

Environmental accounting as a tool for sustainable economy: the case of the pharmaceutical companies in Puerto Rico

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Abstract

Through institutional approach, the main aim of this research was to evaluate and analyze how and why Janssen Pharmaceutical Company in Puerto Rico uses environmental accounting. A qualitative research in environmental accounting through an empirical analysis of Sustainability Reports, the study of many pharmaceutical firms on the island and an exploratory and descriptive case study in Janssen Pharmaceutical. It was concluded that the use of environmental accounting in Janssen include a series of regulatory, normative and cognitive structures that impact on their environmental performance, based on myths and organizational ceremonies to legitimize and ensure their survival.

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Introduction

The environment is an indispensable element for the sustaining of every living thing, including the human being. Since the early 70s a greater interest in the conservation of these resources is observed, mainly because they start to talk about the depletion and degradation of them. Hence the responsibility begins to fall on all those who in some way may impact the natural environment.

To Saroki, there are reasons to fear the future we have created, as by expanding our capabilities, we expand our capacity for destruction. And despite efforts to improve human conditions, there are now more poor people than before (Saroki, 1993). Currently, our planet Earth is in crisis and its deterioration is observed. It is evident the thinning of the ozone layer and the growth of its hole, the counterproductive effects of acid rain and the greenhouse effect and to top it off air pollution, oceans contamination and disappearance of some species is increasing and with it the biodiversity. These are some of the comments and concerns that have changed the social perspective of humanity in this century.

This environmental crisis caused by the transformation in the biosphere has been a topic of great importance, thus affecting the emergence of programs and laws as the Montreal Protocol (1987); the Treaty of Geneva; Programs of the United Nations Environment Programme (UNEP); the Earth Summit held in Rio de Janeiro (1992), among others. All this concluded that environmental problems demand an international response. These changes have caused a greater reaction both public (through legal mechanisms and environmental policies) and in the private sector (individuals and companies) to contribute to the development of a favorable climate and in most cases for sustainable development.

Accordingly, the GATT (General Agreement on Tariff and Trade, now WTO) suggests that in order that the trade benefits the environment is necessary to assess the natural environment (Ropke, 1994), the SEC (Securities and Exchange Commission) have established that the companies whose publicly traded shares should provide information on the effects of the industry on the environment and the World Bank has accepted his role as global manager of the environment to begin investigating the utility of its annual distributions (money) on the surrounding environment (David Saroki and Jay Schulkin, 1993: 73). Although such liability cannot be extended, for the moment to a financial sector, (banking and insurance remain immune), but it is possible that if they analyze these effects, their own ethics will lead them to a better management of its financial assets for life human and environmental acceptable (are called ethical investors). To this should be added the concern of environmental movements, scientific research and the government's intention regarding a clean environment. What we must ask is whether this concern is only part of a better public image or actually an intrinsic change of everyone.

Puerto Rico is an island located in the Caribbean Sea with an area of 9,104 km² (3,515 m²). It has a population of 3.7 million of people and its economy is based mainly in the manufacturing sector (47% of GDP). When the resources of the island are evaluated, the panorama does not look very flattering and it is noted that public policy and economic growth of Puerto Rico are not directed towards sustainable development. As stated Jose Javier Perez (2003: 6): "Although the picture shows that Puerto Rico is a patient in critical condition, many agree that we have time to save it.

The key is to be creative in how countries use their resources and how governments, businesses and society manage to mobilize in sequence to build economies that are healthy for people and the planet".

This leads us to ask ourselves how aware is the government, employers and the general public in the use and degradation of natural resources and how they are to be lead towards a sustainable development. In particular, how the pharmaceutical industry can contribute to the sustainability of the planet, through the flow of information through its accounting system. As Ruth Hines points out: The accounting practices, while communicating the reality play an important role in creating, sustaining and changing social reality role, insofar as they communicate reality, construct reality (1998). Therefore, if it is recognized that the accounting-help in the construction of the world, according to Rob Gray and influence decisions and expresses "accountability", so if you have in mind the environment when designing accounting, significant changes may occur (1992).

Research objectives

It is impossible to think that if the situation of environmental degradation covers a diverse area, this remains outside in accounting analysis. One method that has been developed to try to contribute to the environment and to internalize this harmful effect has been the environmental accounting. In general, this concept is used in three different ways. First, it is associated with the national accounts of a country where it is recorded and included in the national accounts of a country's reserves, flow, use and depletion of natural resources, environmental costs and externalities incurred in the production process.

The second terminology is related to financial accounting, where the organization presents its financial information to shareholders, in this case, information regarding the costs associated with environmental damage and the responsibility of the company to these effects. Finally, the use of environmental accounting in the management accounting of the organization, which is the interest of this research. This includes the identification, collection, estimation, analysis, internal reporting, and use of the information flow of energy and materials, environmental cost information and other information necessary for decision-making in an organization.

In the research it was intended to clarify the question: Is it possible that the environmental accounting tool that uses Janssen Pharmaceutical Company in Puerto Rico has been established according to certain widespread myths that enable better management and possibly legitimize their operations to the parent (Worldwide Headquarters), but mainly to one of the biggest rationalizers of the twentieth and twenty-first century, which is the state? Hence what intends this research is to see environmental accounting in the pharmaceutical industry as an institutional process rather than a technical process, because you may find that most of the items that pharmaceutical use as part of environmental accounting (measure, evaluate and communicate information), come from events that are taken for state regulations and regulatory agencies, mainly the EPA, EPA, the AAA and the ADS of Puerto Rico , in addition to its parent corporation or worldwide headquarters. Thus, if the Janssen Pharmaceutical Company uses environmental accounting as part of institutionalized routines management accounting, therefore Janssen apply this tools to the goal of greater transparency to the power of coercion that could be using the State or parent corporation and thus.

Legitimize their behavior, and not necessarily as an essential tool in the decision making process in the organization, or by a more commitment to the use and conservation of the natural environment.

In this paper it should be noted, that there was no intention at any time to check or test the institutional theory, since to do so would require a longitudinal study, which lacks this research, but by using this theory could explain the environmental performance of the Janssen Pharmaceutical Company. In addition, this work didn't pretended indicate that the institutional environment dominate the technical or competitive environment, or vice versa, because as Scott mentioned, both exert pressure on organizations to which they must respond in order to survive (1983 and Dimaggio 1999). This would require further research in this field.

Theoretical Framework

Institutional theory exposes the cases that the institutional environment influences the behavior of organizations. This institutional environment is consists of beliefs; cognitions or things that are taken for granted, and that are socially accepted. This argument has two great exponents. On one hand, Meyer & Rowan (1977) indicated that the behavior of organizations it's based on organizational myths and ceremonies. For them, the organizations have institutionalized certain tasks and programs that work as powerful myths that many organizations take ceremoniously, regardless of the efficiency of such practices. They just do it to improve its legitimacy and prove that they are acting in good faith, allowing ensure the survival of the organization. On the other hand, DiMaggio & Powell (1983) argued that as organizations comply, or do some of them, these institutional rules through a mimetic relationship and conformity.

Would result in an institutional isomorphism, since there would be greater homogeneity within organizations. Meyer and Rowan based their analysis on symbolic models, in which organizations would somehow reflect the values and traditions of society. However, to DiMaggio and Powell, were very visible influences acting on the behavior of the organization (mainly the government and professional groups).

This research is part of the institutional theory within the organizational field, in terms of conceptualizing, how institutions have occupied a very important place in the performance of an organization (decision making, legitimacy, survival). In particular, how the practices of environmental accounting in the organization are seen as part of institutionalized routines of management accounting that improve decision making in the organization and simultaneously legitimizing organizational activity to fulfill what is expected of them. See how environmental accounting practices in the Janssen Pharmaceutical Company have become an institutionalized routine, primarily through coercion rules and laws established by the government and thus legitimize its internal and external behavior.

This research focused mainly on qualitative research through a case study of environmental accounting in the Janssen Pharmaceutical Company in Puerto Rico. This qualitative research allowed a deep and thorough analysis, enabling us to better understand the patterns of behavior and social processes in the company (Denzin: 1977: 11).

A case study is an empirical inquiry that investigates a contemporary phenomenon in a real-life context, especially when the boundaries between phenomenon and context are not clearly and obviously when multiple resources are used to obtain the evidence.

It is the preferred strategy when have a question of how and why; when the researcher has little control over events; and when the focus is a contemporary phenomenon in a real-life context (Yin: 1994: 13). The case study then it is a form of deep research and details some phenomenon (individual, community, programs, institutions), which helps providing a better understanding of what we want to study. This may help explain, describe, illustrate, explore and evaluate the phenomenon investigated in the context of real life (Yin, 1994: 25). So that the research is conducted primarily by observing the facts in a thoughtful manner and to the extent we can assess and explain the behavior of the phenomenon in a concise and accurate manner. Therefore, when a case study is used in research, the main objective is to explain this phenomenon and the reward is the opportunity to learn more about this phenomenon (Stake, 2005: 452).

Empirical Analysis

The empirical analysis used in this study consisted of two parts, as shown in Figure 1. In the first part, it was performed an evaluation of sustainability reports (environmental section) having pharmaceutical corporations (corporate) in its website (web). It consisted in the analysis of each of the aspects included in the G3 guide. Each firm is expected to indicate how it behaves in each of these areas and what tools are used to contribute to the sustainability of the planet. Moreover, in this part also environmental information from pharmaceutical companies located in Puerto Rico was evaluated, collected using the questionnaire. A non-random sample (for convenience) was used to distribute this questionnaire due to the concentration of these companies in the areas of greatest environmental pollution (north and southeast of the island).

A response rate of 62.5% was obtained, which is considered acceptable. In the second part of this research, analysis of case study for Janssen Pharmaceutical Company in Puerto Rico was presented.

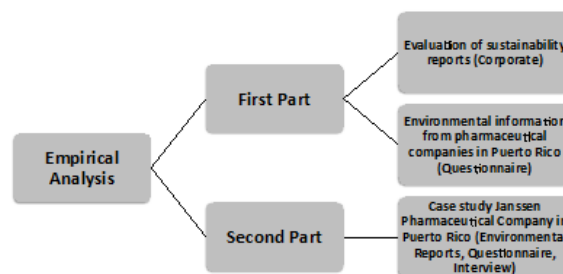


Figure 1 Empirical Analysis

Importantly, being the first time a study of environmental accounting is done in the pharmaceutical industry in Puerto Rico, I considered it was important to conduct an exploratory study in one of the firms surveyed above, to further investigate the environmental accounting in this industry. In this part, three methodological instruments were used: a questionnaire was distributed to people in the Environment Department, the Department of Finance and Production Area); interviews were performed to people in the Environment and Finance Department, a CEO of the company and persons in regulatory agencies) and analyzed the environmental reports that the company sends to regulatory agencies in Puerto Rico and published in the " Performance Track" for purposes of evaluating environmental information to the company and to compare the results with the triangulation process.

Sustainability reports (G3)

Question	Analysis
Compliance with aspects of sustainability GRI (G3)	Most fails
Using environmental accounting	Its using or starting to use this tool

It was noted that most corporations do not meet all the sustainability aspects included in the G3 guide.

Pharmaceutical corporations primarily include information that could be considered mandatory by state regulators, such as water, emissions and compliance, avoiding data on materials, products and services, transport and biodiversity, which are usually less transparent. Moreover, this industry is taking or starting to use the tool of environmental accounting, inasmuch as collecting quantitative and qualitative information (either to comply with environmental regulations and assess their performance in terms of compliance with established goals), analyzing this information to make decisions relating to such behavior (evident in these reports all the resources used by the corporation to reduce its environmental impact), and finally presenting this information to the public through sustainability reporting.

The thing I cannot conclude is how important the environmental accounting is for decision making in the management of its operations. According to the information presented in sustainability reports, it is limited, since it is used to comply with environmental regulations and to legitimize their behavior, and not as an adjustment of major changes in the management of their operations, as stated by Carlos Larrinaga (2001).

Finally, I note that most public corporations have some type of environmental information related to its operations, confirming the claim that every day more companies are motivated by the display of this information, although still lacks financial information (Carlos Larrinaga 2002 ; Moneva and Llena 1996 and Moneva et. Al 1998). It is important to note that this research did not seek in any way to assess the quality of the information presented in these reports, much less see if this information has been increasing over time (longitudinal analysis is required).

But I conclude that the information in these reports was more an act to legitimize their behavior than an essential tools for real sustainability of their operations with respect to environmental or natural resources. Furthermore, as mentioned Larrinaga et al. (2002), it may be that some companies are somehow internally managing their activities with environmental impact even decide not to report it, either because they think it is more harmful than beneficial, wishing to hide data to shareholders or do not have adequate knowledge about rules or standards.

Questionnaire to the pharmaceutical industry in Puerto Rico

The survey was conducted with the aim of increasing knowledge about the environmental performance of the pharmaceutical industry in Puerto Rico, including the use of environmental accounting as an integral part of that flow of information. To carry out this survey several references of earlier researches were used thus obtaining a broader picture of the most relevant information to this research: A.Huizing (1992^a); Gray et.al (1993) and EPA (1995a, b, c, d; 1996; 1997a, b). Three environmental directors of three different pharmaceutical companies validated this survey. Other surveys were sent to environmental managers via e-mail, after telephone contact and engagement thereof with the environmental area.

To handling this survey, a convenience random sample was used. The population of the pharmaceutical industry on the island was evaluated and found to be mainly concentrated in two areas (north and southeast).

Of the fifty-four companies located in this region, it was decided to remove five of them, as they went only on pharmaceutical products packaging and research and not on manufacturing product.

On the other hand, it is important to indicate that communication between fifteen (15) of the companies located in the area was impossible, for reasons of lack of interest or commitments and responsibilities of staff in the environmental and administrative area. In addition, there were five companies operating more than one firm in the island, but only one person answered the questionnaire, so that he could contact and send the questionnaire to twenty-nine companies (29), which would be the final sample used. This survey consisted of a total of eighty-one (81) questions, of which seventy-four (74) were closed and seven (7) open questions. A response rate of 62.5% was obtained, which is considered acceptable. Moreover, the responses come mainly from the two areas of greatest concentration of industry, but in particular the 80% came from the southeast area.

In the analysis of pharmaceutical companies in Puerto Rico it was intended to obtain accurate information to support the hypothesis of this research, that the information provided by the companies belonging to the pharmaceutical industry on the island, make it as a tool to legitimize their operations, mainly, to pressure groups, in particular government agencies, ensuring the continuity of its operations and its permanence in the island. We wished to investigate the following:

Question	Analysis
Environmental performance of pharmaceutical companies in Puerto Rico	- Excellent environmental behavior. - The environment is very important for your business. - Compliance with environmental regulatory agencies.
Using environmental accounting to evaluate their behavior	- Use environmental audits. - Use of environmental costs.

Table 2 Pharmaceutics companies in Puerto Rico

The environmental performance of these companies was evaluated in three ways: in general; through compliance with environmental regulations; and using environmental accounting as a tool for managing their operations.

First I point out, that according to information provided by pharmaceutical companies, the overall rating of environmental performance is excellent and consider the environment as an area of vital importance to their company. Secondly, with regard to environmental compliance, companies said they present and send information to agencies that regulate their behavior with respect to air, water and soil; and, in general, they comply with the environmental regulations. This somehow could mean a greater concern for the environment in which they operate.

In the assessment of information relating to environmental accounting, companies management or handling environmental audits, generate environmental costs information (mainly tangible costs and), calculate the energy and water consumption, emissions and discharges on the water and air, use recycling as an essential part of the production process, consider the life cycle of their product and in their investment and budget consider the natural environment. In addition, companies say that the changes generated to consider the environment in their operations is mainly to comply with established legislation (86.67%) and not by (6.67%) initiative, leaving aside the interest that they may have in managing their operations. These with the purposes for legitimize their operations to regulators and thus ensure continuity of operations. Moreover, it was observed that 40% of pharmaceutical companies do not know the term environmental accounting, however, they speak about environmental costs (98.7%), calculate environmental costs (93.33%), speak about budget, waste, audits, energy, water, recycling, emissions and investment, among others, which are an essential part of the environmental accounting.

This may reflect on the one hand, lack of knowledge about the term and on the other hand, may involve the use of environmental accounting becomes a mere instrument of cultural elements, in particular, ceremonial ritual and/or belief or things that are taken for granted, in addition to meeting the requirements of the regulator. These are not used as a tool to contribute to organizational change, to the extent that it can transform the way the company can see its operations properly and do that they are much more transparent.

Case Study of the Janssen Pharmaceutical Company

Finally, this research aimed to evaluate and analyze how and why Janssen Pharmaceutical Company in Puerto Rico uses the tools of environmental accounting. To meet this goal, it was necessary to answer us the following:

Janssen Pharmaceutical company uses environmental accounting:

- As an integral part of its environmental management
- As a method to reduce environmental damage
- As an integral part of the administration or management of the company (in terms of decision making)
- Janssen Pharmaceutical Company uses environmental auditing as an integral part of its management program
- Janssen Pharmaceutical Company considers it important to develop a sustainable economy and uses environmental accounting as integral to a sustainable economy.

However, the main question I have to answer in this research is the one that was developed as the hypothesis of this research. My argument is that the environmental accounting tool that uses Janssen Pharmaceutical Company in Puerto Rico today do is in order to legitimize their operations mainly to one of the biggest rationalizers of the twentieth and twenty-first century, which is the State, as indicated DiMaggio and Powell (1999: 105). Hence, what intended to do this research is environmental accounting in the pharmaceutical industry as an institutional process rather than a technical process, since most of items used as part of environmental accounting, come from state regulations (EPA, the JCA, the AAA and ADS) and its parent corporation.

Concept	Find	Description
Information and environmental costs	Collects qualitative and quantitative information on environmental costs.	Tangible costs, audits, consumption of water, energy, waste management and recycling.
	1. Environment within your budget. 2. Environment in evaluating investment. 3. Considers the analysis of the product life cycle.	1. Conventional Costs 2. Does not include contingency costs, potentially hidden costs and related to the image. 3. Modify behavior when it is expected some impact on human and environmental health. 4. This analysis is done by the parent corporation.
	Communicate environmental information.	1. Environmental policy 2. Relationship with the community 3. Do not generate any environmental report
Environmental Reports	Transparency is a matter of image.	1. Environmental reports required by government agencies and parent corporation. 2. Limited to gathering and participation in environmental forums.
Participation of accountant	Their participation is limited to evaluating the budget of the Environmental Department and the costs associated with this.	

Table 3 Summary of the Janssen Company

It was observed that Janssen collects quantitative and qualitative environmental costs related information, use the budget and investment tools to analyze their environmental performance, consider the environment within their budget, including the environment in the assessment of the investment, but not consider the life cycle analysis of the product in the process of evaluating information. Finally, it communicates environmental information primarily through its environmental policy and relations with the community.

But does not generate any public environmental report evidencing their environmental performance (only limited to the publication at the corporate level).

Janssen Gurabo is taking or starting to use this tool, as during this case study, it was shown that the company is taking part of the processes required in environmental accounting, as it might be to gather, analyze and publish information. However, it is unfortunate that is using these environmental accounting tools, ignoring its meaning and their use, which might limit its usefulness. So I note that Janssen Gurabo gathers all this information not necessarily to improve decision making within your company, but using this tool as something taken for granted, without questioning why or for what.

It is the question of why Janssen Gurabo is using environmental accounting. Which could answer the previous unknown. First, to assess all aspects of the measurement of environmental costs in Janssen Gurabo, I observe that only present general and regulated information, such as the environmental costs that are part of the overall costs of the company, in particular those in the budget of the Environmental Department and corresponding to the costs related to compliance with environmental standards established by the appropriate regulatory agencies (AAA, EPA, EQB). This negatively impacts their decision making, since underestimates their price, overestimates the economic benefits of their products, improperly selects materials, projects for pollution prevention projects and proper management of resources (water, energy, waste), among others. Second, to evaluate the behavior regarding budgeting tools and investment.

I could see that the budget is primarily aimed at those areas corresponding to some kind of environmental regulation, such as the waste tank and external costs associated with services evaluation of environmental impact of their operations (old and new) incurred by the company. On the other hand, Janssen Gurabo includes the environment in assessing investment, primarily to meet regulatory requirements and any changes make to it are directly related to meet established environmental laws and regulations. This reflects that the company is using environmental accounting as something that is taken for granted, in particular, to meet some regulatory requirements established by those government agencies that exercise over it some kind of pressure, allowing legitimize their behavior and present the image of an excellence company with their environmental performance in order to legitimize itself, coinciding with Larrinaga and Bebbington (2001), Pilar Fuentes (1993), Larrinaga (2002a, b) and Gray (1995 Larrinaga 2002a).

Moreover, little information flow between employees of the company was observed, since several occasions they did not know the information, the answers did not match, and even departments (Finance and Environment) where it should be this information, it was not collected or was unknown (sometimes not match the information within a single department). All this can influence decision-making in the company, because if not recognized and considered the environmental costs and environmental information adequately in the budget and evaluation of the investment and is not transparent to the flow of this information, it can distort their utility in their decision-making. In assessing the behavior of Janssen Gurabo related to the environmental report.

I believe that transparency is limited to a question of image, may coincide in some way with the motivation to provide environmental information reported by Freedman and Stagliano (1992 Larrinaga et al. 2002) and then evaluated by Larrinaga et al. (2002: 45-6), in particular the right to information of shareholders and investors and compliance with legal obligations. First, it makes those environmental reports required by regulatory agencies (AA, EPA, EQB) and J & J Corporation, in order to legitimize their behavior. This is confirmed by one of the commentaries made by one of the supervisors of the environmental area: "The environmental and safety area may be an impediment to the growth of business operations, because if I cannot deliver and pour more, I cannot produce, that is, which is worrying as it limits the production or growth. So Janssen Gurabo meets the requirements (governmental rules), because it is something that can damage the growth". Second, in the "Performance Track" I observed that transparency is limited to community orientation, participation in environmental forums, visits and inspections by regulatory agencies and community services. Which are more limited to image and not necessarily to greater transparency of the company operations. Janssen publishes information that is required by regulatory agencies or those related to environmental accidents. Moreover, as noted above, the company was very tight in providing information related to energy consumption, donations from the company, to answer the questionnaire, audits and environmental reports and finally availability in the recording of interviews.

Although this research did not interview all personnel of the Department of Finance, I think their work is mainly limited to assess the Environmental Department's budget and the costs associated with it, leaving important tasks aside as knowing the overall performance of the business.

Design and evaluation of information systems in the company to capture the environmental costs and the analysis of the product life cycle. This can weaken them in the course of playing a major role in the analysis and provision of information to make visible the relationship between business, society and ecosystem (Birkin & Woodward: 1997), thus limiting the transparency necessary for sustainability of the planet. Furthermore, as the UN (2000) states:

Accounting:

- Do not join with other groups to develop appropriate techniques environmental costs: In the case study they operate as a separate entity.
- Do not recognize the issues of environmental sustainability as an important strategic / financial issue: In the case study know the term, but do not define it.
- Is not involved in the decision-making initiatives sustainable environmental management: In the case study was limited to approving environmental budget.
- There is a weak relationship between the accounting function and environmental: In the case study each department works independently.
- The accounting is not involved in the drafting of the environmental report: The case study is limited to accept, not to write.

In this study case, I could not find is how important is the environmental accounting for decision making in the management of their operations.

The information submitted by Janssen in the case study evidence which merely comply with environmental regulations and to legitimize their behavior, not as a agent of important changes in the management of its operations. This agrees with the analysis of Marrero (2002: 50), when he noted that managers in Puerto Rico show a social commitment to consider environmental regulation in decision making of their companies, however, cannot determine how to act if environmental legislation does not impose an obligation to comply with its provisions, reflecting a commitment to legitimacy and image.

Finally, in the case study I note that Janssen Gurabo has an environmental behavior quite similar to that of the industry on the island, which could point out, albeit of course, that environmental accounting could be used in the same way throughout the sector. While recognizing that one of the weaknesses of the case study is that it can only make generalizations about the case itself, says Lukka et al. (1995) that could generalize if companies or organizations are sufficiently similar and operate in similar conditions, which would imply, mimetic isomorphism. This way I can point out that to the similarity of the pharmaceutical industry in their environmental performance, I can conclude that they may be presenting the same behavior, thus generating environmental information and using environmental accounting as a process of legitimation and good image, rather than a process of improving decision making in the operations of your organization and a greater environmental commitment. However, I recognize that this view deserves further research.

Conclusion

The final thought in this research is that the behavior of the Janssen Pharmaceutical Company in Gurabo regarding the use of environmental accounting is based on myths and organizational ceremonies, as reaffirmed Meyer & Rowan (1977). Janssen Gurabo ceremoniously adopted environmental accounting, without really knowing its usefulness.

This process of institutionalization in the institutional theory, resulting in three ways (Zucker (1987) Fligstein 1999): the internal structure of the organization (of the own routines of the organization), other organizations (the interrelationship between organizations and organizational fields) and the institutional environment (external environment of the organization, especially the State). In this case study in the use and practice of environmental accounting a series of cognitive, normative and regulatory structures that influence on the environmental performance of the organization are mixed, although mainly comes from the influence of the state on the behavior of the organization by the rules or laws that set, as shown in table 4

Finally I note that although I noticed that the behavior of the Pharmaceutical Company Janssen are embedded the three structures, concluded that in this case study, use and practice of environmental accounting in the company comes mainly from the influence of the State on the organizational behavior through rules or laws that set. Thus consciously manipulates the actions of the company, promoting continuity and stability.

Furthermore, this research raises the argument of institutional isomorphism DiMaggio & Powell (1983), to the extent that companies will be subject to follow and comply with laws and institutional regulations.

So their behavior is similar, which tends to institutional homogeneity. Although my research lacks a formal study of the organizational field, I point out that the pharmaceutical industry is a very similar sector with regard to environmental regulation (regulating the agencies themselves), would assume the same behavior as found in Janssen Gurabo . Unless, as Bansal and Penner (2000) postulate; while the rules and regulations on issues or social issues (where appropriate, use of recycled paper by publishing houses in Michigan) may appear to be homogeneous, the cognitive heterogeneity may exist, so there may be organizational differences in the interpretation of such issues as Zucker (1987, 1999) anticipated. However, I recognize that deserves more attention in future research.

For Janssen Gurabo, institutional isomorphism that could be allowing:

Greater legitimacy for their behavior: they incorporate institutional elements and myths generally accepted, their behavior is seen as legitimate both internally and externally, although these myths and ceremonies will not necessarily provide greater efficiency. For example, establish a department of environment in the pharmaceutical industry, it can generate higher spending and not doing so will lead to gross negligence or illegitimacy government agencies and the external environment.

Improved stability: to the extent that the rules, regulations, practices performed are widely accepted, so their behavior will go to meet him accepted.

Greater success and survival: to the extent that adapts and becomes isomorphic to that environment and be legitimized by it, its success and survival will be greater (Meyer & Rowan: 1999).

Institutional Structure	Characteristics	Janssen Behavior
Regulatory Structure	View the institutions as a set of government rules or systems, where a series of rules for that are met, otherwise, be penalized. Thus, the behavior is seen as legitimate if it conforms or act according to the rules and laws (Scott, 1999: 133-34).	Government entities like AAA, EPA, EQB, Health Dept. and the Headquarter of J & J. establish some kind of coercion (through rules, laws and metrics) on Janssen Pharmaceutical to generate information on the audits and environmental assessments, environmental emissions, consumption and water quality, the material used of waste generated and recycling.
Normative Structure	View the institutions as a set of regulatory structures that provide a moral framework for the conduct of social life, where the rules are internalized by the participants and where behavior is driven by the sense of what is appropriate for social obligations of each other or by sharing common values.	Janssen have a series of regulatory elements that are involved in environmental accounting, in particular, accounting rules and accounting groups (by environmental costs and investment budget), certifications (ISO 14001) and Performance Track (voluntary action is greater transparency) that can be formed by sharing common beliefs and what is appropriate for the organization and society.
Cognitive/Cultural Structure	Indicate that there are processes that become routine because they are part of the beliefs that are taken for granted and the only way of doing things, and other behavior that would be unthinkable. DiMaggio & Powell (1983) include the mimetic isomorphism, referring to those beliefs that are taken for granted, noting that an organization could be imitating the behavior of another, especially when the atmosphere is permeated with much uncertainty. The higher the uncertainty, the greater likelihood that the behavior of someone or something based on rules, these may reduce that uncertainty. So you could say that firms prefer to rely on rules to express the world that is fulfilling. In addition, if the accounts is an institutionalized routine, you can predict the behavior of the entity despite the uncertainty in the environment (Scapens, 1994).	The behavior in Janssen is immersed in uncertainty, because the environmental impact of its production processes may not be well defined, as usually happens with the impact or damage to the environment. So they are using converted into beliefs that are taken for granted, for routines, or simply imitating other companies in their environmental performance, in particular the creation of an Environmental Department (Janssen assumes that if they set this department comply with environmental regulations), the use of technology (in the incident EPA-approved technology is used, as it was assuming it would work in your organization), the efficiency ratio (voluntary use can be imitating the success in other companies) and finally, to communicate the information may be assuming who only need that information are the regulatory agencies and the community (it is assumed that if you provide information to the public, can be interpreted negatively their environmental performance).

Table 4 Institutional theory and environmental accounting in janssen pharmaceutical

An organization also produce efficiently and thus ensure their survival, also need the legitimacy of their environment to survive, making the organization carries out activities with legitimate character, otherwise are seen as illegitimate before society, predicting the failure of the organization. In particular, pointed Meyer & Rowan (1977: 90) that one of the important aspects of organizational legitimacy is related to the conservation of the environment, noting that organizations should seek formal rules and safety programs to protect the environment, what otherwise, it can be seen as negligence or illegitimacy. This is the behavior observed in Gurabo Janssen, incorporating elements such as environmental department, environmental policy and compliance with environmental regulations as an essential tool to legitimize their behavior, a way of ensuring their survival.

RISKS

But in particular, the use of environmental accounting practices is mainly due to the need to legitimize their behavior for good management and conservation of natural resources, to the external environment surrounding it, mainly the state.

Thus it would be complying with the myths, rules and standards to achieve institutionalized survival (Meyer & Rowan, 1977 and DiMaggio & Powell, 1983). This, unfortunately, would limit the contribution they could make environmental accounting for sustainable development of our country, as their contribution would be based on the search for legitimacy rather than its merits as a technique or process to reduce the use, consumption and deterioration environment and make the organization a sustainable company. However, it is important to note that although it would be limiting the use that may be giving to environmental accounting (only as a legitimizing entity and not as a agent of changes), understand the institutional pressures, no rational choice and homogeneity organizational behavior, can help the organization to identify factors that may assist in the generation and use of innovative knowledge, in particular relating to the use, maintenance and preservation of the environment, which is an important part of sustainability . In addition, "Environmental problems can be solved through changes in the institutional arrangements that control the industry and social action. As the environmental issue continues to develop, institutional changes should be alert to the development of new institutional forms that can be neither imagined "(Hoffman, 1999: 367). This suggests new ways of thinking, analyze and make from the environment a necessary resource for the sustainability of human life (Goikoetxea, 1999: 177).

Recommendations

As a process of research, the study case has the weaknesses of generalization. However, there are two areas that I want to mention: certain lack of environmental information and the constant rotation of managers of the Environmental Department.

I believe that this work has contributed to the research of environmental accounting within the pharmaceutical industry, however, I acknowledge further enrich investigating the behavior of environmental accounting of Janssen and performing a multiple case study in several pharmaceutical companies in the island. Furthermore, I consider it necessary to Janssen, a greater involvement of accountants in the environmental management of the company, greater commitment in the industry with environmental accounting, greater control and greater commitment of government agencies with the sustainability of the planet and finally to all to contribute the sustainability of the island to the extent that they can become aware of the natural environment belongs to everyone and every human being on the planet.

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