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Review

A review of 'theories of the firm' and their contributions to Corporate Sustainability

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ABSTRACT

Corporate Sustainability has arisen as an alternative to traditional, short-term, profit-oriented approaches to managing the firm by holistically balancing economic, environmental, and social issues in the present generation and for future ones. Although a number of theories of the firm have been proposed within recent decades, their application to Corporate Sustainability has been limited. This paper presents an overview of the most widely used theories of the firm (such as the Stockholder Theory, the Aggregate Theory, the Contractual Theory, the Resource Based View, and the Stakeholder Theory), and analyses their contributions to Corporate Sustainability from an interpretative perspective. The discussion highlights the point that each of the theories, on its own, is limited in addressing sustainability's four dimensions (*i.e.* the economic, environmental, social, and time). Nonetheless, each theory, or group of theories, has a particular perspective or principles that can contribute to one or more of the four dimensions. The authors of this paper propose a 'Sustainability Oriented Theory of the Firm', which is built upon elements of those theories as they relate to Corporate Sustainability. This *new theory* can be useful in providing the firm's leaders and all of its stakeholders with a more complete vision of its obligations, opportunities, relations, and processes that the firm should address as it engages in helping to make societies become more equitable and sustainable in the short- and long-terms.

1. Introduction

Sustainability has become an important alternative to neoliberal economics, the dominant socio-economic paradigm, which tends to focus, almost solely, upon short-term profitability with little or no focus upon the long-term social, environmental consequences or impacts (Reid, 1995; WCED, 1987). However, in most cases, the term is considered to only pertain to environmental issues (Costanza, 1991; Rees, 2002; Reinhardt, 2000). It is also often perceived to be highly compartmentalised and lacking in completeness and continuity (Seuring and Müller, 2008).

Although many sustainability categorisations can be found, Lozano (2008b) proposed one based on different perspectives, which included the following types: (1) the conventional economists' perspective; (2) the non-environmental degradation perspective; (3) the integrational perspective, *i.e.* encompassing the economic, environmental, and social dimensions; (4) the intergenerational perspective, *i.e.* the time dimension; and (5) the holistic perspective. In some cases the boundaries between, or among these perspectives are blurred.

This paper is based upon the holistic perspective, which proposes two dynamic and simultaneous equilibria, the Two Tiered Sustainability Equilibria (TTSE): The First Tier Sustainability Equilibrium (FTSE) describes the interactions of three dimensions; the economic, environmental, and social, in the present. The TTSE also incorporates, through the Second Tier Sustainability Equilibrium, the fourth dimension, time, where the FTSE interacts dynamically with the dimensions with the future in mind (*i.e.* the short-, long- and longer-term perspectives), for example how the economic dimensions of today inter-relate with the economic dimensions of the future, but also with the environmental and social dimensions of the present and the future.

Increasingly, corporate leaders and their staff have been recognising their broader roles and responsibilities and, consequently, are engaging in voluntary actions to contribute to sustainability (Dunphy et al., 2003; European Commission, 1998; Fergus and

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Rowney, 2005). In this context, the company is considered an entity with specialized unique resources which interacts with its environment to maintain long-term viability (Reinhardt, 2000), as well as with the other two sectors. The other sectors, what Holliday et al. (2002) termed the other two pillars of society; civil society and government, have also been making important contributions to sustainability.

This evolving interest in sustainability by the corporate sector was evidenced by over 7700 companies in 130 countries that had signed the UN Global Compact (UNGC, 2010). However, embedding sustainability principles, such as the Global Compact, into company systems presents significant challenges, especially due to their complexity and the multi-dimensional issues (Langer and Schön, 2003).

Corporate Sustainability (CS) has been proposed as a framework to address the full array of sustainability challenges. For Dyllick and Hockerts (2002, p. 131) CS is: "… *meeting the needs of a firm's direct and indirect stakeholders, such as shareholders, employees, clients, pressure groups, communities without compromising its ability to meet the needs of future stakeholders as well*". Lozano (2012) defined CS to be "Corporate activities that proactively seek to contribute to sustainability equilibria, including the economic, environmental, and social dimensions of today, as well as their inter-relations within and throughout the time dimension while addressing the company's system (including Operations and production, Management and strategy, Organisational systems, Procurement and marketing, and Assessment and communication); and its stakeholders". Both definitions of CS underscore that companies have to address stakeholders, and that they must be addressed from a holistic perspective and systemically (as highlighted by Linnenluecke et al., 2009), by including the four dimensions of sustainability (economic, environmental, social, and time dimensions). This is in contrast to reductionist approaches, which analyse phenomena through dissection into their component parts, and then reassembling them (Lovelock, 2007).

There has been recent research pertaining to CS (*e.g.* Dunphy et al., 2003; Dyllick and Hockerts, 2002; Linnenluecke et al., 2009) and related terms, such as Corporate Responsibility, Corporate Social Responsibility (CSR), Corporate Citizenship, Business Ethics, Stakeholder Relations Management, Corporate Environmental Management, Business and Society (Hopkins, 2002; Langer and Schön, 2003). Additionally, several theories of the firm have been developed to explain how companies function. However, there have been limited discourses on how the theories of the firm relate to CS.

The authors of this paper proceeded beyond those limited approaches by providing in Section 2, an overview of theory development; Section 3, an introduction to *interpretation* as a method of analysis; Section 4, an overview of the most widely used theories of the firm in the context of CS; Section 5, a discussion of the authors' understanding and interpretation of the theories of the firm's contributions to CS; and, finally, Section 6, a proposed new theory of the firm titled, the 'Sustainability Oriented Theory of the Firm', which was built upon the analyses and synthesis of the essence of the other theories of the firm.

2. An overview of theory development

According to Bacharach (1989), a theory is '*a statement of relationships between units observed or approximated in the empirical world*', whilst for Bryman (2004), a theory is "… *an explanation of observed regularities*", and these may be grand theories, which operate at a more abstract and general level; or may be middle range theories, which fall between grand theories and empirical findings, and operate in a more limited domain. Three important elements of theories address: (1) boundaries, which set the limitations in applying the theory; (2) falsifiability, which determines whether an empirical refutation is possible; and (3) utility, which refers to its usefulness (Bacharach, 1989). In general, by appraising and establishing norms and values, the theories of the firm take a normative approach (Hasnas, 1998). Due to the socially constructed nature of firms, their theoretical explanation is within the realm of middle range theories.

Seth and Thomas (1994) recognised two types of theorising: (1) inductive, where agreed observations lead to a generalisation of the phenomenon being studied; and (2) deductive, where the initial observations provide a basis for speculating about the phenomenon, this is followed by developing assumptions, and then by creating a hypothetical model from which the generalisations are deduced. Each of these, in its pure form, can be seen as the two extremes of a continuum. Seth and Thomas (1994) also highlighted that methods, at any point along this continuum, could be valid junctures for theory generation.

According to Remenyi et al. (2000) a research design consists of five components (1) a study's questions, (2) its propositions (if any), (3) its unit(s) of analysis, (4) the logic linking the data to the propositions, and (5) the criteria for interpreting the data. For this paper these were:

1. Questions: *What are the contributions of current theories of the firm to Corporate Sustainability? Are current theories of the firm sufficient to fully encompass the contributions of firms to Corporate Sustainability?*
2. Propositions: *There were no propositions for this research;*
3. Unit of analysis: *The firm and how it relates to other firms;*
4. Logic linking the data and propositions: *The logic was developed iteratively in the discussion of each theory and how it relates to the questions;* and
5. Criteria for interpreting the data: *The criteria were assessed in relation to the four dimensions of sustainability, the firm, and its relations to other parties.*

3. Interpretation as a method of analysis

According to Heller (1989) the social sciences are open to interpretation and reinterpretation, as opposed to the falsification focus of the natural sciences, where the primary interest is not problem solving, but to create meaning and to contribute to self-knowledge by addressing problems, elucidating them, and placing them in context. The social sciences are mediated, to a large extent, by speech and communication (Gadamer, 1975). Human-based studies have the advantage over those done in the natural sciences in that their object is not sensory appearance as such, but is an inner reality, a coherence experienced from within (Dilthey, 1972), where the "philosopher's" job is that of meta-interpretation (Dreyfus, 1980). However, it should also be noted that in the natural sciences, interpretation plays an important role, since the natural scientist must determine which are the relevant facts and what their theoretical and practical significances are (Dilthey, 1989; Dreyfus, 1980).

The theory of interpretation is essential in the theory of knowledge, of logic, and the foundation of human studies (Dilthey, 1972). A method that can help in this 'interpretation' is hermeneutics, which is based the inquiry into the conditions of human understanding of texts (Harrington, 2001; Heidegger, 1976; Leyh, 1988). Hermeneutics becomes necessary when there is a breakdown in understanding, whether of culture or between/among conflicting paradigms (Dreyfus, 1980). Through hermeneutics it is possible to understand and, ultimately, discriminate critically between blind and enabling prejudices (Bernstein, 1982). This quest for understanding involves knowing the history, and the historical present of our society, and of ourselves (Heller, 1989). The analysis of understanding is, therefore, always limited by the inner experience of the interpreter (Dilthey, 1972). Hermeneutical explorations have the possibility of developing universally valid interpretations by analysing understanding, in general. An important characteristic of hermeneutics is the paradox of the hermeneutics circle, where the whole has to be understood from its individual elements and their connections with each other, and yet it presupposes that to understand the individual elements the whole has to be understood (Dilthey, 1972; Gadamer, 1975; Harrington, 2001; Schleiermacher, 1977).

Dreyfus (1980) stated that there are three ways that explicit understanding involves pre-understanding: (1) Fore-having, the totality of cultural practices; (2) Fore-sight, the vocabulary or conceptual scheme we bring to any problem; and (3) Anticipation, a specific hypothesis which, within the overall theory, can be confirmed or disconfirmed by the data.

According to Bernstein (1982), the explanation of understanding involves three interdependent activities; understanding, interpretation, and application. In this process the technical know-how and ethical know-how are present. Heller (1989) highlighted that there are several types of explanations, each belonging to one of three groups: (1) explanation with efficient causes; (2) explanation with final causes, and (3) explanation with formal causes.

The analyses performed for this paper were done via an iterative process of the authors' understanding and interpretation of the Theories of the Firm and how they contribute to the four dimensions of sustainability. The process followed a similar approach to the constant comparative analysis used in Grounded Theory (GT) (see Glaser and Strauss, 1999), where the initial framework for analysis was done in the context of: (1) the four dimensions of sustainability (see Lozano, 2008b), economic, environmental, social (by linking them to internal or external stakeholders), and the time dimension (similar to 'comparing incidents applicable to each category' stage of GT); and (2) the factors that influence leaders' decisions in managing the company (Dunphy et al., 2003; European Commission, 1998; Fergus and Rowney, 2005). The analyses were done, based upon the authors' interpretations, of how each theory (or group of theories) contributes to CS.

During the analyses the key contributions of each theory (or group of theories) to CS were distilled to form the foundation for the new theory (which is the equivalent of combining the 'integrating categories' and 'recognising relations' stages of GT). In this way 'pieces of the puzzle' from each theory were added to develop a more general framework or overall theory, where the whole was understood from its parts, and the parts from the whole (see Dilthey, 1972; Harrington, 2001; Schleiermacher, 1977). Finally, the authors synthesised the key contributions of the different theories to develop the *new theory*, which corresponds to the 'writing new theory' stage of GT.

A number of caveats are presented because of the nature of hermeneutics and interpretation. Due to limitations in size of a journal paper, each theory is presented in a concise form, although each theory or group of theories was studied extensively, based upon the relevant literature. Other important caveats included threats to reliability and validity (Saunders et al., 2007).

In this paper reliability was mainly affected by observer error and bias, based upon the nature of the interpretation and hermeneutics, which are based on the standpoints, experiences, values, and the understanding of the researchers (Heller, 1989). In this case these were framed by holistic, systems thinking, and life cycle thinking as crucial bases for understanding the meaning and application of the CS concept. Additionally, there was the challenge of obtaining true knowledge about a world whilst being aware that this knowledge is situated in that world (see Heller, 1989).

Validity is concerned with whether the findings are really about what they appear to be about (Jupp, 2006; Saunders et al., 2007). Generalisation, or external validity, involves asking whether the conclusions drawn from a particular study can be generalised to other people and to other contexts (Jupp, 2006; Saunders et al., 2007). Validity for this paper was influenced by the context of where the theories have been developed (mainly in the U.S.A. and Western Europe in the last century) and was evaluated within the context of a changing global, environmental climate, and sustainability context. The conclusions are, therefore, bound by this context, and might not be applicable to other regional or temporal contexts. The discussion of the theories is valid at the time the paper was written, which may limit its generalisability and conclusions in the future depending on academic and world developments.

4. Overview of the most widely used theories of the firm in the context of Corporate Sustainability and the authors' understanding and interpretation of their relevance to Corporate Sustainability

In order to explain how companies work, a number of theories of the firm have been developed over many decades. Seth and Thomas (1994) stated that theories of the firm provide different perspectives and frameworks for thinking about organizational objectives and analysing important research problems, where each theory consists of a logically consistent network of concepts and assumptions regarding not only the goals of the firm but also the behaviour and motivation of managers. These authors underscored that theories of the firm address questions such as: Why do firms exist? What factors determine the scope and size of the firm? What is the function of the firm and of its managers?

The following questions, as posed in this paper, are also relevant for this dialogue: a. *What are the contributions of current theories of the firm to Corporate Sustainability?* and b. *Are current theories of the firm sufficient to fully encompass the contributions of firms to Corporate Sustainability?*

In the following sections, the authors of this paper present and discuss the most widely used theories of the firm. These analyses were based on the categorisations from Seth and Thomas (1994), and Avi-Yonah (2005), which are the most germane to CS discourses. Each theory, or groups of theories, was explored extensively by different authors and in different contexts, but, to the authors' knowledge, their discussion has been limited to the context of CS. Some exceptions to those limitations pertain to the works of Avi-Yonah's (2005) on Corporate Social Responsibility (CSR), and Freeman and his colleagues' work (Freeman et al., 2004; Freeman, 1984) on stakeholders.

There may be other theories that could be relevant to CS (and sustainability, in general), which should be considered in future research. However, given the limitations of the scope of this academic paper, the authors provided an overview of each theory in order to facilitate its understanding and subsequent analysis.

The theories of the firm were divided into the following groups (based on Seth and Thomas' (1994) categorisation): (1) the entity, or personality, perspective, which addresses the establishment of the firm in a legal context; (2) the nature of the firm, which is designed to explain why the firm exists and how it relates to stakeholders, such as its employees, suppliers, customers and competitors; and (3) the firm's obligations to shareholders, employees, and other social and non-social groups.

In addition to the limitations from interpretation and hermeneutics, and in line with Seth and Thomas' (1994) caveats, this research was circumscribed by the concise presentation of the theories and the selection of the theories by the authors.

4.1. Corporate Entity, or personality, theories

The Corporate Entity theories of the firm focus on a company's personality. Personality in this context is "… *not a human being nor anything given in nature, but a group of rights and capacities, or at any rate a group of legal relations, and this group owes its existence entirely to the recognition of it by the legal and institutional organization of the community*" (Radin, 1932, p. 645). They were designed to help to answer the questions: What is a Corporate Entity? Is it real or imaginary? Is it natural or artificial? Is it created by the state or is it created *de facto?*, (Avi-Yonah, 2005; Machen, 1911; Radin, 1932) According to Allen (2001), the discussion of the corporation's personality is more established in the U.S.A., than in other countries, although the roots of such dialogues were in France and Germany; consequently, these theories were based on Common Law. These theories clarify how a company is to be established legally, and how this influences the company's relations with government. Three theories in this group include: (1) the Artificial Entity, (2) the Aggregate Entity, and (3) the Real Entity.

4.1.1. The Artificial Entity theory

The Artificial Entity theory has its roots in the first half of the XIX century with Savigny, who proposed that the corporation is a fictitious being (Machen, 1911). The Artificial Entity theory prevailed during much of the XIX Century (Millon, 1990), with the Dutch East India and the British East India Companies mentioned as typical examples (Avi-Yonah, 2005).

Under the Artificial Entity theory a corporation was given the right to exist by a sovereign power, originally *i.e.* royal charter incorporated them incorporated artificially and usually by the state (Berle and Berle Jr., 1947; Machen, 1911; Millon, 1990; Radin, 1932). Under this perspective corporations are not considered to be 'citizens', but as extensions of the state (Avi-Yonah, 2005; Coelho et al., 2003). In modern times, the Artificial Entity theory may help to understand state-owned companies, which are usually limited to a single country. Avi-Yonah (2005) highlighted that the theory is limited in explaining multinational companies, especially where the country of incorporation was economically weaker than the corporation.

The theory deals with the process and who is responsible for the establishment or incorporation of a company within a social context. The authors' understanding and interpretation of this theory is that the corporation is an extension of the 'state' or 'sovereign power' that sanctioned its incorporation. This reduces the influence that company managers can have in deciding the direction of the company. Discussions on sustainability commenced long after the Artificial Entity theory was developed; therefore, and with the benefit of hindsight, it would be specious to consider that it should address the four dimensions of sustainability. The theory does not specify the company's responsibilities to groups other than the government that incorporated it.

4.1.2. The Aggregate Entity theory

The Aggregate Entity theory, currently the dominant one in legal academic circles (Avi-Yonah, 2005), had its roots in Germany with the *Zweckvermögen (*translated as special-purpose fund, or trade tax exempt). In this theory the company's property is at the disposition of its managers, and the company is not the property of a person or group of persons (Machen, 1911). The corporation can be created *de facto* by the association of people who agree to undertake an enterprise; thus the company is considered to be the sum of its human, and sometimes non-human, components (Avi-Yonah, 2005; Jensen and Meckling, 1976; Radin, 1932).

The Aggregate Entity theory postulates that the corporation is an extension of its stockholders (Lee, 2005), as opposed to the Artificial Entity theory where the corporation is an extension of government. The stockholders are protected by the principle of limited liability, *i.e.* they provide the capital for the company with the expectation of financial returns, but they are not liable for illegal acts committed by the company or its employees (Jensen and Meckling, 1976; Millon, 1990; Radin, 1932). In this perspective, corporations are considered to be profit-generating 'islands' for the exclusive benefit of the shareholders, *i.e.* the company is a separate entity from society or the environment; labour is considered as expendable, where it is possible to substitute an experienced worker with one without experience with the same results in production; and symbiotic relations between the company and the community in which it operates are not addressed.

This theory was developed on the principle that the company is a means for accruing a higher profit to the shareholders. The authors of this paper's interpretation of this theory is that the company is a protective 'façade' for the shareholders, liability is reduced, but their benefits are not compromised. The theory deals with the process and who is responsible for the establishment or incorporation of a company within a social context. For this theory, this happens when there is an activity set up to generate profits for shareholders. The basis of this theory limits its scope to the economic dimensions and its obligations to the stockholders. Although the leaders and managers have considerable power and influence to make changes, they are bound by shareholders' interests.

4.1.3. The Real Entity theory

In contrast to the previous two theories, the Real Entity theory proposes that, "*[w]hen a company is formed by the union of natural persons, a new real person, a real corporate "organism," is brought into being … The corporate organism is an animal: it possesses organs like a human being. It is endowed with a will and with senses*." (Machen, 1911, p. 256). The corporation is considered to be a *persona repre-sentata, i.e.* it acts through agents, and has '*a will and senses*' (Machen, 1911), and is not an aggregation or an entity made up by the state, as in the previous theories. This position questions the frameworks and operations of companies under the previous two theories, by having as its basic principle that corporations are actual 'beings' controlled by their managers.

Under this perspective a corporation can be accused of certain crimes, *e.g.* that of omission and in some cases of commission, but not others, such as murder and other acts of violence (Avi-Yonah, 2005; Lee, 2005; Phillips, 1996). Whereas, in the Aggregate Entity theory, only employees can be punished, in the Real Entity theory, corporations can also be punished for illegal acts.

The authors of this paper's understanding and interpretation of this theory is that corporations are considered to be entities, which are integrated within the fabric of society, where the company and its employees, including management, have legal rights and responsibilities. The company is an entity comprised and represented by its employees, and is not an extension of the government or of its stockholders. The incorporation of the company has to occur within the legal and civic rules of a particular state.

From this perspective, company leaders have a responsibility to ensure that the company and its employees comply with the law(s), which provide(s) them the opportunity to engage and empower different groups to better contribute to sustainability. Based upon these dimensions of the Real Entity theory, the authors of this paper underscored that it is not explicit in how it addresses CS; however, the principles of the theory are implicitly related to CS by complying with the laws of a state.

4.1.4. Insights derived from Corporate Entity theories

The authors of this paper's understanding and interpretation of this group of theories is that they are based on two main elements, the incorporation of a company, and how it is viewed legally, within a state context. The Artificial Entity theory has largely fallen into disuse, with the exception of state companies. The Aggregate and the Real entity theories have opposite positions. Whereas, the former considers the company to be a 'façade' to reduce the liability of shareholders, the latter frames the company in a social and state context. The Aggregate Entity theory has a strong focus on economic issues. However, the theories do not explicitly address CS, since most were developed many years before the sustainability concept. Nonetheless, the Real Entity theory's basis on company responsibility to comply with the law and society's rules is congruent with sustainability in that a company is part of a larger legal rights system.

The Corporate Entity theories differ on how leaders may make decisions in managing the company. In the artificial case they are restricted to the state's approaches, while within the aggregate theory, they must maximise profit, and in the real one they are bound by the rules of the state and society. This provides the largest degree of flexibility when it comes to deciding issues that go beyond revenue generation and is, therefore, potentially more appropriate for addressing CS issues. The obligations of the company are mainly to the state, with the exception of the Real Entity theory, which establishes the company's responsibilities to society.

The authors of this paper's interpretation is that the Aggregate Entity theory focuses on the company stockholders (addressing internal and external stakeholders), the Artificial Entity sees the company as an extension of the state (thus, addressing mainly external stakeholders), whilst the Real Entity focuses on the rights and responsibilities of the company to its external stakeholders. This group of theories explains the incorporation of the company in a legal (government) context. These types of contributions are illustrated in Fig. 1.

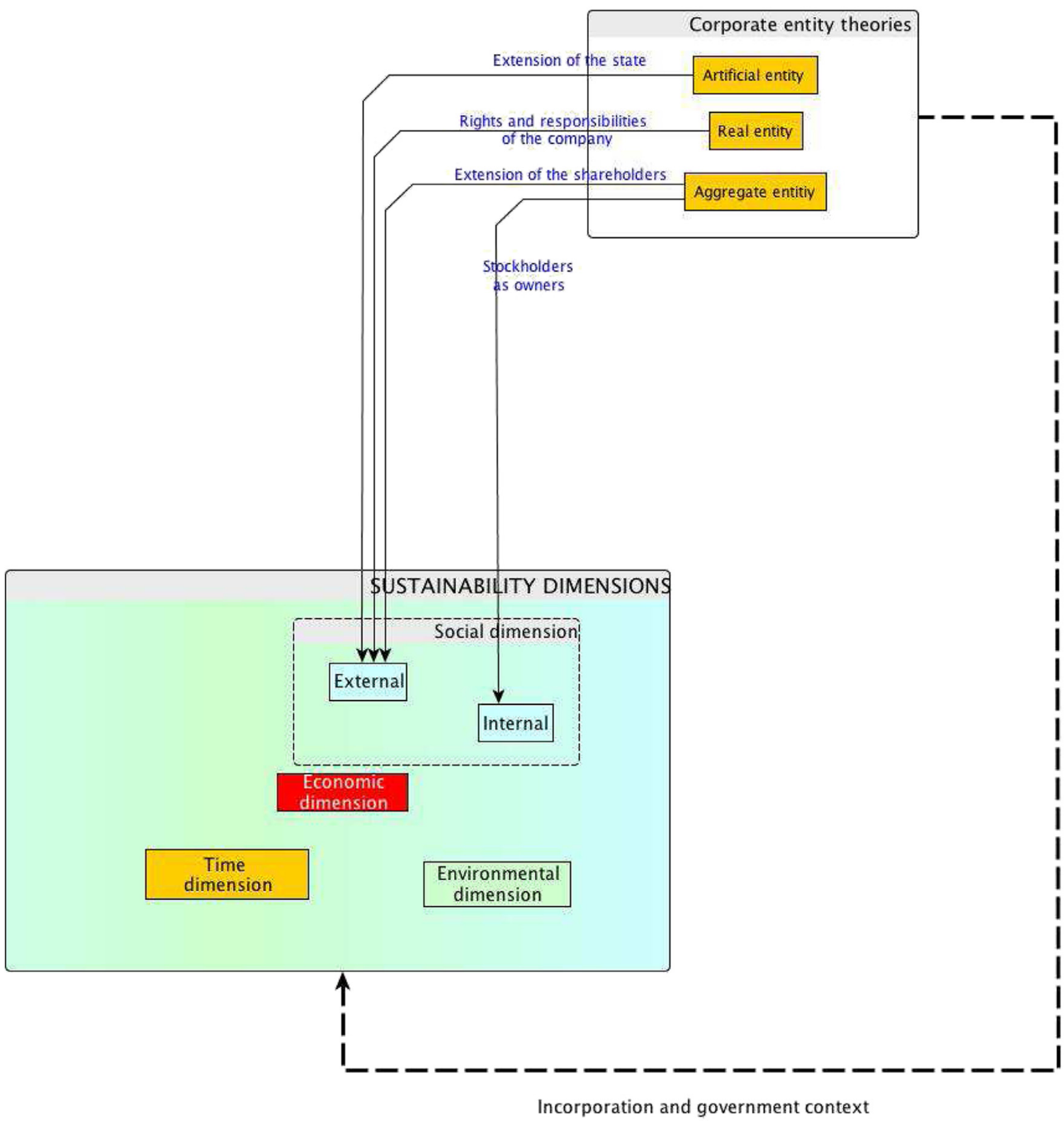

Fig. 1. The authors of this paper's understanding and interpretation of the Corporate Entity theories of the firm contributions to Corporate Sustainability.

4.2. Corporate Nature theories

'Nature of the firm' theories are designed to explain the nature of the firm's existence. According to Boatright (1996) the discussion on the nature of the firm has a long and tangled history, from which three main theories have been developed: (1) the Contractual Theory of the firm, which also includes Agency Theory; (2) the Evolutionary Theory of the firm; and (3) the Resource Based View (RBV) theory.

4.2.1. The Contractual Theory and the Agency Theory

In his seminal article, Coase (1937) stated that the nature of a firm is to reduce transaction costs, which take place in the market, by contracting with other parties (some of the parties upon which the firm can enter contracts include employees, suppliers, customers, and creditors (Jensen and Meckling, 1976)), thus becoming more profitable. The contract is seen as an agreement to obey directions in exchange for remuneration. The firm is a nexus of relationships and contracts among various corporate constituencies that substitute firms for markets if the transaction costs of using the latter become large (Boatright, 1996; Coase, 1937; Demsetz, 1988).

The Contractual Theory is based on the Aggregate Entity theory (Phillips, 1996). As with that theory, the stockholders' interests are imperative. They were considered to be residual risk bearers, *i.e.* capital providers in return for residual assets claim (Coase, 1937). Shareholders pay to have their pecuniary interests as the objective of the firm, whereas other parties, *e.g.* bondholders and employees, preferred contractual agreements (Boatright, 1996).

Some of the critiques of this theory include that: (1) contracts are incompletely specified, with the risks of being vague, general, or omitting non-stockholders (Boatright, 1996); (2) contracts are only bilateral (Hölzl, 2005); (3) contracts negotiated between management and labour unions may result in unforeseen negative developments for one of the parties (Boatright, 1996); (4) the market, the firm, and the government or other regulatory powers treat the contract transactions differently (Coase, 1937); (5) there are hidden or unrepresented social costs, *i.e.* low or ineffective addressing of corporations' impacts on environmental and social aspects, are neglected (Boatright, 1996); (6) the firm is treated as a 'black box' that is supposed to meet marginal conditions with respect to inputs and outputs, while maximising profits, *i.e.* present value (Jensen and Meckling, 1976); (7) technological and organisational aspects of production are neglected (Hölzl, 2005); and (8) large corporations may use their power to gain unfair beneficial contracts.

The Agency Theory is a specific case of the Contractual Theory, which focuses on the agency relationships between the principal, or principals, who engage and transfer authority, and the agent, who performs a service on behalf of the principal(s). These types of relationships are typical in publicly traded corporations (Jensen and Meckling, 1976).

In addition to the critiques of general Contractual Theory, the Agency Theory can be critiqued specifically in that: the agent does not always act in the best interest of the principal; there may be differences in needs between the principal and the agent, *i.e.* problems between ownership and governance (Jensen and Meckling, 1976); and the agent may have limited ability to react under unfamiliar situations or in unstable environments (Yu, 1999). Additionally, the agent might look for short-term benefits, neglecting the possibility of better, more lucrative future contracts; and the agent might over-look possible synergies between/among the clients, due to lack of technical or organisational knowledge.

According to Boatright (1996) and Machlup (1967) the Contractual Theory and the Agency Theory are marginalistic theories, where the purpose is to maximise profits for the stockholders by reducing transaction costs, whether directly (as in the Contractual Theory) or through an agent (as in the Agency Theory). This is due to their basis on the Aggregate Entity theory.

From these two theories, the authors of this paper's understanding and interpretation is that the firm has commercial relations with other parties, such as customers and suppliers, and that the agent may manage these relations. The contracts, explicit or implicit, that the firm agrees upon with other parties, provide a formal and framed relationship with others. The nature of the contracts and the influence of the parties in relation to each other need to be taken into consideration. The company's main obligation is to generate profits for the stockholders. One of the key points of the theories is that the firm is treated as a 'black box', *i.e.* they are only concerned with external relations.

The contribution of these theories to CS is only on a relational profit generation approach. Nonetheless, they can help company managers to consider how to better establish those relationships to reduce costs and to enhance benefits, both in the short and longer-term, which could potentially be utilised by them to create networks and to catalyse their engagement in CS issues.

4.2.2. The Evolutionary Theory

As with the contractual and agency theories, the Evolutionary Theory considers the firm to be motivated by profit; but in the Evolutionary Theory, the company's actions are not assumed to be profit maximising. Instead, it posits that more profitable corporations drive less profitable ones out of business (Nelson and Winter, 1982). This is based on the Social Darwinian theory, where organisations enter into competitive warfare with other organisations, and where only the strongest and most efficient survive (Miesing, 1985). However, the 'survival of the fittest' approach does not ensure that the biggest, or the ones that survive, are not the most ruthless, corrupt, or unethical (Lozano, 2008a; Miesing, 1985), nor does it guarantee the long-term existence of the corporation.

According to Hölzl (2005) the Evolutionary Theory can help one to better understand industrial dynamics, such as routines and behaviours, and also the cognitive nature of the firm, *i.e.* knowledge processing, storing, and producing. However, intra-firm conflicts, *e.g.* capital – labour conflicts, are not considered.

The understanding and interpretation of the authors of this paper, is that the Evolutionary Theory is focused on the time dimension by proposing that firms become bigger and more economically powerful, and thus drive competition to extinction. This can stimulate company leaders to develop a longer-term perspective, which could be used in CS if, and only if, the rights and responsibilities of the parties involved and towards the law and society (as considered under the Real Entity theory) are respected. Another advantage of this theory can be that the more sustainability orientated companies could drive less sustainability orientated companies out of the 'market' in the longer term.

4.2.3. The Resource-Based View (RBV) theory

The RBV theory states that a firm is more than an administrative unit; it is instead a collection of productive resources, innate to the firm (Conner and Prahalad, 1996; Penrose, 1959). Penrose (1959) categorised resources into: (1) tangible, including plant equipment, land and natural resources, waste products, and finished goods; and (2) human, including unskilled and skilled labour, clerical, administrative, financial, legal, technical, and managerial staff. Sanchez and Heene (1997) added intangible resources, which include capabilities and cognitions.

Co-operation among individuals within the firm affects the knowledge they apply to the business and gives it a source of advantage in competition (Beal, 2001; Conner and Prahalad, 1996). In such cases, managers need to add valuable knowledge to employee's activities, so that the knowledge can be utilized within the firm (Conner and Prahalad, 1996).

The RBV helps to explain that one firm can produce or offer a service equal to or better than another, and the focus is put on reducing production costs (Demsetz, 1988). According to the RBV some resources can only be developed over long periods of time, and some cannot be bought or sold (Barney et al., 2001), while certain resources cannot be imitated or substituted by competition (Dyllick and Hockerts, 2002).

The authors of this paper's understanding and interpretation is that the main principle of the RBV is that the company is an entity with inter-related internal resources that gives it its competitive advantage, *i.e.* the company is not a 'black box' as considered by other theories. The RBV offers a unique perspective to corporate leaders by providing an explanation of how internal resources can lead to proactive changes in the company, especially if they were to consider environmental issues, as well as the rights and responsibilities of the firm, internally and externally. The company is obliged to develop its internal resources to generate a competitive advantage.

The RBV focuses mainly on the social and time dimensions, by managing and developing such resources over time. The theory, as originally postulated, does not consider the environmental dimensions.

4.2.4. Insights into Corporate Nature theories

The understanding and interpretation of the authors of this paper of this group of theories is that their main focus in upon the company's existence. These theories are mainly grounded on economic precepts, whether they are the reduction of costs, improving internal resources and competencies, or driving competition out of the market. The Contractual Theory focuses on the relations with other parties, while the Evolutionary Theory is based on strategic operations designed to defeat the competitor(s) in the longer term, and the RBV is focused on developing internal resources over time.

The main contribution of these theories is that they offer company leaders different perspectives on how to engage with diverse stakeholders, in the short and long term. The theories' main focus is on the economic dimension, although they do this by considering other stakeholders' needs and expectations.

The authors of this paper consider this to mean that: the Contractual and Agency theories are focused on cost reductions (contributing to the economic dimension) and the company's relations with its business partners (external stakeholders); the Evolutionary theory focuses on profitability (the economic dimension) and out-evolving competitors, *i.e.* external stakeholder (contributing to the social and time dimensions); and the Resource Based View theory focuses on developing unique resources, affecting internal stakeholders (contributing to the social and time dimensions) and reducing production costs (the economic dimension). This group of theories focuses on the company's existence. These contributions are illustrated in Fig. 2.

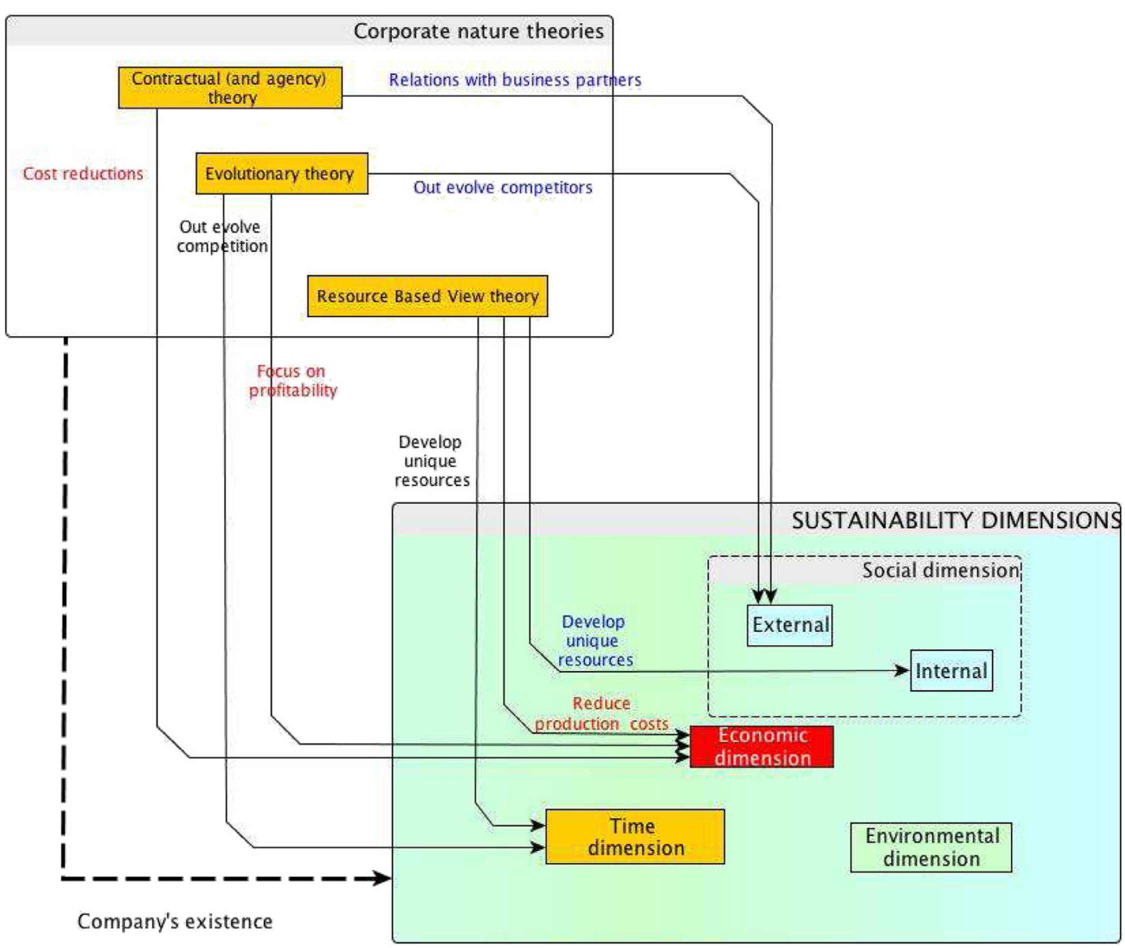

Fig. 2. The authors of this paper's understanding and interpretation of the Corporate Nature theories of the firm contributions to Corporate Sustainability.

4.3. Corporate Obligation theories

The Corporate Obligation theories were designed to explain a company's explicit obligations to different groups. They were based on how managers determine corporate objectives, for example through non-competitive markets or even at the expense of stockholders' interests (Boatright, 1996; Machlup, 1967). The theories in this group include: (1) the Stockholder theory, (2) the Social Contract theory, and (3) the Stakeholder theory.

4.3.1. The Stockholder theory

The Stockholder, or Shareholder, theory postulates that firms have a fiduciary duty only to their stockholders, or owners. The firm's main purpose is to maximise returns to its stockholders by maximizing the market value of the firm (Argadoña, 1998; Friedman, 1970). This theory is based on the aggregate theory. According to Boatright (1996) and Machlup (1967) the Stockholder theory can also be considered to be a marginalistic theory. Stockholders provide capital, gaining property-owning claims over the company, and generally having significant power and influence, with the expectancy of a return on investment (ROI) (Hill and Jones, 2001; McIntosh et al., 1998; Thomas et al., 2004). This transaction provides them with *prima facie* rights and limited liabilities (Freeman et al., 2004; Ray, 2005), which reduces the stockholders' business risks (Boatright, 1996).

Langtry (1994) distinguishes three different Stockholder Theories: (1) Minimalist pure Stockholder theories, where firms should be run to maximise stockholders' interest, subject only to minimal, legal constraints; (2) Non-minimalist pure Stockholder Theories, similar to minimalist theories except that they impose more far-reaching legal constraints on the firm; and (3) Tinged Stockholder theories, where firms should be run to maximise the interests of stockholders, subject not only to legal constraints but also to moral or social obligations.

Under the Stockholder theory, capital cannot be directed towards the public interest without the consent of the stockholders (Freeman et al., 2004; Hasnas, 1998). Managers may undertake short-term policies that are favourable to stockholders, but which are detrimental to other groups, such as employees, consumers, community members, and suppliers (Charreaux and Desbrières, 2001). Additionally, the theory tends to ignore social, cultural, and economic needs (Brook, 2001), and neglect the impact on the environment (Boatright, 1996; Hasnas, 1998). This position is not tenable in the long term, and can lead to negative impacts on the environment and society and lead to discontent, protests, or even to the removal of the company's 'licence-to-operate' by society or the government (White, 2004). These arguments have led to the Stockholder theory being labelled as an "… *outmoded relic of corporate law that even the law itself has evolved beyond* …" (Hasnas, 1998), where stockholder meetings have become events where executives treat the stockholders to lunch and speeches instead of carrying out meaningful transactions (Freeman, 1984). Additionally, the corporation is considered to be an 'island'.

The Stockholder theory is widely preferred by academics and practitioners. The theory suffers from the same critiques as those for the Aggregate theory. The difference lies in that the Stockholder theory focuses on how the company generates profit for the stockholders, rather than how the company is established legally. The Stockholder theory's focus is on short-term economic issues, such as the expectancy for a large and quick return on investment (ROI), which neglects the long-term sustainability dimensions. The obligation, as the name indicates, is solely to the stockholders.

The understanding and interpretation of the authors of this paper with regard to this theory is that its main contribution to CS is to the economic dimension, sometimes at the expense of the other dimensions. The theory confers on company leaders the responsibility to manage a company efficiently and effectively.

4.3.2. The Social Contract theory

The Social Contract theory is primarily framed by Rousseau's (1762) 'Social Contract' and on Coase's (1937) aforementioned Contractual theory. It is comprised of a family of closely related theories. In the widest sense, the Social Contract theory states that firms have an ethical obligation to enhance societal welfare by satisfying consumers' and employees' interests while keeping within the general canons of justice. Society grants firms rights to exist with the expectation of returns of benefits, giving them legal recognition, authorising them to use land and natural resources, and to hire members of the society, whilst managers have obligations to abide by social and justice contracts (Hasnas, 1998).

Another version of the Social Contract theory indicates that there are 'extant social contracts', *i.e.* informal agreements that embody behavioural norms that are derived from shared goals, beliefs, and attitudes of groups or communities; however, the 'social contract' is not legally recognised, and it is not transparent to the corporation's founders, owners or managers (Hasnas, 1998). The Social Contract theory extends the Contractual theory to civil society, where the company is given a 'licence-to-operate' (White, 2004).

The authors of this paper's understanding and interpretation of this theory is that the company has an obligation to society, which is ultimately responsible for providing or removing the 'licence-to-operate', if the company does not fulfil the obligations implicit under the Social Contract. The main focus of this theory is on the social dimensions of sustainability. The other dimensions (economic, environmental, and time) are not explicitly addressed.

The Social Contract theory provides company leaders with guidance on how to extend the principles of Contractual theory from suppliers to the relations with social stakeholders, where social and justice contracts are consistently fulfilled.

In summary, the Social Contract theory is a narrower version of the Stakeholder theory, where the focus is only on the social stakeholders. Two questions, therefore, can be posed with regard to Social Contract theory: How should or could the Social Contract be enforced? What is its scope or extent in the context of CS?

4.3.3. The Stakeholder Theory

The Stakeholder Theory postulates that corporations have duties to multiple stakeholders (Freeman, 1984). Stakeholders can be internal, such as employees, including management; or external, such as customers, suppliers, banks, environmentalists, governments, and other groups (Argadoña, 1998; Freeman et al., 2004; Freeman, 1984). Some stakeholders may be considered both internal and external, such as stockholders. Stakeholders can also be divided into primary and secondary groupings, where primary ones have a more direct influence or are influenced by the company to a greater degree than secondary ones (Castka and Prajogo, 2013; Lindfelt, 2002; McIntosh et al., 1998). Table 1, lists some of the different stakeholders.

Within the context of this theory, the corporation's fundamental obligation is to ensure it survives and thrives while considering and balancing the needs of multiple stakeholders, instead of solely maximising its financial success (Hasnas, 1998; Kaku, 2003).

Although, originally, the Stakeholder Theory had as its main focus social stakeholders, more recently an increasing number of authors have addressed environmental issues through the Stakeholder theory. This includes environmental management (Céspedes-Lorente et al., 2004; Krucken and Meroni, 2006; Onkila, 2009), environmental regulation (Céspedes-Lorente et al., 2004), and protection of the natural environment (King, 2007).

Table 1
Examples of a firm's primary and secondary, social, and non-social stakeholders within the stakeholder theory context.

	Primary stakeholders	Secondary stakeholders
Social	• Shareholders (stockholders) and investors • Employees and managers • Customers • Unions • Suppliers and other business partners • Local communities	• Government and regulators • Civic institutions • Social pressure groups • The media and academia • Trade bodies • Competitors • General public
Non-social	• The natural environment • Future generations • Non-human species	• Environmental pressure groups • Animal-welfare organisations

Sources: Adapted from Céspedes-Lorente et al., 2004; Eesley and Lenox, 2006; Hill and Jones, 2001; King, 2007; Lindfelt, 2002; McIntosh et al., 1998; Onkila, 2009; Steurer, 2006.

In particular, Céspedes-Lorente et al. (2004) proposed four streams of research within Stakeholder theory that touch on the natural environment: (1) the role of external stakeholders in assessing environmental performance and corporate environmental risks; (2) the importance of pressure for environmental reporting practices and communication; (3) the influence of stakeholders on the environmental strategy of firms; and (4) the development of environmental cooperation between the firm and its diverse stakeholders.

In spite of the latest discourses on Stakeholder theory, it has been recognised that it has a number of inherent difficulties, such as identifying and differentiating between stakeholders (*e.g.* primary and secondary) (Langtry, 1994), meeting their expectations (Argadoña, 1998; Dyllick and Hockerts, 2002), and forecasting their reactions towards the firm's actions (Langtry, 1994).

The authors of this paper's understanding and interpretation is that the Stakeholder Theory's main principle is managing and balancing the relationships of the company with social and non-social stakeholders. This theory, with its additions to include the environment, contributes to the economic, environmental, and social dimensions of sustainability. However, it is limited in how it addresses the time dimension, since it does not specify how to deal with changes in the environment where the company operates.

The Stakeholder theory provides company leaders and managers with a broader understanding on how to engage with different groups that are influenced or influence the company.

4.3.4. Insights into Corporate Obligation theories

The understanding and interpretation of the authors of this paper about this group of theories is that they focus on the management of company obligations. The Stockholder theory is based on the principle that the company is only obliged to provide a return on stockholder investment. The Social Contract theory is based upon the ethical obligations of the company to society, so it can maintain its 'licence-to-operate'. The Stakeholder theory emphasises that the company has obligations to a wide variety of social and non-social entities and that these need to be taken into consideration in the management and operations of the company.

Within that context, Corporate Obligation theories have been designed to help to explain a company's obligations to their stakeholders. These theories help to explain how and to what purpose the company functions. They range from a narrow scope, such as the Stockholder theory, to a broader scope, in the case of the externally focused Social Contract theory to the internally focused RBV, to the broadest scope by the Stakeholder theory, which encompasses the economic, environmental, and social dimensions.

In general the theories addressed, thus far, do not usually consider the effects of the time dimension, with a limited exception in the RBV that deals with the time dimension through the development of the company's internal resources. The theories in this group do not consider the legal establishment of the company.

Recognising, dealing, and empowering the different internal and external stakeholders can be a challenge for corporate leaders, especially when their focus has traditionally only been upon satisfying stockholders' interests. The theories can provide company leaders with an explanation of the company as a whole system that relates to and has impacts on society and the environment. This has the potential to help company leaders to more effectively embed sustainability into their company's activities and culture, and to better contribute to making societies more sustainable.

The authors of this paper's interpretation is that: the Stockholder theory focuses on maximising the ROI (economic dimension) and protecting the stockholders through limited liability (internal stakeholders of the social dimension); the Social Contract theory contributes to the external stakeholders (social dimension) through the 'licence-to-operate'; and the Stakeholder theory addresses all stakeholders (social dimension), including the environment (environmental dimension), whilst being based on the survival and thriving of the company (economic dimension). This group of theories focuses on the management of the company's obligations. These contributions are illustrated in Fig. 3.

5. Discussion based upon the authors' understanding and interpretations of the theories of the firm's contributions to Corporate Sustainability

Due to the socially constructed nature of the firms, the theories developed to explain them are in the realm of the middle range theories (see Bryman, 2004).

CS is, to a great extent, also a socially constructed term. Therefore, any theory pertaining to it will also be a middle range theory.

This paper was developed upon meta-interpretations (as postulated by Dreyfus, 1980) of the CS phenomenon, which set the boundaries of the theory development (see Bacharach, 1989). Given that theories of the firm belong to the realm of social sciences, the authors used an interpretative approach to explore how they may contribute to CS.

The predominance of the aggregate theory basis, which is inherent to the Stockholder and the Contractual theories, is understandable since historically and culturally firms have had more rights than responsibilities, at least in Western societies (see McIntosh et al., 1998). However, the rise of sustainability has led to the recognition that companies have responsibilities to different stakeholders beyond profit generation and job creation (as indicated by Carroll, 1991; Farmer and Hogue, 1973; Freeman et al., 2004; Freeman, 1984; Hill and Jones, 2001).

The use of hermeneutics (see Dilthey, 1972) provided a base for the authors to compare and inquire (as reported by Harrington, 2001; Heidegger, 1976; Leyh, 1988) into the theories' contributions to CS and how this affects company leaders. This helped the authors of this paper to: (1) clarify, the often contradictory positions of the theories (see Dreyfus, 1980); (2) discriminate critically (as postulated by Bernstein, 1982) the differences of the theories and their contributions to CS; and (3) develop valid interpretations of the theories.

The main position taken by the authors was that of confirming or rejecting a particular proposition, as posited by Dreyfus (1980). The authors utilised Bernstein's (1982) 'understanding' and 'interpretation' in the enquiries. Further research is needed to build upon their 'application'. The purpose of this paper was to provide 'ethical

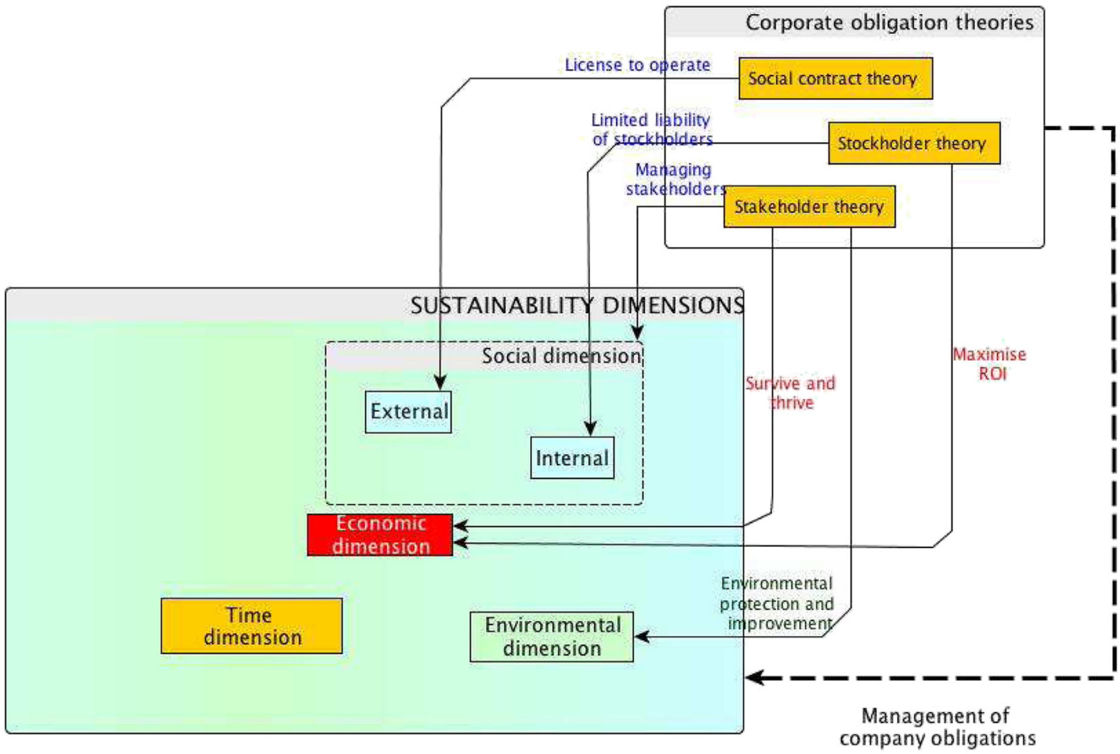

Fig. 3. The authors' understanding and interpretation of the Corporate Obligation theories of the firm contributions to Corporate Sustainability.

know-how' on how the theories contribute to CS. The explanation of the theories was done under formal causes (see Heller, 1989).

The research was framed on the following components of the research design (see Section 2), with the intention of answering the questions: What are the contributions of current theories of the firm to Corporate Sustainability? Are current theories of the firm sufficient to fully encompass the contributions of firms to Corporate Sustainability?

The answer to the first component is given by the understanding and interpretation of each theory and/or by each group of theories. The authors presented, the contribution of each theory and group of theories within the context of the four dimensions of sustainability (see Lozano, 2008b), and with regard to the factors that influence corporate leaders' decisions in managing the company (Dunphy et al., 2003; European Commission, 1998; Fergus and Rowney, 2005). The understanding and interpretation of the authors of this paper is that company leaders, working within the context of any of the theories reviewed, can obtain insights from them in how each can contribute to CS in its own particular way, as the iterative process revealed that each theory can be 'a part of the puzzle' and can connect with the other parts; this was suggested by the paradox of the hermeneutics circle (see Dilthey, 1972; Gadamer, 1975; Harrington, 2001; Schleiermacher, 1977).

The authors' interpretations of the theories, *i.e.* the elements (Figs. 1–3), are synthesized in Table 2 and illustrated in Fig. 4. These show that most theories are focused on the external stakeholders of the social dimensions; followed by the economic dimension. The internal stakeholders are addressed by three theories (with two focussing on stockholders).

The Evolutionary theory and the RBV contribute to the time dimension, the former by out-evolving competitors, and the latter by developing unique resources over time. The only theory that explicitly focuses upon the environmental dimension is the Stakeholder theory. This may be due to the social context within which these two theories were developed. This contrasts with the environmental bias of CS (as highlighted by Atkinson, 2000; Costanza, 1991; Rees, 2002; Reinhardt, 2000).

Following the meta-interpretation proposed by Dreyfus (1980), the groups of theories were limited, when taken as separate elements, in addressing the four dimensions of sustainability; however, each can potentially provide contributing principles (as discussed in Sections 4.1.4, 4.2.4, and 4.3.4):

- The Corporate Entity theories contribute two main points: the incorporation of a company and how it is viewed within a state context, *i.e.* a legal perspective;
- The Corporate Nature of the firm theories provide a perspective on the company's existence and how it deals with the nexus between competitors, and its own resources; and
- The Corporate Obligations theories' main foci are the management of the company and clarification of the stakeholders to whom the company is responsible.

6. Conclusions and recommendations

In practice, corporate leaders, generally, understand that their company operates as a whole within a system of multiple stakeholders. The Theories of the Firm, discussed by the authors of this paper, do not adequately encompass all of the relevant CS issues.

The methodological approach taken for this paper was based on seeking to understand the nuances of the Theories of the Firm. It is possible that other researchers, with different experiences or from different contexts, have had, or will have, different interpretations of the theories reviewed.

The theories reviewed were selected because they can help leaders (and academics) gain insights into how firms can contribute to the dynamic interactions of the economic, social, environmental, and time dimensions of CS. The theories were summarised in a

Table 2
The authors' understanding and interpretation of the key principles of each Theory of the firm's contributions to Corporate Sustainability.

Theory of the firm		Corporate Sustainability dimensions				
		Economic	Environment	Social (stakeholders)		Time
				Internal	External	
Legal perspective	Artificial entity				Extension of the state	
	Aggregate entity			Shareholders as owners	Extension of the shareholders	
	Real entity				Rights and responsibilities	
Nature of the firm	Contractual	Cost reductions			Relations with business parties	
	Evolutionary	Focus on profitability			Out evolving competitors	Evolutionary path as 'survival of the fittest'
	RBV	Reduce production costs		Develop human, tangible, and intangible resources		Internal company resource development over time
Obligation to stakeholders	Stockholder	Maximise returns to stockholders		Stockholders as owners with limited liability		
	Social contract				Society grants firms rights to exist with the expectation of a return for certain benefits	
	Stakeholder	Ensure company's survival and thrive	Environmental protection, management, communication, and cooperation	Benefit and balance the needs of internal and external stakeholders		

concise manner to help in the comparative analysis. Other disciplines and theories (for example the institutional theory and the network theory), while their main focus may not be on the firm, could complement those reviewed in this paper. These should be explored in future research.

Seth and Thomas (1994) questioned whether an integrated theory of the firm should be developed. They suggested that in the ideal case, such a theory would be broad enough to function as a frame of reference for all possible research issues in strategy. They concluded that, at the moment of their publication, the development of such an integrated theory was not necessary. However, the authors of the present paper are convinced that it is increasingly imperative to develop an integrative and holistic theory of the firm, to provide a broad frame of reference for future research and application of corporate actions to help to ensure effective and meaningful implementation of CS policies and actions.

From that interpretation of the different theories discussed in this paper the following principles were distilled: (1) the firm has to generate profits; (2) the firm and its system (including operations and production, management and strategy, organisational systems, procurement and marketing, and assessment and communication) are constantly evolving; (3) the firm is comprised of its products, services, internal activities, structure, operations, management, and relations to stakeholders; (4) the firm has inter-related tangible, intangible and human resources; (5) the firm influences, and is influenced, through a network of relations, and by a number of social and non-social stakeholders which can provide or rescind the firm's 'licence-to-operate'; (6) the firm is controlled by its managers, who are responsible for overseeing and ensuring that its activities are within the law; (7) the employees are 'ambassadors' of the firm and are responsible for balancing the profit generation objective of the company with its responsibilities to all stakeholders; (8) the employees are responsible for developing the firm's resources and for integrating them holistically throughout the firm's system over time to provide it with a competitive advantage; (9) the firm and its employees can be accused of crimes against sustainability; and (10) the firm and its agents are obligated to recognise that their firm, competitors, legislators, consumers, the environment, and the world, are constantly evolving.

Based on these principles, the authors propose a new theory of the firm, titled the '*Sustainability Oriented Theory of the Firm*', which was built upon the authors' comparative and integrative understanding and interpretation of the different theories and was integrated within an holistic perspective of CS.

> "*The firm is a profit generating entity in a state of constant evolution. This entity is a system comprised of resources and networks of relationships with stakeholders. The firm's employees are responsible to represent the firm, manage its resources, and empower its stakeholders so that the firm complies with laws, maintains its 'licence-to-operate', increases its competitive advantage, and better contributes to foster the evolution of more sustainable societies by holistically addressing the economic, environmental, social, and time dimensions.*"

One of the elements of any theory is its utility (see Bacharach, 1989). This proposed 'Sustainability Oriented Theory of the Firm' can be useful in providing a firm's leaders and its stakeholders with a more complete vision of their obligations, opportunities, relationships, and processes that the firm's leaders should address as they engage in helping to make societies become more sustainable in the short and long term.

This proposed theory could have implications for governments because they should consider firms as real entities, with rights and responsibilities to and for contributing to societal sustainability.

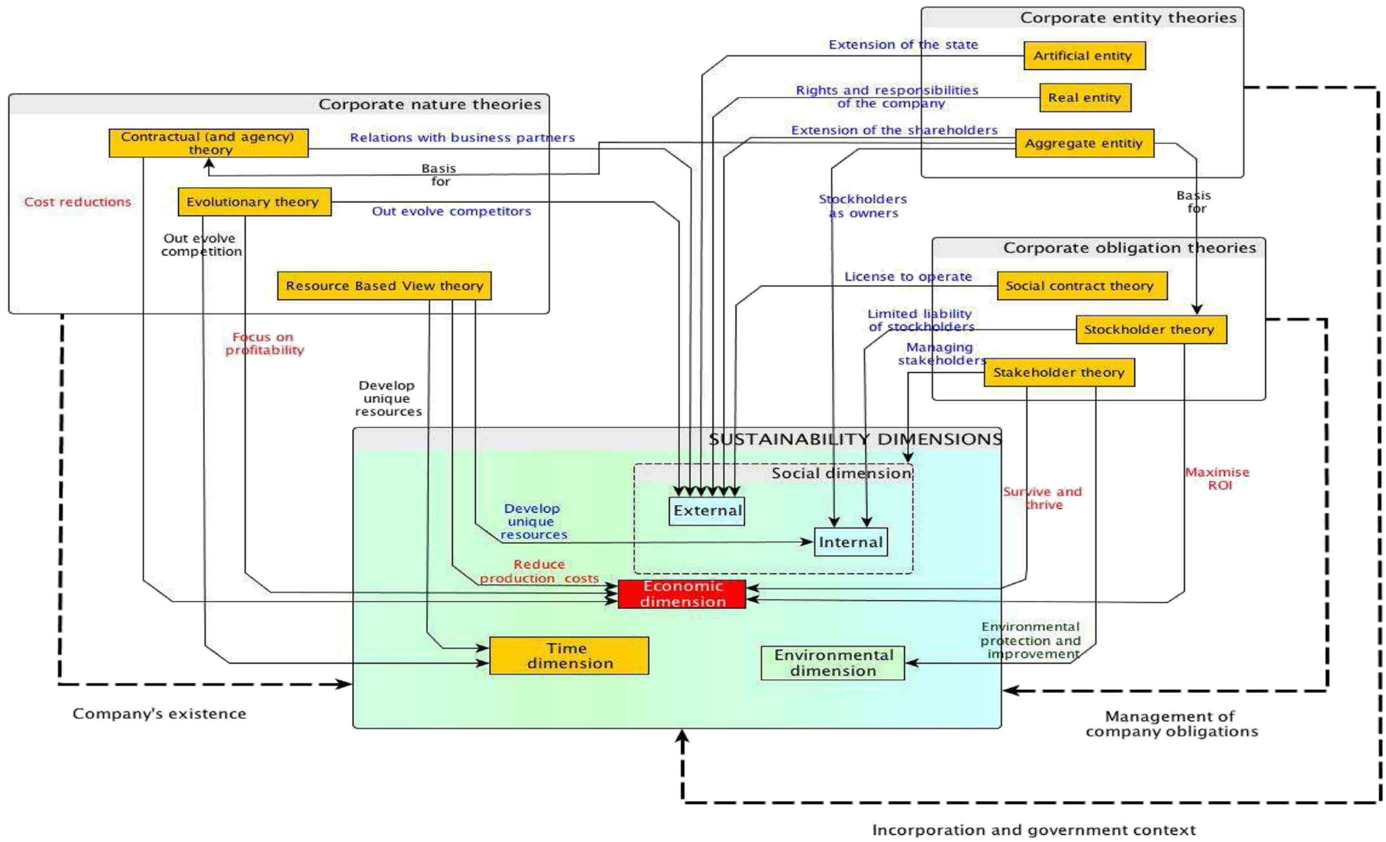

Fig. 4. A diagram of the authors' understanding and interpretation of the Theories of the Firm's contributions to Corporate Sustainability: Connections and principles of the theories to the economic, environmental, social (internal and external stakeholders), and time dimensions of sustainability.

Further research should be performed on how this proposed theory could be used in planning and guiding CS initiatives and activities, and how the 'Sustainability Oriented Theory of the Firm' could be inter-linked with dynamically complementary responsibilities of governments, academia, the media, NGOs and society, at large. That research could focus upon many elements including the falsifiability element of the new theory (see Bacharach, 1989).

The authors welcome feedback on ways to modify, improve, and apply the proposed 'Sustainability Oriented Theory of the Firm' in helping societies to become more sustainable.

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