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STRATEGIC ASPECTS IN SUSTAINABILITY REPORTING: PETROBRAS CASE

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Resumo: Este artigo tem como objetivo identificar a relação entre a estratégia empresarial e seus aspectos de sustentabilidade, representados pelos indicadores do *Global Reporting Initiative* (GRI), como próxi. De natureza descritiva e qualitativa, trata do caso da Petrobras, a maior empresa brasileira no setor de óleo e gás e 14^a. maior no mundo nesse setor. O estudo baseia-se na análise de conteúdo temático de documentos da empresa, principalmente seu relatório de sustentabilidade de 2013 e seu plano estratégico plurianual (PNG 2013-2017), com a utilização do software ATLAS TI 7.1. Os resultados mostram evidência de que alguns dos elementos da estratégia tem pouca ou nenhuma relação com os temas de sustentabilidade; o foco da empresa ainda permanece nos resultados de ordem econômica; no que se refere aos indicadores sociais e ambientais, há uma prevalência daqueles de natureza operacional, ao invés dos estratégicos; e ainda há um desequilíbrio na abordagem *Triple Bottom Line* no relatório de sustentabilidade da empresa, com uma grande predominância dos aspectos sociais. Ao final, discute-se a necessidade de uma análise e avaliação com critérios múltiplos para o desempenho da sustentabilidade no que se refere a uma proporcional importância das estratégias orientadas à sustentabilidade por parte das organizações.

Palavras-chave: Estratégia, Sustentabilidade, Relatórios de Sustentabilidade, Indicadores de Sustentabilidade, *Global Reporting Initiative*.

Abstract: This paper aims to identify the association between a firm's strategy and its sustainability aspects, represented by Global Reporting Initiative indicators as a proxy. The study is both descriptive and qualitative, describing the case of Petrobras, the biggest Brazilian oil and gas company and 14th in the world. It is based on a thematic content analysis of Petrobras documents, mainly its 2013 sustainability report and its Pluriannual Strategic Plan (PNG 2013-2017), by using ATLAS TI 7.1 software. Results show evidence of some of the most important elements of strategy have none or little relationship to sustainability issues; the focus of the company's strategy still remains on economic results; when it comes to social and environmental indicators, there is a prevalence of operational ones rather than ones of strategic nature; there is also an imbalance regarding the triple-bottom-line approach in Petrobras' reporting, with a predominance of social aspects. At last, we discuss that there should be multiple criteria analysis and evaluation for sustainability regarding the proportional importance of organizational sustainable strategies.

Keywords: Strategy, Sustainability, Sustainability Reporting, Sustainability Indicators, Global Reporting Initiative.



1. Introduction

This paper is focused on linking two major topics for organisations: first, their strategy and second, its relationship with sustainability aspects. More exactly, we are dedicated to demonstrate, through analysing in-depth one case, how reporting on sustainability aspects are related – if so – to the actual strategy in companies. In order to accomplish this, we will make an attempt to match the main aspects related to strategy in literature (such as mission, vision, values and principles and so on) and firm's sustainability aspects, represented by the guidelines and indicators of Global Reporting Initiative (GRI), considered an important international reference for sustainability reporting as a proxy.

It is important to highlight that, in the recent years, sustainability issues have been drawing attention of both academia and organisations (Kolk & Mauser, 2002). Companies have been turned into key elements in fostering sustainability since they are players with great economic, social and political power, and therefore have a large influence on the context in which they act worldwide (Hart, 2007). Nevertheless, it has not been an easy task to define a firm's position towards sustainability (Hunt & Auster, 1990; Hart, 1997; Aragón-Correa, 1998), especially when referring to strategic aspects (Parnell, 2008; Stead & Stead, 2008; Bonn & Fischer, 2011).

After the wide spreading of the Sustainable Development concept (WCED, 1987), new ways to understand organisation's sustainable performance have arisen. Perhaps, the most known being the Triple Bottom Line approach (Elkington, 1999; Harris et al., 2001), that captures the firm's performance in economic, social and environmental dimensions, and also one of the most recognised and used organisational frameworks (Berns et al, 2009).

Recent researches have stressed the growing importance given to sustainability in companies' strategies and disclosure. For instance, it is almost unanimous that sustainability-related topics, such as environmental, social and governance issues should be fully embedded in company' strategies, according to 96% of the CEOs that took part of a worldwide survey (Lacey, 2010). In addition, companies have largely used sustainability reports (UNCTD, 2008), mainly based on GRI guidelines (GRI, 2013), in order to communicate to their several stakeholders what is being done in terms of sustainability. The acknowledged relevance of publishing sustainability reports can be noticed by the fact that both investors and corporations are becoming aware of the importance of environmental, social and governance factors in the estimation of corporate value (Klettner, Clarke & Boersma, 2014). In Brazil, this subject has been explored through several studies as well (e.g. Leite e Filho et al., 2009; Campos et al., 2013; Calixto, 2013).

Thus, this paper aims to identify the association between firm's strategy and sustainability aspects as disclosed in business reports. In order to reach this objective, we will follow a qualitative methodology, through a study of Brazilian oil and gas company Petrobras, by making content analysis of several documents, such as its Sustainability Report and its Pluriannual Strategic Plan. The analysis is based on the main aspects related to strategy in literature (such as mission, vision, values and principles and so on) and firm's sustainability aspects, represented by the indicators of Global Reporting Initiative (GRI), version G4. This main objective is threefold: i) to identify main firm's strategic aspects; ii) to identify firm's main sustainability aspects; and iii) to find out how these two elements are associated, if so.

The choice of the company was based on its numbers and importance: in the world, within Oil & Gas industry, Petrobras is currently the 14th company in production that can reach up to 2,6 million barrels per day (Forbes, 2015) – but back, in 2012, Petrobras got the seventh place (Petrobras, 2013c). In Brazil, Petrobras was the overall biggest company until



2013 (Exame, 2013), but from late 2014 and the beginning of 2015, the company has lost a large part of its value, for both external – the drop of oil prices – and internal – corruption scandals and management pitfalls (The Economist, 2015).

Despite the mentioned events, the importance of the Oil & Gas industry is undeniable. Between the years 2000 and 2014, the contribution of this sector increased from 3% to 13% in overall Brazilian GDP (Brasil, 2015), reinforcing the relevance of this sector to national economy. In addition, this industry has been object of several studies on how companies are reporting their performance related to sustainability, both in Brazil and overseas (e.g. Alazzani & Wan-Hussin, 2013; Ayoola & Olasanmi, 2013; Infante; Mendonça; Purcidonio; Valle, 2013).

In short, the main assumption of this study is the need to clarify the existence (or absence) of an association between two relevant topics to organisation's perpetuity – strategy and sustainability. The search for identifying connections through business reports which purpose is precisely to show to stakeholders, in general, planning, actions and results pursued by the company, will also contribute to show evidences of consistencies and/or inconsistencies in organisation' discourse.

2. Theoretical background

2.1 Sustainability and its relation to strategy in organisations

The worldwide known definition that has become a reference to sustainability is a result of the so-called Brundtland Report, made by the World Commission on Environment and Development (WCED). This quotation brings the idea that Sustainable Development would be the “development which meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p. 43). However, it is important to highlight that this definition refers originally to the idea of Sustainable Development.

In general, literature shows that definition and understanding of both sustainable development and sustainability do not represent a consensus (Lélé, 1991; Van Marrewijk & Werre, 2003; Vos, 2007; Doppelt, 2008). Nevertheless, several authors converge on the approach known as Triple Bottom Line - TBL (Elkington, 1999), as a proxy to represent sustainability in an organisation, referring to business activities that demonstrate the inclusion of social and environmental aspects to their economic operations and interactions with stakeholders (Van Marrewijk & Werre, 2003). Thus, sustainability is thought to represent a new way of acting of the organisation, and not just focuses on voluntary practices and answers to the demands of stakeholders (Valente, 2012).

Thus, for the purposes of this research, one of the most important ideas is the “Triple Bottom Line” (TBL) concept. The TBL holds three dimensions: (i) economical, (ii) social, and (iii) environmental (Elkington, 1997; Fiksel, McDaniel & Mendelhall, 1999; Harris, Wise, Gallagher & Goodwin, 2001). The analogy here would be a three-legged stool (the organisation), which each leg would be one of the three aspects that should be balanced aiming the balance in sustainability of the organisation itself (Bennett, 2004).

Despite the controversy on the feasibility if its application (MacDonald & Norman, 2004; MacDonald & Norman, 2007), the discussion on the TBL concept has increased since its first appearance (Elkington, 1999). Some authors even affirm that the TBL is a new view of the firm, representing “[...] a metaphor to remind us that corporate performance is multi-dimensional” (Pava, 2007, p. 108), or in other words, “the triple bottom line captures the essence of sustainability by measuring the impact of an organisation's activities on the world” (Savitz & Weber, 2006, p. xiii).



Although several initiatives related to guidelines for disclosing of sustainability in organisations have been attempted, there is still room for effective implementation of management practices of sustainability and the reporting of sustainable management (Hahn & Scheemesser, 2006; Vos, 2007; Barkemeyer et al., 2014).

In literature, there have been numerous attempts to assess and evaluate the outcomes and the effectiveness of sustainability practices related to corporate strategy. Some authors made an effort to connect mainstream strategy concepts to a new reality, in which sustainability has become intrinsic as part of the strategy and the business itself (Parnell, 2008; Stead & Stead, 2008; Bonn & Fischer, 2011).

For instance, Parnell (2008) cites strategic elements such as the strategy itself, strategic plan, stakeholders, intended strategy, strategic management and the generic strategies to contextualize how Sustainable Strategic Management (SSM) arises as a new sub discipline in the field of management. The same path was followed by Stead and Stead (2008), covering most part of the chronological management theory evolution and culminating in the SSM being an advance in strategic management.

Hart (1997; 2007) also emphasizes the wide scope for strategy when sustainability is taken into account. According to the author, both temporal (today and tomorrow) and extension (internal and external) variables should be part of company's strategy. The last reminds us the Stakeholder Theory (Freeman, 1984). Freeman (1984) identified the stakeholders as central to company's strategy, what should be designed observing stakeholders' interests and needs. Other authors (e.g. Atkinson, Waterhouse & Wells, 1997; Frooman, 1999) highlighted the stakeholders' importance in company's strategic definition.

Most recently some authors added other ideas related to SSM, such as corporate philanthropy (Porter & Kramer, 2002), sustainable value creation (Hart & Milstein, 2003) and sharing (Porter & Kramer, 2006; 2011), and responsible competitiveness (Zadek, 2006), adding to this subject an even more strategic perspective.

Thus, a general definition of SSM would include all of the previous elements, in some degree, as Stead and Stead stated:

"Sustainable strategic management includes strategic management processes that are economically competitive, socially responsible, and in balance with the cycles of nature. Whereas in traditional strategic management, the term, sustainable, is typically used in reference to a firm's ability to continuously renew itself in order to survive over the long-term, ... we're taking a more comprehensive global view of the term, referring not only to the survival and renewal of the firm itself, but also to the survival and renewal of the greater economic system, social system, and ecosystem in which the firm is embedded" (Stead & Stead, 2004, p.6).

Despite many companies seek to incorporate sustainability issues, it seems often that those concerns are achieved more coincidentally than through the formulation of a clear strategy. If strategies are designed for improving performance in terms of the issues identified as relevant for the organisation, in many cases this link between sustainability and organisational strategies is missing in practice (Baumgartner & Ebner, 2010). The next section will explore sustainability reporting and its associations or disassociations with organisational strategy.

2.2 Sustainability reporting

Researchers have dealt with corporate social reporting as a proxy of companies' actual sustainability practices and their strategies (Dawkins & Ngunjiri, 2008; Tang & Li, 2009). Some studies on how companies adapt Corporate Social Responsibility (CSR) have revealed that CSR is a very important component of companies' activities and it has become an integral part of the business strategy (Idowu & Leal Filho, 2009; Metaxas & Tsavdaridou,



2013). It refers to how sustainability practices are defined, implemented and communicated in different parts of the world is often related to specific variables, such as cultural aspects and social context (Chapple & Moon, 2005; Golob & Bartleet, 2007) or industry (Wanderley, Lucian, Farache & Sousa Filho, 2008).

Effective corporate reporting refers to presenting a clear strategy and a set of objectives for the company that is based on a sound understanding of the market context and drivers, including environmental, social and governance trends and issues, the full range of material risks and opportunities the company needs to understand and respond to (Ayoola & Olanmi, 2013). In short, there should be some rules or requirements in order to create a comprehensive reporting. To be effective, three types of information disclosing should be considered: (i) vision and goals, (ii) management approach, and (iii) performance indicators (Bouten et al., 2011).

A fundamental argument here is how key organisational stakeholders are taken into account, and how environmental and social issues are measured, monitored and reported, as these information are been considered of importance for investment, consumption and other related decisions (Rodrigue; Magnan & Boulianne, 2013). Researches have shown that communicating sustainability practices to consumers and stakeholders, in general, leads to positive attitudes and increased attention to the company (Wigley, 2008; Tang & Li, 2009).

For the purposes of this study, we have used the Global Reporting Initiative (GRI) guidelines as a proxy for the organisational sustainability. GRI is a worldwide network with headquarters in The Netherlands; it counts on the participation of experts and representatives from business, non-governmental organisations, experts, government agencies, among others, present in over 40 countries. GRI guidelines are the most used reference for firm's sustainability reporting (GRI, 2011), and it has instructions for specific industry reports (Staniškis & Arbačiauskas, 2009).

GRI guidelines are intended to represent a broad term considered synonymous with other reports whose objective is to describe the economic, environmental and social impacts (TBL) of an organisation. The overall goal of the initiative is to develop a globally accepted reporting framework to enhance the quality, rigor, and utility of sustainability reporting (GRI, 2011). The more recent GRI version – G4 Guidelines – follows four principles (stakeholder inclusiveness, sustainability context, materiality, and completeness) to ensure that sustainability reports (i) present a reasonable and balanced account of economic, environmental, and social performance, (ii) facilitate comparison over time and across organisations, (iii) address issues of concerns to stakeholders (Clarkson, Li, Richardson & Vasvari, 2008). In addition, as highlighted in the G4-GRI Guidelines, sustainability reports have to present a good level of accuracy, timeliness, clarity and reliability.

3. Method

3.1. Research Categories and Codes

This study is both descriptive and qualitative. We have performed a case of study based on Petrobras, the biggest Brazilian oil and gas company and 14th in the world. Case studies are particularly suitable for exploratory investigations focused on the study of emergent practices (Yin, 2009). Although researches on sustainability reports are not rare, the object of study (association between strategy and sustainability) and the methodology applied in this paper can be considered distinct among others regarding this theme.

As research sources we used a set of public documents related to strategy and sustainability in Petrobras: Petrobras' 2013 sustainability report; Petrobras' 2012 sustainability report; and Pluriannual Strategic Plan (PNG 2013-2017) slides and transcription presentation. It was also necessary to include the 2012 Report because, after the analysis



made on 2013 edition, we have noticed that the strategic aspects cited there were not related to the same period, but for the next planning cycle. Regarding sustainability indicators, it was used the G4 Sustainability Report Guidelines and G4 Sector Disclosure Oil and Gas.

It is important to highlight that the main source of information on sustainability was the sustainability report and its data systematized. The content analysis technique allowed systematizing qualitative information (Berg, 2004). Previous literature suggests that this method provides valid results for sustainability reporting research, thus allowing the researcher to evaluate the extent of various items' disclosure (Guthrie; Petty; Yongvanich & Ricceri, 2004).

Content analysis of companies' annual report and sustainability report has been a frequently used method in the study of corporate social reporting in the social and environmental accounting literature since the 1970s (Milne & Adler, 1999; Tand & Li, 2009; Metaxas & Tsavdaridou, 2013). It is the research method usually used to assess social and environmental disclosures of a company (Milne & Adler, 1999). This technique has been used in many papers (Gamerschlag, Möller & Verbeeten, 2011; Skouloudis, Evangelinos & Moraitis, 2012; Roca & Searcy, 2012; Metaxas; & Tsavdaridou, 2013) and it has been used in order to quantify the amount of sustainability information in the reports.

For data analyses we used ATLAS TI 7.1 software. Thematic content analysis has been carried out, which involves the analysis of the written text from the definition of various groups of categories on the bases of selected criteria in order to collect the information systematically. It assumes that frequency is an indication of the subject matter's importance (Guthrie et al., 2004; Krippendorff, 2004).

The data processing followed these stages: a) open coding of data according to the terms used to underpin the study; b) analysis and c) comparison of the documents to identify patterns in the data (Flick, 2009; Berg, 2004). Two macro categories of analysis were established: the first, which involves related to the strategic aspects (codes), both general strategy and sustainability strategies; and second, related to sustainability aspects, represented by GRI indicators (codes) as a proxy. We also conducted the triangulation of primary data obtained from the theory researched in order to enrich and complete the production of knowledge sought by this research (Flick, 2009).

3.2. Research Categories and Codes

Table 1 shows the first category, related to the strategic aspects, both general strategy and sustainability strategies. These aspects were used as references for encoding the documents under analysis.

Table 1 – Strategy category.

Strategy aspects	Authors	Definition
Strategy	Steiner and Meiner (1977)	"Strategy is the forging of company missions, setting objectives for the organisation in light of external and internal forces, formulating specific policies and strategies to achieve objectives, and ensuring their proper implementation so that the basic purposes and objectives of the organisation will be achieved."
	Mintzberg (1979):	"Strategy is a mediating force between the organisation and its environment: consistent patterns of streams of organisational decisions to deal with the environment."
	Hitt, Ireland and Hoskinsson (2005)	"A strategy is an integrated and coordinated set of commitments and actions designed to exploit core competencies and gain a competitive advantage."
Competitive strategy	Porter (1985)	"The search for a favourable competitive position in an industry, the fundamental arena in which competition occurs. Competitive strategy aims to establish a profitable and sustainable position against the forces that determine industry competition."
Mission	Hill and Jones (2001)	"A company's mission describes what the company does".



	Hitt, Ireland and Hoskinsson (2005)	"A mission specifies the business or businesses in which the firm intends to compete and the customers it intends to serve."
Strategic Mission	Ireland and Hitt (1992)	"Strategic Mission is a statement of a firm's unique purpose and the scope of its operations in product and market terms".
Vision	Hill and Jones (2001)	"The vision of a company lays out some desired future state; it articulates, often in bold terms, what the company would like to achieve".
Values	Hill and Jones (2001)	"The values of a company state how managers and employees should conduct themselves, how they should do business, and what kind of organisation they should build to help a company achieve its mission".
Strategic Plan	Mintzberg (1987)	"A formalized procedure to produce an articulated result, in the form of an integrated system of decisions. What to us captures the notion of planning above all -- most clearly distinguishes its literature and differentiates its practice from other processes - is its emphasis on formalization, the systemization of the phenomenon to which planning is meant to apply"
Strategic Management	Hitt, Ireland and Hoskinsson (2005)	"Strategic management process is the full set of commitments, decisions and actions required for a firm to achieve strategic competitiveness and earn above-average returns."
Strategic Management Process	Rummelt, Schendel and Teece (1994)	"The full set of commitments, decisions, and actions required for a firm to achieve strategic competitiveness and earn above-average returns".
Strategic Intent	Hamel and Prahalad (1989)	"Strategic intent is the leveraging of a firm's resources, capabilities and core competencies to accomplish the firm's goals in the competitive environment".
Competitive Advantage	Porter (1996)	"The ability gained through attributes and resources to perform at a higher level than others in the same industry or market"
Competitive Advantage	Barney (1991)	"A firm is said to have a competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential player".
Differentiation	Porter (1985)	"In a differentiation strategy, a firm sells to be unique in its industry along some dimensions that are widely valued by buyers" (Porter, 1985, p. 14)
Stakeholders	Freeman (1984)	"Any group or individual who can affect or is affected by the achievements of the organisation's objectives".
	Hitt, Ireland and Hoskinsson (2005)	"Stakeholders are the individuals and groups who can affect the firm's vision and mission, are affected by the strategic outcomes the firm achieves through its operations, and who have enforceable claims on the firm's performance."
Value Chain	Porter (1980)	"A set of activities that a firm operating in a specific industry performs in order to deliver a valuable product or service for the market"

Source: created by the authors

Table 2 shows the second category, related to sustainability aspects, represented by GRI indicators as a proxy (GRI, 2013). Indicators were used as references for codification, aspects, subcategories and categories as families in ATLAS TI software.

Table 2 – Sustainability reporting category.

Category	Sub-Category	Aspects	Indicators
Economic	-	Economic Performance	G4-EC1; G4-EC2; G4-EC3; G4-EC4
		Market Presence	G4-EC5; G4-EC6
		Indirect Economic Impacts	G4-EC7; G4-EC8
		Procurement Practices	G4-EC9
Environmental	-	Materials	G4-EN1; G4-EN2
		Energy	G4-EN3; G4-EN4; G4-EN5; G4-EN6; G4-EN7
		Water	G4-EN8; G4-EN9; G4-EN10
		Biodiversity	G4-EN11; G4-EN12; G4-EN13; G4-EN14
		Emissions	G4-EN15; G4-EN16; G4-EN17; G4-EN18; G4-EN19; G4-EN20; G4-EN21
		Effluents and Waste	G4-EN22; G4-EN23; G4-EN24; G4-EN25; G4-EN26
		Products and Services	G4-EN27; G4-EN28
		Compliance	G4-EN29
	Transport	G4-EN30	



		Overall	G4-EN31
		Supplier Environmental Assessment	G4-EN32; G4-EN33
		Environmental Grievance Mechanisms	G4-EN34
Social	Labour Practices and Decent Work	Employment	G4-LA1; G4-LA2; G4-LA3
		Labour/Management Relations	G4-LA4
		Occupational Health and Safety	G4-LA5; G4-LA6; G4-LA7; G4-LA8
		Training and Education	G4-LA9; G4-LA10; G4-LA11
		Diversity and Equal Opportunity	G4-LA12
		Equal Remuneration for Women and Men	G4-LA13
		Supplier Assessment for Labour Practices	G4-LA14; G4-LA15
		Labour Practices Grievance Mechanisms	G4-LA16
		Human Rights	Investment
	Non-discrimination		G4-HR3
	Freedom of Association and Collective Bargaining		G4-HR4
	Child Labour		G4-HR5
	Forced or Compulsory Labour		G4-HR6
	Security Practices		G4-HR7
	Indigenous Rights		G4-HR8
	Assessment		G4-HR9
	Supplier Human Rights Assessment		G4-HR10; G4-HR11
	Human Rights Grievance Mechanisms	G4-HR12	
	Society	Local Communities	G4-SO1; G4-SO2
		Anti-corruption	G4-SO3; G4-SO4; G4-SO5
		Public Policy	G4-SO6
		Anti-competitive Behaviour	G4-SO7
		Compliance	G4-SO8
		Supplier Assessment for Impacts on Society	G4-SO9; G4-SO10
		Grievance Mechanisms for Impacts on Society	G4-SO11
	Product Responsibility	Customer Health and Safety	G4-PR1; G4-PR2
		Product and Service Labelling	G4-PR3; G4-PR4; G4-PR5
Marketing Communications		G4-PR6; G4-PR7	
Customer Privacy		G4-PR8	
Compliance		G4-PR9	

Source: created by the authors based on GRI (G4)

Besides the indicators listed in Table 2, others have been analysed too. In G4 General Standard Disclosures Overview, we selected some report general categories, as we understood they were relevant to the comprehension of Petrobras strategy and its association with sustainability: Strategy and Analysis; Stakeholder Engagement; Governance and Ethics and Integrity. Each of these categories has respective indicators that were also analysed. As GRI has some specific report guidelines, once Petrobras is a company from Oil and Gas sector, we also analysed some G4 Sector Disclosures Oil and Gas Sector indicators.

4. Results



4.1 Company's general aspects

First, we offer some description of the company, as shown in Table 3. As mentioned before, Petrobras was, not long ago, the biggest company in Brazil. Its strategic importance and competence in oil drilling, especially in deep sea, is worldwide recognized.

Table 3 – Company background.

Subject	Description
Name	Petroleo Brasileiro S.A.
Sector	Oil & Gas industry
Location	Based in Brazil, Headquarters in Rio de Janeiro, present in 18 countries
EBTIDA (2013)	R\$ 62,967 million
Brand	US\$ 5.7 billion - BrandAnalytics/Millward Brown
Products	Automotive and road transport, industrial and thermoelectric, chemical and petroleum industry, domestic, aviation, rail, nautical, waterway, agribusiness, asphalt, fleet, shipbuilding, marine and locomotive.
Employees	86.111 (total)

Source: Petrobras Sustainability Report (2013c).

4.2 Petrobras' overall strategy

According to Petrobras' Sustainability Report (2012, p.26), company's Corporate Strategy Summary refers to "Expand operations in target markets for petroleum, oil products, petrochemicals, gas and power, biofuels and distribution. Set global benchmark as an integrated energy company". Integrated to strategy summary, there are the Business Segment Pillars, which expose strategies for each Petrobras business unity: Exploration and Production; Downstream and Distribution; Gas, Power and Chemical-Gas; Petrochemicals and Biofuels. None of them has sustainability aspects – in terms of TBL – present in the strategy definition, but concerns about expansion, market leadership, efficiency and sustainability (in a "perpetuity" sense) in operations. The competences considered as necessary for Petrobras to achieve these strategies are: operational excellence in management, energy efficiency, human resources and technology.

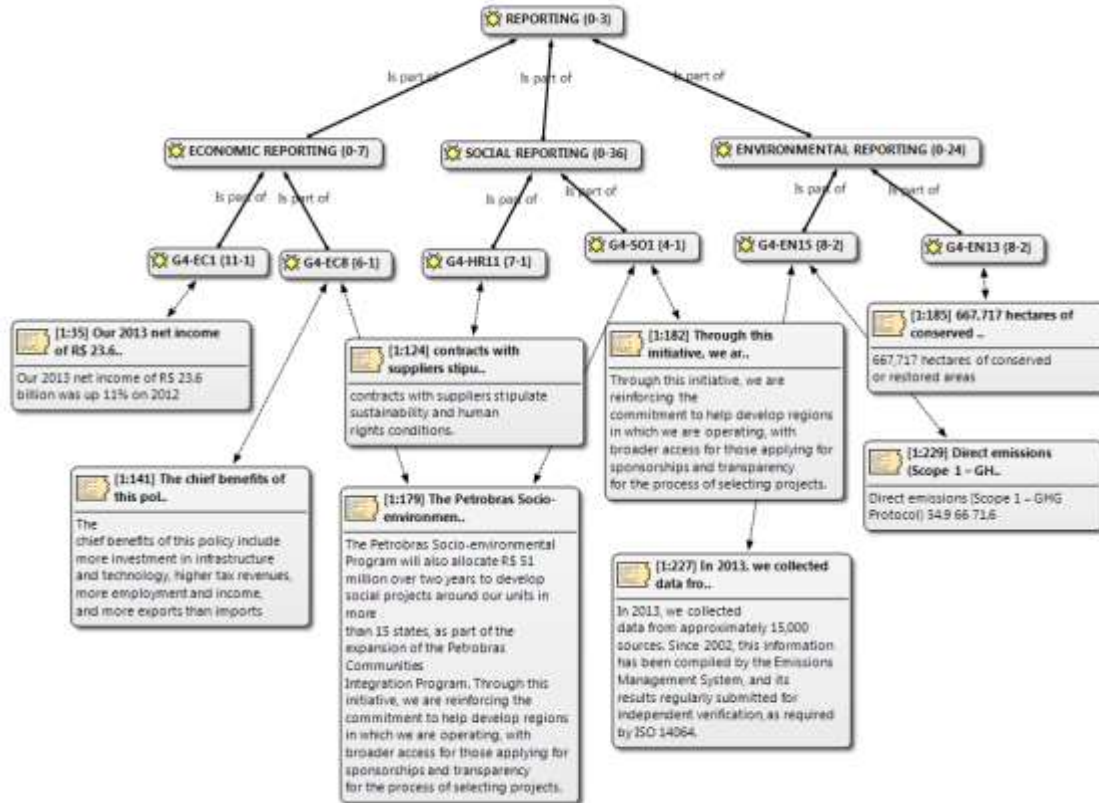
Besides sustainability aspects are not being considered in these strategies statements, the report (Petrobras, 2012) shows that commitment to sustainable development is possible to be noticed in corporate strategy, as three sustainability factors (profitability, integrated growth and social and environmental responsibility) are said to be the drivers of strategic decisions and analysis on corporate business performance.

4.3 Petrobras' strategy and sustainability relationship analysis

These analyses were dedicated to explain how reporting on sustainability aspects are related to strategy in Petrobras case. In order to accomplish this goal some steps have been taken. First, to analyse **organisation's sustainable reporting**, we have checked Petrobras' selected documents previously presented here. Codification in this phase has been primarily deductive, as we have decided to consider all sustainability aspects represented by the indicators of the GRI last version previously presented and 64 codes have been created and grouped according to the Triple Bottom Line approach. Figure 1 represents the first network created as result of analyses – due to the limited space, this figure and the other that follows captures only part of the elements that were analysed.



Figure 1 – Petrobras Sustainability Reporting



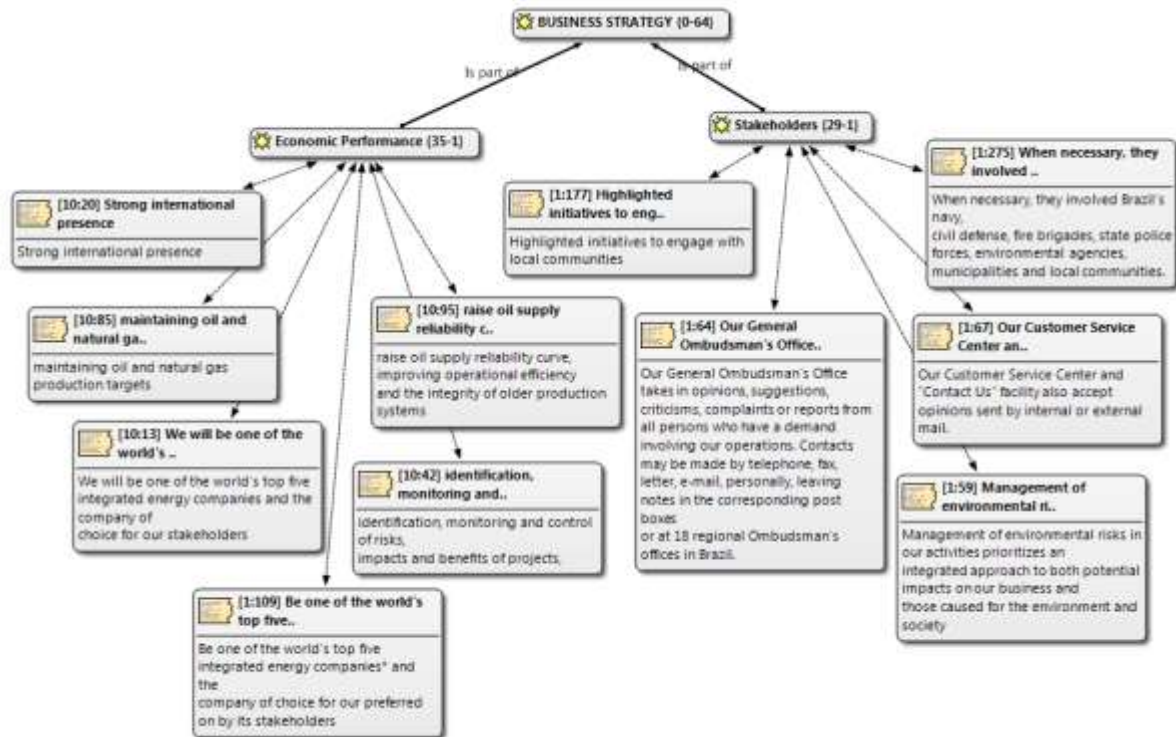
We can notice that the three main elements in reporting are unbalanced, as social reporting shows 36 relations being the most saturated dimension. Respectively environmental reporting captures 24 relations and only seven links have been found for economic reporting. It is important to remark that Figure 1 only shows selected codes in each dimension and selected quotations trying to offer a picture of the main topics found in Petrobras reporting.

Second, we have considered the main aspects related to strategy found in Petrobras selected documents. We have checked documents trying to capture all strategic aspects divulged by Petrobras. We have focused in mission, vision, values, principles and main objectives, actions and results. This codification phase has been mostly inductive, as the study is exploratory in its nature, and to the best of our knowledge, there are not identifiable coding schemes as antecedent in academic literature in this area of research.

Figure 2 represents the second network created. It shows the two main elements found in Petrobras' sustainability strategy that are economic performance and stakeholder consideration. There are 64 codes into this network but we are showing the two most saturated. Selected quotations from these big codes are also shown.



Figure 2 – Petrobras' sustainability strategy



In order to analyse the association between firm's sustainability aspects in Petrobras and the main firm's strategic aspects we compare the networks generated as representative of both topics. As we can see, on one hand there is not a strong association between strategy and sustainability, as economic performance appears as an important pillar in strategy whereas social issues seems to be most important in reporting. However, on the other hand we have obtained an important result linking both goals (reporting and strategy) it is the revelation of stakeholders as the second big pillar in Petrobras strategy.

It is possible to find that in Petrobras' strategy – at least the one that is communicated – does not demonstrate the balanced relationship between the three pillars of sustainability, as stated by TBL approach. It seems that the company relies primarily on economic pillar in formulating and executing its strategy. Nevertheless, the importance given to stakeholders is reasonable and expected considering Petrobras operational nature and its range of economic and politic influence.

4.4 Petrobras' sustainability reporting

In our analysis, some observations could be pointed out regarding Petrobras Sustainability Report 2013. First, as its strengths points, we have observed that this report follows GRI G4 Guidelines and it is classified as "In accordance – Comprehensive". This means that Standard Disclosures of the organisation's strategy and analysis, governance, and ethics and integrity are communicated. Besides, this classification supposes that organisation communicates its performance more extensively by reporting all indicators related to identified material aspects, according to materiality principle (GRI, 2013). Aligned to this finding is the fact that Petrobras Sustainability Report 2013 presents its materiality study, also indicating stakeholders' engagement in the process.

On the other hand, we also found some attention points or weaknesses in the report. From the GRI G4 indicators list (GRI, 2013) there are several aspects and indicators that were not observed in 2013 report. Regarding Economic indicators, two of Market Presence aspect



(EC5; EC6) were not mentioned. Concerning Environmental dimension, two indicators (EN1; EN2) in the Materials aspect were not found. Finally, and more expressively, in Social dimension, all sub-categories presented some missing indicator: Labour Practices and Decent Work (Labour/Management Relations - LA4; Supplier Assessment for Labour Practices - LA14; LA15); Human Rights (Investment - HR1; HR2; Child Labour - HR5); Society (Anti-corruption - SO3; SO4; SO5; Anti-competitive Behaviour - SO7; Compliance: SO8); Product Responsibility (Marketing Communications - PR6; PR7; Customer Privacy - PR8; Compliance - PR9).

It is interesting to mention that Social dimension – the most extensive in Petrobras Sustainability 2013 report – it is also the one with more missing indicators. With respect to Product and Responsibility aspect, for instance, none indicator is presented. Even in quantitative terms the GRI guide points more Social indicators to be disclosed, proportionally, there are still imbalance in the reports presented by Petrobras. A considerable number of contradictions can be found when considering GRI whole Index in the report and the document content itself. Several indicators were founded uncompleted, with generic and vague data.

A fundamental implication derived from these absences and contradictions is that the company's report is not complete as suggested by its classification ("In accordance – Comprehensive"). In consequence, the accuracy of the information in Petrobras Sustainability 2013 report can also be questioned.

5. Final Remarks

The objective here was to identify the association between firm's strategy and its sustainability aspects. In order to do so, we have covered the main elements present in Strategic Management literature and we have used Global Reporting Initiative indicators as a proxy to represent sustainability aspects that should be taken into account by companies.

Through in-depth thematic content analysis of Petrobras documents, some outcomes could be identified. First, as we have pointed out in methodology section, the 2013 sustainability report contains information on the previous year only referring to sustainability, and not on strategy aspects. The latter related in this report refers only to the next period or cycle (2013-2017), what would not allow the reader to compare strategy and sustainability in the described period (2012).

Second, some of the most important elements of strategy have none or little relationship to sustainability. When referring to strategy, the focus of the company remains on economic results, rather than highlight sustainability-oriented drivers.

Third, in order to accomplish organisational long-term competitiveness, it also depends on various factors related to sustainability. There is also an imbalance in Triple Bottom Line approach in Petrobras' reporting, with a predominance of social aspects. Historically, company has played an important role for Brazilian society. However, we cannot forget the several environmental issues Petrobras had in its past, such as oil spills and an oil platform sinking, in 2001. Moreover, as we have shown, even the social indicators are not covered in their full extension.

Fourth, when it comes to sustainability indicators, there is a prevalence of operational ones rather than ones of strategic nature. According to Porter's article "What is strategy" (Porter, 1996), operational indicators should not be considered as strategic. In other words, if we reach to the conclusion that, indeed, sustainability indicators could be found in the previous analysis, we could not be sure that they do represent firm's strategy. In addition, as an aggravating factor, many times their main function is only to comply, according to the mainstream regulation, such as ISO 14,001 and 26,000 or GRI guidelines.



Fifth, studies in Oil & Gas industry have shown that is essential to have multiple criteria analysis and evaluation for sustainability in and importance of sustainable strategies (Infante et al., 2013). This is a warning for the company to broaden even more its strategy and ways of measurement, despite the clear advance regarding stakeholders' role in the making of sustainability reporting (materiality) criteria.

After overall analysis, it is possible to propose a matrix that could work as a basis for evaluating the effectiveness of the relationship between strategy and sustainability. The assumption here is that should be some kind of coherence/consistency between them; i.e., if a company has sustainability in its strategy, there should be also indicators to measure it (**quadrant I**). The opposite situation is also appropriate: a company does not have sustainability in its strategy; thus, it should not have indicators to measure it (**quadrant IV**). Problems lie in the other two situations: **quadrant II**, strategy without indicators and **quadrant III**, indicators without strategy. Therefore, this analysis could help firms to evaluate its position towards sustainability in its strategy. All these possibilities are shown in Table 4.

Table 4 – Strategy versus Reporting Matrix

		Sustainability Reporting	
		Presence	Absence
Sustainability Strategy	Presence	I – Consistent Effective presence of Sustainable Strategies and Indicators	II – Inconsistent Incoherent absence of Sustainable Indicators
	Absence	III – Inconsistent Incoherent presence of Sustainable Indicators	IV – Consistent Intentional absence of Sustainable Strategies and Indicators

Source: created by the authors

As limitations, we cite the own nature of this research, by using secondary data. Despite the large amount of information, it is possible that some important strategic issues related to sustainability have not been analysed.

Some suggestions for future researches include a longitudinal study for the same company, in order to verify its progress (or not) regarding the association between strategy and reporting. It is also possible to have a comparative analysis of several companies, both either in the same industry or in different industries to identify similarities and differences among them.

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