

# Revista de Gestão Ambiental e Sustentabilidade - GeAS

GeAS - Revista de Gestão Ambiental e Sustentabilidade E-ISSN: 2316-9834; DOI: 10.5585/geas.v2i2.61 Organização: Comitê Científico Interinstitucional/\_Editor Científico: Pedro Luiz Côrtes Revisão: Gramatical, normativa e de formatação.

## SUSTAINABLE ENTREPRENEURSHIP IN THE ENERGY SECTOR: A PERSPECTIVE FROM A BRAZILIAN POWER UTILITY FIRM

Recebido: 05/07/2013

Aprovado: 25/10/2013

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#### ABSTRACT

The key question in this article consists of identifying the conditions under which the social projects developed by the firm Alpha are really promoting the sustainable development in the state of Ceará, located in Northeast Brazil. The general goal is to discuss if the firm's social projects are related to the sustainable corporate entrepreneurship (SCE). This paper intends to stimulate the scientific community to advance knowledge on entrepreneurial, innovation and sustainability. This case study focuses on four Alpha's projects: Ecological Initiative, Efficient Exchange, Social Energy, and School of Efficient Paths. The thematic content's analysis methodology was used in this article. The documental research served as primary data source and helped to better elucidate the studied object. The researcher obtained 12 questionnaires answered. It was found an agreement of respondents to the categories: values, transparency and governance, workforce, environment, suppliers, consumers and customers and community. For the theme government and society, the results showed a disagreement with the category and for the last theme, innovation, the respondents are indifferent. After lexical analysis of data the results confirm in accordance with state of art of literature the existence of triple bottom line in the social projects of Alpha, by the categories resulted (profit, planet, people) from content's analysis of open questions. Alpha is a strong example of social commitment with poverty and environment. In conclusion, the research confirms that the firm promotes sustainable entrepreneurship and innovativeness leading to sustainable development.

Keywords: entrepreneurship, energy, sustainability, social projects, innovation

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São Paulo, v.2, nº 2, p 01-23, Jul/Dez. 2013

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# EMPREENDEDORISMO SUSTENTÁVEL NO SETOR DE ENERGIA: UMA PERSPECTIVA DE UMA EMPRESA BRASILEIRA CONCESSIONÁRIA DE ELETRICIDADE

#### RESUMO

A questão central neste artigo é identificar as condições em que os projetos sociais desenvolvidos pela empresa Alpha estão promovendo o desenvolvimento sustentável no Ceará, estado localizado no Nordeste do Brasil. O objetivo geral é discutir se os projetos sociais da empresa estão relacionados com o empreendedorismo corporativo sustentável (SCE). Este artigo tem a intenção de estimular a comunidade científica para o avanço do conhecimento sobre empreendedorismo, inovação e sustentabilidade. Este estudo de caso se concentra em quatro projetos da empresa Alpha: Ecoelce, Troca Eficiente, Energia Social e Escola Coelce. A metodologia de análise do conteúdo temática foi utilizada neste artigo. A pesquisa documental serviu como fonte de dados primária e ajudou a elucidar melhor o objeto estudado. O pesquisador obteve 12 questionários respondidos. Foi encontrada uma concordância entre os entrevistados para as categorias:

valores, transparência e governança, força de trabalho, meio ambiente, fornecedores, consumidores e clientes e comunidade. Para o tema governo e sociedade, os resultados mostraram uma discordância com a categoria e para o último tema inovação, os entrevistados foram indiferentes. Após a análise léxica dos dados, os resultados confirmam a existência de uma tríade nos projetos sociais da Alpha, pelas categorias resultantes (lucro, planeta, pessoas) a partir da análise do conteúdo das perguntas abertas e de acordo com o estado da arte da literatura. Alpha é um forte exemplo de compromisso social com a pobreza e o meio ambiente. A pesquisa confirma que a empresa promove o empreendedorismo sustentável e a inovação na direção do desenvolvimento sustentável.

Palavras-chave:empreendedorismo,energia,sustentabilidade, projetos sociais, inovação

# EL ESPÍRITU EMPRESARIAL EN EL SECTOR ENERGÍA SOSTENIBLE: UNA PERSPECTIVA DE UNA EMPRESA BRASILEÑA DE UTILIDAD DE ELECTRICIDAD

#### RESUMEN

La pregunta central de este artículo es identificar las condiciones en las que los proyectos sociales desarrollados por la empresa Alfa están promoviendo el desarrollo sostenible en el estado de Ceará se encuentra en el noreste de Brasil . El objetivo general es analizar si los proyectos empresariales sociales están relacionadas con el emprendimiento empresarial sostenible (SCE). Este artículo tiene la intención de estimular a la comunidad científica para avanzar en el conocimiento sobre el espíritu empresarial, la innovación y la sostenibilidad. Este estudio de caso se centra en cuatro proyectos de la empresa Alfa: Ecoelce, Cambio Efectivo, Energía Social e Escuela Coelce. La metodología de análisis de contenido temático fue utilizado en este artículo. La investigación documental sirvió como la fuente primaria de datos y ayudó a aclarar el objeto estudiado. El investigador recibió 12 cuestionarios completados. Valores, Transparencia y Gobernabilidad, la fuerza de trabajo, el medio ambiente, proveedores, consumidores y clientes, y la Comunidad: Un acuerdo entre los encuestados a las categorías que se encuentran. Para el gobierno el tema y la sociedad, los resultados

mostraron una discrepancia con la categoría y el último tema de la innovación, los encuestados se mostró indiferente . Tras el análisis de datos léexical, los resultados confirman la existencia de una tríada en proyectos sociales de Alfa , las categorías resultantes ( lucro , planeta , personas) a partir del análisis de contenido de las preguntas abiertas y de acuerdo con el estado de la literatura de la técnica. Alpha es un gran ejemplo de compromiso social con la pobreza y el medio ambiente. La investigación confirma que la empresa promueve el espíritu empresarial sostenible y la innovación hacia el desarrollo sostenible.

Palabras clave: el espíritu empresarial, la sostenibilidad energética, proyectos sociales, innovación

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### **1 INTRODUCTION**

The presence of multinational companies in the Brazilian power utility sector emerged during the national privatization process initiated in the 1990s. Committed to promote the reduction of public involvement in economic activity, the government of President Fernando Collor (1990-1992) started the privatization process as a political strategy. The privatization process was extended to the power utility sector during the first term of President Fernando Henrique Cardoso (1995-1998). Only during the subsequent presidential terms, under President Lula (2002-2010), it regained power to draw the energy policy in the country.

During all this period also, the regulatory power has been modified with a view of opening the power utility sector to private capital, increasing competition with privatization of federal and state distributors of energy. It was not different with the studied company, here denominated Alpha, that, since 2007, belongs to a Spanish corporation, one of the largest in the sector in the world, and owned by a well-known holding. Especially in this case, it seems that the company Alpha won some principles from its holding related with sustainable corporate sustainability (Miles, Munilla, & Darroch, 2009).

This paper seeks to investigate whether the firm is a real case of sustainability promotion or one more case of greenwash. If big corporations do not understand that in order to maximize profits, they should give up on projects that harm the environment and society, so we are at serious risk of becoming victims of our own greed to pursue maximum profits.

The key question in this article consists of identifying the conditions under which the social projects developed by Alpha are really promoting the sustainable development in the state where it is located. The general goal is to discuss if the firm's social projects are related to the sustainable corporate entrepreneurship (SCE).

The initial assumption is that the sustainable entrepreneurship is consequence of social projects. There would not be sustainable entrepreneurship without social projects. There is a theoretical gap between the present literature and the reality of sustainable entrepreneurship.

In order to develop the argument, the article discusses the relationship between entrepreneurship and sustainability, in addition to studying the social projects implemented by the firm. This research is also based on scientific effort to uncover the main theoretical references on the relationship of the topics "entrepreneurship and sustainability." Understanding the connections between these two subjects was

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necessary to develop this research, which is specifically related to sustainable development and innovation.

There are several institutions studying the topic of entrepreneurship in Brazil, however they lack a more specific emphasis on sustainability. The topic has become frequent in international literature, as seen in Pastakia (1998) e Schaper (2005), as it deals with two main objectives to support two worries of human kind, which is social responsibility and environmental management. The field study of SCE already has advanced with various international publications, however, when it focuses on social projects, it seems to have a gap in the Brazilian literature. Despite the fact that it is a relevant theme, studies on entrepreneurship and sustainability are only now emerging and need to be further explored and better off developed.

The choice of this particular firm is due to the fact that Alpha is an important subject to promote sustainable development by social projects. This study focuses on four of such projects: Ecological Initiative, Efficient Exchange, Social Energy, and School of Efficient Paths. The Ecological Initiative helps thousands families in Ceará to pay the electric bill through the exchange of waste. The Efficient Exchange is focused on the efficient use of electricity, by exchanging old refrigerators for new ones to the low income population. Social Energy has the goal of bringing Alpha's help to the communities with high social vulnerability. School of Efficient Paths is a traveling environmental education project. These projects provide an opportunity to reflect on sustainability, hence enabling researchers to practice critical thinking on the subject. This paper intends to stimulate the scientific community to advance knowledge on entrepreneurial and sustainability. These issues come as particular importance given the increasing pressures of a growing population, worsening of social problems. Creating sustainable businesses can be a possible solution to these challenges.

## 2 THE SOCIAL AND ENVIRONMENTAL PROJECTS AT THE FIRM

Our Common Future (1987, p. 46) defines: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs". The issue of energy power is universal problem and sources of energy should be considered more environmental friendly. It is necessary to use the sources of energy in an ethical manner. This applies to new technologies, or renewable energy that must comply with environmental issues. The society must be prepared for responsible consumption, for example, consumers may choose their energy supplier. Schrader and Thogersen (2011, p. 3) asserts that "Indeed, sustainable consumption has attracted the attention of scholars from many disciplines worldwide. Early publications on this topic

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focused mainly on the significance of private consumption for sustainable development and on the clarification of sustainable as a new concept."

Global corporations cannot neglect the socio-environmental issues since the industry, which is the main causes of injuries to the environment, eventually affects entire ecosystems. To ensure sustainable development is necessary to worry about not only economic factors but also on a broader vision of social reality. At this point, the research brings four projects of social and environmental responsibility: Ecological Initiative, Efficient Exchange, Social Energy, and School of Efficient Paths. According to Elkington (1997), the triple bottom line is the simultaneous pursuit of economic prosperity, environmental quality and social equity.

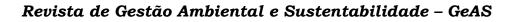
Social responsibility has become a duty for all, being a form of approaching companies with social issues. Philanthropy despite being beneficent in a first approximation often does not create the means for sustainable development. The Ecological Initiative project5 exchanges waste for discounts on energy bills. The program is active throughout the state of Ceará and currently has 55 collection points, of which 32 are on fixed-basis and 23 are periodical collections mainly in the countryside communities.

About 70 communities in 20 countries are reached by holding group's global ecological initiative. Nineteen institutions can be benefited by Ecological Initiative project through the solidarity of customers who give bonuses to the institutions. The holding group won World Business and Development Awards (WBDA) with this project, among nine other winners of the prize sponsored by the United Nations (UN).

According to Rennings (1998, p.16) "Changes of life-styles and consumer behavior are often defined as social innovations". Efficient Exchange6 is a social project focused on the efficient use of electricity; refrigerators can be traded by the population included in the Low Income program. Since the program began, the firm had been benefited 63 municipalities, exchanging more than 25,000 refrigerators. Only in 2009, 9,034 refrigerators were collected, and also 2,100 liters of lubricants oil, which were treated and reused, and approximately 910 kg of HCFC gas, which also will be reborn.

Specifically in the case of SCE, when companies understand the need to exercise responsibility for their actions in economic, social, environmental and technological issues, people will see their processes as a way to preserve life. The most demanding consumers become aware of this, they will

<sup>&</sup>lt;sup>6</sup> Retrieved May 30, 2011 from, https://www.coelce.com.br/coelcesociedade/programas-e-projetos/trocaeficiente.aspx.



<sup>&</sup>lt;sup>5</sup> Retrieved May 30, 2011 from https://www.coelce.com.br/coelcesociedade/programas-e-projetos/ecoelce.aspx.

only consume products from these companies and of course the enterprise will profit more (Kuckertz & Wagner, 2010).

Poverty is a worldwide phenomenon that is increasingly intensified by economic, demographic and social problems. It is the responsibility of all people to think about the possible solutions to the problem. Social Energy7 was established with the purpose to help the communities around the firm with high social vulnerability by an approach of training residents in the communities around the craft, respecting the potential of each region. The project aims to generate income to the families involved in the training.

In addition to training, the firm follows the development of collections of regional products and makes the marketing of them. Social Marketing efforts should be designed to elicit the awareness of entrepreneurial leadership that is not only the state's duty to share the burden of social problems nor the third sector alone, but it is also a task that should be part of profitable companies.

However, when it raises the issue of job training, this process will demand discussions about environmental and social issues whether it is necessary to prepare people for the workplace, academy and businesses must make them aware of basic points about corporate social responsibility to influence practical behavior.

School of Efficient Paths8 is an environmental education itinerant project, which goal is to present the whole process of generating electricity (in this case, coming from hydro power) until the arrival at home. It also provides guidance on responsible consumption of electricity. In 2007, the project toured 96 communities in Fortaleza and countryside, receiving about 34,000 visitors. In 2008, it toured 85 communities in Fortaleza and countryside, carrying about 3,200 courses, donating more than 56,000 energy efficient light bulbs and benefiting approximately 33,000 people.

Creating conditions to generate employment and income can not only be the task of government and public institutions. Society as a whole and the companies have to rethink these new forms of job opportunities, and must do so in a responsible manner. According to Kuckertz and Wagner (2010, p. 524), still remains a question:

Do individuals who are concerned by issues of sustainability also exhibit stronger entrepreneurial intentions? Given that existing imperfections in the market create numerous opportunities for entrepreneurship connected with sustainable development, adding individual sustainability orientation to models of entrepreneurial intention could increase their explanatory power.

<sup>7</sup> Retrieved May 30, 2011, from https://www.coelce.com.br/coelcesociedade/programas-eprojetos/energiasocial.aspx.

<sup>8</sup> Retrieved May 30, 2011, from https://www.coelce.com.br/coelcesociedade/programas-e-projetos/caminhos.aspx.

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Is the firm really promoting sustainability in Ceará? Is this a case of greenwash? Is Alpha an example of innovative and entrepreneurial organization oriented to sustainability? The research has selected four social projects for analysis.

### 2.1 TYPES OF SUSTAINABILITY ORIENTED ENTREPRENEURSHIP

The entrepreneur appears in several theoretical discussions in the last years, especially in studies about entrepreneurship and sustainability strategies. So, it is necessary a previous reflection about who the entrepreneurs are. Those who create and innovate into the enterprise objectifying profits are the intrapreneurs; on the other hand, the entrepreneurs are the undertakers that act as the intrapreneurs, but in their own enterprise (Pinchot III, 1989). The people who, even not being stimulated, give their contributions in order to innovate the management methods of the enterprises, their products or services and the consumer habits are, in fact, the real entrepreneurs. In general, they are people who have high level of involving with their businesses.

The intrapreneurs, searching to establish new products, processes and services, achieve to innovate when integrate marketing technique, collaborating, thus, in the enterprise strategy to obtain profits. In general, the entrepreneurs have not as main motivation the obtaining of wealth, but for them the primordial motivation is the personal realization. Pinchot III (1989) denotes that the intrapreneurs, as well as the entrepreneurs, are not necessarily inventors of new products or services. Their contribution is showing new ideas or even prototypes and transform them into profitable realities.

Schumpeter (1988) asserts about creative destruction, which is a standard description of the innovation process. According to the author, innovation is associated with creativity, with the generation of new ideas, but also with initiative and risk taking. Innovation entails bringing new ideas to fruition in the market, satisfying the demands or creating new needs, a process that improves the well-being. There are five types of innovations in Schumpeter (1984): the launch of a new product, the adoption of new production methods, the opening of new markets, the conquest of new sources for inputs and the creation of new forms of market organization. "Eco-innovations can be developed by firms or non-profit organizations, they can be traded on markets or not, their nature can be technological, organizational, social or institutional" (Rennings, 1998, p. 5).

Yet for Schumpeter (1988), a new invention is an idea that can be perceived as a product or process. The implications of competitiveness are limited by the fact that Research and Development

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(R&D) generate costs. An innovation is the first introduction of a new product in the economy, enabling productivity gains and therefore a unique competitive advantage for the innovator. Moreover, the diffusion means that innovation is finally traded in the market. Only at this point, the production gains induced by innovation can be absorbed by the economy. While innovation has not been copied and innovator is the only one to offer it on the market (e.g. due to patents), its competitive advantage can lead to monopoly profits. According to Bhola (2009, p. 374):

In current discourses of innovation, an innovation is not necessarily a material thing, a gadget or a contraption, but may indeed be an idea, process, or frame of mind, or standpoint of values. An innovation is not necessarily a novelty, something never seen before, but may indeed only be an alteration worthy of notice, a variation or a modification of something already there; or a renovation or a transformation of something, or just a restoration of an old idea from decades or even centuries ago but since forgotten or simply neglected, and now brought back with new functions, and new and compelling justifications—all with vigor, and intense fervor. Innovative thinking and actions on the part of innovators lead to development of innovations that can be disseminated among particular publics.

It is important to establish a difference between social entrepreneurship, philanthropies and the sustainable entrepreneurship. In the first case, the social entrepreneur seeks to maximize the social relations of respect and trust, or social capital (Trivedi, 2010). The innovations in this type of entrepreneurial initiative follow the course of improving the living conditions of people. A social entrepreneur creates innovative ideas and uses his leadership around a social project, while a philanthropist invests in the ideas of the social entrepreneur. The main executive's vision, decisively influenced by his personality, guide the entrepreneurial organization actions, since, usually, the entrepreneur acts even in an intuitive way, taking flexible decisions, so that focalize the opportunities. The innovative organizations have a visionary leadership, charismatic or autocratic (Mintzberg & Quinn, 2001, p. 233).

Great part of the time, the strategy in the innovative enterprise is deliberated because of the centralized structures, but also can be emergent, whenever the ideas are developed, and even the vision can change, as a result of the learning and the adaptations that appear. These organizations have mission as something very important for the generation of the strategies. The mission gives the direction that the organization should follow (Mintzberg & Quinn, 2001, p.238).

Social entrepreneurship which "encompasses the activities and processes undertaken to discover, define, and exploit opportunities in order to enhance social wealth by creating new ventures or managing existing organizations in an innovative manner" (Zahra, Gedajlovic, Neubaum, & Shulman, 2009). But as the electricity firm seems to have this entrepreneurial character and at the same time it is engaged in social projects, could that be considered social entrepreneurship?

In fact, the sustainable entrepreneur polarizes ideas about high ethics more than pursuing profits. He motivates his team around a common cause, and they all follow the same social vision and

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eventually bring creative ideas to the project, thus enabling social innovation. However, for the Entrepreneurial Theory as a science, the sustainable entrepreneur should not be treated only as another kind of entrepreneur. Discussing SCE:

SCE is the process of leveraging innovation of an organization's products, processes, strategies, domain, or businesses models to discover, assess and ultimately exploit attractive economic opportunities created by latent and manifest environmental problems and/or social responsibility issues (Miles et al., 2009, p.69).

Spence, Gherib, and Biwole, (2011, p. 336) define sustainable entrepreneurship (SE) as: "an innovative, market oriented and personality driven form of value creation by environmentally or socially beneficial innovations and products exceeding the start-up phase of a company".

Regarding organizations, in the classification of Mintzberg and Quinn (2001, p. 298), they defend that the innovative organization or adhocracy facilitates the intrapreneuring, since it is less rigid; and yet, related to the innovation, according to Mintzberg and Quinn (2001, p. 293), the entrepreneurial configuration also detains an organic and flexible structure, being able to renew. Even so, this innovation is restricted to simple situations, the one that could be understood easily as for only one leader. The sophisticated innovation requires another type of flexible structure, the one that can join different forms of expertise. Thus, the adhocracy needs to admit and assign power to the experts, people whose knowledge and abilities have been widely developed in training programs.

The innovative organization is also organic. However, is decentralized, in the way that the decisions and actions are placed in several points and levels, nevertheless, the power dislocates to where is the expertise, having as people-key to the enterprise the staff of R&D and the knowledge staff. The sophisticated innovation is its main goal, including teams with different experts, joined in an informal way. The operating adhocracy innovates and takes over projects to satisfy its clients, an example is the cinema enterprise. On the other hand, the administrative adhocracy makes projects for itself, as for example, the chemical enterprise (Mintzberg & Quinn, 2001, p. 293-294). The ecopreneur practices eco-innovation that is understood as the production, assimilation and exploitation of new products, production processes, services or methods of business and management, which targets, throughout its life cycle, to prevent or substantially reduce the environmental risk, pollution and other negative impacts of resource use (including energy use). The novelty and environmental purposes are the two distinctive features for innovation (Gibbs, 2009).



The challenge of addressing climate change in the context of moving society towards the environmental, economic and social goals of sustainability requires radical innovation of cleaner technologies and processes, which meet individual and social needs at acceptable costs with significantly, reduced environmental impacts (Kralj, 2011, p. 286).

Radical innovations drive the firms towards new paradigms, reducing ecological problems and taking advantage of market imperfections as opportunities to the real change of thinking about society and economy.

Innovations play a crucial role not only as the basis of the persistent economic growth prevailing especially in developed countries since the beginning of the industrial revolution; they are also an important, if not the only, mean for maintaining the sustainability of this development, that is, for avoiding destruction of the natural environment and exhaustion of natural resources that may be needed by all our descendents in order to maintain at least the current level of wealth (Renning, 1998, p. 10).

Some authors regarded the economy discourse of innovation as the most relevant. Schumpeter (1988, p. 56), for instance, sees enterprises as capable of conceiving profitable ideas through new combinations. Tracey, Phillips, and Jarvis (2011, p. 60) argue "that one important way that new organizational forms emerge is through a process of bridging institutional entrepreneurship, which involves an institutional entrepreneur combining aspects of established institutional logics to create a new type of organization underpinned by a new, hybrid logic".

It is noted that SCE is one solution to the problem of sustainability using market power in a new way. The firm under study operates as a business enterprise, with products, services, customers, markets, costs and income. Is it a case of a new type of entrepreneurship which main motivation is not profit but to promote sustainability? "Entrepreneurship research has focused transfer on what is to be developed; sustainable entrepreneurship must investigate transfer on both what is to be sustained as well as what is to be developed" (Shepherd & Patzelt, 2011, p. 143). Then, it is possible to resume the effort of defining different types of entrepreneurship according to Table 1.

|                 | Ecopreneurship   | Social  | Institutional  | Sustainable  |
|-----------------|--|---|--|--|
|                 |  | entrepreneurship  | Entrepreneurship   | entrepreneurship   |
| Core motivation | Contribute to<br>solving<br>environmental<br>problem and<br>create economic<br>value | Contribute to<br>solving societal<br>problem and<br>create value for<br>society | Contribute to<br>changing<br>regulatory,<br>societal and<br>market<br>institutions | Contribute to<br>solving societal<br>and<br>environmental<br>problems<br>through the<br>realization of a |
| Main goal       | Earn money by solving  | Achieve societal goal and secure  | Changing<br>institutions as  | successful<br>Creating<br>sustainable  |

Table 1 – Different kinds of sustainability oriented entrepreneurship

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|                | environmental   | funding to         | direct goal     | development       |
|----------------|-----------------|--------------------|-----------------|-------------------|
|                | problems        | achieve this       |                 | trough            |
|                |                 |                    |                 | entrepreneurial   |
|                |                 |                    |                 | corporate         |
|                |                 |                    |                 | activities        |
| Role of        | Ends            | Means              | Means or ends   | Means and ends    |
| economic goals |                 |                    |                 |                   |
| Role of non-   | Environmental   | Societal goals as  | Changing        | Core element of   |
| market goals   | issues as       | ends               | institutions as | integrated end to |
| -              | integrated core |                    | core element    | contribute to     |
|                | element         |                    |                 | sustainable       |
|                |                 |                    |                 | development       |
| Organisational | From focus on   | From focus on      | From changing   | From small        |
| development    | environmental   | societal issues to | institutions to | contribution to   |
| challenge      | issues to       | integrating        | integrating     | large             |
| -              | integrating     | economic issues    | sustainability  | contribution to   |
|                | economic issues |                    |                 | sustainable       |
|                |                 |                    |                 | development       |

Source: Schaltegger & Wagner (2011, p. 224-225)

This discussion leads to a better definition of sustainable entrepreneurship as being "focused on the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and non-economic gains to individuals, the economy, and society" (Shepherd and Patzelt, 2011, p. 137). It is important to consider not only economic factors, but also the society and the environment.

The entrepreneurship issue appears in several theoretical discussions in the last years, especially in the studies about entrepreneuring strategy and planning. Especially about SCE, according to Miles et al. (2009, p. 68) "SCE initiatives are CE activities designed to harness innovation within the firm's strategies, products, processes, or business definition while fostering some aspect of sustainability".

The contribution of these approaches to the generation of strategies in the entrepreneurial organization can be counted in 4 main points: 1) The innovative opportunity is the focus of the entrepreneurial organization; 2) the main executive centralizes the power, managing by the use of the authority or by the charisma, but the view substitute the formal plan; 3) there is a facing of the uncertainty and it is seen as possible gain opportunity; and 4) the need of realization, basically, is the motivation propeller of the entrepreneurs, that have as main aim the organization increasing (Mintzberg, Ahlstrand & Lampel, 2000, p. 105-106).

The entrepreneurial school premises are: the leader has the strategy in mind, as a view of what intends in the future; the leader intuition and experience are the basis for the process of the formation of the strategy; the leader implements the vision through the control and centralization, but promotes

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specific changes, if necessary; the vision is flexible, the strategy is deliberated in the global sense, however emergent with the course of the vision, dependent on the innovation; the organization is adapted to the leader, which is granted big power and management capacity; the strategy is conducted to the market niches protected against the immediate competition forces (Mintzberg et al., 2000, p. 111).

The intrapreneurs search to establish new products, processes and services, achieve to innovate by an integrative marketing technique, collaborating, thus, in the enterprise strategy to obtain profits. In general, the entrepreneurs have not as main motivation the obtaining of wealth, but for them the primordial motivation is the personal realization. Pinchot III (1989) denotes that the intrapreneurs, as well as the entrepreneurs, are not necessarily inventors of new products or services. Their contributions are in take new ideas or even prototypes and transform them in profitable realities. Gibbs (2009, p. 65) defines a subset of sustainability entrepreneurs as "ecopreneurs, defined here as those entrepreneurs who combine environmental awareness with their business activities in a drive to shift the basis of economic development towards a more environmentally friendly basis".

Ecopreneurs, as a type of ecological entrepreneur pays attention not only for the economic factors, but also to the environment. This is a new way of making businesses and to obtain profits, using the power of the preservation of the nature, as a tool to make businesses.

### **3 METHODOLOGY**

In the methodological issue, the reference frame is a totality that includes the theory and its methodology, with theory understood as a generalization of the observed reality and in its interpretation by the use of the scientific severity. The methodology is logic and heuristic, at the same time, and should not be reduced to a posterior reflection to the research results. The methodology includes the methods, as well as the collection techniques of data for the research (Yin, 2005).

Analysis considered several methods of ordination of the constitutive elements of the scientific objects. The research analysis frame is systemic. In conformity with Bruyne, Herman and Schoutheete (1977), the systemic analysis frame recognizes in any research problem of predominance of the whole over the parts and, consequently, it approaches over its object, under a coherent and global net. This is a case study about four business projects of social and environmental responsibility, named in the article: Ecological Initiative, Efficient Exchange, Social Energy, and School of Efficient Paths.

The thematic content's analysis methodology uses lexical analysis of answered closed questions and analysis of open questions, creating or inferring categories (Bardin, 1977; Bruyne et al., 1977). This work is essentially a case study, having as basic concern the delineating of the case-unit,

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which contains certain varieties of cases; in general, the cases are not selected by statistical criteria (Yin, 2005).

The research intended to take a typical case of sustainable entrepreneurial thematic, since Alpha works with natural resources and has social projects. The case studies are based in a theory and refer to an object of knowledge that directly is derived of it. For that, still the researchers used documents in the site of the company aiming a documental analysis. This study is also based in a literature review about the subject, using journals, books and accomplished researches related to the theme.

### 3.1 INSTRUMENTS OF DATA COLLECTION

The collection of primary data was accomplished through the field research with the leaders of the social projects of the enterprise, named Ecological Initiative, Efficient Exchange, Social Energy, and School of Efficient Paths.

Data was collected by questionnaire consisting of open and closed questions. There are some questions related with preliminaries data, about the intrapreneur and what projects he works. However, the most reference data treats about the following subjects: values, transparency and governance, workforce, environment, suppliers, consumers and customers, community, government and society, innovation and sustainability. It was followed a sequence of questions fulfilled by the respondent. In this part the form has questions (1 to 36) of Likert's type (1975) and open questions (37 to 42).

In the intention of avoiding possible failures in the definitive research questionnaire, mainly about the understanding of the questions, it was accomplished a previous test through a form applied personally by the researcher to two persons related to the area associated with the firm. The criterion of choice of the interviewers was intentional focusing the leaders of the enterprise responsible by the social projects, trying to facilitate the knowledge of the study object. Besides, there was contact with some scientists of the area of sustainability that contributed in the methodology, in some way. The documental research served as primary data source and helped to better elucidate the object studied. The researcher personally obtained 12 questionnaires answered.

The questions 1 to 36 are Likert's type (1975), with the evaluation on the right of the form, using a graduation scale from 4 to 1 point following the legend: 4- Agree completely, 3- Agree in part, 2-Disagree partially and 1- Disagree. The questions in this part of the questionnaire were adapted from an instrument of data collection from Indicadores Ethos Princípios Norteadores dos Grupos de Trabalho (2012). The leaders should mark only one option that represented his or her positioning about the

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question. Nevertheless, to analysis effect of the data (Table 2), was considered the following (Brasil, 2002):

strong agreement - when all leaders agreed completely; agreement - when all leaders agreed and at least 1 of them agreed in part. disagreement - when all leaders disagreed and at least 1 of them disagreed in part. strong disagreement – when all leaders disagreed completely.

The results of the open questions (Table 2) show a strong agreement on the following indicators: practices anti-corruption, company commitment to improvement of environmental quality and business communication police, and none of the respondents demonstrate a strong disagreement in any of the topics.

Results show disagreement in some indicators: social responsibility of suppliers, consumer and customer satisfaction, participation in community, business benefits, participation and social influence, participation and monitoring of public administration. The most important thing for the company is the realization of an innovative vision. Innovation is practiced in the products or services by technology. All the rest of the indicators, the major number of them, results in agreement, but to the research analysis is important to view all indicators compounding each theme or category.

For the thematic content analysis, it is considered to the results the following legend (Brasil, 2002):

strong agreement – when all results are strong agreement;

agreement – when the most of all results are agreement.

indifferent – when the quality and amount of results are the same.

disagreement – when the most of all results are disagreement.

strong disagreement – when all results are strong disagreement.

## 4 RESULTS, ANALYSIS AND INTERPRETATION

Data analysis was accomplished with softwares Sphinx Lexica 2000<sup>®</sup> and Microsoft Excel<sup>®</sup> that facilitate the interpretation of the results.

For themes one to six (**Table 2**) were found an agreement of respondents to the categories: values, transparency and governance, workforce, environment, suppliers, consumers and customers and community. For theme seven, government and society, the results showed a disagreement with the category and for the last theme, innovation, the respondents are indifferent.

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Disagreement on theme seven (**Table 2**) is explained by the process of privatization of the company. All the others themes are related to the issue of socio-environmental responsibility which in turn is a vector of sustainable entrepreneurship, but what was unexpected is the indifference towards the issue of innovation. The better explanation to this fact is that some of the respondents are not really intrapreneurs as others are.

Table 2 – Indicators and results of the research by topics

| Indicators  | Results          |
|---|------------------|
| Theme 1:Values, Transparency and Governance                                 |                  |
| Ethical commitment  | Agreement        |
| Practices against bribery   | Agreement        |
| Practices anti-corruption   | Strong Agreement |
| Social balance  | Agreement        |
| Corporate governance  | Agreement        |
| Theme 2: Workforce  |                  |
| Care, health and safety conditions work                                     | Agreement        |
| Additional benefits   | Agreement        |
| Hiring criteria   | Agreement        |
| Valuing diversity and promoting equity                                      | Agreement        |
| Inclusion of people with disabilities                                       | Agreement        |
| Relations with unions   | Agreement        |
| Commitment to professional development and employability                    | Agreement        |
| Access to information   | Agreement        |
| Theme 3: Environment  |                  |
| Company commitment to improvement of environmental quality                  | Strong Agreement |
| Environmental education and awareness                                       | Agreement        |
| Theme 4: Suppliers  |                  |
| Selection criteria and evaluation of suppliers                              | Agreement        |
| Employees of suppliers  | Agreement        |
| Social responsibility of suppliers  | Disagreement     |
| Theme 5: Consumers and Customers  |                  |
| Excellence in customer service  | Agreement        |
| Questions, suggestions and complaints                                       | Agreement        |
| Consumer and customer satisfaction  | Disagreement     |
| Business communication police   | Strong Agreement |
| Knowledge and management of potential damage in products and services       | Agreement        |
| Theme 6: Community  |                  |
| Managing the impact of business in surrounding community                    | Agreement        |
| Relations with the surrounding community                                    | Agreement        |
| Incentive to volunteer work   | Agreement        |
| Company Involvement in social action  | Agreement        |
| Participation   | Disagreement     |
| Business benefits   | Disagreement     |
| Theme 7: Government and Society   |                  |
| Participation and social Influence  | Disagreement     |
| Participation and monitoring of public administration                       | Disagreement     |
| Improvement of public spaces and support for social government initiatives  | Agreement        |
| Theme 8: Innovation   |                  |
| The most important thing for the company is the realization of a innovative | Disagreement     |
| vision  |                  |
| Innovation is practiced in the products or services through the use of      | Disagreement     |
|   |                  |



| Indicators   | Results   |
|--|-----------|
| technology   |           |
| Innovation should be practiced in market and consumer habits                     | Agreement |
| Innovation should be practiced in the techniques and activities to serve clients | Agreement |

Source: Adapted from Indicadores Ethos Princípios Norteadores dos Grupos de Trabalho (2012)

To elucidate the analysis of the results it was necessary to formulate some questions. Is poverty a source of environmental degradation? Does environmental degradation affect the poor disproportionately? Are relevant environmental aspects measured? When does development constitute progress? When the researcher asked the leaders of Alpha's social projects to talk about the firm Efficient Exchange project (open question), some of them answered highlighting keywords bill and recycling. As seen in answer number 9: "It is quite innovative, because it makes the exchange of recyclable material for the account bonus." And answer number 10: "It is a wonderful project that aims to reduce the energy bill with the exchange of bonds for recycling and also the preservation of nature". Those categories appear in the analysis as an economic factor, because the savings in the customers' bills are important to almost all of the executives.

It is necessary a model of resource usage based on natural systems, minimizing energy and material usage, as seen in two others relevant words of the respondents: PROCEL and refrigerator. PROCEL is the National Electrical Energy Conservation Program of Brazil. When the researcher asked about Efficient Exchange Project (open question), respondent number 1 answered: "The Efficient Exchange Project aims to avoid waste of energy in consumer's households (low income consumers), contributing to an incremental change of habits towards rational energy usage by replacing old refrigerators to new efficient ones (with PROCEL seal)". Respondent number 6 answered: "project has social and environmental characteristics. The firm is an example of social responsibility and commitment to energy efficiency develops this program to replace old refrigerators of low-income customers, for new equipment PROCEL stamped "A" saving level."

A central aspect of social and environmental movements is the need to replace old practices by others, translating the principles, objectives and guidelines of the new social movements. By committing to sustainable development, companies must necessary change the way they operate to reduce, at least, the adverse environmental and social impacts. This requires a new approach to innovation, which leads to the idea of sustainable innovation, e.g. a kind of innovation that contributes to the achievement of sustainable development (Barbieri, Vasconcelos, Andreassi, & Vasconcelos, 2010).

A key idea that appeared when the leaders talked about the Social Energy project (open question) was communities' development, as seen in the statement of respondent number 10: "Social Energy's project is a link between the enterprise and the consumers, educating people for new increment savings habits, modifying values by the work's strength and providing income generation".

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In addition, in the answer of respondent number 11: "It is a project targeting sustainability of communities of Fortaleza, metropolitan area, through income generation and development, also bearing information on proper use of electrical energy and its risks for safety".

The School of Efficient Paths aims to be a project to re-educate low-income population into social, environmental and economic dimensions, as should promote change of habits (open question), e.g. leader number 1 answered: "The project is an implementation of environmental education theme at schools, according to PROCEL's methodology, with easy form of assimilation by educators, teachers, students and consumers".

In addition, respondent 4 asserts: "The project presses down energy's consumption in the community with some explanations providing re-education of consumers".

Does the notion of sustainable development have value to the Alpha's projects? Should there be a common definition for the term? Can the sustainability of a project or instrument be assessed? What is the role of innovation? Does it make sense to talk about sustainable technologies? These questions seem to be explained by the triple bottom line to sustainability: social, environment and economy (Elkington, 1997).

As observed by the answers, when the executives confirmed that Alpha is an enterprise that is strongly related to sustainability (open question), e.g. executive number 7 said: "Sustainability is embedded in firm's mission, e.g., incorporating social and environmental criteria in its strategy and governance model. This achievement enables business objectives and maximize value's creation in the long-term perspective for clients, employees, community, government and society".

Respondent number 6 answered: "Yes, it makes the day by day practice. The proactive actions lead to the concept of our mission, people and energy to a better world, respecting life and commitment to society and the environment. The firm has in its organizational structure a specific area related to the environment, sustainability and other areas dealing with energy efficiency, innovation and R&D".

The results of the research seem to confirm, in accordance with literature (Elkington, 1997), the existence of triple bottom line in the social projects of Alpha, as observed in **Table 3**, by the categories resulted from content's analysis of open questions. After lexical analysis of words that appeared more in the answers of open questions. Crossing to the data of closed questions the initial research assumption was confirmed in relation to Alpha's social projects studied: the sustainable entrepreneurship is a consequence of social projects. There would not be sustainable entrepreneurship without social projects. However, it is necessary to remember that the other two pillars environmental and economic are important, too.

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| Social                   | Environmental                | Economic  |
|--------------------------|------------------------------|---|
| Education or educational | Waste                        | Consumers or consumer, customers or consumption |
| Communities              | Environment or environmental | Efficiency or efficient                         |
| Development              | Sustainability               | Energy  |
| Social                   | Project                      | Income  |

Table 3 - Categories resulted from content's analysis of open questions

Source: Direct Research (2012)

Is there a theoretical gap between the present literature and the reality of sustainable entrepreneurship? Maybe it can be solved with more studies about the institutional component as it can be observed in Schaltegger and Wagner (2011). This is an important point to sustainable entrepreneurship to implement new institutional arrangements, as undertaken by the firm under scrutiny.

The general goal was to discuss if its social projects were related to SCE. This seems to be confirmed since the projects are promoting sustainability. However, some leaders of Alpha seem to be quite indifferent to innovation, which require additional empirical studies to state that this is a pure case of SCE. Nevertheless, Alpha presented some characteristics of the innovative organizations: the existence of professional teams of the knowledge and the incentive to the innovation.

Regarding to discuss the relationship between entrepreneurship and sustainability, this goal was reached but with some limitations, mainly because of the absence of the institutional pillar, that is not included into Elkington's (1997) triple bottom line (social, environmental and economic) model. The authors of this research strongly agree that the results found here can help in the understanding of social projects implementation inside firms. They also indicate that social projects are also a sine qua non condition to promote sustainability.

The answers appointed the following factors as very relevant for the leadership of the entrepreneurs: flexibility, creativity, knowledge, information, devotion and commitment. Besides these points, they considered other relevant factors, such as, dynamism, changing, adaptation, qualification, innovation, ability and assumption of risks.

It is important to remind that the entrepreneurial organizations have their actions centralized on the main executive leader, whether or not innovative. However, this type of organization can innovate only in a relatively simple way that is, centralized on the main executive leader, being innovative organizations or not (Mintzberg & Quinn, 2001). Thus, the Entrepreneurial School does not discard the

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innovation, preferring to relate it to the intrapreneuring and place it in the Learning School. The other results of the research, joined to these, reveal that in the interviewed organization there is a hybrid of innovative and entrepreneurial model, according to the behavior of these executives with regard to the innovation (Mintzberg et al., 2000).

The executives of Alpha presented a leadership as orientated to the task as to the people. As to the tasks, the research appointed an agreement related to: giving bigger emphasis to the execution of the terms, quality patterns and economy costs; in the insistence of the need of executing goals, to triumph over the competitors and to improve the performance with sustainability; and was found a strong agreement to clarify the individual responsibility, distributing tasks to specific people.

It shows indicators of an autocratic leadership, typical of entrepreneur organization. Concerning the orientation to the people, it confirmed a strong agreement in developing the working team sense; and there is an agreement among them, when focused on the person or on the group, showing the need of the development of human relations. These evidences concern to the style of democratic leadership. By the way, they considered themselves as democratic leaders.

The entrepreneurs had a strong agreement about having compromising from the internal collaborators with the mission of the enterprise, and considered indispensable values in a subordinate: devotion, loyalty and commitment. Agreeing that they stimulate their subordinates by the intellect and the charisma is relevant to their leadership. It is concluded that these analyzed points are typical of the charismatic leadership that can be executed in the entrepreneurial organizations.

Among the characteristics of a transitional leader, they agreed that there is the cooperation of the leadership to the objectives of the internal collaborators, followed by the reward issue to compensate the performance, in order of preference, such as: 1st eulogies, 2nd salary increase, 3rd participation in the profits, 4th promotion, 5th environmental awareness, 6th sustainability and 7th innovation.

The leaders of Alpha considered relevant the decentralization to their leadership, and agree to allow that the others decide when there is not necessity of their opinion, besides, permitting the debate of ideas, accepting suggestions, but they seem to contradict themselves when considered relevant the control and centralization for their leadership. Yet, in three of these projects there are self-drove teams and only one does not have any form that permits a more effective participation in the enterprise management. Therefore, the entrepreneurs agreed to the idea that is offered internal training compatible to the collaborators. These are typical characteristics of the innovative organizations according to the studies of Mintzberg and Quinn (2001).

Finally, these executives showed characteristics of charismatic, visionary, and autocratic leaders, typical of entrepreneurial organizations centralized on the main executive's figure. Nevertheless, the *Revista de Gestão Ambiental e Sustentabilidade – GeAS* 

results indicate the existence of the elements that proves that Alpha has the characteristics of the Entrepreneurial School (Mintzberg et al., 2000). They also presented a transitional and democratic leadership style. Moreover, they agree with the argument that Alpha has few hierarchic levels, typical situation of entrepreneurial organizations, where a control over the subordinates is practiced. It is concluded that Alpha is a hybrid of entrepreneurial and innovative organization oriented to sustainability.

## 5 CONCLUSION

Social and environmental responsibility should be the concern of mankind, since each person, company, institution and nation have the duty to preserve natural resources, and science should be a great ally in this project of preservation of life in an ethical and conscious way.

The human element should not be overlooked; there are areas of poverty on the planet, especially in emerging and undeveloped countries, where most basic resources such as energy, drinking water and food is not part of everyday life. Another point is the generation of employment and income. More and more degrading forms of work emerge exploiting workers in countries where labor is cheaper or even negligible.

New social technologies are emerging every day in order to help businesses, and how the tone of capitalism in the postmodern age is the issue of innovation, sustainable innovation can facilitate re-use of materials preserving nature, and keeping the corporate profitability.

Science has to contribute towards the sustainable development since is not only the academia that should reflect on the socio-environmental issues, but also it should influence the average citizen to think of it through the written and spoken media and their various means of propagation, such as radio, television, newspapers and internet. Universities must get closer to the population in this sense through the actions of extension about natural practices, examples are: the issue of recycling, re-use of water and energy savings.

The society should not promote economic growth, without ensuring that nature is properly protected from the impacts of economic activity, as this would not promote sustainable development. In addition to the commoditization of natural resources, transformed into inputs for industrial activity, are seen as palliative measures, e.g. try to solve the problem of the destruction of the ozone layer by the sale of carbon credits. It is necessary to use clean technologies. Alpha is a strong example of social commitment with poverty and environment. Beyond third sector, government, the private companies

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should pay more attention to our common future. In conclusion, the research confirms that the firm promotes sustainable entrepreneurship and sustainability.

The strategy in the entrepreneurial organization is, in great part of the time, deliberated, because of the centralized structure, but can also be emergent, when the ideas are developed, and even the vision can change, as a result of the learning and adaptations that arise. It seems to be very tenuous the classification of the authors of the schools of strategic thought, since they consider the intrapreneuring in the Learning School and not in the Entrepreneurial School. Likewise, it is difficult to disconnect the intrapreneuring in the innovative adhocracy from the entrepreneurial organization.

The Entrepreneurial School defends that the entrepreneurial organization has a centralized leadership on the main executive's figure. Another question is: how to have a centralized organization and at the same time innovative. It seems to remain a paradox that can be solved by a hybrid of monarchist entrepreneuring and participative management.

### ACKNOWLEDGEMENTS

Thanks to Ceará Foundation for Research Support (FUNCAP-CE).

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