SUSTAINABLE DEVELOPMENT AS A PROFIT PARADOX OF THE SMALL INDUSTRIES OF THE STATE OF RONDONIA

ABSTRACT

The concept of sustainable development has become an inevitable reference for political leaders and international organisations. According to its institutional promoters, sustainable development must combine three aspects that are imperative: growth, reduction of poverty and preservation of ecosystems. Combining these imperatives represents hard work and can be difficult for small industrial businesses. Together they are responsible for the economy of a region in the way they involve themselves in society and directly contribute to the country’s growth as well as economic and social development. There is still no clear definition of the factors influencing the economic results of small enterprises which implement social and economic management with corporate social responsibility. Therefore, it is the aim of this paper to elaborate on this paradox, by looking into Small and Medium-sized enterprises which follow that management model, checking whether it is possible to combine economic development and social development and still obtain more profitability. This research refers to the important study area of sustainability because it focuses on industries which are based in the South of Legal Amazon.

Keywords: Sustainability; Small Industries; Corporate Responsibility and Profitability.

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1. INTRODUCTION

Environmental subjects are very much present in society today and are discussed and assimilated by different spheres. The debate around environmental degradation and disorganised growth has become an international issue and the environment has gained importance in various domains of society.\(^4\)

In fact, sustainable development is referred by politicians and international organisations; according to its promoters, it must combine three very important aspects: growth, poverty reduction and ecosystem preservation. Exploration of environmental resources without any concern for their renewal, together with the lack of structural projects that take into account future impacts, leads to water and energy crisis and brings about losses for the whole of society. A new cycle of worries for humankind ensues, then.\(^5\)

Due to population growth and the higher demand for consumption all over the world, exploration of spaces and natural resources as well as the number of manufacturing and mining industries has also grown.\(^6\) Among these, small and medium-sized enterprises have been standing out. Studies show that in Europe 99.5% of all enterprises are micro and small enterprises.\(^7\)

Corporate social responsibility as a management tool for SMEs is still at an early stage; managers have do not have much information about it and those who have are still afraid of committing themselves to this management model for lack of an exact definition of the concept. There is much controversy as regards results as far as corporate social responsibility is concerned.\(^8\) In fact, some authors think these are positive, others that they are negative and there are those who believe they have no bearing on the profitability of the enterprises that have been studied.

Therefore, it is the aim of this research to study the management model of Rondonian SMEs and to try and identify signs of corporate social management in these industries by looking into their


results. Ultimately, it seeks to find an answer for the following question: is it possible to combine economic development, social development and sustainable development and still achieve profitability?

In order to answer this question two alternatives were set:

A_01 - Implementing a sustainable economic and social management policy contributes to manufacturing SMEs’ financial success and makes them more lucrative

A_02 - Manufacturing SMEs which do business with the goal of becoming partners and responsible for sustainable development are more lucrative.

This study may contribute to shed some light on how these enterprises behave towards a social commitment that has been assumed and what expectations people have, since they are an important piece of the social puzzle, when fulfilling their role of contributing to the sustainable socioeconomic development.

2. LITERATURE REVIEW

2.1 Sustainable Development

Due to the rapid growth of humankind and to scientific and technological advances, the demand for transforming natural spaces and exploring resources has increased significantly, causing different environmental degradation factors that are usually dealt with separately but which, in fact, build a complex network of environmental, social and economic aspects.\(^9\) These factors, which are responsible for degradation processes all over the world, are the human intervention, population growth, inadequate farming practices and livestock husbandry and the building of industrial complexes.\(^10\)

In order to meet the needs of future generations, the World Commission on Environment and Development officially created the concept of sustainable development, which corresponds to an activity that efficiently uses natural resources to meet present needs without compromising the life of


future generations.\textsuperscript{11} The adoption of sustainable development proposed by the commission ensures that society has a good quality of life for all generations and that natural resources can be used in such a way that does not spoil nature and preserves it as a whole.

One should “distinguish between sustainability \textit{per se} and what it means in the broad sense.”\textsuperscript{12} Sustainability in itself points to the protection/preservation of resources in the long run, through planning, saving and enforcing behaviours and results. In the widest sense, sustainability seeks to capture what the current theory calls the three pillars: Ecological Sustainability, Economic Sustainability and Social Sustainability”. “Sustainability stands out as a moderating concept that has been gradually setting up the legal conditions and assumptions for a sustainable evolutionary context.”\textsuperscript{13}

Development has brought about some negative effects that non-liberal economists use to make the distinction between growth and development; they believe the Market ensures ecological regulation so much so that sustainable growth is often replaced by sustainable development.\textsuperscript{14}

\section{2.2 Socioeconomic Development}

Development can be described as a process by which countries and the people who inhabit them may become richer and is related to one’s possibility of ascending socially and politically in a sustainable manner.\textsuperscript{15}

“Development requires that the main sources of hardship be removed like poverty, tyranny, lack of opportunities, systematic social demotion and negligent public services […]”\textsuperscript{16}. Understanding how development works economically, socially and politically is essential for designing strategies. When one speaks about development, it means that there is growth originating in some \textit{status quo},

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which expresses an idea of progress; in order to be able to lead to development, growth must be based on a serious questioning of what really is at our disposal and of how we can change it.\textsuperscript{17}

In order to attain development, companies have to grow and develop economically, since it is up to them to generate wealth and income, especially in the areas where they are based.\textsuperscript{18} Using corporate social responsibility as a management tool may contribute to mitigate the factors responsible for the uneven distribution of income in a country and help a region grow and develop.\textsuperscript{19}

### 2.3 Social Responsibility Management

Corporate management is a continuous process of leading an enterprise on the path to achieve its goals; it must define a strategic planning containing the guidelines that will ensure its continuity.\textsuperscript{20} According to the European Commission,\textsuperscript{21} corporate social responsibility provides a set of values with which it is possible to build a more cohesive society that will evolve towards a sustainable economic system.

The concept supporters of the corporate social responsibility management model advocate focussing on social issues, while taking into account financial aspects. This model stresses ethical, social and environmental attitudes, making society aware of the fact that enterprises which implement social programmes and care about the environment are capable of better financial performances.\textsuperscript{22}

In his studies, Wood\textsuperscript{23} has not found a favourable relationship between social and financial variables; furthermore, he claims that relationship is ambiguous and is based neither on consolidated theoretical principles, which explain how these variables should relate, nor on accurate indicators. In the author’s opinion, corporate social responsibility is not a restriction to profit maximization, but a variable that is strategic to organisations.

Nagata et al.\textsuperscript{24} have observed that economic return happens only in the long run, which is why enterprises should focus on strategically planning actions that make sustainable development possible, both for the sake of the companies themselves and of interest groups. The authors believe that environmental responsibility as part of the managerial process will make companies more competitive in the long run.

\subsection*{2.3.1 Corporate Social Responsibility Management in Small and Medium-sized Enterprises}

All over the world, small and medium-sized enterprises have expanded their productive capacity in order to meet national as well as international demands; they are present in every traditional sector, from industry to commerce and services, displaying their capacity to adapt and undergo important processes of radical innovation.\textsuperscript{25} They help create jobs and, therefore, they are vital as far as employment and poverty reduction are concerned. As a considerable source of innovation, SMEs help develop and increase economic competitiveness and, by lending flexibility to the industrial structure, they make the economy more dynamic.\textsuperscript{26} Thus, Corporate Social Responsibility in and out of the organisational perimeters is indispensable to valuing people, organisations and society and help enterprises develop and be accepted in the society to which they belong.

\subsection*{2.4 The Relationship Between Profit and Socioeconomic Variables}

In the present context, an enterprise which adopts a corporate social responsibility management model tends to be more lucrative and, in the long run, to increase its chances of survival. Ensuring that the organisation has profit and survives is part of a company’s social responsibility (economic dimension) and there is no hierarchy of values among the already mentioned social responsibility dimensions.\textsuperscript{27}

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Profit is the main goal of an enterprise, the motor of an entrepreneur and the opening key to any organisation. In a word, it is the life source of a business. Without positive results an enterprise faces the risk of shutting down, and as such, generating profit is its true social responsibility.

There is a dichotomy between profit and sustainability; profitability is part of any enterprise’s economic dimension but cannot be separated from the social and environmental dimension. In the short term, no enterprise will survive, no matter how lucrative it is, if its managers fail to realise it. The relationship between these two variables – economic and financial performance and social performance – is still contradictory; some authors describe it as positive, some as negative and others think it does not exist nor has any influence whatsoever.

When looking into a fifteen year period of research on the relationship between corporate social performance and the corporate financial variable, Boaventura, Silva and Bandeira have concluded that results did not change the causal link between them. Enterprises that establish a better relationship with their stakeholders are prone to having better results.

Ambler and Wilson do not subscribe to the stakeholders theory for they think it shifts the focus from making the business successful to sharing its fruits, wondering what right the interested parties have to make claims. According to these authors, the other party should have no interference in determining the company’s goals.
3. METHODOLOGY

The present article is part of an empirical, analytical and descriptive study, based on data gathered from a specific population, and wishes to present the results obtained by small and medium-sized enterprises from the Brazilian State of Rondônia as regards their socio-economic and sustainable development.

Research involved collecting qualitative and quantitative data through a mixed approach and by using the necessary tools to that effect. Questionnaires were applied and interviews conducted to shareholders and managers and sometimes to accountants who were in a position to answer the questionnaires.

The questionnaire included 17 questions, numbered from 1 to 17, and it was structured in three levels of the conceptual model: the company, the co-workers and the external environment. Respondents answered the questionnaires spontaneously and voluntarily and were instructed to provide precise information. Questions were organised into modules according to the categories of factors which contribute to a Social Responsibility Management.

For analytical purposes, the answers were divided into two groups, one including enterprises which had obtained profit and the other referring to those that had incurred losses. The data that were obtained were measured and classified and included in charts and tables to allow its understanding and interpretation. The analysis must provide objective information on whether results are statistically significant, according to pre-established limits.

Comparison between ordinal variables among the enterprises that had profit and those that had incurred losses in 2012 was done with recourse to the Mann-Whitney Test for independent samples. This test is considered suitable to compare an ordinal variable between two independent groups.

Association among ordinal variables was done using Spearman correlation coefficient. It varies between -1 and 1 and is a non-parametric measure of association between at least two ordinal variables. Values close to zero indicate the absence of correlation; the closer they are to 1 or -1 the stronger the association. If the value of the coefficient is positive, variables vary in the same direction.

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and if it is negative, they vary in the opposite direction. In this research, a 5% significance level has been considered to analyse the results of statistical tests.

The Mann-Whitney test was used to treat independent samples, because it addresses random ordinal variables both qualitatively and quantitatively, using independent samples that are equally located, verifying whether one population tends to have higher values or if both have the same median.

4. ANALYSIS AND DISCUSSION OF RESULTS

The research targeted 60 small and medium-sized manufacturing companies from the state of Rondônia, as can be seen in Figure 1:

![Figure 1](image)

*Figure 1. Cities where the companies which have answered the questionnaire are based*

*Source: own elaboration.*

The companies which have answered the questionnaires are located in the cities of Vilhena, Chupinguaia, Colorado do Oeste, Ji Paraná, OuroPreto and Rolim de Moura, as can be seen in Figure 2

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Figure 2: Distribution of the enterprises according to their location
Source: own elaboration.

Of the sixty enterprises included in this study, there are only two on which there is no information regarding their size, number of workers and financial success due to their not answering that specific question. Of the remaining fifty-eight, thirty-seven (63.8%) are microenterprises and twenty-one (36.2%) are small enterprises.

Figure 3. Distribution of enterprises according to dimension
Source: own elaboration.

As regards financial success, most of the fifty-eight enterprises which disclosed information about this item (forty-nine, 86.0%) had made a profit in 2012, against only eight (14.0%) which incurred losses.
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Figure 4. Financial Success in 2012
Source: own elaboration.

The alternative A₀₁ - implementing a policy of corporate social responsibility management contributes to manufacturing SMEs’ financial success and makes them more lucrative - was confirmed; taking into consideration the managers’ answers, it was observed that social responsibility actions inside the enterprise in 2012 resulted in a higher increase of the revenue of the enterprises that had obtained profits than of those that had incurred losses (Table 1).

Mean and median score of the answers to this question were higher among companies making a profit than among those incurring losses and the differences were statistically significant ($p = 0.001$).

Table 1. Comparison between companies that made a profit and those that incurred losses in 2012, regarding the influence of corporate social responsibility on the increase of revenue and on the company’s functional development

<table>
<thead>
<tr>
<th>Items</th>
<th>Results in 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Companies that made a Profit ($n = 49$)</td>
</tr>
<tr>
<td>Increase in Revenue</td>
<td>Md = 4.00; $M = 3.76$; $SD = 1.25$</td>
</tr>
</tbody>
</table>

Source: own elaboration.
Figure 5. Comparison between companies that made a profit and those that incurred losses in 2012, as regards the influence of corporate social responsibility on the increase of revenue and on the company’s functional development

Source: own elaboration.

The alternative A.02 - manufacturing SMEs that do business with the goal of becoming partners and responsible for sustainable development are more lucrative - was rejected; the variables did not confirm the assumption since, as regards sustainable criteria that are given priority by the industry, the companies that were studied showed significant differences only in the functional adequacy. In this respect, companies which made a profit reached higher mean and median scores than those reporting losses, which points to higher levels of functional adequacy. The mean and the median were similar between the two groups of enterprises and the differences found were not statistically significant.

The analysis of the variables reduction of unnecessary expenditures and planning the purchase of raw-materials showed no differences between companies making a profit and those incurring losses. As to sustainable criteria that are on top of the companies’ list of priorities to become more lucrative, there are no statistically significant differences between companies making a profit and those incurring losses. In fact, mean and median scores are very close in every item as regards the two groups considered, indicating that the setting of goals based on sustainable criteria does not differentiate companies making a profit from those incurring losses.
Table 2. Comparison between businesses that made a profit and those that incurred losses in 2012 as regards sustainable criteria that are given priority by the industry

<table>
<thead>
<tr>
<th>Items</th>
<th>Results in 2012</th>
<th>Mann-Whitney Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Companies making a profit (n = 49)</td>
<td></td>
</tr>
<tr>
<td>Preservation of the environment</td>
<td>Md = 5,00; M = 4,63; SD = 0,57</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Companies incurring Losses (n = 9)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Md = 5,00; M = 4,22; SD = 1,09</td>
<td>( p = 0,271 )</td>
</tr>
<tr>
<td>Reuse of waste</td>
<td>Md = 5,00; M = 4,51; SD = 0,77</td>
<td>( p = 0,459 )</td>
</tr>
<tr>
<td>Reduction of unnecessary expenditures</td>
<td>Md = 5,00; M = 4,73; SD = 0,45</td>
<td>( p = 0,696 )</td>
</tr>
<tr>
<td>Better utilisation of raw-materials that have not been used</td>
<td>Md = 5,00; M = 4,63; SD = 0,67</td>
<td>( p = 0,994 )</td>
</tr>
<tr>
<td>Functional adequacy</td>
<td>Md = 5,00; M = 4,59; SD = 0,50</td>
<td>( p = 0,011 )</td>
</tr>
<tr>
<td>Correct use of components and raw-materials</td>
<td>Md = 5,00; M = 4,67; SD = 0,59</td>
<td>( p = 0,438 )</td>
</tr>
<tr>
<td>Control and awareness of the use of energy and drinking water</td>
<td>Md = 5,00; M = 4,78; SD = 0,42</td>
<td>( p = 0,406 )</td>
</tr>
<tr>
<td>Selective disposal of industrial residues</td>
<td>Md = 5,00; M = 4,45; SD = 0,82</td>
<td>( p = 0,782 )</td>
</tr>
<tr>
<td>Providing sustainable info to the community</td>
<td>Md = 4,00; M = 4,33; SD = 0,72</td>
<td>( p = 0,205 )</td>
</tr>
</tbody>
</table>

Md - Median; M - Mean; SD – Standard Deviation; \( p \) - Mann-Whitney Test significance value.

Source: own elaboration.
Figure 6. Sustainable criteria given priority by the industry. Comparison between businesses that made a profit and those that incurred losses in 2012 as regards sustainable criteria that are given priority by the industry.

Source: own elaboration.

5 FINAL REMARKS

Comparative analysis between companies making a profit and those incurring losses allowed a detailed picture as to what influenced their development and the social responsibility factors that account for a company’s economic, social and financial stability.

Through the information that was obtained, it was possible to identify what affects such variables as financial performance and sustainability as well as the influence of social responsibility on small and medium-sized enterprises’ profitability and sustainability in the State of Rondônia.

The alternative referring to manufacturing SMEs that do business to become partners and responsible for a sustainable development achieving more profitability was rejected due to not having been confirmed, since the companies that were studied did not show differences in all the sustainable criteria given priority by the company but functional adequacy.

Analysis of the reduction of unnecessary expenditures and planning of the purchase of raw-materials showed no significant differences, either, between companies making a profit and those...
incuring losses; the same applies to setting sustainable criteria as priority goals to make the company more lucrative.

The idea of combining economic development and sustainable development that was advocated by the renowned Brundtland Commission was not confirmed in the case of industrial SMEs in the State of Rondônia, despite some managers having adopted sustainable criteria, because results have not been favourable and there is no indication that the variable sustainability influences the variable profitability.

The results of this study are, thus, concurrent with others which point to economic return occurring only in the long run. Therefore, it is important that studies such as the present one continue for a longer period in order to find out how the companies behave in the future.

The study has shown that companies that practice corporate social responsibility had had higher revenues than those that do not. Managers are, then, advised to practice corporate social responsibility and to have their employees share the company’s results, thus encouraging them to do social and voluntary work in their communities, making them aware of the fact that consumers look for products that are produced by companies that care for social and economical development of the communities and that regard them as partners.

Managers must be aware that an industry is a legal entity, composed of rights and duties that are of a fiscal, environmental, legal and social nature; society expects companies to meet people’s needs and to be aware of human and environmental impacts, helping themselves but also the communities in which they are located. They should disclose their reports with transparency, because letting others know how they manage their companies and that they care about their employees and the community, that they favour a socioeconomic development model that is sustainable, helps improving the company’s image. This will result in more sales and increased revenue which translates to more profit.

Finally, it is important that other studies on corporate social responsibility in SMEs be conducted so that new paradigms may be unveiled and new managerial strategies be suggested that will help managers develop their companies in a socially responsible way and still achieve positive results and successfully and sustainably stay on the market.

Acknowledgements

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REFERENCES


Sustainable Development As a Profit Paradox of the Small Industries of the State of Rondônia


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J.S. Witte, R.S. Witte, Estatística. (7ª ed.). Rio de Janeiro: LTC, 2005