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Assessing global performance in universities: an application of balanced scorecard

Carlotta del Sordo^a *, Rebecca L. Orelli^a, Emanuele Padovani^a, Silvia Gardini^a^a University of Bologna, Management Department, P.le della Vittoria 15, 47121 Forlì, Italy

Abstract

Universities act in order to create and communicate knowledge, mainly via research and teaching. They require a reporting system which supports these aims and tracks performance. This paper explores the balanced scorecard (BSC) to ensure reporting practices by universities. Particularly, the research considers the BSC as a strategic tool that can be used by the universities administration and other stakeholders to capture the multidimensional aspects of universities' performances. The paper employs as a research approach a literature review of the BSC. This study is framed as follows: review of the literature on the BSC and its aims; analysis of the use of the BSC by the university administration, given their multidimensional performances; finally, development of a model to suit University context. The model, applied to an Italian University identifies contemporary reporting practices and gaps in universities. The developed model contributes to the debate on internal and external reporting within Italian universities and highlights possible future benefits of the use of the BSC reporting model in universities.

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Open access under [CC BY-NC-ND license](https://creativecommons.org/licenses/by-nc-nd/4.0/).*Keywords:* Balanced Scorecard, Performance, Universities, Accountability.

1. Introduction

Universities act in order to create and communicate knowledge, mainly via research and teaching. They require a reporting system which supports these aims and tracks performance.

The Balanced Scorecard (BSC) is the result of Robert Kaplan's and David Norton's considerations in the early 90s (Kaplan & Norton, 1992). They found that the traditional management systems mirror a structural "failure to correlate an organization's long-term strategy with its short-term actions", as "the emphasis placed by most organizations on short-term financial assessments produces a gap between the development of a strategy and its implementation" (Kaplan & Norton, 1996). In order to solve this problem, the two scholars proposed a balanced performance assessment, namely the BSC, which consists of a combination of performance indicators, including both economic-financial indicators and non economic-financial ones.

This paper explores the BSC to ensure reporting practices by universities. Particularly, the research considers the BSC as a strategic tool that can be used by the universities administration and other stakeholders to capture the multidimensional aspects of universities' performances. The paper employs as a research approach a literature review of the BSC. This study is framed as follows: review of the literature on the BSC and its aims; analysis of the

* Corresponding Author. Tel.: +39-0543374640. E-mail address: carlotta.delsordo@unibo.it

use of the BSC by the university, given their multidimensional performances; development of a model to suit University context; and conclusions, implications and further research.

2. The BSC: Literature review

The basic idea of Norton and Kaplan is to provide managers with a reduced set of indicators - though coordinated, in order to form an interpretive framework for the business - also avoiding the risk of information overload, i.e. that an excessive amount of data may reduce the real possibility of their use by the recipient. Kaplan and Norton define the BSC precisely as "a set of measures that gives top managers a fast but comprehensive view of the business" (Kaplan & Norton, 1992).

Therefore, a single, economic-financial analysis perspective is not enough to offer an overview of an organization's performance and strategic positioning. Budgeting, analytical accounting and reporting systems constitute a necessary economic and financial toolkit for managers, but one that suffices in particularly stable contexts only. Therefore, the dynamism of the competitive environment compels to implement guiding tools, precisely such as the BSC, which, by offering new analysis perspectives, allows managements to capture the multidimensional aspects of measurement, to have both an overall and synthetic view of business performance and to ensure a strategic approach, allowing them to translate strategy into actual actions.

The BSC does not replace financial metrics, rather complements them (Kaplan & Norton, 1996, p. 41). The two American authors present the following four perspectives:

- Economic-financial perspective: It is aimed at monitoring the relationship between the organization and its shareholders or, more generally, it targets the users of financial statements, being an instrument which, after the earlier formulations intended for private companies, has found application in the public sector and non-profit organizations.
- Customer perspective. It attains the measurement of the relationship with the market. It represents the strategy from the customers' point of view, highlighting what an organization intends to achieve in order to maximize customer satisfaction and grow their loyalty and retention.
- Internal process perspective. It identifies key operational processes in which the organization must excel. It is interesting to note that according to Kaplan and Norton the market must not be overlooked: "Internal measures to the BSC should be derived from those business processes that have the largest impact on the customer" (Kaplan & Norton, 1993).
- Learning and growth perspective. Targets for success have to be dynamically adapted to the market environment, balancing long-term goals with short-term ones. This perspective, therefore, aims at highlighting goals and measures for innovation, growth and acquisition of new skills, so that they adapt to a path of continuous improvement.

The BSC has evolved in the minds of its creators. It was in fact first established as a tool for measuring and evaluating performance, and it was then transformed into a method capable of linking daily operations to long-term strategic objectives, resulting in the quintessential strategic control tool. Thus, after a few years, the BSC has been perfected and spread not only in the field of performance measurement: It also proved to be an effective means of influencing corporate strategy.

The implementation of a BSC therefore clarifies the connection between strategy and indicators, as the latter must be adequately representative of the organization's strategic objectives.

3. The use of BSC in Universities

The traditional economic-financial measurements for universities show strong limitations (Lynch & Cross, 1991) in reflecting the organization's ability to compete for two reasons:

- They do not offer an overview on the overall "health" of the organization, mostly because they cannot evaluate the contribution of intangible assets (such as professional skills, effectiveness of operational processes, employee engagement, customer loyalty, etc..) in the creation of value within the corporate structure.

- They neglect the long-term strategic direction. In fact, economic-financial metrics refer to past management, whereas, in order to drive business dynamics, past measures must be integrated in future performance drivers (lead indicators) (Goold & Quinn, 1990).

Such short-term orientation is very dangerous in the academic context, where strategic approach should be a distinctive feature of the system. Hence the need to specify metrics measuring the status of goal achievement, not only with reference to the first year of the plan. For these reasons, as performance measurement systems are concerned, traditional economic-financial measures are increasingly being backed up by qualitative and quantitative indicators / metrics, precisely designed to snapshot performance in the multiplicity of its aspects also in a predictive and symptomatic perspective (Newman, 1975).

The lack (or scarcity) of consideration, and the resulting lack of measurement, of such intangible aspects is undoubtedly a limit in the university context, much more than in private companies. Many companies and governments do not know that intangible resources are available, such as property and intellectual capital. Intellectual property rights are considered, globally, among the most fundamental rights, requiring legal protection.

With reference to this last aspect, it is particularly relevant that in 2002 the Austrian Minister for Education and Science forced (IC Reporting According to the University Act, UG 2002, Leitner, 2004) universities to prepare, starting from 2006, an intellectual capital report, detailing - also for external stakeholders - university activities (development of research, teaching, innovation, and the use of intellectual capital). This way, social goals and the underlying strategy of the university can also be expressed. In this survey, intellectual capital has been divided into human, relational and structural capital, following one of the established analysis of intellectual capital suggested by the literature (Petty & Guthrie, 2000).

The implementation of the BSC in universities presents, therefore, a further useful element, namely the fact that, because it is not focused on traditional economic-financial measurements, it allows to capture those multidimensional aspects of measurement - such as relational and intellectual capital, the ability to produce and transmit knowledge, etc. - that have even a more fundamental importance in universities as knowledge-intensive service firms.

In short, the Rector and in general the organs of institutional government (Academic Senate and Board of Directors, but also Deans and Department Directors) need to be able to monitor the achievement status of priority institutional goals, while having a concise, easy-to-read overview about the overall performance of the university and its strategic positioning within the academic context, more and more competitive.

Hence the choice of a reporting system that is able to offer a reduced number of indicators (maximum selectivity), tailored to the university strategies, consistent with a systemic logic and basically capable of expressing qualitative aspects.

The rationale behind the BSC, on the other hand, is particularly suitable for public administration and, therefore, for state universities, as a result of the absence of market conditions in the provision of services. As a consequence, compared to businesses, for universities financial results have less significance in terms of their ability to demonstrate their business purposes, as it clearly emerges from the analysis carried out by both international and national literature (Cugini et al., 2011; Greatbanks & Tapp, 2007; Johanson, et al., 2006; Kaplan, 2000; Kaplan, 1999a; Mouritsen et al., 2005, p. 9; Niven, 2003; Whittaker 2000).

4. A BSC Model for a University: an Italian application

Following the approach of the BSC developed by Kaplan and Norton (1992), it is necessary to identify the specific university mission and vision from which the relevant strategic themes should be derived and articulated in the four perspectives.

In general, we can say that the mission of a university is to implement a teaching provision that is adequate to the demands of students, and contribute to the development of knowledge both in terms of research and through the application of the latter. Therefore, the creation and transmission of knowledge are aspects to be monitored.

It should, however, be noted that the statement of the mission is the first step of the model building process for an organization, and is itself a key moment in the implementation of the BSC. In governments, on the contrary, the

mission is an item that, at least partially, is not established, as it is already stated by normative sources and, in the case of universities, by the Constitution (Italian Constitution, Art. 33). In fact, when missions set forth in the statutes of the various Italian universities are analyzed, one can note that they are characterized by common features. Holding the specific mission, vision and strategic issues of each university as firm items, the traditional structure of the BSC can be partially modified, so that it is able to detect / focus on the main parties at whom it is addressed, that can be broken down into two main groups: students and communities. In particular, the first group is represented only by people at whom the teaching provision is targeted. The second group instead includes all those individuals affected by the research action as developed within the university. In this sense, the original customer perspective of the BSC is here split into student and community perspective.

The structure of the BSC for universities tends to identify, among the main stakeholders, all of the students (in terms of teaching provision) and the community as an end user of the activity performed by the faculty. To these main categories (students and community) more can be added, e.g. the community receiving newly graduates to be employed in the labor market and therefore presenting new particular needs (depending on the area involved); student parents, who contribute to their children's faculty selection based on the image offered by single universities; and so on. These can be considered users, although students and communities are the main intended public of universities. The first perspective of the BSC has been split for this reason, in order to facilitate understanding of strategies outlining. In this sense, a systematic activity of reporting and benchmarking could be initialized.

As part of the articulation of the five perspectives, there is a need to outline indicators depending on specific strategies of the university to which they will be applied and on the characteristics of the university very structure. The aim of the research, in this perspective, is limited to the outlining of a possible structure of the BSC for a university, without identifying its internal indicators.

Among the factors to consider in this perspective of the BSC, the commitment and the value that should guide teachers, both individually and within networks, can be enlisted as strategic elements capable of contributing, through future research, to the community. On top of this, considering that universities will increasingly be a market driver in the future - seeking more funds from the private, profit and nonprofit sectors, and, on the other hand, monitoring costs more carefully - it will become increasingly necessary to work in accountable terms, that is, with the possibility to also produce qualitative reports that are able to explain and provide information on the research activity that is developed.

Universities competitiveness expresses itself also in terms of raising more funds, which, since 1994, are increasingly linked to the performance achieved by universities. Therefore, it appears increasingly necessary to measure the research performance of universities in terms of the number of papers published in major international journals, or in terms of scholarships or grants / funds obtained for the development of research projects, both at a national and international level (as shown by the following objectives-indicators-initiatives tables).

Even within universities, the economic and financial outlook plays a major role, because resources are the driving force to implement research and teaching. The fundamental knowledge to be considered in this dimension is to be found in the accounting information system (del Sordo et. al., 2012). The latest techniques for obtaining financial resources from private and nonprofit entities are also particularly important.

As for the internal process perspective, it refers to the ability of employees (technical, administrative and teaching staff) to coordinate and cooperate in order to work efficiently and effectively with the available economic resources. Finally, the learning and growth perspective attains the improvement of both the teaching and research activities.

The model, applied to an Italian University identifies contemporary reporting practices and gaps in universities.

5. Conclusions, Implications and Further Research

The developed model contributes to the debate on internal and external reporting within Italian universities and highlights possible future benefits of the use of the BSC reporting model in universities.

Given the multidimensional nature of the university performance, in this paper we propose the use of the BSC as a reporting tool for Rectors, academic bodies, and also for other stakeholders. In this sense, the described model of

BSC can be used, albeit with the necessary adaptations to the needs of individual institutes, as a guide for the management of universities in Italy. The BSC for universities, as proposed in the model presented here, is a tool that can provide:

- a strategic vision in order to systematize the information that Rectors and academic bodies will have to use, creating both a guide and a strategic reporting system;
- an external communication of the strategic objectives achieved in the context of an increased competition between universities;
- a tool which, if used by more universities, would allow for a benchmark analysis

The next step in the research is the application of the proposed meta-model in at least two Italian universities. This deployment will require the involvement of universities for a rather long period of time. In fact, for a correct application of the BSC model, it will be necessary to start with the outlining of the mission and end with the definition of targets and indicators. This planning phase should last no less than twelve months starting from the moment the implementation is decided. The following phase then includes assessing, from the evidence, whether the BSC can truly be a strategic planning tool, a strategic reporting system, an external communication means to meet the demand for accountability and, ultimately, a functional improvement of the services offered by the university.

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