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BSC IN BRAZILIAN COMPANIES: DIFFERENCES IN USE BY SIZE AND INDUSTRY

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ABSTRACT

The Balanced Scorecard (BSC) is a tool created by Kaplan and Norton in the 1990s, whose objective is to assist organizations in visualizing the company as a whole, providing strategic business management from four perspectives: financial, customers, internal processes and learning/knowledge. The aim of this article was to analyze how, and if, the tool is used in small Brazilian companies. To do so, the quantitative research employed by Giannopoulos et al. applied in companies located in Cyprus and the United Kingdom in 2013 was used as basis. The adapted research instrument was applied to 92 companies, using a multivariate analysis of the collected data to draw a comparative analysis between Brazilian, Cyprus and the United Kingdom companies. It was noted that Brazilian companies still do not demonstrate a broad knowledge concerning the feasibility of this tool's use, so they do not consider the companies in the four dimensions that make up the BSC.

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INTRODUCTION

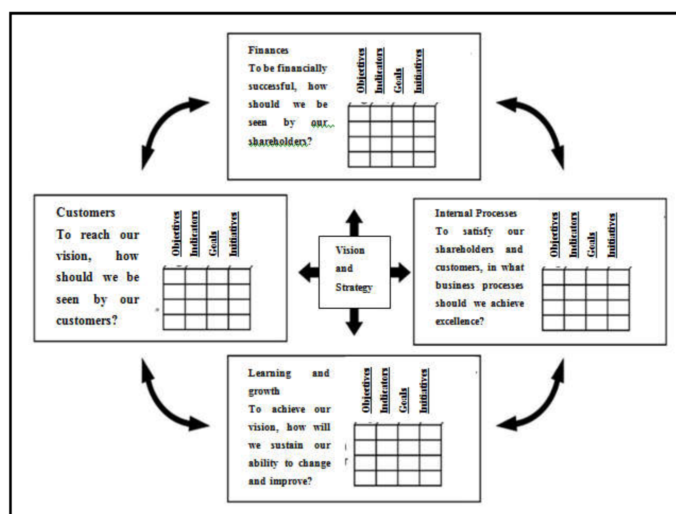
The *Balanced Scorecard* (BSC) is a strategic management tool developed by Kaplan and Norton in the 1990s to present a broader view of translating corporate strategies into organizational performance measures that, in the view of their creators, enabled new perspectives when compared to other management tools used by then and that had financial objective as a prime focus (KAPLAN and NORTON, 2004). The idea of going beyond the financial perspective and the possibility of facilitating the understanding of the corporate strategies came to the encounter of small and large organizations that could go through serious difficulties in managing their business for not only financial questions, and in some cases ending its activities (VILHENA and MELLO, 2014). Giannopoulos, Holt, Khansalar and Cleathous (2013) developed a questionnaire and conducted a research of UK and Cyprus small business workers, and concluded that the companies surveyed had a greater focus on BSC financial perspective measurements, suggesting that there are still a prevalence by financial dimensions to the detriment of others. This study motivated the following question: if this research were carried out in the current days in Brazil, what outcomes would we obtain? Thus, we established the objectives of this research, in which we intend to investigate whether there are differences by economic segment and size regarding: (a) importance of the typical factors of strategic maps; (b) awareness of the BSC; (c) use of performance indicators and, in addition, to establish comparisons with the data obtained from the United Kingdom and Cyprus in the research by Giannopoulos et al. (2013) and Brazil. It is believed that this research contributes to the progress of studies in organizational performance management because it allows verifying if the use of the BSC varies according to the segment and size of the companies operating in Brazil, besides making it possible to establish comparisons with the outcomes presented in the United Kingdom and in Cyprus. For that, a review of the literature on the BSC was carried out and the research instrument elaborated by Giannopoulos, Holt, Khansalar and Cleathous (2013) adapted to Portuguese was applied. The questionnaire was answered by 92 executives from different companies operating in Brazil, the outcomes and their possible implications were discussed.

LITERATURE REVIEW

Balanced Scorecard: *Balanced Scorecard* is a strategic management tool developed in 1992 by teachers Robert

Kaplan and David Norton, which gained room, evolving into a link between strategy and execution, resulting in a relevant tool for monitoring and executing the strategies of an organization (LOBATO, 2011). In Borba's (2011) view, BSC brought a new concept of strategic planning and execution, organized from the business perspective of the company and structured in perspectives, with the clear objective of balancing and aligning actions with perspectives. In the 1992 seminal article for *Harvard Business School Press*, Kaplan and Norton question the management used by companies that direct their strategies only by financial indicators, since there could be a series of risks and frustrations due to the failure to understand the real motives of performance obtained, leading to possible misunderstandings in diagnoses and solutions. In a study designed by Kaplan and Norton in 1997 together with 12 companies, numerous indicators were created and tested, such as: customer delivery, process cycles, compensation plans and shareholder value. After discussions and meetings, they came to the conclusion that companies need four large groups of important perspective indicators: (a) financial; (b) customers; (c) internal processes and (d) learning and growth.

Consequently, BSC becomes a strategic management methodology that allows translating strategic objectives to action, permeating the entire organization vertically and horizontally, in such a way as to achieve the desired outcomes and enabling initiatives for route corrections if applicable. According to Kaplan and Norton (2004), the BSC methodology shows how much can be invested in companies in modern times, as it rethinks old themes that have been forgotten or not understood previously, bringing a greater understanding in their strategic indicators in the face of the globalized world. Kaplan and Norton (1997) assert that the *Balanced Scorecard* takes the set of objectives of the business units beyond the summarized financial measures. Executives begin to assess the extent to which their business units generate value for current and future customers, and how they should enhance internal capabilities and the required investments in personnel, systems, and procedures to improve future performance.



Source: Compiled from Kaplan and Norton (1997, p.10)

Figure 1. Balanced Scorecard divided into the four Perspectives

According to Borba (2011), each day the entire structure of the Balanced Scorecard has evolved and presented more values not only to the concept, but also throughout the management model, bringing the best outcomes obtained with reference to the involvement, commitment and participation of the members in relation to the organization. According to Caldeira (2014), the *Balanced Scorecard* is a balanced measurement tool that over the years has been improving and is now known as a strategic management model. As a result, companies began not only to perform measurements in a balanced way, but also essentially to successfully implement new strategies. In order to consolidate the reference to Kaplan and Norton, according to Lobato (2011), the *Balanced Scorecard* relates the performance indicators and provides answers to four basic questions according to the four previously mentioned perspectives: (a) how do the customers see us?; (b) in what should we be excellent?; (c) will we be able to continue to improve and create value?; (d) what do we look like to shareholders?

According to Daychoum (2016), the *Balanced Scorecard* is considered a balanced management model, it has a strategy so well defined that some CEOs even say that if they lose this document, it could jeopardize the entire process by making the strategy elaborated without effect due to the degree of transparency translated into this set of performance measures.
As far as performance, measurement is concerned, according to Lobato (2011), the process perspective points to two fundamental differences between the traditional approach and the BSC approach:

In this context Montenegro and Callado (2019) describe the BSC as a complementary tool to the planning of organizations, using a set of performance indicators, which contributes to the implementation process, to monitor performance and evaluate the strategies adopted by the organization company.

Strategic business vision

Companies are facing various challenges, great difficulties, threats and opportunities, surrounded by processes never seen before each day. The external environment has been marked by a set of variables with a high degree of complexity that has hit the companies directly and indirectly. According to Torres (2015), one of the problems identified is that organizations most often do not get information that ensures they detect and interpret what may actually be affecting their business. In this sense, we highlight the importance of BSC, which enables and facilitates the communication of the strategy in a clear way, allowing us to certify if the company is obtaining the desired outcomes. According to Kaplan and Norton (2004), a small number of strategic objectives, to which indicators and goals are associated, is defined for each of the perspectives. Therefore, it is necessary to monitor regularly the evolution of the indicators to determine the success or failure of the company's strategy. Kaplan and Norton (2004) assert that indicators should be few, simple, easy to understand and they need to enable the decision-making process and the execution of quick actions. In this sense, performance measurements should contain outcome indicators and predictive indicators. However, companies are often more concerned with outcome indicators because they are easier to measure and more accurate. Kaplan and Norton (1997) argue that the *Balanced Scorecard* describes the vision of the future, gathers information into unique reports that meet management requirements, assists in making decisions that are high in performance, and allows evaluations of improvement in an area to another. According to Daychoum (2016), the BSC system adds financial dimensions, reveals internal processes

that need improvement, analyzes customers, observes investments in personal training and systems, favoring the change of company activities.

Financial perspective

According to Lobato (2011), from the financial perspective the objectives and financial measures reveal whether the implementations of the strategies are contributing to the improvement of the financial outcomes of the organization. Such objectives and measures should be part of the cause and effect relationship as they play two important roles: defining the expected financial performance and serving as the basis for the objectives and measures of other *Balanced Scorecard* non-financial perspectives. According to Herrero (2005), financial indicators show if the strategy is contributing to some important factors such as net profit, cash generation and return on investments. These goals are not fixed and are different for each company especially if you observe the life cycle of each one. The companies' life cycle can be divided into many phases, but Norton and Kaplan (1997) sum up in three: growth, sustainability and harvesting. Growth, as the name already indicates, the company is in the innovation phase and has new products or services with great potential, at this phase the company needs large investments in several areas such as professional training, infrastructure, distribution networks and large investments in tools.

Therefore, these companies can operate with low or even negative cash with the promise of amortization of any investment made. The financial objectives at this phase are percentages of revenue growth and sales growth. In order to target the growth phase, there is a strategic theme called "Growth and revenue mix" that refers to the increase in supply to gain new markets and customers, for which we need: (a) New products; (b) New applications; (c) New customers and markets; (d) New relationships; (e) New mix of products and services and (f) New pricing strategy. Sustainability, at this phase the company needs to attract external investments and shareholders with the promise of stability and continuous improvements. Long-term investments, compared to the growth phase, are smaller because the organization already has a large base for conducting its business. For Kaplan and Norton (2004), the financial objectives at this stage are directly related to profitability, with accounting measures, operating income and gross profit margin. The strategy in the support phase concerns performance improvements and low cost in productivity. Harvesting, the maturity phase of the company, where the greatest interest is to harvest everything that has already been invested, these companies no longer invest as in the other phases and seek to leave only cash stability to benefit the company.

According to Kaplan and Norton (2004), the financial objectives are related to the decrease in working capital and operational cash flow. The strategies in the harvest phase aim to return the invested capital as the improvement of the utilization of the assets by which the members of the senior management try to reduce the conditions of working capital essential to balance the volume of its businesses. According to Kaplan and Norton (2004), the Balanced Scorecard does not conflict with the financial objectives of the companies but allows those objectives to become more evident for better visualization and perception, thus helping the strategic performance of the company.

Customer perspective

According to Herrero (2005), this perspective focuses on customer satisfaction and the markets to which the company intends to compete in its respective organizational objectives. Performance indicators, from the perspective of customers, allow us to establish actions that enable the identification of satisfaction, loyalty, attracting new customers, retention, market share, profitability and refer to how the organization will produce special value for its customers. Lobato (2011) states that, from a customer's perspective, customer objectives and measures identify the market and the segments in which the organization wishes to act to achieve greater growth and profitability. This perspective maintains the relationship of cause and effect, bringing with it revenue components related to financial objectives. *Lead time,* in the view of Kaplan and Norton (2004), is the time that the product takes from the receipt of the order to the delivery to the final customer, the speed of delivery does not necessarily mean success when delivering a product, the speed has great value in this matter, however the sincerity and true control of lead times transmit security to the customer.

According to Kaplan and Norton (2004), the quality is linked to the level of defects, the accuracy in the delivery times are also considered part of the quality. The combination of services and performance dictates how companies create their value to customers. Cost is the perception of the fair value of the product or service procured. Kaplan and Norton (2004) indicate that in order to better understand and meet customer expectations, it is of utmost importance that market targets be segmented, since companies that seek to please everyone often end up appealing to no one. Creating indicators for all types of people can widely vary and thus result in false indicators. A company may be concerned about the final value of its products and not realize that most customers do not mind paying more or less, if these same customers are more interested in quality than price, the company can then have a redirection in being able to please and obtain loyalty from that type of customer. In order to meet the needs of customers, a set of essential measures was created: (a) Market share; (b) Customer retention; (c) Customer acquisition; (d) Customer satisfaction; (e) Customer profitability. These measures, which seem generic, are used in several companies, but must be customized for each specific customer group.

Figure 2. The customer perspective/Essential Measures

Market Share	Reflects the proportion of businesses in a given market (in terms of customers, amounts spent, or unit volume sold).
Attracting Customers	Measures in absolute or relative terms the intensity with which a business unit attracts or conquers new customers or business
Retention of Customers	It controls in absolute or relative terms the intensity with which a business unit retains or maintains continuous relationships with its customers.
Customer Satisfaction	Measures the level of customer satisfaction according to specific performance criteria within the proposed value
Customer Profitability	Measures the net profit of customer or segments, after deducting the specific expenses necessary to support these customers.

Source: Compiled by Kaplan and Norton (1997, p.72)

For Kaplan and Norton (2004), value propositions can be divided into three categories: (1) Attributes of products/services; (2) Customer relationship; (3) Image and reputation. In relation to customers, it is possible to observe a

great added value in their satisfaction, for example, good appearance and elegance of the employees, stores with good aesthetics and hygiene, promotions spread with sincerity and clarity, employees with great technical knowledge about the products, who serve customers by name, who take them to the door after a purchase, among other actions. According to Kaplan and Norton (2004), image and reputation are linked directly to the quality of products and services, they must achieve stability in the long run, contributing to customer loyalty, then customers become a publicity channel when they comment on the efficiency and quality of products. Investing in various types of media is also an important factor for companies to get a good image.

Internal processes perspective: Olve, Roy and Wetter (2001) understand that the company should not only reflect on what to do to preserve and strengthen its essential *know-how* to satisfy the needs and demands of its customers, but must consider how to ensure the efficiency and productivity of resources that create value. According to Kaplan and Norton (2004), there are 3 generic processes from the perspective of internal processes, and if followed and adapted to each situation, they can produce good financial outcomes, being:

Innovation: Creation of new products and services based on market research, analyzing the search of customers about future products. Conduct research on new technologies to find benefits by providing customers with new solutions.

Operations: It is the process of executing tasks, which starts in the request made by the customer and ends with the delivery of the product or service. Operations are repetitive and require great management to maintain stability and seek improvements in each process.

After-sales service: This process is responsible for the guarantees of repairs, defects, returns and processing payments, such as credit card.

Perspective of learning and growth: The perspective of learning/growth is a balanced indicator that identifies and verifies the growth of people, their skills, training, leadership and knowledge, as well as systems and procedures.

According to Lobato (2011), the perspective of learning and growth highlights the concept in which most companies visualize the need to improve current processes, reconciling creativity to insert innovations and additional skills. The value of the corporation is directly linked to the ability to develop human resources, enhance leadership, establish customer value and increase operational efficiency. This perspective shows whether individuals are playing their role in their area of expertise, as well as their skills and mastery of their work, also has the infrastructure function to facilitate the achievement of the ambitious objectives of the other *Balanced Scorecard* perspectives. According to Caldeira (2014), the combination of people involved with the technology plus organizational climate is the guarantee for the success of the objectives measured. Kaplan and Norton (2004) reveal in their experiences, from the BSC's elaboration, five categories for this perspective: Employee capacity, information system, motivation, *empowerment* and alignment. For Herrero (2005), with the new vision of the role of employees, companies elaborate three essential measures to outline the objectives of employees:

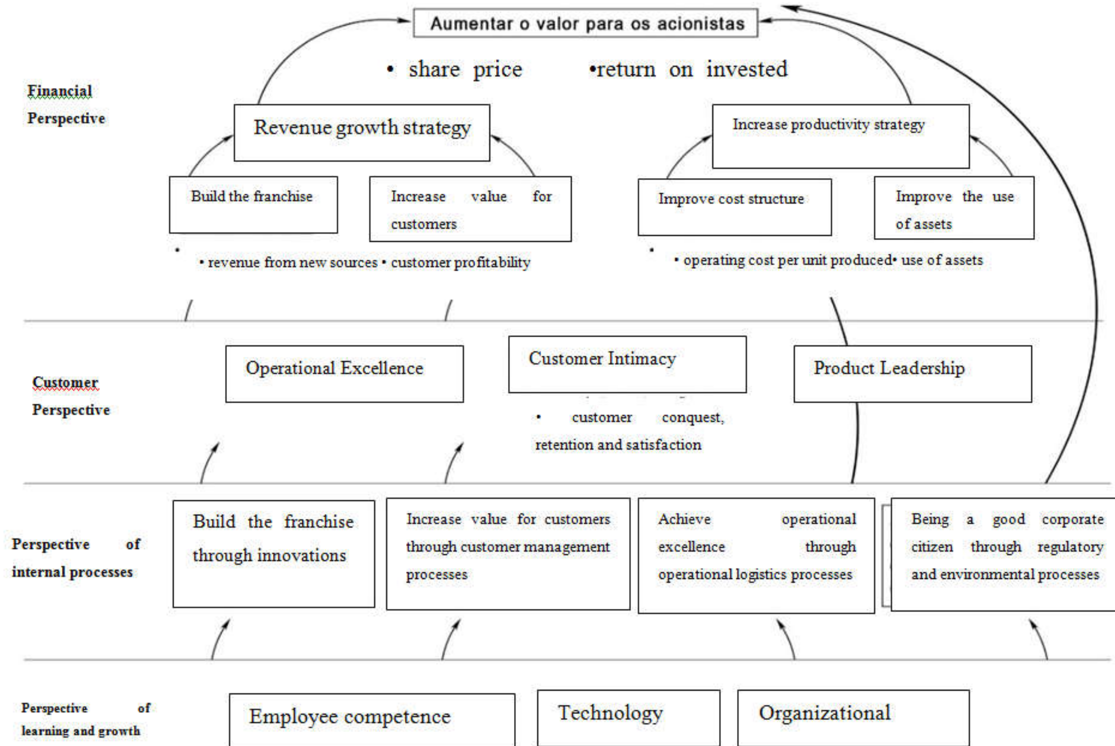
Satisfaction of employees: a satisfied employee performs his work with more disposition, spirit, creativity, has a better answer in all the questions, including when it comes to customer service, provides comfort, harmony, credibility and pleasure when providing his service.

Employee retention: it occurs when there is satisfactory delivery of the outcomes of the work; usually old employees of the house stand out, because they know the reason of existence of the company, it is likely that they add greater value to the company because they have the organizational culture embedded in their actions.

Employee productivity: measures the outcome of improvements implemented on associates. This measure is achieved by the volume of production per employee. The more effective the sales, the higher the revenue per employee. According to Lobato (2011), the objectives proposed in the financial perspectives, in the customers perspectives and the internal processes perspectives, describe where the organization needs to stand out for exceptional performance, but the objectives of the learning and growth perspective are the ones that support the achievement of ambitious objectives in the three perspectives and highlight the importance of investment in equipment, research and development of new products and services, systems and procedures. Based on all the previously mentioned concepts, the corporations elaborate a control panel with indicators, in which it is possible to follow if the established goals are being fulfilled in the four perspectives that compose the BSC, for which it is necessary to elaborate the strategic map.

Strategic Map: According to Kaplan and Norton (2004), for a general to lead his troops battalion to an unknown territory, he needs maps that show in detail information about the city to be attacked, major structures, tunnels, bridges, roads and highways that allow access to the region. Without this tool, it is not possible to communicate accurately about the strategies to the officers and to the rest of the troop, which is why the senior management of many companies has not been able to implement business strategies, due to the lack of explicit information to the employees that allow complete understanding. According to Herrero (2005), the strategic map has the objective of pointing out the path that will be taken to reach the objectives proposed by the organization and also to highlight the hypotheses launched by the managers on the question of cause and effect in the form of a control panel in an organized way among the actions established against the strategy. According to Lobato (2011), the Balanced Scorecard materializes the vision and strategy of the company through a map with objectives and performance indicators in an organized way, according to illustration 3. In order to begin a strategic map, company executives must first analyze the mission and core values of the organization. Based on this information, senior management members will be able to describe the strategic vision they intend to carry out, the objectives and goals they wish to achieve, and how to achieve those outcomes. According to Herrero (2005), a well-developed mission statement describes the objectives of the organization, identifies the businesses to which the company must participate, designs the strategy to be followed by generating value to *stakeholders,* defines the meaning of the word success to the members of the organization, and encompasses shared values and the conduct that is expected from its associates.

Figure 1. ***Balanced Scorecard*** **strategic map**



Source: Compiled from Kaplan and Norton (2004, p.105)

According to Kaplan and Norton (2004), the structuring of the strategic map begins with the financial strategy, from revenue growth and productivity increase, building revenues with new markets and products, adding greater value to existing customers, improving the structure of costs with reduction of expenses. Using assets with greater efficiency, reducing the need for capital in certain types of operations, favoring the increase of value to shareholders and improving financial performance.

Performance indicators: For the elaboration of the Strategic Map, it is necessary to use performance indicators that are metrics, calculations that consolidate a certain situation, serving as the basis for the achievement of the objectives and goals; the objective is to show which path should be followed. According to Caldeira (2012), the performance indicators provide the vision that the company needs to visualize, evaluating as a whole, with a solid base to reach the strategic objectives. They convey a range of information, contribute to understanding deviations, measure the predisposition of responses to a process, and show what actions should be taken to improve outcomes. With the help of the indicators, it is possible to verify in which areas the company is improving or getting worse, from the consultation of histories it is possible to compare averages of previous years from other organizations. For Caldeira (2012), performance indicators are principles that generate consensus in an organization, and its function is to clarify the level of outcomes presented, to be associated with the established goals, promoting easy corporate understanding. According to Caldeira (2012), the consolidation of indicators can occur both with day-to-day business routines as well as personal items such as personal financial control, home remodeling expenses, vehicles, travel, etc. To do this, it is first necessary to have a good *dashboard* with externally performed comparisons and then list the internal goals and objectives to be achieved, put the significant weight (percentage) of each and calculate the percentage of the outcome with the goal, the value that multiplies by weight. For any process to be carried out in order to add value to the company, it is necessary that all the components of the organization be engaged with the strategic vision of the corporation.

Strategic management: Strategic management is a subject that arose around 1950, it was initially introduced as a new discipline of studies of business policies in American colleges, and is one of the main responsibilities of the key business leaders, establishing bases for future achievement and at the same time cooperating to win the current competitive market. According to Herrero (2005), the intention of strategic management is to formulate an innovative competitive strategy capable of creating parameters that allow the achievement of goals in the short and long term. A planning allows anticipating, confronting and driving changes to make the various adaptations in the company being flexible to overcome risks, uncertainties and enjoy the new opportunities that the market offers. It is a great challenge for the manager to order people who were not involved in the elaboration of the business strategy, it is necessary that the whole organization has its participation in the creation of the strategy bringing possibilities of innovations and greater growth in the development phase of its actions. The development of the BSC should be initiated by the company executives and should share the whole idea and strategic vision for the rest of the company that will link personal goals with the organizational ones. According to Vilhena and Mello (2014), organizational communication must be continuous, different types of resources can be used, such as meetings, explanatory leaflets, senior management announcements and *newsletters*. The announcements, as well as the institutional bulletins, should inform the measures taken and the outcomes achieved by the *Balanced Scorecard*, as well as the next steps to be followed,

Table1. Relationship between size, number of associates and performance sector of the companies

Company Size	P	%	M	%	M-G	%	G	%	Total	%
Associates										
Up to 50	21	91.3	1	4.3	0	0.0	1	4.3	23	25.0
51-100	7	70.0	3	30.0	0	0.0	0	0.0	10	10.9
101-200	3	37.5	4	50.0	1	12.5	0	0.0	8	8.7
More than 200	0	0.0	9	17.6	12	23.5	30	58.8	51	55.4
Sector										
Manufacture	5	20.0	3	12.0	6	24.0	11	44.0	25	27.2
Services	17	41.5	12	29.3	5	12.2	7	17.1	41	44.6
Retail	4	36.4	1	9.1	0	0.0	6	54.5	11	12.0
Distribution	0	0.0	0	0.0	2	40.0	3	60.0	5	5.4
Construction	3	75.0	0	0.0	0	0.0	1	25.0	4	4.3
Transportation	0	0.0	1	50.0	0	0.0	1	50.0	2	2.2
Others	2	50.0	0	0.0	0	0.0	2	50.0	4	4.3
Total	31	33.7	17	18.5	13	14.1	31	33.7	92	100.0

Note: P = Small; M = Medium; M-G = Medium-Large; G = Large; N = 92

Table 2. Relationship between the size and hierarchical level of the respondents.

Company Size	P	%	M	%	M-G	%	G	%	Total	%
Hierarchy Level										
Administration	6	60.0	3	30.0	1	10.0	0	0.0	10	10.9
Management	4	30.8	1	7.7	2	15.4	6	46.2	13	14.1
Coordination	3	42.9	2	28.6	1	14.3	1	14.3	7	7.6
Supervision	3	33.3	1	11.1	1	11.1	4	44.4	9	9.8
Analyst	9	27.3	6	18.2	3	9.1	15	45.5	33	35.9
Assistant	2	25.0	3	37.5	2	25.0	1	12.5	8	8.7
Others	4	33.3	1	8.3	3	25.0	4	33.3	12	13.0
Total	31	33.7	17	18.5	13	14.1	31	33.7	92	100.0

Note: P = Small; M = Medium; M-G = Medium-Large; G = Large; N = 92

accompanied by their importance followed by *feedback.* From the standpoint of Kaplan and Norton (2004), everyone should understand the strategic vision to share it and act on it in their work environment, even though it is a time consuming process, when everyone has an understanding of the business unit and the efforts are aligned with the initiatives, bringing about the changes that lead to transformation. Therefore, people understand where they can contribute and improve when performing their activities. According to Kaplan and Norton (2004), strategic objectives determine the direction and priority of activities. These bases are: (a) The mission within an organization, clearly and objectively states the fundamental objectives of its existence, what it proposes to do for the society through a business model, defines its identity by creating a direction for employees; (b) The vision, shows where the company intends to go and what goals it aims to achieve in the future, it can be compared to a great dream that the creators intend to pass on to their associates, so together they will be able to materialize; (c) Values, a set of characteristics that involve the principles, beliefs, behaviors and attitudes that define the personality of the organizational culture and how they interact with people. It is through the values that the means to reach the mission and the vision get well defined, as well as to project the objectives and goals of interests related to the stakeholders, guaranteeing good results for the company. Malagueño, Lopez-Valeiras and Gomez-Conde (2017) emphasize that the BSC is a tool that aggregates a set of financial and non-financial metrics that contribute to the achievement of the goals established by companies regardless of size, whether large, medium or small. In sum, in Massingham, Massingham and Dumay's (2018) perspective the *Balanced Scorecard* is a tool that public and private organizations make use of in order to transpose barriers that prevent business growth. The BSC is a tool that contributes to the evaluation between the implemented actions and the goals to be achieved, providing an alternative to the integrated organizational thinking, since there is the alignment between human and structural capital. Silva, Neto, Wanderley and Souza (2018) emphasize that measurement models should reflect the reality of each organization according to its values, culture, economic sector and other factors of the microenvironment and macroenvironment that influence business. The authors emphasize that the structural design of the BSC contributes to the activities of management, communication, control, and ultimately allows decision-making with a focus on maintaining competitiveness in the market where they are inserted. Based on the concepts listed in the literature review, we intend to investigate the similarities in the use of the BSC tool according to the branch of activity and the size of the companies.

MATERIALS AND METHODS

As the proposed objective was to investigate if there are differences by economic segment and size regarding: (a) importance of the typical factors of strategic maps; (b) awareness of the BSC; (c) use of performance indicators and, in addition, to establish comparisons with the data obtained from the United Kingdom and Cyprus in the research by Giannopoulos et al. (2013), the questionnaire prepared by these authors was adapted to Portuguese. Thus, the research instrument consists of demographic questions: (a) size of the company; (b) number of employees; (c) economic segment; (d) hierarchical level of the respondents, as well as assertive in a Likert scale of 5 points (1 = totally disagree and 5 = totally agree) on the use and relevance of the BSC for the companies in which respondents currently perform their functions. A link to the electronic questionnaire available on the internet and with questions in a randomized order was disclosed to 120 graduate business students *from*a private university with several campi in the city of São Paulo.

Table 3. Outcomes according to the proposed objectives

Objectives	Size	Segment	Notes
Differences in the importance of the typical factors of strategic maps	No	No	There are no differences by size or segment of companies in the importance of the typical factors of strategic maps.
Awareness regarding the BSC	Yes	No	Respondents of medium-large companies have a more favorable view on the BSC than the medium ones.
Differences in the use of performance indicators	Yes	No	Large companies use performance indicators more regularly than small and medium-sized companies do.

Source: Field survey (2019)

Table 3. Comparison between outcomes found in Brazil, the United Kingdom and Cyprus

	Brazil (total) %	Brazil (P)%	RU[c] %	Cyprus[c] %
Number of respondents	92	31	20	20
Services Segment	41	54.8	65	30
Importance growth in sales [a]	46.7	48.4	60	90
Importance increased profits [a]	47.8	41.9	75	85
Importance increased revenue [a]	35.9	32.3	60	75
Importance customer satisfaction [a]	56.5	54.8	65	85
Importance increased number of customers [a]	39.1	35.5	20	45
Importance increased market share [a]	39.1	29	20	45
Importance increased productivity [a]	38	29	45	80
Importance improves the ability of employees [a]	37	45.2	30	70
Importance increased employee satisfaction[a]	33.7	35.5	20	50
Importance improving the quality of products/services [a]	48.9	48.4	50	90
Knowledge of BSC	63	45.2	20	45
Use customer satisfaction measures through research and number of complaints [b]	66.3	58.1	25	33
Use of market share of a specific type of customer or market [b]	35.5	59.8	45	39
Use number of new products [b]	43.5	22.6	70	50
Use timely deliveries [b]	62	64.5	45	11
Use rate of employee satisfaction [b]	41.3	35.5	40	44
Use education and skill level of employees [b]	44.6	41.9	25	33
Use revenue growth [b]	81.5	67.7	15	0
Use growth resulting from new products [b]	56.5	38.7	55	44
Use environment and social responsibility [b]	45.7	29	40	50

Note: P = Small size; RU = UK; a = Very important; b = Does not use; c = Outcomes obtained in Giannopoulos et al (2013)

The participants were informed about the exclusively academic purpose of the study and the possibility of not identifying themselves, guaranteeing their anonymity.

Sample: It was requested that only the students who had work in companies in the city of São Paulo filled out the questionnaire, thus, 92 questionnaires were filled out, 33.7% of small companies, 18.5% of medium companies, 14.1% of medium-large companies and 33.7% of large companies. As expected, the number of associates increases considerably with revenue, that is, 91.3% of companies with up to 50 employees are small and 58.8% of companies with more than 200 employees are large. It should be noted that 51 respondents, or 55.4% of the total of 92, work in companies with more than 200 associates and the most representative sector was the services sector (44.6%). Table 1 shows the relationship between the size, number of associates and performance sector of the companies. On the hierarchical level, Table 2 presents the distribution of the hierarchical level of the respondents among the different sizes of companies. Note the balance of the sample between managerial and operational positions, since 42.4% declare holding positions of management (Administration, Management, Coordination and Supervision). When asked about the degree of importance of financial measures, 39.13% of the respondents considered it as *very important*. Regarding the importance of non-financial measures, 33.70% considered it *very important*. Three constructs of variables treated as continuous were created: Importance of Factors (IF); Awareness regarding the BSC (CBSC) and (c) Performance Indicators (ID). For the creation of FI, the following assertions were used: (a) Sales growth; (b) Profit growth; (d) Increase in revenue; (e) Customer satisfaction; (f) Increase in the number of customers; (g) Increase in market share; (h) Increased productivity; (i) Improvement of employee skills; (j) Improvement of the quality of products/services. For the formation of CBSC, the following assertions were used: (a) BSC is an efficient system of performance measurement; (b) My company is satisfied with the use of BSC; (c) BSC is a relevant performance measurement tool for small businesses; (d) It is easy to implement BSC in small companies, (e) With BSC it is easier to achieve the objectives of the company; (f) BSC allows a better evaluation of the company's strategy; (g) BSC balances short- and long-term goals; (h) With BSC employees understand better the strategy and vision of the company; (i) BSC information helps managers increase customer satisfaction; (j) BSC information helps managers improve the quality of products/services; (k) BSC information helps managers improve employee skills; (l) BSC information can help managers increase employee satisfaction; (m) BSC information helps managers to increase market share; (n) BSC information can help managers improve the delivery time of products or services; (o) BSC information can help managers increase profits and (b) BSC information can help managers reduce costs. In order to create ID, the following assertions were used: (a) Customer satisfaction measures through surveys and number of complaints; (b) Market share of a particular type of customer or market; (c) Number of new products; (d) Timely delivery; (e) Employee satisfaction rate; (f) Education and skill level of employees and (g) Growth, turnover and the environment.

Analysis of the Outcomes: Normalities were tested using the Kolmogorov-Smirnov method and were rejected for the IF and ID variables, but were not rejected for CBSC, so the Kruskal

Wallis test was used to compare medians in the case of non-parametric distributions (IF and ID) and ANOVA for the parametric distribution (CBSC). The *post hoc* comparisons of the differences between the samples by size and economic segment were evaluated with the Bonferroni test (HAIR et al., 2006); MAROCO (2007). In ID, no differences were found by size ($X_{KW}^2 3$) = 6480, p = 0.090, N = 92) or by economic segment ($X_{KW}^2 6$) = 5313, p = 0.504, N = 92), suggesting that, on the respondent's perspective, even with possible strategic differences of the companies, there is no interference in defining the importance of the typical factors of strategic maps in the different economic segments and sizes. The same was observed for the CBSC by segment [F (4.21) = 0.484; p = 0.747], that is, no differences were found, but for CBSC by size differences [F (3.22) = 5.87; p = 0.004], *post hoc* comparisons using the Bonferroni test indicated that the average for medium-sized companies (M = 61.00; SD = 4.94) was significantly lower than the average for medium-large-sized companies (M = 75.17, SD = 3.06) suggesting that the view of respondents working in medium-large-sized companies is more favorable about the applications of BSC when compared to respondents working in medium-sized companies. Similarly, there were differences in size ($X_{KW}^2 3$) = 16407, p = 0.001, N = 92), but not in segment ((6X_{KW}^2) = 5.368, p = 0.498, N = 92). *Post hoc* comparisons of the size show that there are differences between small companies (M = 21.48, SD = 5.30) and medium companies (M = 22.00, SD = 4.74) M = 26.26, SD = 3.65) showing that large companies use performance indicators more regularly than small and medium companies. Thus, one can summarize the findings according to the proposed objectives and that can be observed in Table 3.

Giannopoulos et al. (2013) conducted similar research in 2013 comparing small businesses in the United Kingdom and Cyprus. As the same questionnaire was adapted to Portuguese and applied in companies operating in Brazil, it was possible to establish a comparison between the outcomes found in the three countries, as shown in table 4. Six years distance the answers obtained in Brazil from the UK and Cyprus responses, however, it is noted in the data in Table 4 that the level of knowledge about BSC is similar between Brazil and Cyprus, but for the respondents of 2013 the aspects of sales growth, revenue growth, customer satisfaction, productivity increase and product/service quality improvement are considered to be *very important* at levels above those achieved in Brazil in 2018. The outcomes in Brazil are superior only to the United Kingdom regarding the increase in the number of customers, increase of the market share, improvement of the skill of the employees and increase of the satisfaction of the employees. Likewise, measures of market share, timely deliveries, revenue growth, educational level and skill levels of employees are more used in the United Kingdom and Cyprus than in Brazil, but when measures related to the number of new products, growth resulting from new products, employee satisfaction, environment and social responsibility, Brazil presents higher percentages of use.

Final considerations

The *Balanced Scorecard* tool introduced in the 1990s by Kaplan and Norton was designed to assist in the strategic management of organizations, as not always the auspicious financial outcomes will prove the permanence of organizations in the markets. The proposal of the tool is that there is an expansion of the vision, seeking to associate four perspectives essentially vital to the business: financial, customers, internal processes and learning/knowledge. In view of the *Balanced Scorecard* perspective, the objective of the research was to investigate whether there are differences by economic segment and size in the importance of the typical factors of strategic maps, awareness about the BSC, the use of performance indicators and also to establish comparisons with data obtained from the UK and Cyprus in the Giannopoulos et al. (2013) with small Brazilian companies.

Data collection included 92 respondent companies, of which 31 are considered as small companies in the United Kingdom and Cyprus, Giannopoulos et al. (2013) collected 20 considered small companies according to the criteria of each country. In relation to the objectives outlined, it was possible to identify that:

Differences by economic segment and size in the importance of the typical factors of strategic maps: According to the sample surveyed, no differences were identified by size or segment of companies in relation to the importance of the typical factors of strategic maps.

Awareness regarding the BSC: the outcomes showed that the Brazilian companies considered of medium-large-sized companies have a more favorable opinion about the BSC in relation to medium-sized companies.

Use of performance indicators: large company respondents make more frequent use of performance indicators when compared to small and medium-sized companies.

Comparisons with the data obtained between Cyprus, the United Kingdom and Brazil: the comparative analysis among the countries allowed to understand that, for small companies, there is proximity to the level of knowledge about BSC. Regarding the aspects related to the indicators of sales growth, increase of profits, increase of revenue, customer satisfaction, higher productivity, better quality in the delivery of products/services is considered as *very*important in in companies in Cyprus and the United Kingdom (data from 2013) with levels above those obtained by Brazilian companies in 2018. However, it should be noted that Brazil presents superior outcomes over the other two countries when it relates to the number of new products/services to customers, concern for employee satisfaction, environment and social responsibility. The research reached the objectives set, however, it should be mentioned that of the 120 companies selected for research participation, 92 companies participated indeed, of which 31 are small. It is suggested that the questionnaire applied in this research be directed to other regions of Brazil, as well as to Latin American countries, in order to broaden the view about the BSC tool, its applicability, the level of its comprehension and also the change of outcomes of the organizations from the use of the tool, within the context of each economic reality lived by the organizations.

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