Impacts of Sustainability: A Multilevel Synthesis and Research Agenda

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ABSTRACT: The deterioration of environmental and societal conditions worldwide has initiated extensive discussions on what has been coined as sustainability and to what extent the relevant actions constitute an imperative or alternatively disorientate businesses from their main goal, namely shareholder value maximization. Despite the attention given on this topic, there exists a lack of empirical studies concerning how sustainability affects the economy and society. Therefore, it seems timely to set a research agenda that would focus on the examination of its impact on three levels, namely micro-level (i.e. individual social groups), meso-level (i.e. business) and macro-level (i.e. law, politics, non-governmental and public organizations). Equally important is also the understanding of how antecedents and moderators shape the impacts of sustainability initiatives at these levels. Based on an interdisciplinary conceptual framework, the article provides a synthesis of the extant literature and suggests avenues for future research on this issue.

KEYWORDS: Sustainability Impacts, Stakeholders, Business Strategies, Political- Legal & Institutional Infrastructure, Individual-Level Traits, Societal-Level Traits
INTRODUCTION

Mankind is on a course of environmental and social decay. According to the recent environmental footprint accounting index, planet Earth needs one year and four months in order to renew the resources mankind consumes annually (Ewing et al., 2008). According to the 2010 Corruption Perceptions Index nearly three quarters of the 178 countries in the index score below five, on a scale from 10 (highly clean) to 0 (highly corrupt) (Transparency International, 2010). On the other hand, businesses, stakeholders (e.g. consumers, employees) as well as public authorities don’t seem to have been convinced yet (i.e. they are skeptical and possibly cynical) of the necessity for the adoption of sustainability practices. This derives from the perception that the adoption of sustainability disorientates businesses from their main objective, which is the contribution to economic development and the supply of wealth to the shareholders (Karnani, 2010).

Under this perspective, several researchers doubt the adoption of sustainability activities (Reich 2008; Crook, 2005; Vogel, 2005), a fact that further demonstrates the need for the production of measurable results in order to confirm how much the adoption of sustainability practices constitutes a factor of positive change and, if so, through which mechanisms does this positive environmental and societal change take place (e.g. through innovation encouragement, through environmental and societal consciousness and education of business stakeholders).

Given the lack of integrated empirical studies concerning how sustainability affects the economy and society (European Commission, 2007, 2008), it is necessary for the research community to attempt to investigate if, how, and when sustainability has any effect at three levels of analysis, namely:

- at micro-level (level of individual social groups)
- at meso-level (business level) and
- at macro-level (level of law, politics, non-governmental and public organizations)

This research should be conducted through a number of theoretical and empirical studies that require an interdisciplinary approach. Given the above, the present article aims to discuss the necessity of directing research interest to the following:

I. The development of a holistic methodology for examining sustainability practices (i.e., a methodological sustainability toolkit). This will include a number of tools for the clarification, diagnosis and prediction of behaviors and results which derive from sustainability practices. Researchers, executives of private and public organizations, legislators and policy makers, need methodologies and tools for the measurement of the sustainability effect, in order to be able to make decisions and design strategies and policies.

II. The supply of knowledge in reference to which factors are likely to facilitate the adoption of sustainability practices at a business level as well as at a level of individual social groups (citizens). For example: Which are the best practices internationally concerning institutional environmental infrastructure (pressure groups, legislative framework, cultural and social factors)? What is the role of state organizations in the encouragement of adoption of sustainability behaviors at a business as well as at a citizen level?

III. The mapping of business reality concerning a number of sustainability indicators and underlying factors (social, psychographic, macro-economic and market).

IV. The development of corporate governance suggestions. Some relevant, but still unanswered, research questions are the following: Do sustainability practices bear any positive or negative organizational results? Are they a factor of positive
change and if so, through which corporate governance mechanisms is this achieved? What are the benefits for businesses that decide to engage in the adoption of sustainability philosophies and practices? To what extent is it worth for businesses and public organizations to invest in sustainability practices? Is it better for a business to develop green products and production practices and be conceived by its stakeholders as a green business compared to its competitors or is it better to adopt the sustainability concept in a business charity logic (e.g. donations), namely a logic of a more peripheral rather than central strategy? Or, maybe a combination of both strategies is more appropriate?

The remainder of this article first discusses the notion of “sustainability” and then synthesizes current knowledge about the impacts of sustainability and identifies new research directions. Our conceptual framework is depicted in Figure 1. We organize our discussion around this framework, first considering certain impacts of sustainability at the stakeholder, business, and institutional infrastructure level and then specific antecedents and moderators of the impacts of sustainability, namely personality, social and market factors.

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Insert Figure 1 about here

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DEFINING SUSTAINABILITY

According to some authors, there is a great confusion in the literature regarding the concept of sustainability and its definition (McWilliams, Siegel & Wright, 2006). According to Marshall & Toffel (2005) by the mid-1990s, there were more than 100 definitions, leading to a definitional chaos that rendered the concept elusive and meaningless. Similarly Rodriguez et al. (2006) posit that there is significant variation in the way consumers and other business stakeholders, business executives, members
of non-governmental organizations, academic and public authorities, define sustainability.

One of the most widely used definitions is the one provided by the Brundtland commission in 1987 (Kates, Parris, & Leiserowitz, 2005). This commission defined sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. This definition has been criticized as being difficult to operationalize and therefore not useful in evaluating public policy and business decisions (Hult, 2011; Marshall & Toffel, 2005; Solow, 1991). The Dow Jones Sustainability Index (2011) defines corporate sustainability “…as a business approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments”. This definition of sustainability resembles the definition provided by the Johannesburg Declaration, namely “…..a collective responsibility to advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development—economic development, social development and environmental protection—at local, national, regional and global levels.” (Kates, Parris, & Leiserowitz, 2005). Similarly, the Center for Sustainable Enterprise (2011) defines sustainability “as a way of doing business that creates profits while avoiding harm to people and the planet”. These similar definitions have also received criticism in that they are too vague and follow an “all-embracing” approach. As Marshall and Toffel (2005, p. 673) state: “…using this definition what company does not practice corporate sustainability?”

Solow (1991) as well as Gatto (1995) take on a somewhat different approach to the definitional chaos that characterizes the notion of sustainability. They suggest that sustainability is a vague concept that is intrinsically inexact. It is something that
cannot be accurately calculated. Gatto (1995) goes as far to suggest that it is hopeless to try to give a commonly accepted definition of sustainability. This thought is also expressed in the writings of van Marrewijk (2003) who cites the statement made by the chairman of the Dutch Employers Association: “...there is no standard recipe: corporate sustainability is a custom-made process”. Similarly, Crane et al., (2008) attest to the definitional chaos that surrounds the notion of sustainability and propose that sustainability (it should be mentioned here that they use the term Corporate Social Responsibility instead of Sustainability) should be treated not as a construct but rather as a field of scholarship, rendering definitional work less important. In the same vein, Okoye (2009) suggests that Sustainability is an essentially contested concept namely a concept that by its very nature engenders perpetual disputes. Finally, Marshall and Toffel (2005) synthesize the current literature and review four sustainability definitional frameworks (i.e., the triple bottom line, the natural step, the ecological footprint, and Graedel and Klee’s sustainable emissions and resource use). They criticize the above mentioned sustainability frameworks on that they are ambiguous on what is to be sustained and propose a four-level sustainability hierarchy. Levels 1 and 2 cover issue related to human survival and basic health of people, level 3 covers species extinction and human rights; level 4 addresses values, beliefs and aesthetic preferences. Similarly, Kates, Parris & Leiserowitz (2005) provide a definitional framework of sustainability based on the notion of what is to be sustained, identifying three categories: nature (i.e., earth, biodiversity, and ecosystems), life support systems (i.e., ecosystem services, resources, and environment) and community (i.e., cultures, groups, and places).

On these grounds and for the purpose of developing the current study we define sustainability using the definition recently provided by Hult (2011). Hult (2011),
based on the definitional backdrop of a set of 10 articles published in a special issue of the Journal of the Academy of Marketing Science on sustainability, suggests that sustainability should be defined in such a way as to include economic, social, and environmental dimensions. He defines sustainability “…as the extent to which an organization strategically aligns itself with the market-oriented product needs and wants of customers and the interests of multiple stakeholders concerned about social responsibility issues involving economic, environmental, and social dimensions.”

Hult (2011, p. 5). Therefore in the context of this article, we approach the notion of sustainability employing the triple-bottom line framework, namely the underlying backdrop for recent work on sustainability, recognizing that though sustainability was initially seen as a matter of environmental concern only, it is now understood as a complex interaction of three dimensions namely economic sustainability, social sustainability, and environmental sustainability.

**IMPACTS OF SUSTAINABILITY ACTIONS**

Academic research focusing on the sustainability effect at a level of social groups, businesses, institutions, political and legislative infrastructure, is at the first stages of its development (McWilliams, Siegel & Wright 2006). In what follows, we describe the state-of-the-art views on the subject at three levels of analysis: a) at a stakeholders’ level, b) at a business level, and c) at an institutional and political initiative level.

**Impacts of Sustainability at the Stakeholder Level**

According to sustainability proponents, businesses have now significant reasons for becoming more environmentally responsible. Perhaps the most important of these reasons is that primary business stakeholders now expect them to deal with
environmental matters. The satisfaction of the expectations of these groups concerning environmental matters likely bears significant benefits for businesses. The main argument is that, through this satisfaction, businesses and organizations gain access to important/crucial resources which stakeholders have at their disposal (Wang et al., 2008). These resources are essential for the competitiveness and the survival of a business, especially in over-competitive economies.

Beyond the theoretical discussions about how the concept of sustainability is eventually defined and what the levels of citizens’ environmental consciousness are, a number of important relevant research issues also exist. More specifically, there seems to be a need for research into how various social groups react and form associations concerning a) the concept of sustainability and b) the environmental practices of businesses. In reference to these matters, the current literature is fragmented and seems to focus on one stakeholder, the consumer (e.g. Barone et al., 2000; Luo & Bhattacharya, 2006). Nevertheless, it seems that, beyond consumers, there are other stakeholders, such as employees, shareholders etc., that the idea and practices of sustainability have a significant effect on (Sen et al., 2006). What seems to rise as an important research issue in the literature is the creation of a complete theory for the formation of stakeholder corporate associations towards organizational sustainability practices. This theory will offer generalizations, rules and systematic outcomes concerning how different groups perceive sustainability practices and, under which circumstances they are most likely to accept them.

Finally, another important research issue refers to the investigation of specific and more appropriate sustainability practices. Executives of organizations need to know the best possible way to plan sustainability activities. If we suppose that sustainability is something that has to be done (which means that it has benefits for the organization,
and the stakeholders), the subsequent question for executives and decision-makers is how to design and implement such activities. *Which areas of environmental activity should they give priority to? Will the activities concern local societies or the global community? What is the best way for the various stakeholders to be involved in them?* According to Porter & Kramer (2004), the literature is quite silent and only a few studies have been implemented on this subject. Altogether, these observations lead to the following research goals.

1. Using the above knowledge (definitions and theoretical dimensions of sustainability) as well as the proper techniques, researchers should create a toolkit for measuring (and diagnosing) sustainability levels of various stakeholders.

2. Based on the theoretical clarification of the term of sustainability, and aiming at creating a complete theory of stakeholder corporate associations formation, research should proceed with the concurrent examination and comparison of those different stakeholder groups as well as of the interdisciplinary fields that investigate them (Consumer Behavior, Human Resources Management, Financial Management, Social Psychology, etc). It is important to point out that the researchers’ goal should be to contribute to the literature a theory of perceptions, associations and behavioral reactions to environmental activities of organizations and businesses. The theory should be common to all primary stakeholders that affect (and are affected by) a business. In the context of these investigations, more specific technical issues should be examined, such as: a) the process through which the stakeholders’ perceptions of environmental activities are converted into behavioral predispositions (that is, which variables have an intermediary role e.g., organizational identification, emotional bond, trust, etc.), b) the role played by the psychosocial benefits which various stakeholders perceive to get from
sustainability practices (which are these benefits and how do they affect behavioral intentions). Specifically, for the investigation of the content of psychosocial benefits, researchers should thoroughly examine needs and motivation theories (e.g., Bhattacharya et al., 2009).

Impacts of Sustainability at the Business Level

Effects on Business Strategy

The different sustainability strategies that companies can fall along a continuum between two endpoints: Institutionalized programs and Promotional programs (Pirsch, Gupta, & Grau, 2007). Institutionalized programs are part of a more comprehensive approach allowing the firm to position itself wholly in terms of sustainability, i.e., becoming the “environmental responsible” corporate brand (Du, Bhattacharya, & Sen, 2007). On the other hand promotional sustainability programs are more peripheral, since firms continue to position themselves on other traditional competitive dimensions (e.g., value for money) (Du, Bhattacharya, & Sen, 2007). In a similar vein, Hart (1995) suggested that corporate sustainability strategies can be classified into a) pollution prevention strategies, b) product stewardship strategies, and c) sustainable development strategies. Pollution prevention strategies can be classified as peripheral strategies, whereas product stewardship and sustainable development strategies can be classified as institutionalized programs. The abovementioned organizing frameworks seem to also resemble Drucker’s effort to differentiate between two types of social responsibilities: a) social impacts or what business does to society, and b) social problems or what business can do for society (Drucker, 1974; Smith, 2009). A number of interesting research questions are yet unaddressed. For example, which is the appropriate environmental strategy that businesses should
follow? How much is enough in the context of sustainability initiatives? Undoubtedly, research in this field is still at an early stage (Pirsch, Gupta, & Grau, 2007; Smith 2009). Recently, Smith (2009) tried to provide a theoretical answer to this question elaborating on Drucker’s thinking. According to this line of thinking, firms should decide on the “how much” question by differentiating between two types of social responsibilities: social impacts or what business does to society and social problems or what business can do for society (Smith, 2009). Drucker ascribed a greater obligation to attend to social impacts rather than social problems. In the same vein, Drucker considered three limits on CSR in response to social problems that firms should consider: performance of the firm’s mission (i.e., the firms first responsibility is to its mission), firm competence (i.e., is the firm capable enough to act?), and authority (i.e., firms should not usurp government authority. This discussion leads to the following research goals.

3. Building on the theoretical foundations provided by Drucker’s thinking, researchers should empirically examine which sustainability strategy is likely to be more beneficial to the firm, essentially providing answers to the “how much” question. Some relevant research studies examining the “how much” question in the context of corporate philanthropy and socially responsible investing have already started to emerge (Wang, Choi, & Li, 2008).

4. In the case of empirical evidence suggesting a non-linear relationship between sustainability and corporate performance (i.e., concave or convex functional relationships), researchers should theoretically and empirically examine whether there are moderating or context specific factors tempering, shutting-off, or strengthening this relationship. For example, Smith (2009) suggests that adequate
answers to the “how much” question can only be found on a case by case or industry by industry basis.

**Effects on Marketing Strategy**

The Marketing discipline has not been immune from concerns about social and environmental decay (Chamorro, Rubio & Miranda, 2008). Despite the enthusiasm for sustainability that has been echoed in the marketing literature, when marketing scholars investigate sustainability, they have a tendency to focus on very limited dimensions of this construct (Maignan & Ferrell, 2004). For example, marketing has developed expertise on cause-related marketing (e.g., Barone et al., 2000) and environmental marketing (e.g., Drumwright 1994; Menon & Menon, 1997), but has established little connection between these two research areas (Maignan & Ferrell, 2004). Building on this research gap, the discussion below focuses on the need to advance the research agenda by associating cause-related with environmental marketing.

The concept of cause-related marketing came up in the field of marketing during the early 80’s. Since then, this term has been used by businesses to describe their effort to positively influence the customer through the “common support” for the “good cause” of a non-profit organization (Varadarajan & Menon, 1988). Moreover, according to the IEG sponsorship report (2009), more than $1,52 trillion was internationally spent in 2008 on such activities. This amount, combined with the continuously increasing tendency to adopt such activities that has been observed, shows how important marketing activities that include the element of offer are considered nowadays. Cause-related marketing refers to activities with a mid-short term horizon that rely on the cooperation of a business and a non-profit organization. Its main feature is the offer, for
a certain time period, of a part of a product’s sales to a “good cause” or a non-profit organization.

Several studies have been carried out so far aiming at the clarification of the term cause-related marketing, the conditions in which it prospers, as well as the consequences it has in terms of performance not only for the business but for the non-profit organization that participates and society as a whole (e.g. Ross et al., 1992; Adkins, 1999; Welsh, 1999; Barone et al., 2000).

However, the hard times we live in and the challenges this involves for businesses, render the strategies that will bring long-term positive results in the business-customer relation essential. Typical cause-related marketing activities, although proven successful, can be considered a rather short or mid-term effort for differentiation and brand loyalty enhancement (Lafferty, 2009). This fact has led to the development of cause branding, which is viewed as a facet of cause related marketing, representing a long-term orientation (Cone et al., 2003).

This new concept has recently come to the front and still remains unexplored. Specifically, cause-branding refers to a more long-term strategy according to which the business and its brands are placed in the market in a way that their main values are connected in the customer’s mind with a “good cause”. In the context of cause branding, the fundamental values of businesses and their brands are implemented through the continuous support of a “good cause” and the co-operation at the level of a common brand with a non-governmental organization which incorporates the same or similar values. A number of studies in the past have shown how important it is for every business to form the appropriate positioning which successfully differentiates the business and its brands from its competition and which is in perfect harmony with its fundamental values (e.g. Urde, 1999; Keller, 2000; Ghodeswar, 2008). In an
attempt to link CSR with branding, Klein & Dawar (2004) argue that CSR plays “a role in consumers’ brand and product evaluations”, while Curras-Perez et al. (2009) postulate that “CSR is one of the most commonly used arguments for constructing brands with a differentiated personality which satisfy consumers’ self-definitional needs”. In this respect, cause-branding may constitute an effective alternative strategy in the effort to create positive brand evaluations and differentiate its products from competition, as well as a successful strategy of creation of strong bonds with the customers through the alignment of business goals and environmentally-related commitments. However, companies need to be cautious, since they are vulnerable to activism that targets their brand narrations, if such narrations clash with perceived social and environmental problems in the value chain behind the branded corporation (Smith, Palazzo & Bhattacharya, 2010).

Although in the branding literature we come across a significant number of surveys about the effective way of developing strong corporate or product brands (Doyle, 1990; Aaker, 1996; de Chernatory, 1999; Keller & Lehmann, 2006; Keller, 1999; 2000; 2008), cause-branding is barely examined (e.g. Hamlin & Wilson, 2004). The only research attempts that have been carried out in a relevant field and can offer useful insights, without touching the subject of cause-branding though, concern issues of co-operation between businesses at a co-branding strategy level, that is the development of a common brand between two profiteering businesses (e.g. Rao & Ruekert, 1994; Park et al., 1996; Geylani, 2008).

Given the lack of scientific research in the field, as well as the recent turn of businesses towards brand level co-operation with non-profit environmentally orientated organizations, it is advisable to study these issues thoroughly: How is cause-branding exactly defined? Based on which criteria should a business choose the
“good cause” which it will become strategically connected with? What are the consequences of a successful cause-branding strategy for the business which adopts it as well as for the environment particularly and society as a whole? The research carried out so far in the field of brand building has brought forward, as being of utmost importance for the successful brand development, issues such as: the dedication of top management to the effort of strong brand development (e.g. Tybout and Calkins, 2005; Vallaster & de Chernatory, 2005), the continuous co-ordination of all marketing activities so as not to communicate conflicting messages about the substance of the brands (e.g. Davis et al., 2002; Keller & Lehmann, 2006), the creation of a unique brand identity which includes functional as well as emotional benefits for the customers (e.g. Kapferer, 1997; Ghodeswar, 2008), the development of the appropriate brand positioning in the customer’s mind which is in perfect harmony with their fundamental values (e.g. Urde, 1999; Keller, 2000), and executive attraction and training policies which are aligned with brand values (e.g. Aaker, 1996; de Chernatory, 1999). Are all the above, however, equally important in the brand development through a cause branding strategy (especially in the context of “green” entrepreneurship)? Are there any additional factors that play a special role in the specific strategy? On the basis of this discussion, the following research goal could be pursued.

5. Future research should theoretically clarify the term Cause Branding with an emphasis on environmental issues. Specifically, researchers should identify and operationalize the basic dimensions which make up a successful Cause Branding strategy.
6. Researchers should investigate factors and conditions (e.g. organizational characteristics, market characteristics) which affect the design and development of a successful Cause Branding strategy.

7. Researchers should examine the relation between the implementation of Cause Branding strategy and business performance in financial as well as marketing terms (i.e., customer loyalty).

8. Future research should also turn to the studies examining how consumers react to different Cause Branding strategies. Specifically, the objective of these studies will be to identify those characteristics which render a Cause Branding strategy successful in the way the target-public perceives it.

9. Researchers should also consider examining the consequences and effects of the Cause Branding strategy on the non-profit organization (or “good environmental cause”).

**Effects on Information Technology Strategy**

The concept of “Green Information Technology” (Green IT) is currently recognized as a crucial facilitating factor concerning the improvement of business sustainability practices. More specifically, Green IT seems to be able to play an important role in the recognition of business centers where there is excessive waste of energy and environmental resources in general. According to some researchers (Berthon et al., 2009), the benefits of Green IT are mostly traced outside the narrow framework of an Information Systems Department, since the information technologies, through procedures of mapping, measuring and checking, can render more efficient sustainability activities concerning the supply chain, the human resources management and the facilities administration. At this point, the “paradox” concerning
information technologies should be emphasized. More specifically, various researchers (e.g. Laitner et al., 2008) point out that the agenda should focus not only on how much energy ITs (e.g. data centers) consume, but also on how much counterbalance they bring about through the preservation of energy in other sectors of the economy, the function of which they support. For instance, it seems that the development of the Internet has contributed to the decrease of the diachronic energy/produced GNP index (how much energy is required for an increase by one unit of the GNP).

In reference to the influence of Green IT, the research literature is quite poor (Berthon et al., 2009). On the one hand, there have been efforts (mainly from consultants who focus on information technologies and who have not scientifically validated the methodologies they apply) to demonstrate the benefits of green IT, but most of them are of a theoretical nature and do not include thorough measurements or benefit justification. This can be explained by the fact that benefit mapping is a demanding process which possibly goes through the business both horizontally (at a process level) and vertically (at the level of individual functions/departments). On the other hand, the benefits from the adoption of green technologies are likely to be real and important, although an attempt to measure them quantitatively is difficult (Petrini & Pozebon, 2009). Given this fact, the main problem for businesses and organizations is to make clear how they are going to implement the dynamics of information technology in reference to the goals and practices of sustainability. This “how” has to do with research that will contribute to theory building but also practical methodologies of technologies towards greener IT. Chief Information Officers (CIOs) need specific directions and frameworks of green IT implementation. For example, Information Department executives, within the context of design and implementation
of a green system of collection, analysis and distribution of information (green business intelligence) should initially make a number of decisions concerning which “green” indicators the system will include and which business areas it will look in. At this point, there are no research suggestions which cope with this specific problem. Furthermore, information officers should decide on the technical tools which facilitate the process of collection, analysis and distribution of “green” information (both within the organization as well as out of it, e.g. in the supply chain) their storage and analytical processing. To this whole effort, we should also add the goal of hardware and software systems creation which will also be environmentally friendly.

The necessity for the existence of specific framework and methodology roadmaps becomes more imperative if one considers the concept of the paradox of IT contribution to the productivity of organizations (IT Value Paradox). According to this theory (Thatcher & Pingry, 2007), IT would become the solution to many problems and inefficiencies which were historically faced by organizations. Theoretically, this has both significant foundations and support. In practice, though, and in many sectors, these expected results in the increase of efficiency because of the introduction of IT have not been realized. A possible reason for this seems to be the lack of a methodological framework leading to this direction. The exact same phenomenon seems likely to turn up also in the case of green IT. Promises of environmental benefits –direct as well as indirect- are a lot, but without a specific methodological framework/ implementation guidelines, these promises are unlikely to be met. The previous discussion leads to the following research goals.

10. Future research should proceed with the creation of a theoretical framework/methodology which will initially describe the potential (direct and
indirect) benefits from the green ITs. This framework will guide managers on how to incorporate sustainability practices into the IT strategy, but also into the everyday operation of the organization with the help of green ITs. Specifically, the objective of this research will be to create theoretical and empirically validated frameworks that will help IT managers incorporate environmental information indexes into the performance measurement systems of the organization.

11. Future studies should also identify the needs of the organizations which desire the incorporation of environmental strategies in their operation, in terms of hardware and software (e.g. structure and content of data bases, OLAP tools).

Effects on Human Resource Strategy

In today’s economic and hypercompetitive business reality, organizations must work as hard as never before, in order to be successful at four levels of human resources strategy (C.B. Bhattacharya, Sen, & Korschun, 2008):

a) at the level of attraction strategies;

b) at the level of motivation strategies;

c) at the level of development strategies; and

d) at the level of retention strategies;

Generally, it seems that business reality is characterized by what some sources accurately refer to as “talent war” (Bartlett & Ghoshal 2002; Michaels et al. 2001). The question initially posed is if, how, but also when the sustainability philosophy and practices can help businesses design and implement human resources strategies and, of course, how human resources, in their turn, contribute to the sustainability goals the organization sets (Winstead, Woodhall, & Heery 1996; Daily & Huang 2001; Davies & Crane 2010). According to Rupp, Ganapathi, Aguilera & Williams (2006),
employees, as members of the organization, are concerned about, contribute to, and react to an organization’s evolving social and environmental consciousness. Franklin (2008), suggests that CSR may be a tool that companies use to compete for talent. In the same vein, Turban & Greening (1997) find that corporate social performance may provide a competitive advantage in attracting applicants. Literature on the subject of interaction between sustainability and human resource strategies is at its infancy and could be described as particularly poor (Rupp, Ganapathi, Aguilera, & Williams, 2006). Some of the significant research questions that have to be answered concern whether (is it to the organization’s benefit?), how (with what procedures), as well as when (under which circumstances) the organization will create employment positions (job-products) as well as systems of training, efficiency evaluation, reward and motivation which will incorporate the sustainability philosophy and practices. More generally, although there aren’t enough empirically documented studies yet, the current literature seems to agree that sustainability practices relate to the attraction and selection of the organization’s human capital.

12. Future research should describe current best practices concerning how environmental activities can affect the processes of selecting, hiring, training, motivating, evaluating and rewarding employees. Special attention should be paid to the study of training systems and especially to the extent to which training (through activities of employees’ involvement in environmental practices) can develop the cognitive moral of the employees (Goolsby & Hunt, 1992; Dubinsky et al., 2005) and therefore decrease tendencies of employees to engage in corrupt behaviors (particularly for employees who operate on the “borders” of the organization and come into contact with stakeholders outside the organization.
Given the increasing public pressures for improved environmental performance, the question for companies has become not whether to commit to a strong environmental record, but how to do so in the most cost-effective manner (Kleindorfer et al., 2005). In response to this question, the notion of Green Supply Chains has received substantial attention as the way to both improve a firm’s environmental performance and cut operational costs (Harris and Mumford, 2009). The concept of Sustainable or Green Supply Chain management combines environmental thinking and enterprise management for product design, material sourcing and selection, manufacturing processes, delivery of the final product to the consumer, and end-of-life management of the product after its useful life (Srivastava, 2007). Specifically, a recent study (Shang et al., 2010) has identified six Green Supply Chain management dimensions, namely green manufacturing and packaging, environmental participation, green marketing, green suppliers, green stock, and green eco-design. In this context, researchers have started working on computational intelligence algorithms for dealing with supply chain dynamics, vehicle routing and scheduling, cost-benefit analysis, urban distribution and reverse logistics (Green Logistics, 2010).

Another important strand of research deals with the measurement of the environmental performance of supply chains, including the definition of methodologies for the measurement of the environmental performance of the supply chain (Hermani et al. 2008) or the definition of the relation between the green supply chain initiatives and the supply chain performance for various branches of industrial production, such as energy production, petrochemical industry, electricity industry, and car industry (Zhu et al. 2007). In this context, researchers have also dealt with evaluating the effects of collaborative environmental practices of the supply chain on
the performance of the main production unit of the supply chain (Vachon and Klassen 2008) or the impact of environmental management systems of the focal business on the extension of sustainability practices along the supply chain (Darnall et al, 2008).

While companies have started modifying product design or packaging to address environmental considerations, have incorporated sustainability initiatives in their supply chain strategies and set carbon management goals as part of their manufacturing targets (IBM, 2010), yet they do so mostly internally and the supply chain perspective is rather limited. Linton et al. (2007) stress the need to move the focus of environmental management and operations from local optimization of environmental factors to consideration of the entire supply chain during the production, consumption, customer service and post-disposal disposition of products. The same authors argue that sustainable development is a rich area for academic research that is still in its infancy and has the potential to affect future government policy, current production operations, and identify new business models. The following points highlight some of the open research gaps in this area:

13. The environmental dimension of the supply chain performance has been investigated (Hervani et al. 2005) but has not been incorporated in a complete system of measuring supply chain performance. Therefore future research should address this gap as well as examine the relation between environmental collaborative supply chain practices and business performance not just of specific nodes in the supply chain but of the supply chain as a whole.

14. Future studies should also examine the impact of sustainable supply chain initiatives on marketing aspects and specifically on consumer perceptions, as a clear gap of interdisciplinary research is identified in this area.
15. In the reverse direction, Smith et al. (2010), highlight the need to further study the impact of marketing decisions on supply chain corporate social responsibility issues, including environmental performance.

16. Moreover, future research should also study the organizational and behavioral factors that affect the successful development and implementation of sustainability activities and practices in the supply chain, as well as the criteria that should support the selection of the appropriate practices.

**Effects at the Organisational Performance Level**

At its present stage, the pertinent literature is trying to investigate the effectiveness of the wider concept of corporate social responsibility, especially through studies that examine its effect on financial results (Husted & Salazar, 2006). Some of these studies seem to find that the positive performance of the business at a social responsibility level leads to positive financial results (Luo & Bhattacharya, 2006, 2009; Orlitzky, Schmidt, & Rynes, 2003). Despite the existence of such studies, the debate concerning whether corporate social responsibility positively affects the financial results of companies still exists (Margolis, Elfenbein, & Walsh, 2007). Specifically, on the issue of sustainability practices and the influence of its effective adoption on financial results, literature is even poorer (Barnett & Salomon 2003). It is important, at this point, to stress out that most of the studies that investigate the effect of corporate responsibility on financial results do not find a clear positive relation because of their probable unrealistic hypothesis that the relation is direct and that other factors of a non-financial nature do not interfere (Margolis, Elfenbein, & Walsh, 2007), e.g., the innovation benefits that are possibly enjoyed by a business which really adopts the philosophy of sustainability. Another reason for the existence of
conflicting results, is also the fact that most researchers consider the corporate social responsibility-financial performance relation to be linear. Just recently some research has started investigating the relation between corporate philanthropy and financial results and has come to the conclusion that the relation is non-linear and specifically inverted U-shaped (Wang et al., 2008).

The positive or not effect of the adoption of environmental practices can be examined also in fields other than that of economic performance. Research has shown that the reorganization of the production process based on principles such as pollution prevention as opposed to end-of-pipe controls leads to an important efficiency improvement as well as to a decrease of the production cost (Porter & van der Linde, 1995; Shrivastava 1995; Hart & Ahuja, 1996; Christmann, 2000). Along with the introduction of new green products and services, businesses enter new markets, thus resulting in a sales increase (Lefebvre et al., 2003).

It is very important to investigate the extent to which the degree of incorporation of ecological practices on the part of businesses is positively connected to the development of special skills, not always countable in economic terms, but able to give them a competitive advantage, according to the “green” sources and skills theory (Hart, 1995). The continuous and extensive engagement of a business with environmental issues often leads to innovations of the production processes and to the production of new as well as the improvement of the quality of the already existent products and services which, in turn, lead to cost advantages (Christmann, 2000). The development of organizational skills such as, for instance, the ability to creatively incorporate the views of the interested parties (stakeholder integration), the collective learning and the continuous innovation, has also been recorded as one of the
important benefits of proactive environmental strategy (Marcus & Geffen, 1998; Sharma & Vredenburg, 1998).

Research in this field has just begun and is particularly interesting. The theoretical approaches are plenty but there is a substantial lack of empirical results. Some issues open to investigation are the new skills, such as the green technologies management capacity, the green absorptive capacity, as well as the one of a corporate vision creation, but other uncountable results, with an emphasis on those which are related to innovation, will be analyzed as well.

This discussion informs the following research goals:

17. As a first step, future research should consider making use of archival data from secondary sources and investigate the relation between sustainability and financial metrics, such as sales and profit and various stock-exchange indicators (e.g. risk of “green” stocks, stock-exchange value of the business/Tobin’s q). At this level the relation between sustainability and profit should be investigated using the business and especially a large number/sample of businesses, as an analysis unit.

18. As a second step, future researchers should focus on a few selected companies and, having access to their archival data to investigate the relation between sustainability and profit as well as other financial metrics.

19. Researchers should also investigate the degree to which there are factors that moderate, multiply or even eliminate the relation of sustainability to profit. These factors likely refer to variables which have been characterized as economic- rather than social-related, such as innovation, advertising expenditure, expenses on research and technology, the ranking of the business in best work environment studies, etc.
20. Future research endeavors examining the impacts of social responsibility on companies’ financial results, should probably involve in their investigations variables relating to companies non-financial results as well. Research should focus on the effect of sustainability on intermediate to the profit variables, for example, on the variable of innovation, as well as on variables that relate to business stakeholders, such as, the co-creation of value through innovation, the organizational identification, the organizational pride, the cognitive moral development of the employees, etc. Therefore, in this context, researchers should look for variables which will describe the process of sustainability effect on profit.

**Impacts of Sustainability at a Level of Politics, Institutions, and Non-governmental & Public Organizations**

*Effects at the Political Level*

Another important defining factor for the adoption of sustainability practices is the role of the policy-makers and specifically of the state and government officials. An important role of the state mechanism is to ensure that companies do not cause any harm to the wider social good, including individual social groups as well as the environment. The role of public policy is to make sure that the social and economic change takes place in a fair way. Those who criticize corporate sustainability practices claim that they are used as a substitute for effective public policy (Reich, 2008). Governments and state organizations executives should define and mostly implement a regulatory framework which will control business behavior and responsibility (Reich, 2008). On the other hand there are voices questioning the ability of government to solve social and environmental problems. According to Drucker (1974,
Managers command the resources of society. But they also command the competence. It is, therefore, only logical that they are expected to take the leadership role and take responsibility for major social problems and major social issues.” An illustrative example concerning the effect of government policies on the adoption or not of sustainability practices has to do with the government of Australia. The Australian government proceeded to a number of approaches in order not to comply with the Kyoto Treaty in 1997, with its main argument being that signing the Kyoto Treaty would cause important financial losses for Australia more than for any other country-member of the OECD.

According to Nelson (2008), the academic literature is still rather silent concerning the issue of interaction of public policy and corporate sustainability practices. More specifically, Nelson reports that the relation of public policy, sustainability and social responsibility has received the least research interest in the wider corporate responsibility literature. The “interface” of public sustainability policy and corporate responsibility is expected to become more and more important in the following years through initiatives taken by public policy makers as well as through top business executives activities.

The main question that seems to be posed, concerns mainly not if, but how exactly public policy design can promote the concept of sustainability. Some initial studies apply comparative studies of a political, legal and institutional approach. More specifically, these studies seem to focus on the comparison of sustainability practices as they are implemented in different systems of corporate management and especially in the systems of the Anglo-American tradition and of continental Europe (Williams & Aguilera 2008). At its current stage, the existent relevant literature comes mainly from the United Kingdom. This is reasonable given the leadership demonstrated by
the political system of this European country in the promotion of environmental as well as social responsibility practices. We mention the example of former British Prime Minister Tony Blair, whose government promoted policies (which were implemented by countries such as France, Belgium, Germany and Holland) of environmental and social alignment of large investment pension funds. In the same context, the same political leadership promoted policies of transparency and reporting of revenue and operation (sustainability reporting) for two large companies of British interest (BP & SHELL), which draw energy products from rich in resources but still poor countries of the planet.

Given the lack of scientific projects concerning the effect of public policy (strategies and legislation) on the promotion of sustainability practices, the following research goals can be derived.

21. Researchers should consider investigating the mechanism translating public policy into sustainability practices (e.g. the design of policies for the promotion of corporate social responsibility affects social expectations and these, in turn, affect the adoption of sustainability practices). At this point it should be noted that researchers should separately examine the effect of political factors and factors of institutional environmental infrastructure (e.g. labor activism, activism by non-governmental organizations, pressures from investors etc.) (Williams & Aguilera, 2008)

22. Future research should focus on comparative studies which should include literature reviews, as well as in-depth interviews with politicians, members of parliament and officials in relevant ministries. At a first stage, reality in various national bounds should be described, in terms of environmental policies, as well as future perspectives and plans. At a second stage, there should be comparative
studies with environmental policies that come from different countries (e.g. Are there any differences inside the European Union? What degree of harmonization is the country at? What are the predictions?). In the context of such investigations, there should be in-depth interviews with officials of the EU responsible for the environment (e.g. Office of the Union Delegate for the Environment). Finally, at a third stage, field researchers could go on with a comparative study contrasting environmental policies among various countries (e.g. comparison of a country from the European South to one from the European North).

Effects at the Legal Level

The effect of sustainability at a level of public policy design has a very close relation to the effect of sustainability at a legislation level. Legislation originates and is applied by the political and government authority but in many cases legislation is practically cancelled by government policies (e.g. in the case of China, employees have strong labor rights derived from legislation, but thousands of them are in prison because of their attempt to use their legal rights) (Williams & Aguillera, 2008). Given this situation, the current article makes a distinction between the effect of sustainability at a public policy design level and the effect at a legislative framework design level.

As in the case of the relation of public policy with sustainability, so in the case of interaction of legislation with sustainability, literature is especially poor (Williams & Aguilera, 2008). It seems, however, that legislation plays an important role in the adoption of sustainability practices. A first example refers to recent legislative regulations about the mandatory creation of environmental and social responsibility reports from the part of the businesses in various European countries. For instance,
the Danish parliament passed a bill (16 December 2008) which obliges the largest companies, investment funds and state companies in Denmark, to include any information about social responsibility activities in their financial reports.

Generally, the literature refers to two correlating roles which legislation seems to play in its relation with sustainability practices: a) legislation creates social expectations/points of reference about what companies and organizations should do concerning issues of sustainability, b) in case legislation is not possible to be successfully applied, then, given the above expectations, a number of social forces (consumers’ demands, institutional investors’ demands, non-government organizations’ demands, employees’ demands) interact and force businesses to comply (or comprehend the importance of compliance) with the models set by legislation.

As an aside, it should be noted that, the necessity for the study of the relation between legislation and sustainability further arises from the effect of this relation on the existent corporate management theories (Doh & Guay, 2006; Williams & Aguilera, 2008). For instance, those who study corporate management theories have divided them into two theories which are also accompanied by geographical specifications: on the one hand, we have a corporate management theory which focuses on the satisfaction of the shareholders of the organizations and which derives from the Anglo-American political thinking and tradition, and on the other hand, we have the corporate management theory which focuses on the company stakeholders and derives from the European thinking and political tradition. According to Matten & Moon (2004), legislative traditions play an important role on which of the two corporate management theories is usually adopted by the top management of businesses and, therefore, on which forms of corporate social responsibility will be implemented (e.g.
companies which adopt the Anglo-American view, are likely not to give so much emphasis on sustainability, but on another type of corporate responsibility and especially on issues of financial sustainability and contribution of the company). The same writers point out that the different approaches of Europe and America on sustainability issues derive from the strictness of the legislative framework in these two Continents.

To sum up, literature has left some important research questions concerning the relation between legislation and sustainability unanswered.

23. Researchers should initially conduct comparative studies, mostly of a qualitative nature, in order to provide insights on best practices of sustainability legislative regulations. Researchers are encouraged to proceed through comparative studies, firstly to a description of legislation issues inside specific national bounds, and secondly, they will compare those findings to what stands in other countries.

24. Researchers should examine potential determinants of differences that may occur in cross-country investigations, as well as the consequences of those possible differences in the corporate management systems in the countries examined.

*Effects on Environmental Institutional Infrastructure*

Literature concerning the relation of sustainability and institutional infrastructure (i.e. public authorities and non governmental organisations) is also poor (Nelson, 2008; Williams & Aguilera, 2008). Existent studies seem to divide the institutional infrastructure of a country into three components which form and influence the formation of corporate management strategies (and therefore corporate responsibility strategies) through their interaction: a) institutions of a typical nature such as the
constitution, the laws and government policies, b) institutions of a non-typical nature, such as the social norms and c) organizational institutions, namely businesses, unions, non-government organizations. As earlier mentioned, the interaction of these three components creates the institutional framework into which businesses and organizations are asked to adopt sustainability practices. As in the cases of legislation and public policy which were discussed earlier, literature seems to need comparative studies in order to develop this specific sub-section of knowledge. For example, it would be interesting to investigate the role of non-government organizations in cases of adoption of sustainability practices from companies. Doh & Guay (2006) find that the role of non-government organizations is strengthened in Europe (compared to America), due to the existence of clear channels through which social partners participate in the decision making procedures. Some relevant research questions are: What exactly is the situation in various countries as far as non-government organizations are concerned? Are there best practices of non-government organizations’ involvement in sustainability practices? These questions still remain largely unanswered.

Furthermore, another issue of institutional infrastructure of sustainability has to do with state organizations themselves. Do they implement sustainability policies internally? How can their supply policies support sustainability practices in the market? How do citizens and employees in the public sector compare to other groups of stakeholders (consumers and employees in the private sector correspondingly) in reference to sustainability perceptions? The previous discussion informs the following research goals:

25. Research should examine the role of non-government organizations and public authorities in the facilitation or even the hindering of sustainability activities by
businesses. It seems that public authorities, as well as non-government organizations, can facilitate the adoption of business sustainability practices, (either) through the compliance role they have (legal abilities or pressure on legislators), or through the role of partnership, or through the role of “endorsement” of sustainability activities. In these examinations, researchers could investigate which factors of an internal or external environment facilitate non-government and public organizations to energetically assume these roles.

26. Researchers should examine sustainability associations held by the stakeholders of these organizations (e.g. citizens in the case of a local authority, and contributors/volunteers in the case of a non-government organization) per se. Such investigations could also allow comparative studies examining sustainability associations and attitudes of employees in private and public organizations.
ANTECEDENTS & MODERATORS OF THE IMPACTS OF SUSTAINABILITY ACTIONS

Our understanding of the antecedents and moderators of the impacts of sustainability on the stakeholder-, business-, and institutional infrastructure level is still somewhat limited (C. B. Bhattacharya, Korschun, & Sen, 2009). However, understanding how they shape the impacts of sustainability initiatives at these levels is important, since it can help decision-makers enhance the positive outcomes of these impacts through the appropriate actions. By employing a micro as well as a macro perspective, in what follows we describe certain factors which could be investigated as antecedents and/or moderators of the impacts of sustainability actions.

Effects of Micro-Level Variables

Personality Factors

The sustainability literature could be characterized as insufficient concerning the role played by individual differences in the way individuals view and experience sustainability activities (Bhattacharya et al., 2009). This research issue is especially evident in the case of individual personality factors. These factors can be used: a) as determinants of the associations made by individuals/members of public groups and b) as moderating/conditional factors which either multiply, reduce or cancel the impacts of sustainability practices on corporate outcomes results (e.g., favorable associations of individuals about business responsibility, trust in the business, cognitive and emotional identification with the business, etc). Personality factors in particular, compared to other factors of individual differences (i.e., demographic and psychographic factors) seem to be more essential in the researchers’ attempt to thoroughly investigate the way individuals form views and attitudes on various
subjects as well as on people around them (Dabholkar & Bagozzi, 2002). Given the importance of individual personality factors for the explanation of phenomena such as attitudes and behaviors towards sustainability activities, it is surprising that the relevant literature has not been largely developed.

27. Future research should investigate the degree to which personality factors of individuals (i.e., consumers, employees, decision-makers, public servants, legislators etc.) affect their reaction to sustainability programs. Specifically, based on individual personality measurement scales, field researchers have the ability to investigate the extent to which these variables function a) as moderating factors of the sustainability effect on organisational performance and b) as determinants of the associations made by individuals. For example, researchers can employ the 3M model as the theoretical foundation for organizing personality traits (Mowen, Xiang, & Scott, 2009). The 3M model proposes that traits are arranged hierarchically using a four level structure of traits: elemental, compound, situational, and surface personality traits. These traits provide reference points for predicting environmentally sustainable behavior. Below, we mention indicatively some personality variables that researchers could possibly use: Extraversion vs. introversion (Gosling et al., 2003), agreeableness (Gosling et al. 2003), new experiences receptivity/susceptibility degree (Gosling et al. 2003), altruism (Mowen et al., 2007), need for activity (Mowen et al., 2007), need for self-concept enhancement (Shang et al., 2008) etc.
Psychographic factors, like personality factors, constitute another important set of individual characteristics which differentiate individual people concerning how they are influenced by sustainability activities (Dabholkar & Bagozzi, 2002). Psychographic characteristics differ from personality characteristics in that the latter are of a relatively permanent nature (they hardly alter) and at the same time constitute determinants of psychographic characteristics. Psychographic characteristics have to do with the way an individual has decided to live his/her daily routine and therefore the choices he/she has made concerning values and way of life (Hawkins & Mothersbaugh, 2010). As it can be deducted from this definition, psychographics of individuals are very likely to influence views and associations formed towards sustainability activities. Generally, the review of the sustainability literature shows that it has dealt mostly with examining the influence of psychographic factors rather than the influence of personality traits. Nevertheless, we consider that important research issues concerning the effects of psychographic factors on sustainability largely remain open.

As a starting point, researchers and decision-makers need empirically validated scales which will be directed to measuring environment-oriented psychographic characteristics of individuals. The current literature has provided scales of individual social responsibility (e.g. Webb et al., 2008), but, they do not focus on the environmental dimension and they have been developed in particular social and economic contexts (i.e. USA), thus making their adoption in studies conducted in different contexts difficult.
28. Future research should develop psychographic scales of environmental awareness, but also use already existent scales in order to investigate if these (and the concepts they represent) determine- and through which mechanisms- associations and attitudes towards sustainability practices.

29. Future research should investigate to what extent relevant psychographic variables are accountable for the success or/and failure of sustainability programs. This could be achieved through the analysis of models which theorize psychographic variables as conditional/moderating factors.

Below, we mention indicatively some psychographic variables which could be used in relevant research endeavors:

- Stakeholders’ skepticism and especially perceptions that corporate environmental activities are directed by selfish motives (Forehand & Grier, 2003).
- Environmental consciousness (Webb et al., 2008).
- Stakeholders’ affinity and support of specific sustainability activities (e.g. energy, forests, water, etc).
- Personal ethical values/philosophies (e.g., relativism or idealism) (Singhakapdi et al., 1995).
- Motivation for volunteerism (understanding, career, improvement of inner as well as social self-image, altruism, remorse reduction, etc.) (Clary et al., 1998).

Effects of Macro-Level Variables

Social Factors

Based on sociology and social psychology literature (e.g. Schaik, 2002; Paxton, 1999; Fukuyama, 1995; Coleman, 1990) as well as international management literature
(Hofstede, 1983), we propose a number of determinants of primary stakeholders’ attitudes towards sustainability business practices. The literature of corporate social responsibility and especially of sustainability is silent concerning the effects of culturally-related variables (Bhattacharya et al., 2009). These variables are likely to assume different values from country to country and they are about structural elements of every society. For example, we consider that in countries scoring low in “social capital” indexes, the implementation of social and sustainability activities will be lacking, as well. As another example one could consider that the reality of different European countries is characterized by different degrees of trust in institutions, trust in third parties (e.g. interpersonal trust level), co-operation norms, skepticism as well as cynicism towards businesses (Knack & Keefer, 1997; Schaik, 2002).

30. Future research in this field should theorize and empirically validate the role of social and cultural factors on the impacts of sustainability practices. It should be noted that that these social and cultural factors are expected to correlate and interact with the personality traits and psychographics of individual stakeholders.

**Economy and Market Factors**

The literature of corporate social responsibility and in particular the literature of sustainability has not examined the possible influential role of macro-economic conditions of economies on the impacts of sustainability practices. Specifically, it seems that the relevant literature is silent regarding the role of potentially crucial factors of sustainability adoption – such as perceptions of competitive intensity in an industry, ethical and environmental leadership and the dispositions of stakeholders (i.e., valence and efficacy dispositions) towards specific industries.
Researchers should investigate how much economy and market factors facilitate or impede the adoption of sustainability activities. Amongst others, researchers are encouraged to involve the following factors in their investigations:

- **Perceptions of Macro-Economic Conditions.** We expect that, if citizens see their personal economics and the state of economy in general, negatively, they will be negatively predisposed towards sustainability activities. It is likely that in adverse economic perceptions, individuals will be more positively disposed towards business responsibility activities concerning issues of quality and lower prices rather than issues of sustainability.

- **Perceptions of Competitive Intensity.** This factor has to do with how much employees and managers of businesses and organizations perceive sustainability activities as a tool of differentiation from the competition during hyper-competitive times. If this is the case, then sustainability is likely to be more readily adopted by organizations.

- **Satisfaction of Employees and Consumers.** If consumers and employees are not satisfied by the economic-oriented, core offerings of organizations (e.g., customer service, prices, quality, location) then the effect of sustainability on financial and non-financial outcomes will be tempered.

## CONCLUSIONS

The accomplishment of the suggested research activities will contribute to the current academic literature, as well as to the practice of private and public organizations business executives, concerning the impacts of sustainability actions. Specifically, the
suggested research will provide researchers and decision-makers with insights that involve the following:

- Further empirical evidence will be provided concerning the long-touted positive effects of sustainability strategies. This contribution is important in the light of the debate regarding the results of the impact of sustainability on business competitiveness. Given the complexity of this relationship, it is suggested that future researchers should particularly look for the mechanisms which “convert” sustainability practices into competitiveness. We expect that the relation between those two strategic concepts is likely positive, but the difficulties of their empirical confirmation in the current literature, have to do with simplistic approaches which consider their relation as direct (without considering the intervention of other important variables).

- Research will be promoted through the use of a comparative approach, mostly at a level of different groups of stakeholders. If reactions towards sustainability are different among these different groups, then it is possible that standardized designs of sustainability activity are not effective. For example, if internal stakeholders (e.g., employees, stockholders) attribute to firms different motives for the implementation of sustainability activities than stakeholders outside the organization do (consumers, potential employees/students), then a standardized sustainability strategy is likely to be unsuccessful.

- Guidelines will be provided about how to effectively design and implement sustainability initiatives. Although several executives seem to hold a favorable view of sustainability initiatives they do not seem to have at hand the necessary tools that will help them efficiently manage such activities.
• Comparative research will be promoted, at the level of political, legal, as well as institutional environmental infrastructure. Comparative analyses are essential in interdisciplinary fields which are at a development stage, like the one of sustainability.

• Research that examines the sustainability associations of public organizations’ stakeholders, namely citizens and public employees, will be promoted. The relevant literature is still at a very early stage, concerning studies of sustainability associations of employees working in private businesses (Sen et al., 2006; Bhattacharya et al., 2009) let alone studies of sustainability associations held by employees working in the public sector of the economy. The necessity for such studies of associations arises from the important role of the public sector in the facilitation, and promotion of sustainability practices. Future research should focus on local authorities, contemplating and highlighting the important role of local authorities (probably more important than the role of central government) in the adoption of sustainability practices from citizens as well as businesses.

• Research examining conditions under which sustainability has positive effects on organizational outcomes will be promoted. For one to investigate whether sustainability has any effect at the level of social stakeholders of organizations, at the level of businesses and organizations’ operation, as well as at a level of institutional environmental infrastructure is only one side of the coin (Luo & Bhattacharya, 2006). The other side has to do with which variables are likely to render unimportant, or even positively multiply the sustainability effect. Relevant suggested activities will be innovative given the fact that they will be of the first ones which will investigate systematically and not fragmentarily the conditional factors (boundary conditions) that alter the effect of sustainability on outcomes.
The creation of diagnostic and predictive sustainability tools will be prompted. These will include a number of tools for the clarification, diagnosis and prediction of sustainable behaviors and their effects on financial and non-financial results. Researchers, managers of private and public organizations, legislators and politicians, need methodologies and tools to measure the effect of sustainability, in order to be able to make decisions and design strategies and policies. Therefore, researchers could develop a number of decision supporting tools for policy-makers and managers concerning sustainability policies. This is important, given the fact that the current situation of sustainability decision making, relies mostly on opinions-based decision making, that is, opinions and intuitions not empirically and scientifically-based.

In concluding this article it should be noted that we do not claim to have listed all the issues surrounding the impacts of sustainability. However, we hope the abovementioned suggestions for future research on this topic to pave the way towards better highlighting the range of potential research on the impacts of sustainability.
REFERENCES


FIGURE 1

Conceptual framework of the study

Note: Dotted lines signify moderating effects

1.