LUND UNIVERSITY

An exploration of strategic sustainability business initiatives

By
Alejandro Navarro
aalejaandro@gmail.com

Supervisor
Carl Dalhammar
carl.dalhammar@iiiee.lu.se

Lund University Center for Sustainability Studies, LUCSUS Geocentrum 1, Sölvegatan 10 P.O. Box 170, SE---221 00 LUND Sweden Phone: +46 (0) 46 222 48 09 www.lucsus.lu.se

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Environmental Studies and Sustainability Science (LUMES) at Lund University August 2011

Abstract

The perspective of the business sector is crucial in advancing efforts for the sustainability of social-ecological systems. This paper reports an exploration performed around sustainability related business initiatives. The point of departure is a literature review where sustainability is portrayed as a business mega-trend.

Interestingly, out of a series of semi-structured interviews, the response from the business sector appears to be mainly through reactive initiatives. Furthermore, the business sector is struggling to develop business models where the value, generated by sustainability initiatives, can be tangibly evaluated and appropriated today.

Among other aspects to be advanced, there is a need for evaluation instruments which provide guiding information for individual business action, where future performance and capacity to create value are bridged with present sustainability initiatives. With this in mind an exploration of sustainability performance as an element that could contribute with providing useful information to evaluate business initiatives was advanced in the discussion section of this paper.

Word Count : 16 168 Words.

1. Introduction

The point of departure for this paper is the consideration that the business landscape and the way in which business create and deliver value, have been modified by sustainability (Hall & Vredenburg 2003; Hart & Milstein 1999, 2003; Berns et al 2009; Esty & Lubin 2010). The intention of this paper is to explore the initiatives of the existing business sector vis a vis sustainability challenges. The exploration is done from a business stand point of the sustainability challenges.

As a first step in this research, a literature review indicates some fundamental tensions which undermine social-ecological systems in relation to business:

- The aggregate effects from social systems are exceeding the limits under which ecological systems can safely operate (Clack & Dickson 2006; Haines et el. 2006; Haines et el. 2006; Meadows et al. 2006; Rockström 2009). For example the rate of loss of biodiversity or water use among many others.
- Business decision making is biased towards short term benefits in spite of long term perspectives (Porter 1992; Rada & Trisoglio 1992; Rappaport 1992; Denis 2010; PÔ 2010; Porter & Kramer 2011).
- The role of business in society as the main instrument to create wealth is being actively and critically discussed (Friedman 1970; Drucker 1984; ; Freeman 2003; Noren 2004; Enderle 2009; Thomson 2009; Pitelis & Vasilaros 2010), given that a big portion of the wealth generated is perceived as being private financial benefits, whilst not benefitting the greater society (Barton 2011; Porter & Kramer 2011).

With the previous in mind the empirical portion of the research was carried out in two phases. A first phase, where interviews with business consulting companies and NGOs were performed with a two fold purpose. One, to confront what was presented by literature with business practitioners. Two, guide the subsequent empirical research. This first phase was guided by the question, How are companies creating private value out of sustainability initiatives? The results obtained from this first phase contributed for the identification of the research question which guided the second phase of empirical work:

Which factors are contributing to a preference for reactive business sustainability initiatives?

What motivated this exploration is the consideration of the business sector as a critical social actor for a transition towards a more sustainable society. The previous stems from the fact that firms are the main social organization form to perform economic activity (Maskell 2001; Pitelis & Vasilaros 2010). The development of the thesis is structured around the creation, appropriation and evaluation of value out of addressing sustainability challenges. It is important to highlight that the focus is placed on initiatives, in contrast to considering the whole firms as the research object.

Given the multiple paths a business can take to address the sustainability challenges, the present paper will focus on a strategic approach to sustainability. The previous in contrast to both the "business of business is business" approach as proposed by Milton Friedman (1970) and the philanthropic approach. Addressing sustainability strategically implies the creation of private benefits, while either incorporating sustainability elements to the current business model or developing a whole new business model. Additionally, sustainability can be the main source of business value (e.g. clean technology sector).

The present paper is disposed in the following way. After this introductory section a methodology section follows, where a chronological account of considerations is presented. Next, a background section contains the main elements of the development in time of the business and sustainability

discourse. After this, a business theory section where the discussion around business value, private and public benefits, intangibles and time perspective is depicted. Additionally a framework for a strategic perspective of sustainability is presented.

Subsequently a section where the findings for phase one and phase two of the empirical work are presented. Finally a discussion and conclusion section where sustainability performance[1] is examined as an element that touches upon the main tensions encountered along the research process and in which ways it could contribute to alleviate them.

[1] The concept of sustainability performance is an open discussion. Details on what is understood by it are presented in the discussion section of this paper.

2. Methodology

The methodology section of this paper will be presented following the chronological development of the research as follows. First, an account of what motivated the process and the initial theme. Second, phase one of empirical research followed by phase two of empirical work. Finally, additional methodological considerations.

2.1.Process initiation

This paper explores the sustainability challenges from the firm's perspective. To this end, the point of departure was the creation of value out of sustainability associated initiatives, given that it is value, that motivates business action (Freeman et al. 2003).

A business value perspective, contrasts with other 'sustainability' approaches such as the ones based on resource limits, product life cycle or technological fixes, where the focus is on external elements. What is considered as internal or external is clearly a matter of definition, for the present research, this definition is made in reference to the creation of value which is what motivates and directs business action[2]. Hence, a value perspective could complement and contribute to the discussion on the sustainability of the business sector.

The research process for this paper began searching for information from various sources like the World Wide Web, general business literature, fellow students, public media, the project supervisor and academic databases. After reviewing different business elements, sustainable business strategy became the guiding theme for my subsequent literature review. The reason to use business strategy is based on an understanding, which will be expanded along the theory section of the paper, of business strategy as a guiding elements for business action. The literature review around sustainable business strategy was performed to gain some understanding on what has already been researched, and which are the main theoretical propositions around the topic (Bryman 2008).

It is important to point as well, how the literature review guided the initial empirical research as well as contributed elements for the analysis section. The main topics of conversation for the interviews were taken from the literature review. Additionally, the sustainability strategy framework proposed by Renato Orsato (2009) was central to develop the understanding that guided the analysis of the information gathered through the interviews.

Additional to the literature review, I used survey information from MIT Sloan school of management 2009 and 2010 business and sustainability studies as secondary data, to guide additional reading topics as well as to have access to updated field studies around business sustainability. This provided relevant, high quality data that I could have not obtained otherwise given the resources needed to acquire this information, which according to Bryman (2008) is one of the purposes of secondary data. The information collected up to this point is presented in the background section accompanied by a sustainability frame. The intention of the sustainability frame

---

[2] A firm reliant on natural resources does not react to the depletion of the resource per se but to the effects of that depletion on the capacity to create value. Once the capacity to create value is threatened or enhanced, a firm might decide to source from more sustainable sources; or might adapt the business model in which value can be created out of a service based model; or it might even change the whole business model by reinventing a market (these is not an account of the available options, they are examples of different action paths). The evaluation of the different options is guided by the ability to create value more than from guidance of a resource scarcity. Why do oil firms continue to invest in oil exploitation, even when it is known that is it a finite resource? because under the current economic framework there is value to be created in spite of the scarcity of the resource. This example is an over simplification, it should be considered just as an illustration of the point that value is what drives business action.

is to make the understanding of sustainability for this paper explicit. Also, two informal meetings with business people were held to enrich the search for relevant research focuses.

At this point of the research process, I had a general understanding of the business and sustainability discourse, nonetheless there was a need to review specific business aspects more in depth. The main guide for such information was the Harvard Business Review. Along this process, barriers and challenges for sustainable business initiatives were identified and the theoretical propositions to overcome them were subsequently reviewed (e.g. One of the barriers for sustainable business initiatives is the understanding of the implications for a company, hence a proposed framework to overcome this barrier was reviewed). What is described in this paragraph is presented in the paper under the business theory section. In a nutshell, sustainability business literature suggests that sustainability has modified the way in which companies can create and deliver value, even the conception of value in it self.

2.2. Empirical phase one

I wanted to explore the proposition, that sustainability has modified the business landscape as well as the capacity of firms to create and deliver value, which is my interpretation out of the business literature review. As means to this purpose, semi-structured interviews were used to gather information. Out of the literature review business aspects such as intangibles, timeframes and financial evaluation, among others were used as topics and guided question formulation[3].

Extracts from the interviews will be presented as anonymous along the paper, given the agreement with the interviewees. Some notes and guiding questions used in this interview phase can be reviewed in Annex 1.

The overarching guiding question for this phase of the research was:

How are companies creating private benefits from strategic sustainability initiatives?

The formulation of the question clearly opens the research for a vast amount of information. I acknowledge that there are limits to what can be responded in this paper in relation to the question as formulated. Nonetheless, I chose to have a broad question at the beginning of the research to prevent from unintentionally excluding valuable information either on the interviews or the information reviewed.

The focus on initiatives allows an interesting perspective on how value is being generated. Placing the attention on initiatives allows for a relatively more comfortable integration of uncertainty and complexity in the business strategy, by allowing permanent adjustments to actions as feedback on action can be constantly evaluated (Chia & Holt 2009). In the previous sentence, relatively more comfortable is indicated in contrast to more prescriptive approaches to strategy. Additionally the understanding of sustainability initiatives might give some insight into what can be absorbed and used by other firms, this does not imply that other perspectives do not allow this transferability. Clearly there are limitations on just focusing on initiatives rather than on the operation of a whole firm as it leaves aside, for example, the complexity associated with the operation of the firm or the challenges of evaluating specific elements in an operating whole.

For the interviewees, the selection process began by identifying organizations that worked as advisors or consultants for other firms in the intersection of business and sustainability. This meant business strategy consulting firms, business sustainability consulting firms and NGOs that worked

[3] Details on these topics is presented in the theory section of this paper.

in close relation with the business sector. All the interviewees in this phase were business consultants.

Once the firms were identified, as well as individuals that worked with the topic of interest, an email requesting an interview was sent (See Annex 1a). The email contained a brief explanation of the research, as well as the topics that were expected to be discussed. Two out of five interviews were performed in person, while the remaining three were conducted over the phone. The transparency on the details provided to the interviewees was used to avoid ethical challenges along the interview and its analysis.

The reason to target this group is based on two elements. One, consulting firms have contact with multiple industries which allows them to have a broader view, in contrast to industry specific professionals. Second, given the lack of general understanding around sustainability, advisory organizations can influence the action of other firms significantly with their knowledge. Hence, the importance of their perspective around the sustainability challenge.

The intention of these first five interviews was twofold, on one hand, they would serve to confront the theoretical discussion with first hand field information. On the other hand, they would serve as means to narrow the scope of the research by identifying key sub-themes.

The first five semi-structured interviews were held in a period of two weeks. The duration of the interviews ranged from thirty minutes to an hour. Each interview was recorded, transcribed and analyzed to enrich the subsequent conversation as well as to increase the accuracy of the information via recurrent revision with the interviewees. The review of the transcript followed one of the alternatives presented by David Silverman (2005), where the text is reviewed back and forth to see where the guiding questions arise. Once relevant elements arose, they were associated to a main dimension, which is the first step of the process 'meaning categorization' as presented by Kvale (1996). The categorization allowed the creation of topics for conversation which in its turn allowed to refine the information when revisited with subsequent interviewees. Additionally characterization is used to present the information along the findings section of this paper.

2.3. Empirical phase two

A second phase of the exploration departed from the gained understanding of the first phase of empirical work. The interviews in the first phase indicated a preference for reactive initiatives[4], consequently the focus for the exploration on the second phase was on the elements that contributed to that perceived preference.

For this second phase the subject of conversation was the financial business case of sustainability initiatives. An interesting aspect of this new subject of conversation is its use as an instrument to evaluate business initiatives and performance. The reason for proposing this subject lies in the fact that it is a point of confluence of the main tensions around business sustainability such as the evaluation of non-financial aspects as well as time frame considerations.

The formulation of the question is done in a way that seeks multiple factors, in contrast to a question formulated with a *why* where *a* specific qualitative answer could be expected.

At this point, the research question that guides the empirical work was:

---

[4] Reactive initiatives is used for initiatives associated to compliance, cost reduction, resource use efficiency and waste management. More on this will be expanded on the theory section of the paper.

Which factors are contributing to the preference for reactive business sustainability initiatives?

Seven additional semi-structured interviews were carried out. Three of the interviewees represented the business strategy perspective, whilst the remaining four represented a financial perspective. Out of these last four, two are researchers at the Sustainable Investment Research Platform[5] (SIRP), whereas the remaining two were professionals in the financial sector. One of them is a manager in a private investing firm, while the other is a financial market analyst. One additional individual, also part of the SIRP, responded via email to the questions sent, the information was used in the same way as the transcriptions. The method to analyze the transcriptions follows the same guidelines as for phase one. The question guide can be reviewed in Annex 2, it is important to note that a slightly different formulation of the questions was made for business and financial professionals.

There were two main reasons for selecting professionals affiliated to SIRP. One, it is a research program where Swedish researchers were involved, which facilitated my access to them in case of an interview. Second, the research program focuses on the challenges of the financial community to make 'sustainable' investments which added a very interesting perspective of the long term strategy design and financial evaluation tension.

Along the research, information available in the World Wide Web as video-interviews or presentations were also utilized. The difficulty to access high profile individuals is the justification for the use of this source of information. Portions of these public interventions were transcribed and used for the paper.

2.4.Discussion

To finalize this paper, and to synthesize what was encountered along the research, a discussion section revolving around the concept of sustainability performance is presented. Sustainability performance is a concept introduced to this research by one of the interviewees and explored as a topic in the interviews.

2.5.Additional comments

In this subsection, some considerations that affect the whole research project are presented as bullet points.

- Along the research concepts like value creation, intangibles, private and public are used, with the implied consideration of a 'universal' business language, which is assumed to be shared by the interviewees. This clearly has limitations because there are cultural and contextual aspects that have been left outside by this research. This was a conscious choice, to some extent justified by the complexity that contextual elements would have brought to the project. Additionally, most of the business literature reviewed does not explicitly place that context, implying a 'universal' business language where the connection to cultural elements is done at other levels of the firm. Namely at the operational and organizational levels, which are outside the scope of this paper.

- There is a bias on how the research was developed which concealed it to the understanding of factors contributing to a preference for reactive initiatives rather than factors contributing to the adoption of proactive initiatives. The reason for this is that most of the information reviewed, as well as the interviews, are related to the dominant business sector. Hence, most of the understanding that I encountered revolved around the adaptation of the existing business sector, in

[5] SIRP - http://www.sirp.se/

contrast to a disruptive transformation of business. Information for the latter, would not be readily available through the sources I used. Additionally the actors of of a disruptive transformation sit outside the dominant business consulting and finance professionals. Furthermore, most of the information reviewed, and people interviewed, are related to rich economy contexts where the focus is on transformation of existing infrastructure.

- In relation to the analytic position regarding the information that is gathered through the interviews, the study is descriptive in relation to the social challenge (Silverman 2005) of business sustainability. This means that analysis tools as narrative analysis or hermeneutics are not used.

- The link between the theoretical framework proposed for this paper and the empirical work performed, is more clear for the first phase than for the second one. For the first phase the understanding of what is reactive or proactive is supported on the sustainability strategies framework presented along the theory section of the paper. Whilst, the link on the second phase is more subtle given that the theory is used as basis for the construction of interviews and their analysis, more than to examine particular theoretical concepts. For example, intangibles is an important concept for the conversations but the concept it self is not discussed[6]. In this sense the theoretical framework is more of a supporting element for the research than a platform for deductive exploration.

- The theorization or generalization of knowledge gained through qualitative research is always a challenge (Kvale, 1996; Silverman, 2005; Bryman, 2009). The intention of the present research is not to generalize, nonetheless some propositions are made departing from what is perceived and understood out of the conversations with the interviewees. The ideas presented in the paper need more investigation prior to generalization.

- A critical perspective of the role of business around sustainability challenges, where sustainability obstructs the capacity of business to create value, is not actively explored in this paper. The main reason is that the available time and effort were placed on the exploration of initiatives that aim to create value out of sustainability related initiatives. This does not deny the vices of how the economic sphere has emerged (e.g. environmental degradation, social imbalances), on the contrary, the paper departs form these tensions but tries to explore the role of business as part of a solution.

- The perspective pursued along this paper tries to address value as a central element of the sustainability challenge. This point is made because I feel that perspectives that focus on production or consumption separate the analysis and battle to reconcile it afterwards. This happens because a consumption or production approach is fundamentally incomplete, since this divide is a constructed one. I consider a value perspective allows for a more holistic stage of conversation[7].

- Along the research process there was a tension between exploration of concepts, ideas, initiatives and the requirements for academic writing. These demands are sometimes expressed as answering a research question. "You need a research question, something that is researchable, something that you can answer". How can we create something new if we know the answer, how can we create if we explore what is researchable? Managing the expectations of a six month project is very

---

[6] Intangibles as a topic is discussed along the theory section.

[7] In relation to a consumption/production approach, value is a complex and challenging concept but it does provide an interesting ground to talk about social dynamics in a more holistic way.

challenging, guides and methodology contributes to fulfill requirements but it hampers the exploration of ideas.

3. Background

The concept of sustainability has influenced the understanding of the relation and dependence of social systems on the natural environment, as well as the dynamics within social systems. As an example there is the growing interest and attention given by different social actors (i.e. governments, civil society and private sector) in the discussions around biodiversity or climate change.

Being a social organization, business has been affected by the sustainability discourse as well (Hall & Vredenburg 2003; Hart & Milstein 1999, 2003; Berns et al 2009) to the extent that is has been portrayed as a business mega-trend, affecting the firm's capacity to create and deliver value (Esty & Lubin 2010)[8]. Before going forward on exploring the effects of the sustainability discourse on the firm, some clarification around the concept of sustainability is necessary.

3.1.Sustainability frame

Sustainability is a concept that has been used in multiple ways and it has been suggested that its characterization and power varies depending on which discourse accompanies it (Redclift 2005). Therefore, and in order to reduce confusion, the need for some clarification.

The underlying sustainability challenge is the reconciliation of society's goals with the planet's environmental limits over the long term (Clack & Dickson 2006; Haines et el. 2006; Meadows et al. 2006). The identification of environmental limits and its relation to societal activity is an ongoing research involving a great deal of uncertainty given the complex nature of the socio ecological system (Haines et el. 2006). Nonetheless, at different scales some limits have been identified (e.g. the rate of biodiversity loss) and can be used as a guide for societal action (Rockström 2009). The need to understand and internalize these limits is critical given the interrelation and dependency of social systems on ecological systems (Adger 2000; Ostrom 2009).

In other terms, the objective of the sustainability discourse is to make social - ecological systems perpetuate over time. This does not imply a static balance, in the contrary a dynamic one. Sustainability then, is a lens that presents a system perspective, of the social and ecological dynamics within the boundaries of the latter.

When considering business sustainability two aspects should be considered. One is the relation between the firm's objective, which is the creation of value (Drucker 1984; Rappaport et al 1987; Freeman et al 2003; Porter 2011), and the natural environment. The firm makes use of natural resources, ecological services and waste sinks to create value and therefore their interdependence. Second, for the firm to fulfill the role of generation and delivery of value to society, it should contribute to the perpetuation of the society that it is embedded in. Additionally there has to be consideration around the interrelation of the two aspects (social and ecological).

It is important to acknowledge the crucial role of the firm, given that it is the main social organization form to perform economic activity in modern society (Maskell 2001; Pitelis & Vasilaros 2010). Hence, if sustainable social dynamics are considered valuable, the role played by the business sector is a very important one.

---

[8] This is said in the context of sustainability being presented as a mega-trend. Clearly there are other concepts and models that contribute to shape the business landscape.

To sum up what has been said, sustainability is concerned with the perpetuation of social - ecological systems. To understand its implications around business two interrelated perspectives should be considered:

- social elements - relation of the business as a social organization and society
- ecological element - social dynamics within environmental limits

3.2.Business and sustainability background

In relation to sustainability, the posture of the firm has shifted from pollution prevention in the 1970s, to self regulation measures on the 1980s, to the concern of incorporating sustainability into the business practices during the 1990s (Redclift 2005).

The trend in the 1990s lead to, what was called, green consumerism and the perception among companies of the benefits of a 'green' image. In some cases, the marketing component resulted in 'green washing' (Laufer 2003). Along the same timeframe ecological modernization emerged. In a condensed manner, ecological modernization is a 'clean' technological approach accompanied by policy measures, aiming at the creation of win-win situations, that is, achieve economic growth without increasing pollution. Additional concepts around business sustainability are Industrial ecology and Life Cycle Assessment, which can be associated to ecological modernization (Redclift 2005).

More recent propositions suggest that the business landscape has been modified by sustainability (Hall & Vredenburg 2003; Hart & Milstein 1999, 2003; Berns et al 2009) to the extent of been portrayed as a business mega-trend, affecting the firm's capacity to create and deliver value (Esty & Lubin 2010)[9].

Given the perceived impact that sustainability has had on the business landscape, MIT performed in 2009 and 2010 a survey with around 1,500 corporate leaders to scrutinize its effects (Berns et al. 2009; Haanaes et al. 2011). In relation to the challenges that the company faces sustainability does not rank high, with only 16% of the respondents placing it among their three primary challenges. Innovation to achieve competitive differentiation, growing revenue and reducing cost rank as the first three. It can be highlighted at this point, how sustainability is addressed as an independent aspect for business management. Sustainability is disassociated from the capacity of a firm to differentiate itself, innovate, generate revenue and reduce costs[10].

As drivers for sustainability related initiatives, the MIT survey in 2009 (Berns et al. 2009) identified government legislation, consumer concern and employee interest in sustainability as the most relevant elements. Whilst faced with the question of the benefits to the firm by addressing sustainability issues, 35% indicate improvements on company brand, whilst cost saving and competitive advantage are around 10%.

An interesting element pointed out by the MIT 2010 (Haanaes et al. 2011) survey is a difference in the perceived drivers between the sustainability early adopters, who have not moved past considerations of cost cutting and risk management, and embracers[11], who claim increased margins or market share, greater potential for innovation in their business models and processes and access to new markets (Haanaes et al. 2011). This directs the attention to the relation that sustainability

---

[9] This is said in the context of sustainability being presented as a mega-trend. Clearly there are other concepts and models that contribute to shape the business landscape.

[10] This disassociation begins, in this case, with the formulation of the questions in the referenced survey.

[11] Embracers are those considered as sustainability strategy leaders.

might have with the three primary business challenges (indicated above) and how additional benefits seems to become clearer after action around sustainability is taken.

When it comes to sustainability business initiatives, the three main barriers according to the MIT 2009 survey are: (1) there is not a clear understanding how the company relates to sustainability, (2) value creation from sustainability strategies is not clear and (3) the execution of the strategy is flawed.

Another interesting finding by MIT 2010 is the difference, in the perception of sustainability as necessary to be competitive, between product oriented industries and service oriented industries. It is in the former that sustainability is perceived as more relevant for the competitiveness and have a worked out business case for it. This might have to do with the more explicit perception on the use of energy and natural resources to deliver value. A general perception (88%) on MIT 2010 survey (Haanaes et al. 2011), that sustainability driven strategies will be necessary to be competitive in the near future is a significative indicator.

4. Business theory frame

This section presents the understanding encountered through the literature review. It begins with presenting business specific aspects which are the basis for developing the 'sustainability and business strategic action' section.

4.1.Sustainability and business aspects

To develop the research further, there is a need to touch on specific business aspects. Given that a general business theory review is outside the scope of this research, aspects pointed out by literature on sustainable business strategy and considered as most relevant will be visited. These aspects are: business value, public vis a vis private benefits, intangibles and its valuation and short vs. long term time perspectives.

There is an additional sustainability aspect that is very important but will be left outside the present research, and that is distribution. Distribution is one of the big challenges faced by modern society. The distribution of benefits, resources, negative effects, opportunities, among others. The topic is extensive and addressing it here would be overly ambitious.

4.1.1. Business value

Value is the primary motivation for nearly all business activity (Freeman 2003), which explains why it is a concept that plays a central role on this paper[12]. This sub-sections begins by presenting the basis for the understanding of private value in this paper. Subsequently an overview of three value conceptualizations applicable to the business sector is presented.

The concept of wealth as presented by Enderle (2009) will be used as a starting point to further illustrate what the creation of private value encompasses. Wealth will be framed as the amount of economically relevant private and public assets including physical, natural, financial, human, and "social" capital. The creation of wealth is to make something new and better[13]; where the state and companies operate under a broad consensus for the creation of public and private wealth (Enderle 2009) [14].

Following what is presented by Enderle (2009), private value are the economically relevant assets that can be appropriated. Using the institution of private property a firm can appropriate physical (e.g. built infrastructure, man created objects), natural (e.g. land, natural resource use rights), human (e.g. knowledge), social (e.g. reputation) and financial (e.g. capital). It is worth mentioning that there are assets that cannot be appropriated by a firm but affect the value it can generate, as will be illustrated ahead in the private and public benefits as well as in the intangibles section.

---

[12] I acknowledge that the concept of value is massive as the literature that covers it. For the purpose of the paper, a deep review of the concept would have been useful but given the scope and resource constraints of this project, the review was limited to what is presented in this section.

[13] It is important to clarify that European countries in the colonization period of the americas accumulated great amounts of wealth, but this wealth was not created but distributed by force (Galeano 1971).

[14] Wealth generation has multiple levels. We have firms at one level and moving upwards we find industry level, the national economy level and international economy. There is a relationship and interdependence among the different levels, nevertheless the dynamics among the different levels are not going to be scrutinized. For more on the multilayered relation of value and wealth see Pitelis & Vasilaros(2010) When considering greater society, the national level is the default scope.

Financial capital is considered an essential asset for the operation of the economic system at the same time as it used to evaluate the performance of firms. As an instrument, the financial business case is a model that allows to manage complex business information.

In relation to financial capital as an evaluation mechanism, a concept with a strong influence on the business community is that of shareholder value. To create shareholder value companies should earn returns on invested capital that exceed the cost of capital and as a consequence companies do not only need to be competitive in the commercial markets but on the capital markets as well (Rappaport 1987; Young & O'Byrne 2001). This performance on capital, among others, can be attributed to the purchase of company stock by individuals and institutional investors (Young & O'Byrne 2001).

The creation of shareholder value has been portrayed as the way to measure the performance a company (Rappaport 2006) and it has led to some tensions within the firm, namely between strategic and financial units (Rappaport 1992). A shareholder value management approach states that the creation shareholder value is achieved only by delivering value to everyone else (Young & O'Byrne 2001), that is customers, employees, suppliers, among others.

On a different school of thought, stakeholder theory proposes a view of value as a contractual process among those parts affected by the operation of a firm, which can be designated as financiers, customers, suppliers, employees and communities (Freeman 1994). At first sight both, shared value and stakeholder theory, aim for a similar objective, but differences arise on the operationalization of each view. An illustration of this is the purely financial focus on the ten ways to create shareholder presented by Alfred Rappaport (2006) [15], whereas stakeholder theory proposes that defining and creating value is a pluralistic iterative process.

From the stakeholder theory perspective, placing value creation at the center of the business model, concepts such as CSR, sustainability and stakeholder find common ground (Freeman 2003). Additionally, a sustainable organization is one that recognizes the interdependence and synergies between the firm, stakeholders, value networks and society, seeking to maximize economic, social and ecological value (Freeman 2003).

Additionally, Michael Porter and Mark Kramer (2006; 2011), present shared value, which can be summarized as the creation of economic value in a way that also creates value for society by addressing its needs and challenges. This concept will be expanded later on the paper.

4.1.2.Private and public benefits

The point here is to highlighting the relevance of public goods[16] and its positive and negative effects on the creation of private value and vice-versa. As an example clean air, public transport systems, public education and public healthcare may have positive or negative effects on the capacity of firms to create private value. This is not to disregard the intrinsic value of public goods but to underscore its interdependence with the private.

---

[15] Another example of a shareholder value is presented by the Tim Hindle (2009) in The Economist, where value creation is the ultimate measure by which the company is judged. Four types of value are presented, the market value, accounting value, future value prospect, measure of output less input, but non of them explicitly relate to a broader understanding of value or wealth.

[16] Characterized by non-rivalry and non-exclusive consumption (Enderle 2009).

When considering the creation of private value, influential figures such as Milton Friedman have proposed that the maximization of private wealth, measured by financial profit, should be the sole purpose of business (Friedman 1970) [17]. Behind Friedman's proposition public problems and issues should be dealt by the government and framed by policy. A different position is one where the firm turns social problems into economic opportunities, although conditioned to shareholder profits (Drucker 1984). Another approach, is one where companies focus on the creation of shared value (Porter & Kramer 2011) departing from the interdependence that exists between business and society.

4.1.3.Intangible assets

Assets are resources or capabilities that a determined company controls. Financial and physical assets are considered tangible, while, employee skills or organizational culture are considered intangible. Intangibles affect the capacity to create financial value, for this reason their value representation is estimated based on its closeness to a business strategy (Kaplan & Norton 2004). The importance of intangibles in this paper lies in the fact that a significant portion of the value generated out of sustainability related initiatives is considered as an intangible asset.

Intangibles have an important effect on the economic value of a company (Hall, 1993). When considering intangibles, five categories have been identified as follows: Human, Relational, Organizational, R&D and Environmental & Social. Whilst for strategic management intangibles are associated to the creation of value and competitive advantage, from a financial accounting perspective the focus is on the financial benefits associated to them (Arvidsson 2003).

Financial valuation methods account for a very narrow dimension of the actual value of an intangible since its value is assigned by an estimation of how closely aligned it is to the business strategy (Kaplan & Norton 2004). If financial valuation is used as the main source of information for performance evaluation and decision making, as for example the business case of sustainability, relevant information may left out. An additional consideration must be given to the role of intangible valuation. The value obtained is just a representation of their instrumental value (as would be the case for its use value for strategic purposes (Kaplan & Norton2004)), but its intrinsic value is not considered.

There is a very strong relation between the value of intangible assets and the long term performance of the firm (Porter 1992; Denis & PÔ 2010; Barton 2011) which links to the time perspective discussed next.

4.1.4.Time perspective

Time horizon is another of the aspects pointed out by literature on business sustainability that requires some additional examination. In this subsection the main elements of discussion will be depicted as mean to set the basis for discussion further ahead in the paper. The tension lies in the perceived preference for short over long term. Business theory states that long term profitability is the objective of business but the general market behavior indicates otherwise[18].

---

[17] Reliance on the market places greater accountability for social development on private actors. Social and political legitimacy stem out of the answer to these demands (Rada & Trisoglio 1992)

[18] An extreme case where the value created is purely financial is presented in the documentary the inside job (Ferguson 2010).

When referring to an extreme short term perspective, the case would be that of quarterly evaluation of a company. In contrast based on the time to invest and build a new business, long term lays between five to seven years (Barton 2011). As for a more qualitative definitions of long term: (1) time horizon for strategy realization, (2) convergence time of the multiple parties and business units involved, (3) time along which the risk is latent, (4) time for economic value to be created (Denis & PÔ, 2010).

Even though, there is evidence of the high level of correlation between this short term attitude and capital markets behavior (Porter 1992; Rada & Trisoglio 1992; Barton 2011), other structural challenges such as uncertainty and lack of confidence in the future, international financial policies, information technologies and market cycles are associated to the roots of this tension, considering capital market's 'short-termism' as a symptom (Porter 1992; PÔ 2010). Nonetheless capital markets should be the first elements for a reorientation of the economic system away from the short term approach (Barton 2011).

Within the capital markets, in relation to long term perspectives, the undervalued conception of the future (e.g. when net present values method discounts future returns) results in little incentives for investments with returns over extended periods of time. In general lines, short term capital markets present some similar characteristics, (1) emphasis is placed on paying dividends, (2) accountability is exclusive to shareholders, (3) equity ownership is unstable, (4) institutionalized quarterly reporting, (5) the relation between the capital markets and the real economy are aligned more for conflict than the convergence of interests (6) consumption over investment bias and (7) the use of incomplete information proxies [19] (Porter 1992; Rada & Trisoglio 1992).

The tension lies on the bias for the short term perspective which in some cases undermines the capacity of the system to perpetuate in time.

Summing up to this point, a general overview of the evolution of the business sector around sustainability challenges has been depicted. Additionally, four elements around business value have been touched upon, which point to the main challenges business faces when trying to create value out of sustainability initiatives or sustainability business value. What follows is to explore business action around the sustainability challenges.

There are multiple approaches to business action when faced with sustainability challenges. The main three paths, in traditional business, are 'the business of business is business' as proposed by Milton Friedman (1970), the philanthropic and voluntary approach and the strategic approach. The focus for this paper will remain on the latter[20].

4.2. Sustainability and strategic business action

Business action is primarily motivated by the potential to generate private value and business strategy is an aspect of the business that guides the general direction of a business to position it self

---

[19] Reviewing the value expectation embedded in share prices, indicates that typically 70% to 90% of the value is associated to cash flows three to five years in the future, yet the performance of the company is reviewed quarterly (Barton 2011).

[20] There is an alternative 'business model', the social enterprise which is an interesting alternative as business response to sustainability challenges (Hockers et al 2007), but it will not be discussed further since it is outside the scope of this paper. The main reason, for not including it in the process, is that this paper is concerned with the existing business sector more than the emerging socially and environmentally driven one. It is definitely a perspective that could bring a lot of value to the research but resource constraints do not allow to incorporate it.

to generate that value (Porter 1996). Addressing sustainability challenges strategically implies addressing issues that are connected to the business and might contribute to gain a competitive advantage and generate private value (Hart 1997; Reinhardt 1999; Porter & Kramer 2006; Porter & Reinhardt 2007; Berns et al. 2009; Lubin & Esty 2010). The intention of this sub-section is to depict the process of structuring strategic business action.

4.2.1. Mapping sustainability issues

The first step for business action is to identify the sustainability issues. A study performed by MIT 2009 (Berns et al. 2009) identified this aspect as a barrier for strategic business action.

For this paper, identifying and mapping the sustainability challenges is crucial because it represents what is meant by the internal perspective (i.e value) in contrast to external[21] (e.g. resource limits). Mapping aims to relate sustainability challenges to the capacity of a firm to create value as well as the firm's perspective of the business landscape.

A framework proposed by Porter & Kramer (2006) can be used to guide this identification. Even though this framework explicitly aims at 'Mapping Social Opportunities' its use has been applied to sustainability associated challenges such as climate change (Porter & Reinhardt 2007). A two fold approach is advanced. First, an inside-out (See Figure 1) consideration of the impacts that the company has on external elements. This should be tracked along the company's value chain. Additional scrutiny to location and time frames should accompany the analysis.

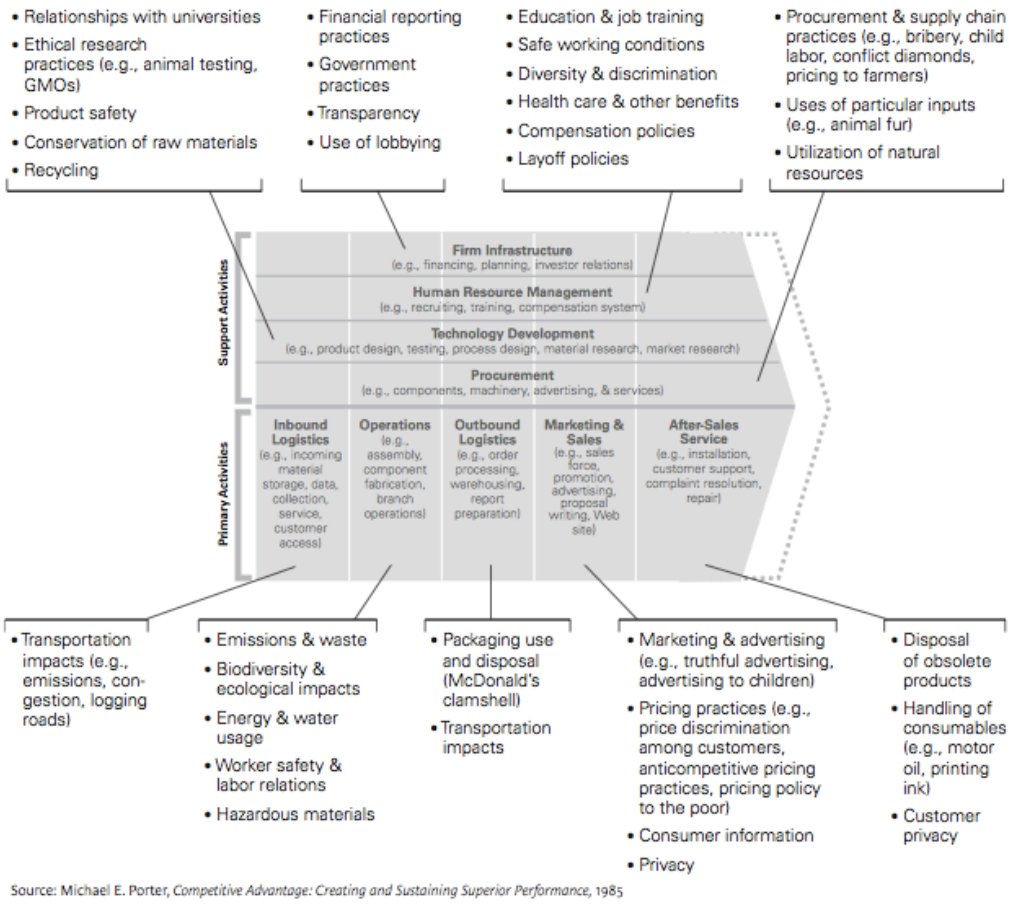

Figure 1. Mapping social opportunities. Inside-out.

[21] As mentioned in the methodology section.

An outside-in (Figure 2) approach contributes to the identification of the reliance by the company, on the supporting environmental and social contexts whose understanding is key for strategic proposition.

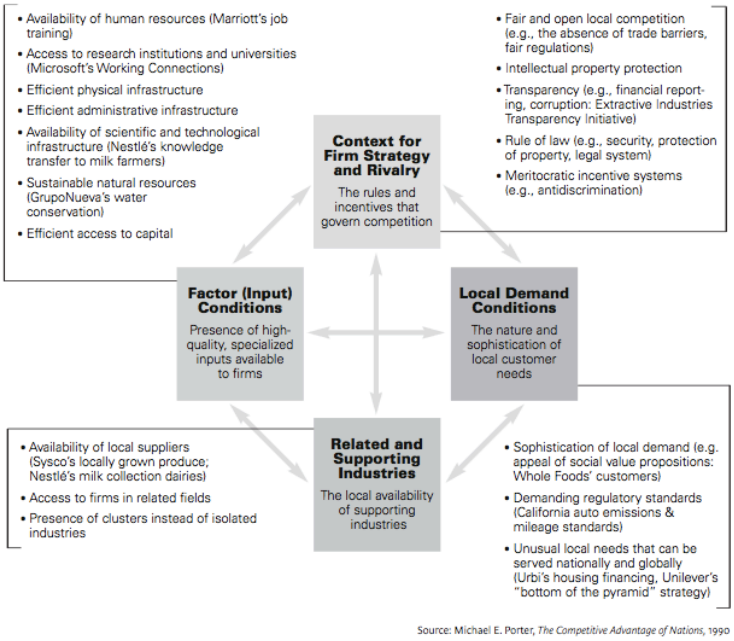

Figure 2. Looking outside in: Social influences on competitiveness

Once the sustainability aspects that affect value have been mapped the next step is to identify the ones that affect the underlying drivers of competitiveness where the company operates. The most strategic sustainability actions are the ones where shared value can, as reviewed in the next section, be created (Porter & Kramer 2006).

4.2.2.Prioritizing actions

The term shared value is presented by Michael Porter and Mark Kramer (2006; 2011) to guide business action in relation to the the negative perception of business within society. This negative image is associated to the four business aspects described in section 4.1 and exemplified in the latest financial crisis in 2008, where big private financial profits were generated and the perceived social effects were mainly negative (Ferguson 2010; Barton 2011).

Shared value departs from the interdependency of business and society and the proposition to create economic value by addressing societal needs and addresses not just conventional economic needs, thereby creating social value. Consequently the purpose of the firm should be to create shared value and not merely financial profit (Porter & Kramer 2011). Under this approach communities are not only seen as consumers of goods and services but as providers of public assets and supportive environment. With this interdependence in mind, the proposition is one of a virtuous cycle, over the long term, of public and private value generation from the economic and social perspectives[22].

The importance of this redefinition of value is that it guides sustainability business action from within, in contrast to sustainability being proposed merely as resource boundaries, or technological

[22] The current economic discourse on public and private has a strong element of partnership between the two spheres. Partnership, negotiation, other forms of reflexive self organization and public-private partnership (Jessop, 2002).

approaches. Once the sustainability challenges that a company relates to have been identified and prioritized, the next step calls for the definition of a strategic direction.

4.2.3.Sustainability strategies

Before going forward with sustainability strategies, some clarification has to be made on strategy in general. Strategy, as defined by Michael Porter (1996), is in essence choosing activities differently or to perform different activities than rivals to achieve a relative advantage position. This approach to strategy has been used for a long period of time and it still holds in many of the existing industries and departs from the interaction of five structural forces which are rivalry among competitors, threats from new entrants, bargaining power of suppliers, bargaining power of buyers and threat of substitute products or services (Porter 2008).

An alternative viewpoint on strategy is advanced by a resource based view of the firm. Under this school, a firm is regarded as a collection of physical and intangible assets and capabilities, whilst competitive advantage is achieved by deploying a competitively distinct set of resources and deploying them strategically (Collins & Montgomery 2008).

A third approach to business strategy considers that competition has taken too much attention and what is really important is innovation and the creation of markets. It is proposed, that the focus of strategy should be placed in finding and developing markets where there is no competition as well as exploiting and protecting the newly created markets (Kim & Mauborge 2004).

The main concern of the previously described strategy approaches is to position business, in relation to other actors or the existing market, so that it can generate private benefits. Sustainability strategies aims to expand the frame for the creation of private value, to include the broader environmental and societal context.

Various explicit sustainable strategy frameworks have been proposed in business literature (Hart 1997; Renhardt 1999; Hall & Vredenburg 2003; Hart & Milstein 2003; Berns et al 2009; Orsato 2009; Bonn & Fisher 2011). Given that Orsato's sustainable strategy approach tries to reconcile all the three schools of business strategy his proposition will be outlined.

Orsato's first four strategies fall under the a CES (Competitive Environmental Strategies) framework (See figure 3). Under the CES framework cost reduction and management of risk are considered as operational effectiveness more than strategies.

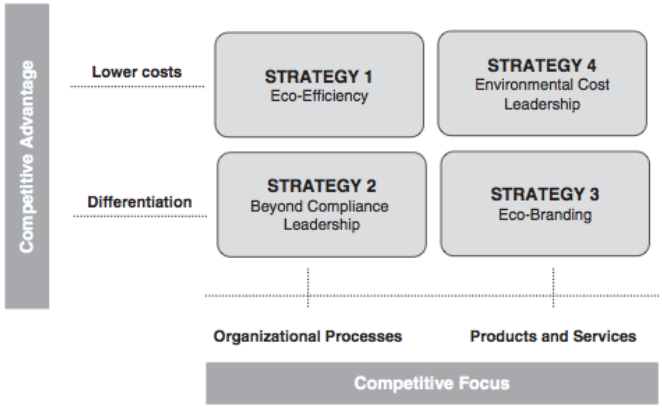

FIGURE 2.1 **Competitive Environmental Strategies**

Figure3. Competitive Environmental Strategies. Source: Orsato (2009)

Eco-efficiency

Eco-efficiency can be taken as more than a cost-reduction approach when it can trigger innovation as it would be the case of lean thinking leading to the remake of industrial processes. As an example industrial symbiosis, can be considered a strategy given that the total cycle of materials – from virgin material, to component, to product, to waste product and to ultimate disposal – is optimized in terms of resources, energy, environmental impact and capital. The ability and preparedness to access the carbon market is another elements where eco-efficiency might render a competitive advantage. Risk reduction and improved corporate citizenship are considered a result of eco-efficiency strategies.

Beyond compliance leadership

This strategic approach is oriented to gain intangible assets in the form of reputation value. For companies operating in resource intensive industries it is vital that the general public knows about their efforts to go beyond compliance, as reputation relates to the perception that stakeholders have about the firm.

Different forms of Voluntary environmental initiatives, as new mode of addressing regulation, have been put forward after it initiated as a business response to image problems (e.g. chemical companies after the accident in Bohpal, India). Seven multi stakeholder initiatives can be identified (1) Government regulation, (2) business government initiatives, (3) business self regulation, (4) business NGO partnerships, (5) civil regulation made by NGOs, (6) government - NGOs initiatives and (7) multiparty initiatives.

The value of environmental and social responsibilities is subjective to an extent and depends on consumer perceptions. And so, to make a beyond compliance reputation value into a more tangible asset some companies have lobbied governments to adapt legislation[23]. The challenge around this strategy relates to the increased public exposure which implies greater public scrutiny.

Eco-Branding

The prospect of differentiating a product or a service is highly valued by business and success depends on how customers value the differentiation efforts and whether they are willing to pay for them. With eco-differentiation products need to satisfy all other requirements such as quality, convenience and aesthetics as well as lower environmental impacts.

Eco labels play an important role within this strategy, they are about providing credible information on the product that goes beyond the physical properties of the product. To address the need for credible information life cycle assessment is one of the instruments used[24].

The challenges around eco-labeling is related to the apparent disconnect between certification and eco-label to shopping behavior, as well as the dissipation of the competitive advantage as the eco-label becomes more successful. The former is associated to the difficulty of conciliating public and private benefits. Given that most goods and services address individual self-interests, environmental solidarity (public benefits) is difficult to perceive therefore not decisive.

---

[23] It is relevant to highlight policy as means to make intangible assets become tangible.

[24] As with the previous foot note, but in this case in a more commercial space, labeling is an instrument to make characteristics that are intangible for the customer, tangible through the explicit communication.

When taken as a business wide strategy ‘eco-labels‘ can be called, eco-branding and it might render competitive advantage if the information is credible.

Environmental cost leadership

To separate products from eco-niches the product should not represent a price premium, this idea is what drives this strategy. An approach for this strategy is eco-design, where the design with the intention to reduce the overall environmental impact can bring cost benefits. Bio-industry as means to produce substitute materials and processes is a big player under this category of strategy.

Another approach under this strategy is PSS (Product Service System) where the intention is to change the perspective from product oriented to a service oriented. The idea here is to innovate the business model in ways that the revenue and cost structures allow to provide customers with a service rather than a product delivering greater value at a lower price.

Sustainable value innovation

The fifth strategy proposed by Orsato departs from Blue Ocean Strategy and is illustrated in the following figure (See figure 4).

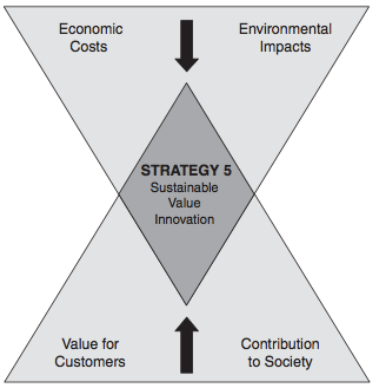

FIGURE 2.2 **Sustainable Value Innovation Strategy**[29]

Figure 4. Sustainable Value Innovation Strategy

SVI is a systems approach, where companies lower their costs and increase the value delivered to the customer in a way that public benefits are generated through less environmental impacts.

As a strategic perspective, SVI searches for systemic inefficiencies considering how products and services impose specific technologies of production as well as particular patterns of utilization.

The framework presented by Orsato (2009) points to the context and capabilities for a company to generate private value from sustainability initiatives. Time horizon, as a crucial element in the conversation, is addressed in a more central way by other strategy propositions (Hart 1997; Hart & Milstein 2003; Nidomolu et al. 2009; Lubin & Esty 2010), as the one presented in the following figure (See figure 5).

Figure 5. Sustainable value framework. Source Hart & Milstein 2003

The general direction of the company's actions to position it self to generate private value can be given by its strategy. To take this strategy and translate it to action, is another of the challenges identified by the study performed by MIT (2009). Business models is an instrument that can contribute to address this aspect and for that reason a quick overview will be presented next.

4.3.Business models

A business model is a conceptual instrument that allows to articulate the business logic of a business by delineating its elements and dynamics (Osterwalder & Pigneur 2002; 2005). A business model helps to identify and analyze how a business creates and delivers value. The main elements of the business model are: (1) Customer value proposition, (2) profit formula, (3) key resources and (4) key processes (Johnson et al. 2008). Additional clarification on business models is presented in Annex 3.

Up to this point the background of business and sustainability which touched upon the main challenges, drivers and trends was depicted. Followed by an account of sustainable business strategy, as one of the approaches of business action around sustainability, finalizing by the concept of business models.

An interpretation of what has been presented on sections three and four of this paper, is a continuum that stretches from reactive, through proactive all the way to transformative business action. Reactive initiatives are the most conservative ones, those that are associated to cost and efficiency within the firm, where the value proposition of the firm remains unchanged. Reactive initiatives in the most conservative version sit very close to operational effectiveness. Proactive initiatives are those where the value proposition of the firm is modified to some degree by sustainability. Finally transformative initiatives are those that are concerned with a fundamental transformation as product of a sustainability perspective.

5. Findings

In this section the findings from the empirical portion of research process will be presented, following the phases described in the methodology section. In the two following paragraphs some general aspects will be introduced before presenting phase one of the empirical research.

The objective of firms has mainly been to create long term value, which is one of the elements that the conversation of sustainability emphasizes. At first sight this might be taken as redundant, as one of the interviewees puts it "*these initiatives [sustainability initiatives] are just good business logic*". Nonetheless, what is important to bare in mind are the considerations that the sustainability perspective makes explicit. In brief, it is the interdependence between social and ecological systems and the interdependence in the dynamics within the social sphere, which are additional considerations to traditional business logic. As a general example, elements such as externalities are not traditionally considered within the economic system, therefore, firms as actors of this economic system do not account for it in their logic.

With regards to the perception of sustainability in firms, a very interesting idea is depicted by one of the interviewee as follows, "*Within a business, the conversation between the CFO and the sustainability manager often begins with risk related sustainability work. Furthermore, the fundament of sustainability management within the business is risk related. You always have to consider which the risks are, as well as the opportunities for a proactive business case. But often what is done by sustainability people, is that we are focusing on the risk. So therefor we have made a weird business case only related to risk*"**An.** This helps to set a frame for what will be presented in the phase one empirical findings section.

5.1.Phase 1

The empirical work performed in phase one of this paper was guided by the question[25]:

How are companies creating private benefits out of sustainability initiatives?

In general terms, a divide between reactive and proactive companies is perceived and expressed by an interviewee as follows, "*There are two different clients, you have the big ones that have a vision and know where they are going. The other part are the reactive. They react on big companies*"**H**. One explanation for the conformation of the two groups is the implications for each business as expressed by another interviewee, " *(...) and in that way, what we have seen in the sustainability agenda, is a more split business community, in a way that some see the opportunity in the sustainability approach. Others see the risk included in everything*". The point of interest here is not whether there are reactive or proactive companies, instead what should be payed attention to is the nature of the initiatives, reactive, proactive or transformative.

5.1.1.Reactive initiatives

Some detail on how this divide is perceived will be presented next, starting with initiatives related to cost. Along the sustainability timeline, what started as pollution control in the 1970s resulted in tangible benefits for the business as described by one of the interviewees. "*The awareness was created in 1970s, as pollution problems (...) the key response from business was eco-efficiency, what*

[25] For this stage of the empirical research, five semi-structures interviews with business consultants, sustainability business consultant and NGOs where performed. Annex 1a and 1b has more details on how this was structured.

is good for the environment is good for the economy. Reduce pollution and waste and gain economic benefits for your company".**K** At this point, the intention is to point to the fact that waste reduction and associated eco-efficiencies have, since then, had tangible economic benefits. Additionally, as another interviewee points out "*companies that have taken the lead, have immediate return on investment in low hanging fruits, in energy management, resource efficiency, in resource reduction*".**H** This is explained given the short term tangible benefits associated to them.

Another business initiative that can be partly associated to costs is the mitigation of operational risk, which results, not exclusively, in the avoidance of costly accidents. As one of the interviewee puts it, "*as an investor you do not want an accident happening in a chemical company in a remote country*"**Ha**. An additional aspect of this affirmation is the geographical element mentioned, which points to actions along supply chains. Companies have extended reactive initiatives up and downstream. Risk related activities along supply chains has a strong component on avoiding the loss of the license to operate as well as expensive accidents.

5.1.2.Proactive initiatives

In this section, some of the points, brought up by the interviewees, illustrating proactive action will be presented. At a basic level the creation of value comes out of extending the logic of resource efficiency which equates to economic benefits, out to customers. As put by one of the interviewees "*what you produce has a downstream impact as well, for example if you produce radio base stations, it is a very strong value selling proposition that these stations consume very little energy because your customer's energy bill will be very high if you do not energy optimize them*" **M**. This approach has limitations given the challenges of designing products that can actually deliver the benefits to the customer and be profitable for the company. This is depicted by another of the interviewees in relation to the chemical industry, "*If you can produce friendlier chemicals (...) you offer this product that is superior from an environmental point of view but it is not necessarily easy to develop*"**Ha**. What is illustrated here is how achieving private benefits out of proactive initiatives, adds elements which increases the complexity in comparison to reactive action.

An interesting example of a firm considered as a sustainability leader is commented by one of the interviewees, "*You could say that GE is doing everything which has to do with sustainability. But it is also right that the products they are making, and their core competences, are very close to the logic of energy saving. So it easier to go towards that* "**R**. The previous touches on two elements, on one hand it reinforces the benefit of reviewing individual initiatives as a complement of the whole firm view. On the other hand, it illustrates how perceived sustainability leaders are not necessarily reliant on initiatives that change their value proposition radically.

There is a perceived trend of change, as one of the interviewees states, "*I have been working in this field for 15 years I can definitely see the huge shift*". This shift is perceived as being led by big organizations, according to the interviewee who afterwards said, "*the good guys now, are Tesco, Walmart, Unilever, they are pushing the agenda. They are pushing it for financial reasons of course*", which implies that these big companies are creating value out of sustainability initiatives. Nonetheless, in relation to the activities performed to create value, this is what the interviewee said, "*These companies that have taken the lead, they have immediate return on investment in low hanging fruits, in energy management, resource efficiency, in resource reduction. If you reduce in 1% it is many millions of dollars in the banks*" **H**. What can be observed here are increased margins from reducing inefficiencies along the operation, more than actual proactive initiatives. However, these big companies are still perceived as sustainability leaders. This is a similar case as the one presented for GE above, but it has the added component of the supply chain (this does not imply that GE does not have a supply chain effect, but it is easier to view it in the case of retailers).

It is along the supply chain, in this case of retailers, where proactive initiatives appear to be. These big players are just following their business strategy more than transforming their business. In relation to the previous, one of the interviewee states, "*(...) in case you are the CEO of Walmart, what can you do in terms of sustainability that would contribute also to your competitive advantage? (...) you have to be realistic. Walmart has a low cost strategy, Walmart has a strong power over suppliers. What Walmart does, is just exert power over suppliers and tries to transfer the costs of environmental commitment to suppliers. If you can do that, why not do it? What else could Walmart do? For some environmentalist, (the answer could be) you could stop growing. Well is that something that you (as the CEO of Walmart) would be able to justify to your shareholders?*". Walmart

Another aspect around proactive initiatives, is accessing the growing green consumer niches with the consideration that they currently still represent a small portion of the total market. As one of the interviewees puts it, in relation to organic food, "*it is still a niche, off course, but the growth we are seeing in this sector is tremendous*"**H**. What appears to be important is the positioning of the company in relation to the potential market of a growing market. Nonetheless, the access to these markets does not necessarily guarantee a price premium or a sustained competitive advantage as proposed by Orsato (2009) and complemented be Rose (2010) "The *consumer is now saying, we are interested in going green, we are aware of the challenges, they [the customer] are quite keen on not going green on cost*".

Competitive advantage is a result of business action; reactive, proactive and transformative. Companies are constantly aiming at transforming the markets and sustainability seems to be one element to do so. As stated by one of the interviewees, "*(...) change that market, so that the companies that are more sustainable will as soon as possible attain the competitive advantage*"**S**. Competitive advantage ties very well with what was presented in the previous paragraph, where positioning in relation to the growing 'sustainable' market is an important element. Nonetheless, the competitiveness based on sustainability is still not significantly tangible today.

In contrast to what has been discussed above, reputation is a less tangible value generated via the communication of initiatives. An interviewee stated that "*companies will look for differentiators, and sustainability is a clear differentiator right now. If you can show your client and customers that you have a similar product, at a similar price working according to the international prices, that are going up and so on, you have a competitive advantage in the fact that you are more secure company*"**S**. This statement is very interesting in two ways. One, it points to the growing value of sustainability in the market place, which is acknowledged by nearly all of the interviewees. Second, it identifies reputation as a big driver for companies to incorporate sustainability. This reputation is normally associated to brand and its possible effects on consumers buying preferences. Nonetheless, underneath lies the long term value of security and this is what is interesting. As the interviewee explains, "*If i buy form Tetra-pak we do not only get a similar product at a similar price, but also, I get many other [benefits] in securities and insurances. Security in my purchase, because in my turn, if I buy from Tetra-pak I can report to my stakeholders that I have chosen a supplier that has the ambition to stay around in the long term and has a high ethical ambition*" **S**.

As with reputation there are other elements to which sustainability initiatives contribute to, for example, employee retention and attraction as expressed by an interviewee, "*Everyone wants to work with sustainability at some level, because it is an issue that consumers appreciate and your employees appreciate as well. You would rather work with a company that cares for the environment takes care of their employees and whose products have a meaning*" **Hs**.

In relation to transformative initiatives, business model transformation is commented by an interviewee, "*are we really looking at what is in fact needed to get rid of poverty and see how we*

can develop products that can be affordable by those people? Some companies are very clever and are trying to approach this. They have realized that this can create new markets, new opportunities. But we need new approaches on how we cooperate with the local people because it is not only a cheaper product but also the ability to use it, which requires some kind of training"**K**. This last affirmation is very rich, first it points out the fact that new markets can be created when addressing social needs, but second and most importantly, it points to the fact that these markets need a change in the business model to approach them. As a business you need to offer a new set of services (in relation to more mature markets, where these services were delivered by the market itself), in this case training, accompanying the product you are offering to capture that market.

An additional example of business transformation is the entrance of Mark & Spencer, traditionally a retailer, to the energy efficiency and renewables sector by launching new home insulation and solar energy services (Rose 2010). More than the fact of diversification, what is being pointed out is the nature of that market, and that is energy efficiency and alternative energy sources. A market where very different business model to address this evolving markets is needed.

5.1.3.Summing up phase 1

This paper departed from literature that portrayed sustainability as a big business mega trend that would affect how companies created and delivered value. This proposition is very powerful but from the first phase of empirical findings, it can be observed how this transition is not as disruptive and tangible as it is illustrated, at least not as it is being acted upon today.

Even some of the 'sustainability leader' companies rely to a significant extent on reactive initiatives to gain this 'title'. In some cases these leaders operate in sector where efficiency gains can be significant.

The more proactive or transformative the initiatives are, the less tangible they appear for traditional business models.

5.2.Phase 2

The second phase of the empirical work departs from the understanding gained along the first phase, where in general a preference for reactive initiatives was perceived. With this understanding the following research question was used as a guide:

Which factors are contributing to the preference for reactive business sustainability initiatives?

In order to have a more specific topic of conversation with the interviewees, in contrast to the first phase, the tension between the definition of a long term business strategy and the evaluation of the performance of the business done via financial instruments was proposed. The use of the word tension needs some clarification to avoid misunderstanding. Tension is used at a conceptual level, what is meant by this is that strategy design sets a long term, broad, value objective while financial valuation is concerned with financially representable private benefits. There is a disparity in the representation of information and human subjective interpretation of factors like value and uncertainty, play a big role. The use of the word tension does not imply that there is a dispute between financial and strategic units within companies.

Next, an account of the main aspects discussed along the interviews will be presented.

5.2.1.Sustainability as an element of business survival[26]

The future market and the capacity of firms to create value is framed by one of the interviewees in the following way, "*In relation to the business value creation, it is coming back to the basic needs of people in society. You need energy, you need food, you need materials, you need mobility. Maslow's pyramid to some extent. We are going back to securing these basics. When we are talking about sustainability in the future, then you are talking about 9 billion people living within the earth's carrying capacity by 2050. How is it possible to deliver energy in the best way? How is it possible to provide food, material, and use them in a good way?*" **K**. This is what a sustainability strategy prepares business for, this is the landscape that business need to be prepared for in order to 'survive'.

In relation to business survival, one of the interviewees points out, "*companies do not necessarily see it [sustainability] as a strategic issue, it is a matter of survival. Looking at it strategically is more of the past, we are seeing a trend of survival mechanism. You have to internalize this issue, otherwise you will not be active in the market in ten years*"**H**. Additionally, this interviewee adds in reference to oil, "*everybody is working to find a strategy to be prepared. They are not going to shift today but they are on the verge of shifting*". What needs to be pointed out here is the idea of a future market for which businesses need to be ready, if they are going to be able to survive. But past the immediate alarm that a word like survival rings, the highlight is the link of sustainability initiatives today and the possible effects on future business performance.

Evidently not all the points of view are the same and there are some positions that consider the portrayal of sustainability as a matter of business survival as extreme. Arguing that sustainability might also be a product of traditional business practices, an interviewee said, "*It sounds too black and white. If a company goes only for compliance, they can still want to reduce costs, I do not want to heat my factory so much. They are still doing actions that are in line with a sustainability strategy*"**M**. To some extent this is extension of the point made under phase one where business sustainability is part of good business logic.

Past the different understandings of the implications of sustainability on a firm and how it should be addressed, what is interesting at this point, is how the value of sustainability initiatives is perceived in the future. An idea which was presented previously in the business and sustainability background section. This future capacity to attain value is portrayed as security, preparedness or survival among others. Nonetheless even if this value seems more 'tangible' in the future, the position to attain it starts by initiatives today. In other words, the capacity to create private value or avoid loss of value in the future, is linked to the actions of the company today.

In connection to the theory reviewed for this research, there is a debate around the time perspective. However, an exploration of sustainability value as an element of the future business to create value is not deeply explored.

---

[26] As a departure for this topic, Stuart Rose former CEO of Mark & Spencer stated that " there will continue to be some businesses that continue to survive as unsustainable business models, they will survive for another decade or two (...) In ten years, tremendous scrutiny from consumers, whether we are talking the talk or walking the walk (...) in general consumers are interested on going green, they understand the challenges, they are quite keen on not going green on cost, but as we have proven you can go green and save money " (Rose 2010).

5.2.2.Bold actions

A recurrent element along the interviews performed for this research is that of bold decisions and bold decision makers in the face of long term initiatives. As one of the interviewees emphatically points out "*Well that is the same thing as in politics. Why would a politician sitting three years in society start planning for a 20 year perspective. It is very difficult to motivate, at the same time, once you take that bold decision, and you explain it to your stake holders, why a company has set the vision to be environmentally neutral within 20 years. Once they are bold enough, and that comes form the CEO and board of directors, there is of course the management team. Once they have convinced them selves that they are going to be a successful company in 20 years. There are several companies today that have, finally, set their 10 year targets. Big companies such as Unilever, P&G, Walmart, IKEA, Tetra-pak etc.*" What needs to be pointed out here, is how some individuals pursue long term value in spite of adverse short term indicators. The underlying element that needs to be reviewed is how 'bold' decisions are taken today with view of the future value creation potential.

A more detailed example of what boldness of action entails is presented by Stuart Rose (2010) as follows. "*When I set this plan, I said that we were going to invest 200 million pounds over a 5 year period without passing a penny to the consumers. When we published our report, we had actually made an additional profit of 50 million pounds rather than the planned one year cost of 40 million pounds. It all came from putting in place, a range of eco efficiencies, whether it is less waste, whether it is less fuel, less energy, less packaging and, indeed putting together ideas for new businesses such as M&S energy.*" There are two elements that are relevant at this point for this paper. One is understanding why those decisions are considered as bold. The reason to why they are considered bold is because they exceed the understanding that traditional business practices allow. Bold decision makers see past the horizon of information presented by traditional narrow understanding and reframe the challenges. Second, action extends the information horizon of business. Once sustainability initiatives are pursued, additional understanding of the challenges and the opportunities is absorbed.

In connection to the literature that was reviewed for the present research, there is not much explored around the limitations of the current business information horizon in relation to sustainability.

5.2.3.Financial business case[27]

The evaluation of the value generated out of business activities, performed by financial units is another aspect that has been consistently indicated by the interviewees. As could be expected, what was presented in the two previous sections is being reflected here as well. Two aspects dominate the conversations, one is regarding the time perspective, which relates to the tension between the short and long term evaluations. Second, the information that is included in a financial interpretation of business.

In relation to the time perspective, attention should be placed on society at large rather than on specific economic sectors or actors. This was indicated by one of the interviewees in relation to business 'short termism' "*that is the core of the problem*" and he continues to add "*companies in general, not to speak of the system that they are work in [the government and society at large], is all about short term. However, this contradicts what is claimed to be the overarching, long-term goal, which is referred to as sustainability. In general, there are very few incentives to think in long term, from society as a whole including B2B, C2B, and all other relationships. There are very few*

[27] The financial business case is an instrument to evaluate the performance of a firm. It was designed for a model where future is heavily discounted and non-financial information is not taken into account.

incentives for any stakeholder in society, for anybody, to think in long term."**S** This affirmation sets some context for the discussion around the business time horizon. This is an argument that is aligned with what was presented on the theory section regarding short term versus long term perspectives, since it portrays a systemic challenge, more than just pointing on specific economic actors.

Business theory states that the objective is to maximize value in the long term, but as was observed in the background section of this paper and expressed in the previous paragraph, this does not seem to correspond with present economic dynamics. Nonetheless, some important economic actors, like the large pension funds are interested in the long term and place considerable value on the future, as described by an interviewee "*large pension funds are the ones that should actually look at the sustainability business case, why? because they have a lot of funds, they have a lot of pressure, they are well diversified, they are all over the world and they are long term oriented*"[28] **I**. What is being pointed out here, is that as an economic actor, pension funds give significant value to future value.

From a financial evaluation perspective, future value is discounted as mentioned by an interviewee "*there is a significant tension between short term and long term returns, and the pressure on firms to perform in the near term is significant, while future returns are heavily discounted*". **Mb** Past this widely known fact, this interviewee adds, "*The interesting thing about the tension is that the calculation of returns, whether in the short or long run, is quite subjective. Despite the certainty that putting numbers on things can appear to bring. (...) managers predisposed to supporting environmental issues will find ways to frame long-term gains in positive ways so that they can pursue them, while those who have a mindset against them will easily find ways to make the finances seem unfavorable*"[29].**Mb** The previous affirmations are very rich, nonetheless the relevant element for the present research is the flexible nature of financial accounting.

The second element places the attention in the fact that financial information allows for a limited view of business. The narrow perspective is related with the focus on risk rather than opportunities as mentioned by an interviewee "*as I understand it all starts with the risk analysis. I think the problem is, that (when) you do the risk analysis, you either do not measure the risks that are 5 or 10 years ahead of you, or you do not measure sustainability risks at all. Generally analysis and risk mapping, in listed companies, is about financial risks that you can cover in one or two years. If you do it in that old fashioned way, you will not find the risks that are really there. You therefore do not discuss how you should solve the problems and reduce the risks. And instead of only focusing on risks, the same work that has to be done with the opportunities*"**L**.

A similar perspective is shared by another interviewee, "*Its easier to look in retrospect to quantify the financial value related to an accident or if media has released that you got child labour in a production site, than it is to look at the financial value of proactive work. A lot of things within finance are risk related but true sustainability work is proactive and more opportunity based*"**An**. The focus on risk placed by the financial analysis, rather than on opportunities plays an important role on the decisions made by the business sector around the sustainability challenges.

---

[28] It is around this premise that some research programs are working such as the SIRP (Sustainable Investment Research Platform, http://www.sirp.se/).

[29] For additional information please review Branett. M. 2008. AN ATTENTION-BASED VIEW OF REAL OPTIONS REASONING. Academy of Management Review 2008, Vol. 33, No. 3

5.2.4.Sustainability just an additional component

This paper departed from literature that portrayed sustainability as a big business mega trend that would affect how companies created and delivered value. This proposition is very powerful but from the first phase of empirical findings, it can be observed how this transition is not as disruptive and tangible as it is illustrated, at least not as it is being perceived today. The point here, is how sustainability is just an additional component to what most of the companies do, it does affect to some extent the capabilities and assets required to create value and access some markets, but it does not change the essence of the majority of business, as one of the interviewees proposes, "*Most things in business are business as usual, there is no such thing as business unusual, because these guys [managers] at the end of the day are pressed by short term commitments, risks of all sorts, competition etc. They are pressed to perform. (...) we should not be surprised that many businesses take sustainability as one small element of the strategy*".**R**

Initiatives are linked to the risks and opportunities pertinent to the actor's context. In relation to this, an interviewee stated that "*some companies might see the advantages of incorporating sustainability and doing things differently because eventually they have a market to gain or maybe they do not have anything to loose for example the new comers, or people who are in deep trouble. The other guys have the tendency to follow the same course they had*".**R** The point that needs to be highlighted is the fact that reactive sustainability initiatives are more likely to be adopted by the majority of business as usual.

5.2.5.The information challenge

There are multiple layers on the understanding around the sustainability challenges and opportunities. On one side we have the communication challenges between individual from different areas within companies, where there is a disconnection on the information used by each. This is expressed as a language challenge by one of the interviewees, "*sustainability people do not speak the business language, and business people do not speak sustainability*" **An**.

On another side, the information to guide business action around sustainability challenges is highly complex and in some cases unmanageable as can be inferred from Hamilton (2010), "*Colleagues from Unilever said, we know how to do sustainability when we know the local farmers, when we can work with local universities and figure out the best practices. We do not know how to source sustainably from the world commodity markets. Soy, palm oil and so forth where we are on a race to the bottom despite our nice sustainable agriculture brochures, our commodity buyers are buying on price and every body is chasing yields at low price*". Furthermore, global markets adds an additional layer of interactions that blurs the information that could be used to guide action. The key point here is how information on the sustainability challenge is not transparent and the same applies for the outcomes of business action. It is difficult for a business to know to which extent they are benefiting from their sustainability initiatives.

A critical element on the information around sustainability challenges is that of externalities. Externalities information is not transmitted along the markets and that allows for business to regard, for example, ecological challenges as merely a resource scarcity problem as expressed by an interviewee "*sustainability for me is about resource management. There is a finite amount of clean water, fossil fuels will run out. We know that if we keep burning coal the way we do, we are not going to be able to breath. Those are very clear, macro trends that no one denies*".

The complexity on the management of information is recognized and some joint effort to tackle the knowledge and information challenge as expressed by Stuart Rose (2010) " *(...) We will need to have a finger on every new trend, every new constraint, every demographic change, every*

technology, to understand which matter and just as importantly those which do not matter. (...) The one thing that we are going to have to do, we are going to have to collaborate, no one organization will have the intellectual capacity, the physical assets or the financial fire power to become completely sustainable. So the businesses that prospers are the ones that can create partnerships, the ones that can compete and collaborate with its competitors."

These partnerships are already on the way today as illustrated by one of the interviewees next, " *(...) that is the reason that we are cooperating with some few selected companies. (...) Because we are not delivering in their target and they are not delivering in our target, we are delivering in a joint target, that is the combination of both of the organization's targets. (...) Our mission is partnering with companies, that want help through their supply chain and their innovation departments. They want to help us change the market. (...) So that the companies that are more sustainable will as soon as possible attain the competitive advantage and on that journey they can communicate that together with us*"**S**.

Knowledge on sustainability challenges is scant given that the challenge is so complex. The business landscape seen from a sustainability perspective is a dancing landscape and full information will hardly be available to guide prescriptive action.

5.2.6.Additional factors

There are additional factors that play a role in the preference for reactive initiatives. The scale of the firm is one of the elements that has a high incidence on how the social and environmental challenges are perceived and addressed. Big global companies with notoriety tend to be perceived as making the first move, but their size, their inertia and market position normally do not allow disruptive changes.

The complexity, which is associated to the scale of the firm, was brought to attention by one of the interviewees. The challenge here is to transform a firm where the levels of complexity are very high. Additionally, the power of shareholders was another element that contributes to more traditional and conservative initiatives.

Business culture was an interesting aspect that was mentioned by an interviewee where a company with strong explicit ethic culture would be closer to understand and integrate sustainability. It was implied that this explicit ethic business culture is not widespread, which contributes to preference for reactive action when faced with ecological and social challenges.

Finally the role of the government in general is considered as lagging behind the business sector. This perception was not causally linked with reactive business behavior nonetheless it is worth mentioning here. Additionally, the perception of the role of government among the interviewees contrasts to what was presented in the business and sustainability background section of this paper. Where the government is considered as one of the main drivers for sustainability related business initiatives.

5.2.7.Summing up phase 2

As it has been reviewed along this section, there are multiple elements that contribute to a preference for reactive initiatives. To begin with, the perception of value from sustainability initiatives is placed in the future as preparedness, security or survival which makes it complicated for organizations to makes decisions about it today. More than deciding to act or not, it is the extent of that action that presents a challenge because the benefits from action are difficult to evaluate.

Secondly, which ties to the last point, is the information horizon and perspective. The future can only be speculated on and given the uncertainty associated to it, there are only desired conditions versus non desired condition but there is no clear choice in absolute terms. And again, the time frame makes it even more complicated. Business decision makers that are considered as bold, have a different perspective on the challenges and their information and time horizon are different.

Additionally, Financial instruments as an evaluation of business are limited on the information universe it can include. On one hand, they are risk oriented, which immediately hampers perspectives on opportunities. On the other hand, value in the future is discounted out of uncertainty, which punished directly the value that might have been perceived out of sustainability initiatives. Finally, there is a big challenge on reflecting in financial terms, the value that stems out of sustainability initiatives.

Sustainability is an element that affects many aspects within business in the sense that it redefines system boundaries. Sustainability is a perspective that contributes to orient business action more than essentially revolutionize it. It does rises many questions on what is really valuable for societies but does not point on how to solve them.

The amount of useful information around sustainability challenges is still small. The challenge is to have information that can account for the changing conditions at the same time as it guides action.

6. Discussion and Conclusion

Along the interview process, the concept of sustainability performance [30] as an evaluation indicator was introduced by one of the interviewees and discussed since with the subsequent interviewees. This is what will be presented as the basis for the discussion and complemented at the same time by my perspective. This section will be structured in the following way, first, a brief account of the findings from phase one and two of empirical work will be presented. Second, an exploration on sustainability performance as a concept that could contribute to alleviate the tensions associated to the business sustainability challenge will be reviewed. Finalizing with some concluding remarks.

Account of the findings

The business sector is still struggling to develop business models where the benefits, brought by sustainability initiatives, can be tangibly evaluated and appropriated today. At the core of the struggle is the challenge to account for non-financial value (e.g. the value of the engagement with community stakeholder that ultimately grants the social license to operate). Value which in the case of sustainability initiatives to some extent lies in the future.

There is a need for instruments which provide guiding information for individual businesses, where future performance and capacity to create value are bridged with present sustainability initiatives. This is needed in order to allow, among other things, the differentiation between desirable and non desirable scenarios (e.g. which resources does a business want to be dependent, and independent, of). At an aggregate level (i.e. the market), the same instruments should allow the emergence of positive aggregate effects following the competition and innovation market logic. Performance based instruments have an interesting mix of characteristics which touch on these key aspects of the challenge. This is the point of departure for a discussion around sustainability performance.

Exploration

The following elements associated to sustainability performance will be discussed. First, the link between business action with the overarching ecological sustainability challenge. Second, the link between sustainability initiatives and financial performance of a firm, third, the link between sustainability initiatives and future performance of the firm, and fourth, sustainability related information to guide action. Additional elements that need consideration are the relation of sustainability performance and competition as well as the relation with business opportunities.

Sustainability performance is an element introduced to this research by an interviewee on the first phase of the project where he stated that "*I think the lack is [in reference to the business sustainability initiatives]; What are the implications for long term performance? What can you get out of it? and How are you rewarded? The financial community does not really reward this at all. They do not put value on the sustainability performance*"K. One of the questions that he posses is very interesting, how to bridge the future performance of a firm with sustainability initiatives today

[30] Sustainability performance is not a term that has been strictly defined, nor it is widely used. The intention in the present discussion section is not to try to frame a definition of sustainability performance, considering that even a definition for sustainability is still a matter of debate. The discussion tries to present and expand what was discussed with the interviewees around an evaluation indicator, where the subject to be measured is the sustainability of a company. Again, a definition of the term is not expected, what is expected is the illustration of some characteristics that the evaluation of a company's sustainability as a complementary (complementary to financial evaluation) could contain. As a first measure the intention of such evaluation tool is to guide business amidst the uncertainty that surrounds sustainability business initiatives.

and points to what he calls sustainability performance. Hence, how can the sustainability perspective expand the information horizon of business, by giving instruments to understand the value that lies in the future and how that is linked to present actions.

Before going forward there is a need to acknowledge that when dealing with complex challenges, such as sustainability, the knowledge that can be constructed is limited. This limit extends to the information on which businesses base its decisions.

Initiatives and the ecological sustainability challenge

The question, which is the contribution of individual business initiatives on 'greater' [31] ecological sustainability challenges?, lingers all along this paper[32]. Some interesting positive results are reported out of sustainability performance based standards, such as the Marine Stewardship Council or Forest Stewardship Council. Sustainability performance contains some relevant elements such as the focus on what can be done today and not on what is possible in the future, it allows the initiatives to be scalable, remains technology independent as each company finds the best way to improve and fosters innovation (Clay 2011). The point here is not to advocate for a standard per se, but to highlight the relation between business action and the emergence of positive effects on the 'greater' challenge[33] in connection to sustainability performance.

Additionally, sustainability performance is to have an indicator of how effectively natural resources are being used, which allows comparison among companies. If there is a focus on practices, for example, just to report a reduction in the use of a particular natural resource, there are no basis to determine if it needs further improvement. Furthermore practices leave little ground for benchmarking and comparability. Additionally, given that measuring the aggregate effects around a certain impact is cumbersome, by using a guiding best performance standard, a best possible aggregate outcome could be progressed.

This is aligned with a business perspective of the ecological sustainability challenges, in the sense that it provides a company with information that could guide action. In contrast to, for example, the concentration of carbon dioxide in the atmosphere which does not provide direct feedback to an individual business initiatives.

Sustainability performance and financial evaluation

Value is the main motivation of business action, and financial evaluation is the main instrument to evaluate a firm's performance. The relation between sustainability performance and financial performance is being investigated by the SIRP and evidence has been found indicating a positive relation between the two indicators (Semanova & Hassel 2008; Semanova et al. 2010).

Sustainability performance is an indicator that could inform and guide business initiatives, in relation to sustainability challenges, while contributing to a positive financial performance of the

---

[31] Greater in reference to scale

[32] This aspect is not something addressed actively by the literature consulted on this paper. The link between value and those 'grater' challenges is not discussed.

[33] This is an extract of Clay 2011 of examples of a sustainable beef performance indicator "So what are the right metrics for beef? Is it kilograms of meat per hectare of land? Is it calories per hectare? Is it protein in/ protein out? Is it animal welfare? What about farmer income? Right now, people from around the globe are working these details out"

firm[34]. This positive relation gives legitimacy to sustainability performance, in the eyes of business, as a valid indicator of business performance. The financial sector and financial units might see benefits in having a comparable indicator of firms and their associated risks in relation to sustainability challenges.

Market analysts are rating companies based on sustainability performance, this performance is normally referred to as ESG performance (Environmental, Social and Governance). This is done to guide, mainly institutional investors, looking for more sustainable investments. These indicators are not based on a fixed definition of sustainability, it actually varies between sectors and industries according to one of the interviewees.

Link between sustainability performance and future capacity

Sustainability performance is an indicator of how well prepared the company is to face sustainability challenges linking the performance of today to the capacity in the future to attain value. An example of this preparedness is depicted by Orsato (2009) when addressing the strategy followed by Tetra-pak on product stewardship. Focusing on resource consumption and product disposal, the company prepared for future challenges which allowed to position it self as a market leader. Clearly there are many other factors affecting Tetra-pak's leadership, not just sustainability initiatives, and this is an aspect that became apparent on phase two of the present research.

Financial evaluation indicators are evaluating sustainability performance by reviewing preparedness and performance, which links to the capacity of the firm to respond to potential pressures in the future. Furthermore, it indicates the capacity of firms to generate value in future markets[35]. According to an interviewee working for an investment advisory firm, sustainability performance is an important factor that contributes to the management of uncertainty by managing risks.

A company with a solid sustainability performance reduces the uncertainty associated to future market pressures associated to sustainability challenges. To some extent sustainability performance would allow to bridge future capacity of a firm to generate value and initiatives performed today.

Sustainability performance as an information tool

As presented earlier in this section, business cannot expect complete information around sustainability challenges to embark in action, when challenges are as complex as the ones made explicit by a sustainability perspective.

Interesting information considerations are presented by an interviewee in relation to sustainability performance, "*Often what we do is discuss sustainability in the future as something very fluffy. Nonetheless when you look at a business you can see the exact dependence they got on certain resources. Subsequently that dependence can be projected in the future and related to the ecological and social limits so that business can operate within these boundaries (...) Then you can argue for what the business in 20 years has to be dependent on and independent of*"**An**. The interviewee continues to add, "*if you can relate those [social and ecological limits] to business, by saying that*

[34] There is still a lot of work being performed by the SIRP around the positive financial performance and sustainability performance. Nonetheless in a very conservative way, as put by an interviewees "firms that are investing in sustainability at least are not worse off".

[35] A well known and widely used indicator defines preparedness as an element that evaluates the companies processes and practices in relation to environmental challenges. Performance is the present impact on the environment in terms of natural resources use. Together preparedness and performance are equated, creating an index of overall environmental performance.

in 20 years time your business needs to be independent of a particular scarce resource and you have to be nice with the ecosystem. Take that as a measure of the ecological aspect of business and do the same thing with social aspects. And with that you can come up with a sustainability performance sort of Indicator"**An**. The interviewee points to research being performed by Johan Rockström as the guide to identify this ecological and social limits today and its projections into the future.

The previous paragraph exemplifies decisions making in a complex system, where choices are difficult to determine. Therefore, rather than focusing on uncovering information for prescriptive action, decision makers can discern between favorable and unfavorable situations and dictate action accordingly. In this sense sustainability performance is a very interesting information tool to guide action, it contributes to discern from desirable to less desirable scenarios.

Additional considerations around sustainability performance

An interviewee stated in relation to sustainability performance as an indicator, "*if you measure your sustainability performance you need to start with an analysis of the company's business, the products in the market place and their footprint, what will be the case in a few year from now (...). And when we have done that, then of course you decide on your performance metrics. Which indicators are essential. I mean we can't have a forest of indicators. We need perhaps five*".**L** Clearly, the development of a sustainability performance is a challenge in it self and what has been pointed out in this section is the use of an indicator, in connection to the challenges encountered in phase two of empirical work.

The implications of sustainability performance in relation to competition are interesting. There will only be competition to achieve the best possible sustainability performance once this represents private benefits for the company. This ties then to how a company can create value out of sustainability initiatives. An easy example is, how a performance standard for energy consumption per unit of economic output in a given industry can foster competition to achieve the best cost efficiency practice. In relation to consumers, energy performance communicates either benefits that can be extended through the product or brand and reputation benefits for the best in class energy performer (as something that society is starting to value). Best in class companies might make a business out of profiting from their practices by reselling their knowledge.

One of the findings from the empirical work performed for this researched pointed the association of sustainability initiatives to risk rather than opportunities as a reason for a preference for reactive initiatives. What is being discussed here around sustainability performance does not contribute directly to point in the direction of where the opportunities around sustainability are, at least not major opportunities. The reason for this is that sustainability performance is an evaluation tool, which could contribute to enhance the evaluation made via financial tools.

Closing remarks

This research departed from sustainability being portrayed in literature as a business megatrend. The response from the business sector appears to be mainly through reactive initiatives. The difficulty to evaluate and appropriate the value out of sustainability initiatives appears as a possible explanation for this preference.

With this in mind an exploration of sustainability performance as an element that could contribute with providing useful information to evaluate business initiatives was advanced in the discussion section of this paper. The logic behind focusing on sustainability performance is that, useful information that could allow business to reduce the perceived uncertainty and therefore act more

decisively, could result in transformative business models which would allow for the appropriation of the value generated[36].

Sustainability performance as a business information instrument could contribute to link the future capacity of a firm to create value with sustainability initiatives performed today. At the same time, the logic of performance based standards[37] allows to scale sustainability performance through the economic market logic. Therefore, affecting the aggregate results and so the relation with the 'greater' sustainability challenges.

There is a need for research regarding a sustainability perspective to sit closer to the social actors that are part of the challenges investigated. The understanding of what motives and drives actors as well as how the actors understand the world in which they act is very important to steer action in a desired direction.

The focus of the research process was not on business evaluation instruments. For this reason there is not an extensive account of other evaluation or reporting instruments which might have added to the discussion of sustainability performance as a complementary business evaluation instrument. This might be an avenue for further research.

Additionally as further research, efforts on business models capable of appropriating value out of sustainability initiatives, is definitely crucial for what will be discussed in the earth summit 2012 around green economy.

[36] An example is a business model that allows the appropriation of value out of saving energy.

[37] As presented previously in the discussion section.

7. References

Adger, W.N., Social and ecological resilience: are they related? Progress in Human Geography, 2000. 24(3): p. 347-364

Arvidsson. S. 2003. Demand and supply of information on intangibles: The case of knowledge-intense companies. Lund University Press.

Barton, D. 2011. Capitalism for the long term. Harvard Business Review. March 2011.

Berns, M. et al. 2009. The Business of Sustainability: Findings and Insights from the First Annual Business of Sustainability Survey and the Global Thought Leaders' Research Project. MIT Sloan Management Review, Special report.

Bryman, A. 2008. Social research methods. Oxford University Press. Third edition.

Clark, W.C. and N.M. Dickson, Sustainability Science: the emerging research program. PNAS, 2006. 100(14): p. 8059-8061

Clay, J. 2011. Roundtables help solve problems on a global scale: Agreements between committed and influential players within a sector can speed up progress towards sustainability. Guardian Professional Networkguardian.co.uk, Published online Thursday 21 April 2011 11.55 BST. Available online at: http://www.guardian.co.uk/sustainable-business/problem-solving-global-scale-roundtables-collaboration?INTCMP=SRCH Accessed: 28 April 2011

Chia, R. Holt, R. 2009. Strategy without Design: The Silent Efficacy of Indirect Action. Cambridge University Press.

Collins, D. Montgomery, C. 2008. Competing on Resources. Harvard Business Review July–August 2008

Denis, E. PÔ, J. 2010. Information financiere: a la recherche du long terme. Revue d'economie financiere

Drucker, P. 1984. A new look at corporate social responsibility. The McKINSEY Quarterly. Autum 1984

Enderle, G. 2009. A Rich Concept of Wealth Creation Beyond Profit Maximization and Adding Value. Journal of Business Ethics (2009) 84:281–295

Esty, D. Lubin, D., 2010. The Sustainability Imperative: Lessons for leaders from previous game-changing megatrends. May 2010 Harvard Business Review.

Ferguson, C. 2010. Inside Job. Documentary. Sony Pictures Classics.

Figge, F. Hahn, T. Schaltegger, S. Wagner. M. 2002. The sustainability balanced scorecars - Linking sustainability management to business strategy. Business Strategy and the Environment Bus. Strat. Env. 11, 269–284 (2002) Published online in Wiley InterScience (www.interscience.wiley.com).

Freeman, E. 1994. The politics of the stakeholder theory: Some future directions. Business Ethics Quarterly, Volume 4, Issue 4

Freeman, E. et al. 2003. Focusing on Value: Reconciling Corporate Social Responsibility, Sustainability and a Stakeholder Approach in a Network World. Journal of General Management Vol. 28 No. 3 Spring 2003

Friedman, M. 1970. The Social Responsibility of Business is to Increase its Profits. The New York Times Magazine September 13, 1970

Galeno, E. 1971. Las venas abiertas de America Latina. Siglo veintiuno editores s.a.

Haanaes, K. et al. 2010. Findings from the 2010 Sustainability & Innovation global executive study and research project: The 'Embracers' Seize Advantage. MIT Sloan management review research reports winter 2011

Haines-Young, R., M. Potschin, and D. Chesire, Defining and identifying Environmental Limits for Sustainable Development. A Scoping Study. Final Overview Report to Defra, Project Code NR0102. 2006, University of Nottingham, Centre for Environmental Management: Nottingham, UK

Hall, R. 1993. A framework linking intangible resources and capabilities to sustainable competitive advantage. Strategic Management Journal, Vol. 14, (1993)

Hall, J. Vredenburg. H. 2003. The Challenges of innovation for sustainable development. MIT Sloan Management Review fall 2003.

Hart, S.L., 1997. Beyond greening: Strategies for a sustainable world. Harvard Business Review. January - February 1997

Hart, S.L., Milstein, M.B., 1999. Global Sustainability and the Creative Destruction of Industries. Sloan Management Review; Fall 1999; 41, 1

Hart, S.L., Milstein, M.B., 2003. Creating sustainable value. Academy al Management Executive, 2003, Vol. 17, No. 2

Hazy, J. Torres, M. Ashley, A. 2008. Reconceptualizing value creation with limited resources. JOURNAL OF TECHNOLOGY MANAGEMENT & INNOVATION. Journal of Technology, Management and Innovation. 2008,Volume 3, Issue 3

Hindle, T. 2009. Value creation: The ultimate measure by which a company is judged. The Economist online. Available at http://www.economist.com/node/14301714. Accessed March 14 2011.

Hockerts, K. 2007. CSR-Driven Innovation: Towards the social purpose of business. Available at www.csrinnovation.dk

Jacobides, M. 2010. Strategy Tools for a Shifting Landscape. Harvard Business Review. January February 2010.

Jessop, B. 2002 Liberalism, Neoliberalism, and Urban Governance: A State-Theoretical Perspective. Blackwell Publishers

Johnson, M. Christensen, J. Kaggerman, H. 2008. Reinventing your business model. Harvard Business Review December 2008

Kaplan, R. Norton, D. 2004. Measuring Readiness of Intangible Assets. Harvard Business Review. February 2004.

Kim. W.C, Mauborgne, R. 2004. Blue Ocean Strategy. Harvard Business Review. October 2004

Laufer, W. 2003. Social Accountability and Corporate Greenwashing. Journal of Business Ethics 43: 253-261, 2003

Magretta. J. 2002. Why business model matters. HBR spotlight: Practical strategy. Harvard Business Review May 2002.

Maskell, P. 2001. The Firm in Economic Geography. Economic Geography Volume 77, Number 4, October 2001. Clark University

Meadows, D. Meadows, D. Randers, J. 2006. Limits to growth: The thirty year update. Earthscan

Nidumolu, R. Prahalad, C. Rangaswami, M. 2009. Why sustainability is now the key driver for innovation. September 2009 Harvard Business Review.

Norén, G. 2004. The role of business in society:Questions and answers on the role of business in society. Confederation of Swedish Enterprise

Orsato, R. 2009. Sustainability Strategies: When it pays to be green? INSEAD Business Press. Published by Palgrave Macmillan.

Osterwalder, A. Pigneur, Y. 2002. Business Models and their Elements. Position Paper for the International Workshop on Business Models, Lausanne, Switzerland, 4-5 October 2002

Osterwalder, A. Pigneur, Y. Tucci, C. 2005. Clarifying business mdels: Origins, present and future of the concept. Communications of the Association for Information Systems (Volume 16, 2005) 1-25

Osterwalder, A. Pigneur, Y. Tucci, C. 2009. Business Model Generation. Preview available at www.businessmodelgeneraton.com

Ostrom, E., A General Framework for Analyzing Sustainability of Social-Ecological Systems. Science, 2009. 325(24 July): p. 419-422

Pitelis, C. Vasilaros, V. 2010. The determinants of value and wealth creation at the firm, industry and national levels: A conceptual framework and evidence. Contributions to Political Economy (2010) 29, 33–58

Porter, M.E. 1992. Capital Disadvantage: America's Failing Capita investment System. HARVARD BUSINESS REVIEW September-October 1992

Porter, M.E. 1996. What is strategy? Harvard Business Review. 1996

Porter, M.E. 2001. Strategy and the internet. Harvard Business Review. March 2001.

Porter, M.E. 2008. The five competitive forces that shape strategy. Harvard Business Review. January 2008.

Porter, M.E., Kramer, M.R. 2006. Strategy & Society: The Link Between Competitive Advantage and Corporate Social Responsibility. Harvard Business Review • december 2006.

Porter, M.E., Kramer, M.R. 2011. Creating shared value: How to reinvent capitalism—and unleash a wave of innovation and growth. HarvardBusinessReview January–February2011

Porter, M.E., Reinhardt, F. L. 2007. A Strategic Approach to Climate. Harvard Business Review. October 2007

PÔ, J.D. 2010. L'entreprise de l'apres-crise: Favoriser une meillure prise en compte du longe terme. Rapport du groupe de travail de l'insitut de l'entreprise preside par Jean-Francois Roverato et Serge Weinberg. Janvier 2010.

Rada, J. Trisoglio, A. 1992. Capital Markets and Sustainable Development. The Columbia Journal of World Business. Fall & Winter 1992

Rappaport, A. et al. 1987. Shareholder returns and corporate excellence. The journal of business strategy.

Rappaport, A. 1992 CFOs & Strategists: Finding a common framework. Harvard Business Review.

Rappaport, A. 2006. Ten ways to create shareholder value. Harvard Business Review.

Redclift, M. 2005. Sustainable development (1987-2005) – An oxymoron comes of age. Journal Sustainable Development. Volume: 13 Issue: 4 Pages: 212-227 Publisher: Wiley

Reinhardt F. 1999. Bringing the environment down to earth. Harvard Business Review July - August 1999

Rockström, J., et al., A safe operating space for humanity. Nature, 2009. 461(7263): p. 472-475.

Rose, S. 2010. Positive action from business. Video online available at: http://www.21stcenturychallenges.org/challenges/can-the-uk-ever-be-sustainable/media-gallery/video/sir-stuart-rose-positive-action-from-business Accessed: april 26 2011.

Rotmans, J., Societal Innovation: between dream and reality lies complexity, in Inaugural Addresses, Research in Management Series. 2005, Erasmus University Rotterdam

Semanova, N. Hassel, L. 2008. Financial Outcomes of Environmental Risk and Opportunity for US Companies. Sustainable Development Sust. Dev. 16, 195–212 (2008) Published online in Wiley InterScience (www.interscience.wiley.com)

Semanova, N. Hassel, L. Nilsson, H. 2010. The Value Relevance of Environmental and Social Performance: Evidence from Swedish SIX 300 Companies.

Seddon et al. 2004. The case for viewing business models as abstractions of strategy. Communications of the Association for Information Systems (Volume13, 2004) 427- 442

Silverman, D. 2005. Doing qualitative research. Sage publications.

Thomson, L. 2009. Shareholder Value and Your Sustainability Goals. Boards and Shareholders. Compliance Week. www.complianceweek.com 888.519.9200 June 2009.

UNEP, 2011, Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication - A Synthesis for Policy Makers, available at: www.unep.org/greeneconomy Accessed March 18 2011

Young, S. O'Byrne, S. 2001. EVA and value based management: A practical guide to implementation. McGraw Hill

8. Annex 1 a

Body of the email sent to phase one interviewees

The research question that i am using as a guide, though I do not intend to fully answer given its broadness, is:

How has sustainability (i.e. environmental and social challenges) affected the value a company can generate?

The starting point for the research is how sustainability, as proposed by business academic literature and some recognized business leaders, has modified the business landscape and consequently the capacity of firms to create and deliver value. Assuming that sustainability is addressed strategically, i would like to touch on the following topics

Business landscape and sustainability
Sustainability and long term performance
Business value proposition and sustainability

9. Annex 1 b

Guide for semistructured interviews phase one

The following have to be considered more as personal notes to guide a conversation than an interview guide. This guide was not followed strictly and along the interview process after each interview it was modify to accommodate new perspectives.

According to an MIT CEOs survey. Business see as their main challenges, innovation to achieve competitive differentiation, growing revenue and cost reduction. Sustainability is considered as an additional challenge.

- Why is sustainability not being considered as an element that contributes to innovation, or growing revenue?
    - Is it a matter of understanding what sustainability means for the business sector?
    - In relation to the revenues generated by business as usual are sustainability strategies generating significant tangible business value?
    - What is lacking then in this understanding?
    - Sustainability challenges are complex in essence, has this been a factor that affects the action of business?
    - Which is the relation of sustainability business strategy in relation to the time perspective?

It appears as if today sustainability initiatives, relative to business as usual, are not paying today but preparing the companies for a coming future.

- What is your take on this?
- What is different in this future that sustainability action is valuable?

Some people have mentioned how sustainability issues are a matter of business survival, and considering them as strategic issues is a matter of the past

- What is your take on this?

There is a tension between financial and strategic units in companies. To some extent it has to do with the capacity of financial models to incorporate intangible information. This is the challenge of creating the business case for sustainability.

- Do you see a trend in the financial sector and financial units to account for sustainability related intangible value?
- How do you perceive the dynamics between strategic and financial units are evolving?

On other interviews people have mentioned that sustainability performance is not rewarded by the market.

- What is your take on this?
- How could sustainability performance be used?

10. Annex 2

Guide for semistructured interviews phase two

The following have to be considered more as personal notes to guide a conversation than an interview guide.

The formulation of the questions deferred whether the interviewee was a involved in the financial sector or involved with business consulting. The subject around which the conversation was presented was the financial business case of sustainability.

Financial interviewees - SIRP researchers, financial sector professional

Most of the initiatives are cost related, (resource efficiency, waste management, supply chain scandals). Not many of them are opportunity based.

- Do they not contribute to revenue growth, or product innovation?

According to other interviewees (mainly business strategy consultants) an issue that appears often is the problem of understanding the implications of sustainability for the business. And what seems to be associated with the narrow information that financial tools allow (intangibles and time perspective).

The financial sector is based on risk, but the focus on risk does not allow to see the opportunities associated with sustainability initiatives.

- Which is your opinion on this?

Some interviewees have pointed out how the financial sector does not recognize the 'sustainability performance' of companies.

- What do you think about this?
- Can sustainability performance be considered as a good indicator of the future performance of a company and the potential of a company to create value in the future?

Bold decision, departing from the advice of financial units, is sometimes the case of sustainability initiatives when aiming to create value out of them (the case of Tetra-pak where product stewardship returns are hard to quantify, in a big part they are intangible).

- Which tools or models are being used to assess the sustainability of companies?
- Are intangible values accounted for?
- To which extent is financial information (book accounting, business cases, stock value) a good indicator of the value that a company generates and can generate?
- Which intangibles are considered and how are they being weighted?

Is sustainability considered independently from other business decisions when it comes to investing in a particular company? If the information is gathered independently how does it relate to other elements from the company?

Are the instruments and tools available facilitating the understanding of the sustainability performance for the investments made?

Which are the conditions for a sustainability investment to get a green light? Is it the same as for other investments?

Is sustainability performance reviewed? How is long term profitability of a firm evaluated or measured?

Which is the time frame and acceptable returns on sustainability investment in relation to other investments?

Is there a difference on the sectors where the sustainable investments are being directed? Are there any considerations on company size?

Can it be expected for a significant portion of investments from private sector including pension funds to go for sustainable projects?

Business strategy professionals

Bold decision, departing from the advice of financial units, is sometimes the case of sustainability initiatives when aiming to create value out of them (the case of tetrapak where product stewardship returns are hard to quantify).

- What do you consider that this leaders see that in particular financial decision making tools are not revealing?

How are you dealing with strategy formulation and the tension between long and short term performance?

- Which are being used as long term performance indicators?
- How are sustainability strategies creating value in the future for the company?
- How are sustainability strategies contributing to expand the time horizon of business?
- How are sustainability strategies contributing to create value in the future?
- Sustainability in general is considered as adding value to the long term performance of a business?
- Is this long term performance being qualified or quantified to aid formulate and track sustainability strategies?
- How is it being qualified and quantified?

Financial performance is considered as method to evaluate a business strategy.

- Which can be the role of sustainability performance?
- Should it be associated to the financial performance in an index? Should it be an independent performance indicator?
- Is sustainability performance being benchmarked?

The business case appears to be completed normally by big companies and in some cases it is related to efficiency, risk avoidance. It does not seem to be the case for smaller companies, where efficiencies can give less margin of operation.

- Is the role of small companies to follow or work in disruptive innovations?

Which tools or models are being used to assess the sustainability of investments?

- Are intangible values accounted for?
- Which intangibles are considered and how are they being weighted?
- Which timeframes for sustainability investments to payback?

When reporting sustainability information is it done independently from other reporting, and if so how is it being associated to the value a business generates?

11. Annex 3

Business model theory extension

In recent business literature the concept of business models has been introduced to describe how a business creates and delivers value (Osterwalder & Pigneur 2002; Magretta 2002; Osterwalder et al 2005; Johnson et al 2008). Business models frame the value proposition of a business as the bundle of products and services that create value for a specific segment of society (Osterwalder & Pigneur 2009). This is a relevant notion given the increasing use of business models in the business sector.

Right after the concept of business model was introduced there was some debate on the use and usefulness of the term business model and in particular in relation to business strategy (Porter 2001; Magretta 2002; Seddon et al. 2004). In spite of this the term has continued to be widely used by business literature. Business model describes how the pieces of the business fit together, while strategy is more concerned with competition; strategy is doing better while being different (Porter 1996; Magretta 2002).

Customer value proposition is composed of three elements: The target customer, the customer fundamental need or problem and an offering that will satisfy this need. This defines the what and the how of the value being delivered.

Profit formula defines how the company creates value for itself and it is composed of a revenue model, a cost structures, margin model and resource velocity (i.e. resource utilization and turnover; Includes lead times, throughput, inventory turns, asset utilization)

Key resources needed to deliver customer value proposition (People, technology, equipment, information, channels, partnerships, brand)

Key processes which allow to deliver value to the customer in a repeatable and scalable manner. Processes such as design, R&D, sourcing, manufacturing, marketing.