high (opportunity) cost for producers to switch to this policy, the structural effect may only be limited. The final active policy structure is focused on both sides and uses many types of instruments. Active policy brings forward positive points on the supply and demand side; however it is very expensive for the government to implement (Daugbjerg & Sønderskov, 2012). Yet, careful interpretation of the policy model is needed because this model takes into account large and small companies that are not specially qualified as sustainable entrepreneurs. In the next part, the institutional profiles of Denmark and the US are discussed with the different types of policy they carry out.

3.3 institutional profiles Denmark and the US

The institutional profile is different in both countries, and the comparison between these two is a fundament for the data exploration in the last part. The opportunity and challenges for entrepreneurs have influence on the supply of entrepreneurs. As described, market failure is an opportunity for the entrepreneur, by the use of government intervention this opportunity for entrepreneurs decreases; this is according to market failure theory (Austin *et al.* 2006). If policy is correctly implemented for sustainable entrepreneurs, this can decrease the challenges for entrepreneurs. Some examples of implemented policy are resources availability for

sustainable entrepreneurs, increasing societal knowledge about environmental degradation and asymmetric information between the customer and entrepreneur. Especially resource availability is important for this research. Denmark and the US have different market economies and policy instruments towards green products and services. This is why; these two countries are compared for possible different influences on the occurrence of sustainable entrepreneurship.

3.4: Institutional profile of the United States

According to the institutional model by Busenitz *et al.* (2000) that already is discussed, the profile of a country is divided into dimensions. First, the regulatory dimension will be described. This contains some political characteristics and policy provisions. The economic model of the United States is a very liberal economy. Taxes are low and social support provision is much lower than in Europe. Due the Dollar the US Government has great global influence. (Campbell and Pedersen 2007) The labour market is known for low minimum wages and low employment protection. These policies help in stimulating companies to hire employees. The government relies on market based forms of organization. Unions in the US never had a really big influence in the governmental decision making process. This lead to more pressure on the responsibility of big firms leaders to address social problems (Wennekers 2006). Because of business schools and MBA trained personal that nowadays incorporate many social and environmental responsibility aspects, CSR is far more developed in the USA and Europe than in less developed countries. The companies are focused on their responsibility towards their stakeholders (value) (Brammer *et al.* 2012). This shows that government involvement is not always necessary to solve market problems. Moreover it can be seen that US policy towards the green market is very passive. An example is the US organic food policy; it can be described as a passive market development policy (Daugbjerg & Sønderskov 2012). The instruments that are used focus more on reduction of pollution, and this implies that there is less attention being given to green products and services. An example is the Environmental Quality Incentives Program; this contains state grants for organic production and marketing methods and for extension services. The program is only indirectly focused on organic producing. In 2002 the United States Department of Agriculture (USDA) implemented the label USDA organic, this is a certification standard for producing organic produce and is awarded by private parties. So the government uses low level regulatory,

economic and organizational instruments. It is remarkable that almost no informational instruments are used. (Daugbjerg & Sønderskov 2012)

The second dimension, the normative dimension, looks at the value system towards entrepreneurship and concern for the environment. First, the US culture can be described as very entrepreneurial. The US culture is very individualistic and has a low rate of uncertainty avoidance (Wennekers 2006). The Americans are independent, failure is socially accepted and starting entrepreneurial activity is very easy. The business ownership rate of the labour force was around 9.9% in 2004 (Wennekers 2006). Moreover there are supportive institutions for entrepreneurs and there is a well developed capital market. The labour market is flexible which stimulates entrepreneurs because of a lower opportunity cost. Second, the concern for the environment. As Baker (2003) argues, there is increasing global concern for the environment. Pressure group activity and increasing media interest which increases the attention and societal knowledge for environmental problems. Instead of rules the US the government puts pressure on CEO's of big companies involved in environmental degradation. In addition there is the consumption of green products and services and this is an indicator of government policy. The average consumption of organic food within the total consumption in the food market in US was 1.9% (97'-08') and 2.7% (04'-07') (Daugbjerg & Sønderskov, 2012). In the past years there has been an increase in the consumption of these green goods and services despite the passive market policy. This is possibly due to the growing environmental concern.

3.5: Institutional profile of Denmark

In contrast to the US is the institutional profile of Denmark. First, the regulatory dimension of Denmark; the Danish economy can be described as a very competitive one. However if we compare Denmark to the US in terms of size and global influence, Denmark is a small global player. However, Campbell & Pedersen (2007) argue that Denmark is a successful competitor in the Western economy, in spite of the high taxes, large welfare state and many economic regulations. The Danish economy can be defined as a coordinated market economy; this is known for more regulations, subsidies and higher taxes. The government uses policy instruments to improve market conditions. Moreover, the Danish are known for their successful labour market structuring, 'flexicurity'. This is one of the important factors of their global competitiveness. Because of their open economy it is important for Denmark to stay

competitive. Denmark has a higher minimum wage and less income inequality than the US. This is due to the influence of workers Unions on wage bargaining and the welfare state characteristics. Because Denmark is a coordinated market economy the Danish organic food market has a very active development policy. The Danish government used conversion subsidies to motivate farmers to change to organic food. Since 1992 there is funding available for research and, more modestly, for organic extension service. The policy implemented by the government has its primary focus on the demand side. From the 1980s there have been certification and labelling systems organised by the state. Only state accredited companies can sell organic labelled food and can receive governmental support. In 2000, there were 97 million DKK (in 2012 approximately 13 million EUR) spent on subsidies for market research, product innovation and marketing of organic produce. In 2007 this funding was increased after a downfall in 2005 (Daugbjerg & Sønderskov, 2012).

Second, the normative dimension: the entrepreneurial culture in Denmark differs from the US. Data shows that in 2004 the business ownership rate of the labour force is stable, at around 6.3% (Wennekers 2006, p.15). Factors of influence are: the higher capita income, high female labour participation rates, low income inequality, a large public sector and a relatively low degree of dissatisfaction with life (Wennekers 2006). As discussed before, the labour market structure causes high opportunity cost for nascent entrepreneurs. These factors show why there is lower rate of entrepreneurial activity and entrepreneurial 'culture'. On the other hand there is also the fact that Denmark has a very low rate of uncertainty avoidance. So it could be said that the Danish are fundamentally entrepreneurial, because they are willing to take risks. However the coordinated market economy increases the barrier to start up because of high opportunity cost. (Wennekers 2006). The difference between US and Denmark environmental regulation is relatively clear. Denmark is much more focussed on regulations. The growing environmental concern as discussed in the US institutional profile is also shown by consumption rates of the Danish organic food market. The rates were 4.1% (97'-08') and 4.8% (04'-07'), these are also increasing. The rates are higher than the US and this is probably due to the combination of growing concern and active policy (Baker 2003).

3.6: Research gap

Table 3.2: **Overview of institutional differences**

	DK	US
Economic Model	Coordinated market	Liberal market
Policy	Active	Passive
Uncertainty avoidance	Very low	Low
Entrepreneurial culture	Stable	High
Consumption organic food	4.1-4.8%	1,9-2.7%
Education level	High	High
Business ownership rate	6.3%	9.9%

The two countries are very different in terms of type of economy, policy and entrepreneurial culture. In table 3.2 a short overview is made for the most important institutional differences between US and Denmark. As can be seen in table 3.2 the average consumption of organic food within the total turnover in the food market is higher in Denmark, but entrepreneurial activity is higher in the US. The coordinated market has consumer needs that the entrepreneur could provide, but are already provided by the government. This implies that there is less opportunity for the sustainable entrepreneur. The market failure opportunities, high uncertainty avoidance and entrepreneurial culture probably result in more sustainable entrepreneurs in the US. However it has to be kept in mind that a coordinated market economy can be successful in addressing challenges like resource availability for the entrepreneurs. The asymmetric information problem is a form of market failure, but the successful policy measures in labor and the organic food market have lead to an increase in consumption of organic food. It would seem that Denmark is successful in addressing the challenges and lowering the asymmetric information so maybe companies now know what the customer needs and have the resources to fulfill these needs due to the active policy. In addition the Danish have very low uncertainty avoidance; this is positively correlated with business ownership (Wennekers *et al.* 2007).

Expected is, that the market failure opportunities, due the liberal market economy in the US in combination with the entrepreneurial culture, results in a higher rate of sustainable entrepreneurship in the US. Mair (2010) supports this view for social entrepreneurship. It argues that in the liberal economy, state or the public sector neglects a higher proportion of social needs. Due to an often more entrepreneurial tradition in a liberal market economy, these problems and needs are taken care for in a normal manner (through the market). The

proposition derived from this: “The occurrence of social entrepreneurship is higher in liberal economies than in cooperative economies” (Mair 2010, p. 6). This hypothesis is used in the area of social entrepreneurship, this research tries to explore if this hypothesis is also applicable on sustainable entrepreneurship. That is why, the first research question is: ‘Is the occurrence of sustainable entrepreneurship higher in liberal market economies than in coordinated market economies?’ The data will be used to explore indicators if there are more sustainable entrepreneurs in the US than in Denmark. These indicators will be explained in the next chapter. Furthermore, addressing challenges for entrepreneurs can be of importance for the supply of sustainable entrepreneurs. That is why, the second research question is: ‘Are the different types of economic systems of influence on the type of support desired by sustainable entrepreneurs?’ This question explore if there are cross country differences in desired type of support in Denmark and the US. It looks at desires from entrepreneurs for support to expand/launch their range of green products or services. As seen, due the active policy measures in the coordinated market economy of Denmark, it is expected that desired support is smaller in Denmark than the US. The passive policy of the liberal market economy in the US, should results in more challenges for sustainable entrepreneurs. However, the market can provide solutions for these challenges, like private organizations.

This literature review has shown an overview of different literature on the rather young subject of sustainable entrepreneur. The sustainable entrepreneur is a type of the social entrepreneur and has his own characteristics. Two important articles about the opportunity for the sustainable entrepreneur have been discussed (Wennekers 2006; Venkataraman 2010). For exploring this theory with data, the institutional profiles of a country are set up (Busenitz et al. 2000). Differences between the country profiles gave an indication for of the occurrence of sustainable entrepreneurship in Denmark and the US. This is because market failure can be different cross country due to the institutional profiles. Not only is it important, for the sustainable entrepreneur, to look at the opportunities, but also to weigh the challenges of sustainable entrepreneurs (Crals & Vereeck, 2005). That is why the second part focuses on the type of support entrepreneurs in the different economic systems of Denmark and the US desire.

Chapter 4

This part will start with a description of the data source used, the data collection method and a sample description. Furthermore the research method and a first impression on the data with descriptive statistics will be given. This enables a base for the results in the next part.

4: Methodology & data description

This descriptive research uses the data of the survey from Flash Eurobarometer 342 ‘SMEs, Resource Efficiency and Green Markets’ (2012). The data was collected between the 24th January and 10th February 2012 and was commissioned by the European Commission. “This Flash Eurobarometer was carried out by TNS Political & Social. It was conducted in the 27 EU Member States and in Albania, Croatia, Iceland, Liechtenstein, the Former Yugoslav Republic of Macedonia, Montenegro, Norway, the Republic of Serbia, Turkey, Israel and the United States where the same target group was interviewed. All interviews were carried out using the TNS e-Call centre except in Albania, Israel, Montenegro and the Republic of Serbia where the local infrastructures (call centres) were used. The sample was selected from an international business database, with some additional samples from local sources in countries where necessary” (Flash Eurobarometer 342-2012, p. 3). The surveys were conducted among different size SME’s (1-9, 10-49 and 50up employees) and different sectors (retail, services, manufacturing and industry). In the US, 300 surveys were carried out (between 25/01/2012 - 07/02/2012) and in Denmark 400 surveys (between 24/01/2012 - 08/02/2012) (Appendix A). This is a rather small sample size, which is why interpretation of the data has to be done carefully and only allows descriptive techniques. The total survey contains 13.167 questionnaires. In appendix A, all countries survey size, population and dates of the survey can be found. Confidence limits for both sizes (300/400) surveys are shown in Appendix B. These confidence intervals are necessary because of the accuracy of the estimations in relation to the sample size and observations. Undoubtedly, the different and rather small sample sizes needs careful interpretation.

Table 4.1: Questions from telephone survey of SME's, Jan/Feb 2012

Number	Question	N (DK)	N (US)	Answer Poss.
Q19	Does your company offer green products or services?	400	300	yes/no
Q22	How much do these green products or services represent in your turnover (latest available fiscal year)?	155	105	0 to 100%
Q24	What are the main reasons why your company offers green products or services?	155	105	Max. 3 reasons
Q25	What are the main reasons why your company is not offering green products or services?	245	195	Max. 3 reasons
Q27	Which type of external support does your company get for the production of its green products or services?	155	105	Multiple
Q29	What type of support would help you the most to expand your range of green products or services ?	155	105	Max. 2 types
Q30	What type of support would help you the most to launch your range of green products or services ?	245	195	Max. 2 types

(Source: Flash Eurobarometer 342, "SMEs, resource efficiency and green markets." 2012)

The main goal of the Eurobarometer 342 report lies in the different profiles of SME's and their relation to the green economy. It is divided into three parts: resource efficiency, green markets and green jobs. In this research the emphasis will be on the questions of the green market part. The part of resource efficiency fits more into corporate sustainable entrepreneurship. As already discussed in the literature review, this tends to focus on doing 'less badly'. Sustainable entrepreneurs that deliver green products & services can possibly deliver permanent solutions for a sustainable development. From this part about green markets a couple of questions from the survey will be addressed. These questions can be found in table 4.1. In this table, the number of respondents and the amount of answering possibilities are shown. The answer categories are important for interpreting the questions. As an example, question 24 has three answering possibilities, interpretation of this question has to be done carefully. The questions differentiate between companies that are offering green products or services (Q19/22/24/27/29) and companies that are not offering them (Q25/30).

Yet, the questions from the data have to be linked to the two research questions. The first research question: 'Is the occurrence of sustainable entrepreneurship higher in liberal economies than in cooperative economies?' This is explored by using questions: 19 and 22. Only companies that are offering green products or services can qualify for sustainable entrepreneurship. Therefore, the first important question of the survey is question 19: 'Does your company offer green products or services?' The criterion to qualify as a sustainable entrepreneur is the annual turnover of green products or services (Q22). The annual turnover of green products or services has to be 51% or more, this is to filter companies that use green products or services as by-products (small part of the company). This research choice is to

look at companies with more 51% of annual turnover; there is no literature that supports this. An example that indicates why 51% of annual turnover is chosen is an example of a shareholder that holds 51% or more of the stocks of a company. The shareholder has a direct voice in the company. If green products or services are 51% or more of the annual turnover, this research sees it has having a direct 'voice' in the company. Because this is an important criterion, it is used often in the cross tables. As seen in the literature review, the sustainable entrepreneur wants to gain competitive advantage through offering sustainable products and services. Measuring this is difficult; because sustainable entrepreneurs are not the only SME's that want to gain competitive advantage (York & Venkataraman 2010). Furthermore, the second research question is discussed: 'Are the different types of economic systems of influence on the type of support desired by sustainable entrepreneurs?' This question differentiates the data between companies that are offering green products or services and that are not offering green products or services. The current/desired types of support from existing sustainable and potential sustainable entrepreneurs are discussed. The current type of support of question 27 lays the basis for question 29. Before looking at the desired type of support for expanding the range of green products or services (Q29), it is useful to know which are the most important types of support the companies currently receive (Q27). Furthermore, this research looks at reasons for not offering green products or services in combination with desired support to launch a range of green products or services. These question can be found in table 4.1; questions 25, 27, 29 and 30. Furthermore, question 24 looks at the reasons for offering green products or services and is used to explore the data. The literature review showed the different types of support in the different economic systems of Denmark and the US, the type of desired support can therefore be linked to the economic systems.

To explore this data, the descriptive method is used. This descriptive method will consist out of cross tables with the questions in table 4.1. These cross tables will give a better inside in the different cross country answers given on the questions of the survey. To test for cross country differences in the questions an independent sample t-test will be used. The test determines the occurrence, that the two independent samples (Denmark and the US), are from populations that have the same mean. This independent sample t-test is a test of equality of means. This t-test has the null hypothesis: 'There is no difference between Denmark and the US for the answers in question ... '. The t-test does this by looking at the equality of means between the countries. A 0.05 (5%) level of significance level is the norm in this research. If

the equality of means significantly differ from each other, this means the null hypothesis can be rejected and a significant difference between two countries exist.

Table 4.2: Size characteristics by number of employees, Denmark and the US samples

Country	DK		US		Total
	N	%	N	%	
1 to 9 employees	144	36	130	43.33	274
10 to 49 employees	131	32.75	88	29.33	219
50 to 249 employees	88	22	56	18.66	144
250 employees or more	37	9.25	26	8.66	63
Total	400	100	300	100	700

(Source: Flash Eurobarometer 342, “SMEs, resource efficiency and green markets.” 2012)

Before the results of this research are presented, this part explores the data as it is. First is looked at amount of employers and yearly turnover. Table 4.2 shows frequency and percentages of the Danish and US companies put in categories of amount of employees they have. This table shows how many companies each country has in the different categories. Remarkable is that there is a higher percentage in micro SME’s (1-9 employees) in the US: 43.33% against 36% in Denmark. Relatively, Denmark has more employees in their SME’s, higher percentages in the 10 or more employee’s categories. Second, table 4.3 shows frequency and percentages of the Danish and US companies put in categories of last year’s turnover. First of all, one could say, that SME’s in the US have relatively more companies with a low turnover. Denmark has 8 companies (2%) and the US has 55 companies (18.33%) with less than 100.000 euro. Second, Denmark has more companies in the 50 million euro and more category, 40 companies (10%) in Denmark and 21 (7%) in the US. Also, Denmark has more in the 10 to 50 million euro category, 65 companies (16.25%) in Denmark against 11 in the US (3.66%). Summing up, in table 4.2 and 4.3, it seems that Denmark has a lot of medium/big sized SME’s in terms of employees and annual turnover. The US seems to have more micro sized SME’s.

Table 4.3: Size characteristics by turnover, Denmark and the US samples

Country	DK		US		Total
	N	%	N	%	
Less than 100 000 euro	8	2	55	18.33	63
More than 100 000 to 500 000 euro	66	16.5	57	19	123
More than 500 000 to 2 million euro	106	26.5	42	14	148
More than 2 to 10 million euro	78	19.5	45	15	123
More than 10 to 50 million euro	65	16.25	11	3.66	76
More than 50 million euro	40	10	21	7	61
Not applicable	8	2	8	2.66	16
DK/NA	29	7.25	61	20.33	90
Total	400	100	300	100	700

(Source: Flash Eurobarometer 342, “SMEs, resource efficiency and green markets.” 2012)

Table 4.4 shows question 19: “Does your company offer green products or services.” As discussed, this question is important to qualify as a sustainable entrepreneur. With this table, probable differences in offering green products or services between the countries can be viewed already. From the answers to question 19, a number of 155 SME’s (39%) in Denmark and respectively 105 in the US (35%) are offering green products and services. However, it can be noted, from the SME’s that are not offering them, in Denmark 223 SME’s (95%) are planning to do so. In the US there are 133 SME’s (70%) planning to offer green products and services in the future.

Table 4.4: Responses to the question: “Does your company offer green products or services?” in telephone survey of SME’s, Denmark and US samples, Jan/Feb 2012

Country		DK		US		Total
		N	%	N	%	
Q19	Yes	155	38.75	105	35	260
	No but I am planning to do so in the next 2 years	11	2.75	26	8.66	37
	No and I am not planning to do so	223	55.75	133	44.33	356
	DK/NA	11	2.75	36	12	47
Total		400	100	300	100	700

(Source: Flash Eurobarometer 342, “SMEs, resource efficiency and green markets.” 2012)

Table 4.5: Responses to the question: “**How much do these green products or services represent in your turnover (latest fiscal year)?” in telephone survey of SME’s, Denmark and US samples, Jan/Feb 2012**

Country		DK			US		
		N	Total %	Total* %	N	Total %	Total* %
Q22	Less than 50%	94	23.5	60.65	72	24	68.57
	51% and more	42	10.5	27.09	18	6	17.14
	DK/NA	19	4.75	12.26	15	5	14.29
	Not offering green products or services			-			-
Total		400	100	100	300	100	100

(*percentage from companies that are offering green products or services)

(Source: Flash Eurobarometer 342, “SMEs, resource efficiency and green markets.” 2012)

Table 4.6: Responses to the question: “**What are the main reasons why your company offers green products or services?” in telephone survey of SME’s, Denmark and US samples, Jan/Feb 2012**

Country		DK		US	
		N	%	N	%
Q24	Demand from customers?	96	30.28	57	27.27
	Company's image	47	14.83	29	13.87
	Subsidies / public support	4	1.26	6	2.87
	Tax incentive	2	0.63	6	2.87
	Company's core values	53	16.72	37	17.7
	Creation of a competitive advantage/ business opportunity	66	20.82	36	17.22
	Catching up with main competitors	18	5.68	13	6.22
	Compliance with national, regional or local laws	24	7.57	23	11
	Non	7	22.08	1	0.478
	DK/NA	-	-	1	0.478
Total		317	1	209	1

(Source: Flash Eurobarometer 342, “SMEs, resource efficiency and green markets.” 2012)

The criterion for sustainable entrepreneurship can be found in question 22; this is shown in table 4.5. Here, the differences cross country of the annual turnover in green products or services are shown. It seems that Denmark has relatively more entrepreneurs in the 51% and more categories. The absolute numbers show 42 entrepreneurs (10.5%/27.09%) in Denmark and 18 entrepreneurs (6%/17.14%) in the US that fit the criterion. The first column with percentages is from all the companies of the survey and the second column is from the companies that offer green products or services. In addition the US has higher percentages in the 1-50% categories. The reasons for offering green products and services are shown in table 4.6. This table explores the data and gives more information about the reasons for the

entrepreneurs. Table 4.6 shows high rates in ‘demand from customers’, ‘company’s image’, ‘company’s core value’ and ‘creation of a competitive advantage’. Cross country differences are low; the biggest difference is between ‘compliance with national, regional or local laws’. For US companies this is a more important reason. Denmark show higher rates in ‘creation of a competitive advantage’ and ‘none’. This question had three answering possibilities, so a company can choose a combination of answers. That is why, careful interpretation is necessary.

Summing up, this research will explore cross-country differences between Denmark and the US, with samples sizes of 400-300. Cross-tabs with independent sample t-test are used to test for cross country differences in sustainable entrepreneurship and desired policy. As seen, the criterion for sustainable entrepreneurs is that the annual turnover of green products or services has to be more than 51%. In the conclusion, explored cross country differences can be linked to the different institutional profiles of the market economies of Denmark and the US.

Chapter 5

The results show four tables. The first table is of the criterion of sustainable entrepreneurship; annual turnover of green products or services. This table explores if the occurrence in sustainable entrepreneurship is higher in Denmark (Cooperative economy) or in the US (Liberal economy). The other three tables will explore possible cross-country differences in firms that are (not) offering green products or services and their type of (desired) support. To explore if the economic systems are of influence on the desired type of support, first will be looked at the kind of support they are currently receiving. Second, the kind of support which will help to expand their range of green products and services. These two cross tables are combined with annual turnover. Third, the kind of support which will help to launch their range of green products or services in combination with the question ‘why they are not offering green products or services’.

Results

First table 5.1 shows the question ‘annual turnover of green products or services’ with an independent sample t-test. The table shows only ‘less than 50%’ and ‘51% and more’ categories. This table, again (table 4.5), shows that there is more sustainable entrepreneurship in Denmark (42/30.9%), than in the US (60/20%). In addition, the independent sample t-test

for question table 5.1 test the significance of the difference in the answers of the question. Here the results show that there is a significant difference between Denmark and the US in sustainable entrepreneurship. The means that the criterion: ‘annual turnover of green products or services’ is significantly different in Denmark and the US. This finding contradicts what is expected.

Table 5.1: Criterion sustainable entrepreneurship¹ and independent sample t-test for differences in answer between Denmark/US

Responses to the question: “How much do these green products or services represent in your turnover (latest fiscal year)?” in telephone survey of SME’s, Denmark and US samples, Jan/Feb 2012

Country	DK		US		Total	t-test ²	df
	N	%	N	%			
less than 50% (not sustainable entrepreneur)	94	69.1	72	80	166	1.872 ^c	208.215
51% and more (sustainable entrepreneur)	42	30.9	18	20	60		
Total	136	100	90	100	226		

(a significant at the 1% level, b significant at the 5% level, c significant at the 10% level)
 (Source: Flash Eurobarometer 342, “SMEs, resource efficiency and green markets.” 2012)

The second table is found in table 5.2, this is the ‘annual turnover of green products or services’ against ‘the type of external support the company gets for producing green products or services’. Observable is that frequently ‘advice or other non financial assistance from private consulting and audit companies/business associations’ is chosen. In Denmark, there is slightly more advice or non financial assistance from ‘private consulting and audit companies’. The US companies receive their advice or non financial assistance more from business associations. It must be noted that Denmark chose quite overwhelmingly that they don’t receive external support for offering green products or services (‘none’). This finding is especially high in the less than 50% category.

Table 5.5 shows the significant difference between Denmark and the US in the categories of which external support the companies currently receive (Q27). The two categories, ‘advice or other non financial assistance from business associations’ and ‘none’ is significantly different in Denmark and the US. The means (t-test) of both countries differ significantly. In the

¹ derived from table 4.5

² means: 0.3088 (DK) and 0.2 (US) / 0 =less than 50% (no sustainable entrepreneurship) 1 = more than 51% (sustainable entrepreneurship) N=136/90

category, ‘Advice or other non financial assistance from private consulting and audit companies’, Denmark and the US are not significantly different. This supports the statement that Danish companies mostly don’t receive support to offer green products or services (‘none’) and US companies also often receive ‘advice or other non financial assistance from business associations’. Despite the active policy in Denmark, most companies that offer green products or services don’t seem to receive external support for this. As discussed, from a coordinated market economy like Denmark, much more external support is expected than in a liberal market economy like the US, yet this doesn’t seem to be the case in this cross table and the independent sample t-test.

Table 5.2: Cross table of annual turnover and support for production-of green products or services³, from telephone survey of SME’s, Denmark and US samples, Jan/Feb 2012

Country			Advice or other non financial assistance from private consulting and audit companies	Advice or other non financial assistance from business associations	None	Total
DK	less than 50%	Count	9	10	70	87
		% within column	56.25%	1%	73.68%	
	51% and more	Count	7	0	25	32
		% within column	43.75%	0	26.32%	
Total		Count	16	10	95	119
US	less than 50%	Count	6	14	32	49
		% within column	60%	73.68%	80%	
	51% and more	Count	4	5	8	14
		% within column	40%	26.31%	20%	
Total		Count	10	19	40	63

(Source: Flash Eurobarometer 342, “SMEs, resource efficiency and green markets.” 2012)

³ The categories: ‘public funding’, ‘private funding from bank or investment companies’, venture capital fund, private funding from friend or relatives’, ‘advice or other non financial assistance public administration’, ‘non’ and ‘dk/na’ are excluded because of low frequencies.

(Q22: How much do these green products or services represent in your turnover (latest available fiscal year)?

(Q27: Which type of external support does your company get for the production of its green products or services?)

Table 5.3: Cross table of annual turnover and support for expanding range-of green products or services⁴, from telephone survey of SME's, Denmark and US samples, Jan/Feb 2012

Country			Financial incentives for developing products, services or new production processes	Assistance with identifying potential markets or customers for these products or services	Technical advice and consultancy services for products, services development or production processes	Consultancy services for marketing or distribution	None	Total
DK	less than 50%	Count	35	22	18	15	17	81
		% within column	74.47%	75.86%	69.23%	83.33%	63%	
	51% and more	Count	12	7	8	3	10	32
		% within column	25.53%	24.14%	30.77%	16.67%	37%	
Total		Count	47	29	26	18	27	113
US	less than 50%	Count	31	34	13	15	2	63
		% within column	79.49%	0.85%	76.47%	93.75%	40%	
	51% and more	Count	8	6	4	1	3	16
		% within column	20.51%	0.15%	23.53%	6.25%	60%	
Total		Count	39	40	17	16	5	79

(Source: Flash Eurobarometer 342, "SMEs, resource efficiency and green markets." 2012)

The third table is shown in table 5.3, here the annual turnover of green products or services is compared with the 'type of support would help the most to expand their range of green products or services'. The results show that there are not many remarkable differences cross country, only in the categories of the annual turnover of green products or services. The less than 50% annual turnover category in both countries has high frequencies in the categories: 'financial incentives for developing products or services', 'assistance with identifying potential markets'. Moreover Danish companies have relatively high frequencies in 'none', this means they don't want extra support to expand the range of green products or services. The US companies frequently chose 'Assistance with identifying potential markets or customers for these products or services'. In the sustainable entrepreneurship criterion of '51% or more' category, Denmark shows relatively high frequencies in 'financial incentives for developing products or services' and 'none'. Apart from this the US has relatively high

⁴ The categories: 'public funding', 'private funding from bank or investment companies', venture capital fund, private funding from friend or relatives', 'advice or other non financial assistance public administration', 'non' and 'dk/na' are excluded because of low frequencies.

(Q22: How much do these green products or services represent in your turnover (latest available fiscal year)?

(Q29: What type of support would help you the most to expand your range of green products or services?)

frequencies in ‘financial incentives for developing products or services’ and ‘assistance with identifying potential markets.’ The category ‘Technical advice and consultancy services for products, services development or production processes’ doesn’t seem to be very different cross country.

In table 5.5 can be seen that only ‘assistance with identifying potential markets or customers for these products or services’ and no extra support for expanding the range of green products or services (‘none’) are significantly different in Denmark and the US. The t-test shows that the countries differ significantly in their answers. So, it can be said that the biggest differences in desired external support to expand the range of green products or services is more no support (‘none’) in Denmark and ‘assistance with identifying potential markets or customers for these products or services’. However, most companies in both countries prefer ‘financial incentives for developing products, services or new production processes’ to expand their range of green products or services.

Finally, the important results from tables 5.4 and 5.5 are presented. These contain the companies that are not offering green products and services. Their ‘reasons for not offering green products or services’ are put against ‘the kind of support that will help the most to launch a range of green products or services’. Looking at the results of Denmark, the most important reasons for not offering are: ‘insufficient demand from customers’ and ‘does not fit or is not important for your company's image’. Companies that choose ‘insufficient demand from customers’ and ‘It does not create a competitive advantage or additional business opportunities’ mostly prefer ‘Financial incentives for developing products, services or new production processes’. In addition ‘does not fit or is not important for your company's image’s mostly choose ‘none’ to the question what kind of support they prefer for launching a range of green products or services. The answer ‘none’ is the most given answer in these categories and mostly corresponds with ‘other’ as a reason for not offering green products or services. This shows that companies in Denmark have another reason for not offering and don’t want external help to launch their range of green products or services. The results in the US show, that the most important reasons for not offering green products or services are: ‘insufficient demand from customers’, ‘it does not create a competitive advantage or additional business opportunities’ and ‘does not fit or is not important for your company’s image’. These mostly correspond to, ‘financial incentives for developing products, services or new production processes’ to help launch their range of green products or services. Furthermore ‘none’ and

‘assistance with identifying potential markets or customers for these products or services’ are also often answered by US companies.

The independent sample t-test in table 5.5 shows whether these countries companies differ significantly in their answers. All categories in question 30 differ significantly in Denmark and the US. For question 25: ‘It does not create a competitive advantage or additional business opportunities’, ‘it is not relevant in terms of compliance with national or local laws’, differ significantly. The difference with Denmark is that the US companies choose more frequently ‘financial incentives for developing products, services or new production processes’ and ‘assistance with identifying potential markets or customers for these products or services’. On the other hand, Danish companies answered more ‘none’ next to ‘financial incentives for developing products, services or new production process’ to the question what kind of support they wanted. Important here, is that there is definitely a differences in desired type between the two countries for companies that are not offering green products or services.

The results show indicators for slightly more sustainable entrepreneurship in Denmark and shows that there is a significant difference between the countries, in the answers of this question. Furthermore, looking at the differences in desired policy between the countries. The second cross table (table 5.2) shows that, in the 51% and more category of annual turnover of green products or services, Danish companies receive slightly more advice or non financial assistance from ‘private consulting and audit companies’. The US companies receive their advice or non financial assistance mostly from business associations. For expanding/launching a range of green products or services in the US answered ‘Financial incentives for developing products, services or new production processes’ and ‘Assistance with identifying potential markets or customers for these products or services’ In Denmark, next to the previously named financial incentives, ‘none’ external help is also frequently answered.

Table 5.4: Cross table of reasons for not offering and support for launching-green products or services⁵, from telephone survey of SME's, Denmark and US samples, Jan/Feb 2012

Country		Financial incentives for developing products, services or new production processes	Assistance with identifying potential markets or customers for these products or services	Technical advice and consultancy services for products, services development or production processes	None	Total
DK	Insufficient demand from customers	Count 21 % within column 58.33%	7 35.00%	11 61.11%	13 16.05%	44
	Does not fit or is not important for your company's image	Count 8 % within column 22.22%	1 5.00%	8 44.44%	25 30.86%	40
	It does not create a competitive advantage or additional business opportunities	Count 15 % within column 41.67%	8 40.00%	4 22.22%	11 13.58%	32
	It is not relevant in terms of compliance with national or local laws	Count 8 % within column 22.22%	3 15.00%	5 27.78%	7 8.64%	20
	Other	Count 3 % within column 8.33%	4 20.00%	0 0.00%	36 44.44%	41
	Total	Count 36	20	18	81	141
	US	Insufficient demand from customers	Count 23 % within column 43.40%	18 56.25%	16 53.33%	12 30.77%
Does not fit or is not important for your company's image		Count 20 % within column 37.74%	11 34.38%	11 36.67%	19 48.72%	49
It does not create a competitive advantage or additional business opportunities		Count 23 % within column 43.40%	17 53.13%	10 33.33%	12 30.77%	45
It is not relevant in terms of compliance with national or local laws		Count 16 % within column 30.19%	10 31.25%	5 16.67%	9 23.08%	32
Other		Count 1 % within column 1.89%	1 3.13%	1 3.33%	4 10.26%	6
Total		Count 53	32	30	39	120

(Source: Flash Eurobarometer 342, "SMEs, resource efficiency and green markets." 2012)

⁵ Q25: What are the main reasons why your company is not offering green products or services?

Q30: What type of support would help you the most to launch your range of green products or services?

The categories in Q25: 'lack of sufficient public support', 'it is not important to or in line with your company's core value', 'it is not relevant in terms of catching up with main competitors' and 'dk/na' are excluded because of low frequencies.

The categories in Q30: 'Consultancy services for marketing or distribution', 'other' and 'dk/na'.

Table 5.5: Compare means of Denmark and the US with independent sample t-test, questions from telephone survey of SME's, Denmark and US samples, Jan/Feb 2012
(Answer; 0=No and 1=Yes)

	Denmark	US	t	df
<i>Q27: Which type of external support does your company get for the production of its green products or services?⁶</i>				
Advice or other non financial assistance from private consulting and audit companies	0.11	0.10	0.125	258
Advice or other non financial assistance from business associations	0.08	0.19	(2.563) ^b	168.133
None	0.69	0.48	3.480 ^a	211.402
<i>Q29: What type of support would help you the most to expand your range of green products or services?⁶</i>				
Financial incentives for developing products, services or new production processes	0.33	0.43	(1.617)	215.288
Assistance with identifying potential markets or customers for these products or services	0.21	0.39	(3.056) ^a	196.424
Technical advice and consultancy services for products, services development or production processes	0.2	0.18	0.381	258
Consultancy services for marketing or distribution	0.21	0.18	(0.295)	258
None	0.21	0.08	3.112 ^a	257.781
<i>Q25: What are the main reasons why your company is not offering green products or services?⁷</i>				
Insufficient demand from customers	0.22	0.28	(1.255)	438
Does not fit or is not important for your company's image	0.20	0.27	(1.883) ^c	392.315
It does not create a competitive advantage or additional business opportunities	0.15	0.27	(3.072) ^a	367.741
It is not relevant in terms of compliance with national or local laws	0.09	0.19	(3.107) ^a	341.416
Other	0.26	0.04	(6.884)	356.683
<i>Q30: What type of support would help you the most to launch your range of green products or services?⁷</i>				
Financial incentives for developing products, services or new production processes	0.18	0.33	(3.562) ^a	356.683
Assistance with identifying potential markets or customers for these products or services	0.10	0.20	(2.828) ^a	352.742
Technical advice and consultancy services for products, services development or production processes	0.09	0.17	(2.577) ^a	351.699
None	0.45	0.29	3.523 ^a	429.646

(A significant at the 1% level, b significant at the 5% level, c significant at the 10% level)
(Source: Flash Eurobarometer 342, "SMEs, resource efficiency and green markets." 2012)

⁶ DK; N=155 / US; N=105

⁷ DK; N=245/US; N=195

6: Conclusion & discussion

This first part this chapter discusses the results for the first research question: ‘Is the occurrence of sustainable entrepreneurship higher in liberal market economies than in coordinated market economies?’ The second part discusses the second research question: ‘Are the different types of economic systems of influence on the type of support desired by sustainable entrepreneurs?’ The last part sums up, discusses the limitations and draws implications for further research.

To begin with the result of the first research is discussed: ‘Is the occurrence of sustainable entrepreneurship higher in liberal market economies than in coordinated market economies?’ Before the results were shown, it was implicated that, mainly due the liberal market economy and passive policy measures, the US had a greater source of opportunity for sustainable entrepreneurs. In the US, social/environmental needs are not taken care of by the state or public sector which implies a greater amount of market failure. However, the results suggest that Denmark has higher level of possible sustainable entrepreneurs. Denmark fulfils the condition of 51% or more of the annual turnover in green products or services.

A possible reason for the higher rate of sustainable entrepreneurship in Denmark is the active policy in this coordinated market economy. Due to this active policy, there can be fewer challenges for sustainable entrepreneurs. This can mean better access to resources due to the active supply policy, also on the demand side, possibly due to the addressing of the asymmetric information problem between producer and consumer. As a consequence, demand has increased and barriers for the sustainable entrepreneurs to offer green products or services are lowered. Furthermore it is possible that because of the very low uncertainty avoidance in Denmark, there are possibly more people that are willing to take on the risk of becoming a sustainable entrepreneur. But the small sample size may have made the results somewhat biased. To conclude, the difference in annual turnover of green products or services between Denmark and the US is significant in the independent sample t-test. To answer the first research question, ‘Is the occurrence of sustainable entrepreneurship higher in liberal market economies than in a coordinated market economies?’ It can be said, that the findings indicate that the occurrence of sustainable entrepreneurship is not higher in liberal market economies than in coordinated market economies.

Now, the results for the second research question are discussed: ‘Are the different types of economic systems of influence on the type of support desired by sustainable entrepreneurs?’ In this part, entrepreneurs as a whole are discussed, because results show no big differences in desired policy for being a sustainable entrepreneur or not, looking at annual turnover of green products or services. Before looking at what kind of support companies desire it is important to know which support the companies currently receive. This is to lay a basis for the desired type of support. This research looks at all types of support. The types of support discussed in the results are among most frequently answered in the question of the survey. Findings indicate that a majority of the companies in Denmark, surprisingly, don’t receive support for offering green products or services. In the US also, a majority of the companies doesn’t receive support. Furthermore, ‘advice or other non financial assistance from business associations’ is a frequently received support. The US being a liberal market economy, these findings are not very strange. This is due to passive policy in the liberal market economy of the US. However, as seen before, the active policy of Denmark doesn’t seem to come forward in the results. Maybe companies in Denmark don’t know that they can receive support, or they just don’t want to receive support or maybe there isn’t any support for their type of company. Now can be looked at the results that relate to the research question. The research looked at the entrepreneurs that are already offering green products or services and their desired support for expanding their range of green products or services. In the US, and even in Denmark, extra financial help is welcome. The last results looked at firms that are not offering products or services; here it is shown that US companies need more financial incentives to launch a range of green products or services. Most Danish companies don’t want incentives because it isn’t necessary for catching up with competitors. Moreover, in both countries the lack of demand from customers is an important issue. This implies that in the US a more active policy could increase the number of companies that offer green products or services. A supply policy with financial incentives and advice for companies. Besides, a demand policy is necessary to make consumers more aware of environmental problems could maybe increase the demand for green products or services. The data showed that the most important reason for offering green product or services; in both countries is ‘demand from customer’. This implies it is very important for a government to implement a good working demand policy instrument, because it can be very effective for all types of SME’s.

To conclude, are the different types of economic systems of influence on the desired type of support?’ The results show that there are significant differences between Denmark and the US

in the desired policy. This seems to indicate that the different types of economic systems are of influence on the desired type of support. In the coordinated market economy, next to extra financial resources, it seems that no extra help is necessary. On the other hand in the liberal market economy the companies need more 'financial incentives for developing products, services or new production processes' and 'assistance with identifying potential markets or customers for these products or services'. This seems to indicate the difference between the active policy (coordinated market economy) and passive policy (liberal market economy); the challenges for entrepreneurship seem to be bigger in the liberal market economy. Even so, this research doesn't prove that the economic systems of the countries have directly influenced the desired type of support, it only showed indicators. Further research has to show this. Also important is that by looking at the companies that do not offer green products or services, a larger percentage in the US are planning to produce green products or services (table 4.4). The research question focuses on (nascent) sustainable entrepreneurs. However from the companies that 'do not offer green products or services' also 'no planning to do so' is taken into account. This is done to create a bigger sample size, but is a limitation of this research. The most important limitation of this research, as already mentioned, is the sample size, a quite small sample size in the US and Denmark makes drawing conclusions tough. These sample sizes could be somewhat biased. The US is a much bigger country, so the sample size of 300 is rather small. In spite of this, this research just gave a description of the data. Furthermore, a limitation is that only two countries are investigated. More countries should be added to the sample size to look at other liberal/ coordinated market economies. Other limitations are that some important variables are not taken into account, possibly other variables are of influence. Examples are personal traits of entrepreneurs in both countries, supporting (private) organizations and other unknown variables that could be of influence.

Summing up, this research used the explorative to investigate very recent data. With the criterion for sustainable entrepreneurship of a minimum of 51% of annual in green products of services, this research concludes that the occurrence of sustainable entrepreneurs doesn't seem to be higher in a liberal market economy. The sources of opportunity for the sustainable entrepreneur seem to be mostly dependent on customer demand. A sustainable entrepreneur can address market failure but if there is no clear need from the customers, then there is not a market to operate in. If there is no market then the sustainable entrepreneur can't gain a competitive advantage. The results can be interpreted, that challenges outweigh the sources of opportunity and therefore Denmark has a slightly higher rate in sustainable entrepreneurship.

Furthermore, an active policy towards the sustainable is necessary, especially on the demand side to address asymmetrical informational problems. Companies offer green products or services when customers ask, here lies a challenge for policy makers.

For future research it would be necessary to have a larger sample size to draw a better conclusion. Also more countries should be investigated. A larger sample size also can better differentiate between no/nascent sustainable entrepreneurs. To take more variables into account, further research can focus on the regression technique, this helps to improve the knowledge of sustainable entrepreneurship . Most important, future research needs to focus on how to correctly measure sustainable entrepreneurship. When this is done further research on the most important variables for the sustainable entrepreneur can be done. If these variables are known, governments can improve their policies towards sustainable entrepreneurship.

In conclusion, the research on sustainable entrepreneurship is far from over. This is only a small step down the right path for further research on sustainable entrepreneurship. Further research is of great relevance, because the sustainable entrepreneurs can be one of the leaders of new future economic sustainable growth.

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Appendix A: Survey information

ABBR.	COUNTRIES	INSTITUTES	N° INTERVIEWS	FIELDWORK DATES		POPULATION 15+
BE	Belgium	TNS Dimarso	400	24/01/2012	02/02/2012	442.109
BG	Bulgaria	TNS BBSS	401	24/01/2012	30/01/2012	270.142
CZ	Czech Rep.	TNS Aisa s.r.o	400	24/01/2012	02/02/2012	862.867
DK	Denmark	TNS Gallup A/S	400	24/01/2012	08/02/2012	204.305
DE	Germany	TNS Infratest	500	24/01/2012	07/02/2012	1.828.309
EE	Estonia	TNS Emor	400	24/01/2012	30/01/2012	48.221
EL	Greece	TNS ICAP	400	24/01/2012	07/02/2012	829.752
ES	Spain	TNS Demoscopia S.A	500	24/01/2012	07/02/2012	2.541.266
FR	France	TNS Sofres	500	24/01/2012	08/02/2012	2.569.054
IE	Ireland	IMS Millward Brown	400	24/01/2012	07/02/2012	167.614
IT	Italy	TNS Infratest	501	24/01/2012	09/02/2012	3.822.666
CY	Rep. of Cyprus	CYMAR	200	24/01/2012	30/01/2012	58.860
LV	Latvia	TNS Latvia	401	24/01/2012	01/02/2012	74.942
LT	Lithuania	TNS Lithuania	401	24/01/2012	27/01/2012	137.024
LU	Luxembourg	TNS Dimarso	202	24/01/2012	03/02/2012	27.016
HU	Hungary	TNS Hoffmann Kft	400	24/01/2012	30/01/2012	513.976
MT	Malta	MISCO International Ltd	200	24/01/2012	07/02/2012	43.268
NL	Netherlands	TNS NIPO	403	24/01/2012	06/02/2012	615.858
AT	Austria	TNS Austria	400	24/01/2012	30/01/2012	286.728
PL	Poland	TNS OBOP	502	24/01/2012	03/02/2012	1.508.064
PT	Portugal	TNS EUROTESTE	400	24/01/2012	03/02/2012	703.429
RO	Romania	TNS CSOP	400	24/01/2012	01/02/2012	491.592
SI	Slovenia	RM PLUS	425	24/01/2012	26/01/2012	104.490
SK	Slovakia	TNS AISA Slovakia	420	24/01/2012	30/01/2012	58.641
FI	Finland	TNS Gallup Oy	399	24/01/2012	08/02/2012	214.080
SE	Sweden	TNS SIFO	400	24/01/2012	02/02/2012	570.652
UK	United Kingdom	TNS UK	500	24/01/2012	02/02/2012	1.622.503
TOTAL EU27			10.855	24/01/2012	10/02/2012	20.617.428
HR	Croatia	HENDAL	210	24/01/2012	30/01/2012	160.165
TR	Turkey	TNS PIAR	301	25/01/2012	09/02/2012	2.409.014
	Former Yugoslav Rep. of		200	24/01/2012	01/02/2012	31.427
MK	Macedonia	TNS Brima				
IS	Iceland	Capacent ehf	200	24/01/2012	03/02/2012	16.412
NW	Norway	TNS Gallup AS	300	24/01/2012	08/02/2012	81.034
RS	Republic of Serbia	TNS Medium Gallup	200	24/01/2012	07/02/2012	81.623
IL	Israel	TNS Teleseker	300	24/01/2012	09/02/2012	127.246
AL	Albania	IDRA	100	30/01/2012	09/02/2012	90.668
ME	Montenegro	TNS Medium Gallup	100	25/01/2012	07/02/2012	1.497
LI	Liechtenstein	TNS Austria	101	24/01/2012	30/01/2012	1.123
US	United States	TNS Custom Research	300	25/01/2012	07/02/2012	11.537.421
TOTAL			13.167	24/01/2012	10/02/2012	35.155.058

(Source: Flash Eurobarometer 342- 2012, Annexes)

Appendix B: Confidence limits

Denmark

With samples of about 400 interviews, the real percentages vary within the following confidence limits:

Observed percentages	10% or 90%	20% or 80%	30% or 70%	40% or 60%	50 %
Confidence limits	± 2.9 points	± 3.9 points	± 4.5 points	± 4.8 points	± 4.9 points

United States

With samples of about 300 interviews, the real percentages vary within the following confidence limits:

Observed percentages	10% or 90%	20% or 80%	30% or 70%	40% or 60%	50%
Confidence limits	± 3.4 points	± 4.5 points	± 5.2 points	± 5.5 points	± 5.7 points

(Flash Eurobarometer 342- 2012, Annexes)