8958 1 Dimensions for the Non-Financial Indicators Metric for Production Chains

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Abstract

There's an apparent gap as in understanding how organizations measure performance. This gap is due to the nature and complexityof the Business Structure and the extent of the owner-managers who are willing to participate in the research process. Throughout the same argument, organizations within each link of the production chains do not have the understanding oftheir performance and how they should bemeasured. In order to investigate and ter a better understanding of the performance of the links this research aims to contribute to the definition of the dimmenseitieséthat are necessary to make up the mis trica of non-financial indicators for the measurementçãof the sustainability of the main andauxiliary production chains. Qualitative andin-depth convergent interview techniques are adopted with 5 managers of organizations of the vitiviní cola chainandwho work at the internationallevel. After collecting and analyzing the content of the metric, we seek to continue the studies by defining the variables that will compose each dimension. It was found that the metric should be composed of the following dimensions: environmental, social, economic, cooperation and trust.

Key words: Non-financial indicators. Vitivinicola production chains. Sustainability of the Production Chain. Cooperation.

1. INTRODUCTION

In the literature, it is noticed that in the last decades the interest in the reactive business area, the measure of performance has increased na de area significantly (Taticchi, Cagnazzo and Botarelli 2008; St-Pierre and Delisle 2006, Garengo, Biazzo and Bititci 2005; Jarvis, Curran, Kitching and Lightfoot 2000; Fisher 1992). According to Taticchi, Cagnazzo and Botarelli (2008), performance measurement evolved focusing on the perspective of financial strategy for a non-financial perspective. In order for companie remain in a dynamic and constantly changing environment, they have to monitor and measure the performance of their companies as well as the links in the chain in which itis inserted. As advocated by Sharma, Bhagwat and Dangayach (2005), performance measurement forms a critical component to improve the performance of a business organization.

According to Chong (2008), a large proportion of existing literature devoted everything about how large organizations measure their performance. And argueso that there is an apparent gap in understanding how companies measure performance. This gap is due to the nature and complexity of the Business Structure and the extent of the owner-managers who are willing to participate in the research process.

Throughout the same argument, organizations within each link of the production chains do not have the understanding of their performance and how they should be measured.
In order to investigate and give you a better understanding of the performance of the links, this research aims to contribute to the definition of the parameters that are necessary to compose the metric of non-financial indicators to measure the sustainability of the production chains. Interview techniques were used to converge qualitatively and in depth

1.2. Study justification

According to Neely, Gregory and Platts (1995) performance measurement (PM) is a topic that is often discussed, but rarely defined. Literally, it's the process of quantifying the action,
Where measurement is the quantification process and action leads to performance. In other words, measure of performance means measuring costs, quality, quantity, cycle time, efficiency, productivity of products and services. Performance measurement is usually based on quantitative reports on which goals and objectives are set and accessed. Measurement is a phenomenon of the whole organization and such measures. They are interdependent and their aggregate contribution will reflect the effectiveness of total effort of the company (ZAIRI, 1993).

Thus, performance measurement is not only concerned with data collection, but is also associated with a predefined performance target or standard (JENSEN, 2003). What's more, performance measurement is best regarded as a general management system involving prevention and detection in order to achieve the conformity of the work product Or service (WEBSTER, 1992). Even with these definitions, performance measurements remain a broad topic.

Studies on performance measurement are generally conducted in business entities. Generally in the form of companies, SMEs and other profitable commercial enterprises. Not many studies have been conducted on measuring performance in the business of production chains.

However, it is perceived the need to measure the links of the production chains in function of if one of them is with gap reflects in all the other leading to non-sustainability of the entire chain. Thus, the aim of this study is to explore in depth the measure of the performance of organizations for production chains, defining the necessary needs to make up the metric of non-financial indicators for the medication of the sustainability of the production chains.

2 LITERATURE REVIEW

2.1 MEASURING COMPANY PERFORMANCE

According to Sun and Scott (2003), the critical success factors in the current dynamics and the competitive business environment is very different from the past. Askenas, Ulrich, Jick and Herr (1995) argued that today's critical success factors are governed by speed, flexibility, integration and innovation. This represents a paradigm shift from success factors such as size, paper, clarity, specialization, and control.

The use of quantitative measurement tools that have been considered effective for moderate change is incapable and insufficient to measure the rapid change that characterized today's external environment. Sun and Scott (2003) the need for an effective measurement system through the use of quantitative resources and qualitative approaches. Therefore, taking sun and scott's suggestion, this research investigates performance measurement using the quantitative and qualitative method, Performance measurement is critical to improving companies.

Performance measures are used to track and track how the organization performs and whether it is meeting its objectives. The importance of the performance measure has increased with the finding that, in to be successful in the long term, organizations must meet the expectations and needs of stakeholders that include their customers, consumers, employees, suppliers, local community Stakeholders and shareholders. While the importance of measuring performance is to quantify.

According to Neely (1999), business performance can be measured by financial and non-financial indicators. Financial indicators are traditional performance measurement techniques used by companies that include profit, return on investment, sales and so on. Normally, it can be measured using the figures provided an financial statement of the company.

In addition to his study, Neely (1999) said that in the Business Environment where companies compete based on non-financial indicators they need information about how they are performing in a broader spectrum of dimensions, not only financially, but also factors in customers, employees, suppliers and the wider community. The combination of financial and non-financial indicators can lead to a balanced performance measurement in the business environment (KAPLAN; NORTON, 2000).

2.1.1 Measuring company performance: financial indicators

The literature review identified five financial indicators for performance Measurement used in the company environment: profitability, cash flow position, return on investment, turnover and budget in relation to actual performance (NELLY; 2002; LUTHER ET AL. 2005; CHEN; SHIMERDA, 1981; MATSUMOTO et. al. 1995; SUN; LI 2006).

2.1.2 Measurement of company performance: non-financial indicators

The literature has shown that there are four non-financial indicators that can be used as performance measures for companies: customer satisfaction, product or service quality, market share and employee efficiency ZAMAN, 2004; CIMA 1993; Fitzgerald et al. 1991; HASKETT et al. 1994; CHO; PUCIK 2005).

Some authors agree that customer satisfaction is an indicator for measuring business performance

(ZAMAN, 2004; CIMA, 1993; FITZGERALD et al. 1991; HASKET et al. 1994).

The four authors in their research stated that the quality of the products or services provided by companies are tools used to measure the performance of companies. The third indicator, as studied by Cho and Pucik (2005), illustrates the Relationship between quality, profitability and market share; And how these three indicators are related to the performance of companies. They found that market shares can be used as a benchmark to measure business performance. Employee efficiency was seen important by all companies (ZAMAN, 2004; CIMA; 1993).

Understanding that organizations basically consist of bureaucratic and hierarchical structures, trust becomes an informal mechanism for the coordination and control of organizational routine (RIPPERGER, 1998; WOLFF, 2000; ZANINI, 2007, 2011).

The existence of trust in bureaucratic relations considerably expands the potential to produce cooperative relationships and managerial efficiency, through the increase of managerial control generated by an informal mechanism (ZANINI, 2007).

According to Ripperger (1998), the presence of trust in interpersonal relationships within the organization allows the reduction of formal hierarchical control, while expanding the possibilities of the use of knowledge with a greater degree of autonomy, facilitating the elimination of redundancies and imperfect processes and allowing continuous improvement by reducing transaction costs. Thus, trust has been addressed as an essential informal element of coordination for the management of organizations (WOLFF, 1996; ZANINI, 2011).

The relationship between the confidence variable and many of the organizational performance variables has been proven in several studies. The existence of trust among the members of a company can contribute significantly to the increase of the efficiency of the various organizational tasks (DIRKS; FERRIN, 2001, 2002).

Its relevance has been observed mainly in the more specific and complex tasks, which involve greater risk and uncertainty (LUHMANN, 1980, 2000; OUCHI, 1980; COLEMAN, 1990; ADLER, 2001; DIRKS; FERRIN, 2001).

The informal role of trust in coordinating and controlling various tasks of the organization has been observed, for example, when it facilitates the process of knowledge transfer (ROBERTS, 2000; ROLLAND; CHAUVEL, 2000; MOSQUE; LAZZARINI, 2008; JENSEN; WEBSTER, 2009), improves organizational efficiency and productivity (AKERLOF, 1970; ARROW, 1974; OUCHI, 1980; RING; VAN DE VEN, 1992; BRADACH; ECCLES, 1998; LANE; BACHMANN, 1998; SAKO, 1998) and decreased transaction costs (KREPS, 1990; CHILES; MCMACKIN, 1996; BUTTER; MOSCH, 2003; ARGYRES, MAYER, 2007; ANDRADE, et al., 2011).

According to empirical studies on the subject, when there is a relationship of trust between people, the probability of exchanges and sharing of information increases, conflicts are reduced and satisfaction and motivation increase (DIRKS; FERRIN, 2001).

They also reduce costs related to the over-application of bureaucratic security instruments - such as monitoring, formal rules and procedures. In this sense, trust can also act as a facilitating element in disputes for decision making, allowing greater management flexibility.

3. QUALITATIVE RESEARCH

The qualitative research method was used for this study. Lincoln and Guba (2000) agrees that qualitative research is used to obtain information about people's attitudes, values systems, concerns, motivations, aspirations, culture or lifestyles. It is used to inform business decisions, policy formation, communication and research. They also claim that focus groups, in-depth interviews, content analysis, ethnography, evaluation and semiotics are among the many formal approaches that are used, but qualitative research also involves the analysis of any unstructured material, including customer feedback forms, reports, or media clips.

According to Denzin and Lincoln (2000), qualitative research is also a type of scientific research. In general terms, scientific research consists of an investigation that: search answers a question, uses a predefined set of procedures to meet the question, collects evidence, produces results that have not been determined in advance, Produces results that are applicable beyond the immediate limits of the study (DENZIN; LINCOLN, 2000).

Qualitative research concerns the subjective assessment of attitudes, opinions and behavior (HOLME; SOLVANG, 1997). Research in such a situation is a function of insights and impressions of the researcher. This approach to research generates results either in a non-quantitative way or in the form that they are not subjected to rigorous quantitative analysis (HOLME; SOLVANG, 1997). In general, qualitative research is more likely to occur in a natural environment. In addition, it is said that qualitative research be exploratory, which is the collection, analysis and interpretation of data from respondents.

3.1 JUSTIFICATION OF THE USE OF QUALITATIVE RESEARCH

Over the past decade, there has been an increasing use of qualitative research in Organizations. Due to the subjective nature of this research method, it can be argued that quantitative research provides better results (BROWN et al., 2005). However, qualitative research can be used to explore various areas, such as human behavior

That can not be quantified, but still important for an organization. According to Jean Lee (2004), there are many reasons or advantages of using qualitative research in organizations and the main ones are: qualitative research provides a more realistic feeld the world that cannot be experienced in numerical data and statistical analysis used in quantitative research, provides flexible ways to collect, analyze and interpret data and information and the use of primary and unstructured data.

3.2 DATA COLLECTION METHOD

For this study, the convergent interview was used during the data collection process. According to Carson et al. (2001), the convergent interview is a methodology that allows a relatively structured approach to classify what needed to be done in a survey project in the early stages. It is also a technique for collecting, analyzing and interpreting qualitative information about people's attitudes, beliefs, knowledge and opinions through the use of a limited number of interviews with experts that converge at most Important issues within a topical area.

Semi-structured interviews were conducted with 5 people who were components of the links in the vitivinicola production chain, whose functions are listed in Table 1.

Table 1 - Searched

Activity	Link of the Wine Chain
Cooperative Manager	Matter before and industry
Employer Manager	Governanca entity of vitivinicola cooperatives
Enotourism Complex Manager	Industry, commercial productive chain vitivinicola and commercial of the gastronomy chain
Researcher at IES	Auxiliary chain - IES
Public Manager	Auxiliary chain - state government of RS

Source: prepared by the author

After being asked about the future and sustainability of the vitivinicola production chain, the interviewees above made notes regarding the survival of the chain after several crises of the sector that were filmed in the 1980s of the last century. The interviewees learned the financial, economic, management, human resources and engineering skills,

Each interview lasted on average 2 hours, after they were conducted, they were analyzed based on the theoretical framework.

4. DATA ANALYSIS

After data collection through semi-structured interviews, it was found that the dimensions to be suggested for the metric of non-financial indicators that would include the areas involving the links of the main and auxiliary chain are respectively: environmental, economic, social, trust and cooperation. Table 2 shows the dimensions with their respective basis of literature.

Table 2 - Dimensions and basis of literature

Dimensions	**Basis of Literature**
Environmental	Delai;Takahashi, 2008; Grahn, 2020.
Social	Delai; Takahashi, 2008;
Economic	Delai; Takahashi, 2008;
Cooperation	Miotti; Sachwald, 2003;
Trust	Lundasen, 2002; Zanini; Migueles, 2014;

From this definition of the dimensions it becomes feasible to research the indicators and themes to be worked on each of the five listed in the table above.

4. CONCLUSION

There is no consensus on the definition of non-financial gains, non-financial indicators, their dimensions and the resulting causal relationships in productive chains. The development of indicators becomes complex because the empirical research activity confronts concepts that paradoxically differ from metrics. This work contributes to the discussion being applied to productive chains with the objective of measuring activities and the sustainability of their links.

This study sought to define dimensions, themes and variables where they could direct the analysis of the sustainability of the production chain, as well as the organizations that depend on them, which carry out imputability and exit, in addition to helping to identify links with gaps and thus balance the chain, which can impact on credibility and sustainability.

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