

The Balanced Scorecard an Adapted Tool to Performance Management Case Study: University Mohammed 5 of Rabat

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Abstract: This article is devoted to the Moroccan public university. It aims to demonstrate the possibility of applying the Balanced Scorecard (BSC) concept as a management and steering assistance tool, explaining and justifying the benefits that this instrument could have for improving the governance of these institutions.

Keywords: University, performance management, Balanced Scorecard (BSC).

Introduction

In Morocco, management control has developed strongly in the public sector as a whole, since it already meets the needs of the budgetary control of guardianships in certain organizations.

It is from the finance act of 2002, that the Moroccan government introduced the principle of globalization of credits¹ and contracting within the budget, focused particularly on results and the search for performance and efficiency around a responsible maneuver for management methods and tools. If we consider the University as a service-producing system, its mode of governance undergoes both the constraint of environment and the central power, while constantly seeking its own legitimacy.

The university in particular and all higher education institutions in general are now facing profound upheavals that affect their missions and their modes of governance. Thus, the reform of higher education through the law 01-00 on the organization of higher education in Morocco has helped strengthening the academic, administrative and financial autonomy of universities, now entrusted to university presidents.

Such autonomy granted by public authorities requires universities to establish their own strategic plans and be able to report on the results achieved. Given this imperative, the university must not only adopt new management methods based on performance management, but also set up more effective monitoring systems.

This article proposes a reflection on the application of a Balanced Scorecard (BSC) in the Moroccan university as an indispensable tool for decision support, communication, and steering the university strategy.

¹ Consists of granting Authorizing Officers more flexibility in the use of the appropriations made available to them, in return for their personal responsibility for the achievement of the objectives assigned to them and for the obligation to report on these results. .

Overview of Moroccan Higher Education

Moroccan higher education is made up of several universities and public or private higher education institutions, in addition to a public-private partnership (see Table 1).

Table 1 : Components of the Moroccan Higher Education System

Type of higher education	Description
Public higher education	On the one hand, public higher education is provided by universities and on the other hand by higher education institutions not belonging to universities. Universities: currently 12 universities with 125 institutions, these are under the supervision of the Ministry of Higher Education, Scientific Research and Training of Executives . Higher education institutions not belonging to universities: Specialized institutions under the pedagogical authority of the Ministry of Higher Education, Scientific Research and executive training, and the administrative and financial authority of technical ministries.
Higher education as part of the partnership	As part of the Public-Private Partnership, 9 universities and private schools are involved and under supervision of the Ministry of Higher Education, Scientific Research and Executive Training.
Private higher education	Considered as a main partner of the State ² , the private sector of higher education includes universities and institutions that are under the pedagogic authority of the Ministry of Higher Education, Scientific Research and executive training

Source: Ministry of Higher Education, Scientific Research and executive training (MHESRET)

² Art 163 of the National Charter of Education and Training.

In the public sector, Morocco is rich of 12 universities grouping 125 establishments, offering more than 2300 formations, and 29 institutions of Higher Education not Relevant of the Universities, (MHESRET, 2016). According to the same source, the private sector of higher education currently includes more than 110 universities and institutions (including 6 private universities), offering more than 320 courses.

As part of the Public-Private Partnership (PPP), 9 universities and private schools are involved. Given the aspect of our research, we will focus on the academic public sector, namely: the University.

The Balanced Scorecard (BSC)

In recent years, organizations' performance measurement systems have been focused on traditional management control data: calculation of internal and external costs, productivity ratios, general financial ratios,... without taking into account the environment in which they operate, a place where the organization evolves. Faced with these purely financial indicators, the management of the strategy remains limited, since the performance is no longer linked only to cost calculations, but also to its environment and intangible capital, which is the element of the renewal of modern management.

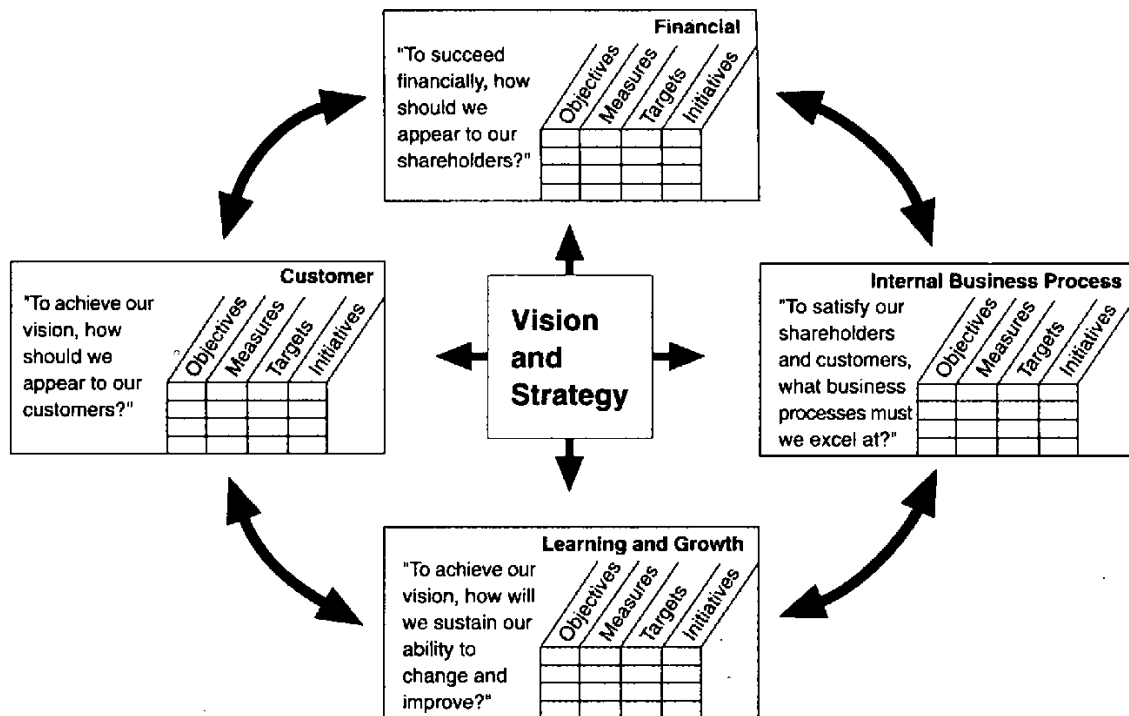
The need for a tool that takes into account financial and non-financial performance indicators has allowed managers to use scorecards models that are considered more comprehensive. As LÖNING et al (2003, p 158), states, *short-term measures will need to be replaced by multiple non-financial indicators that are better targets and have better predictive value for the company's long-term profitability objectives.*

Thus, it was in the nineties that KAPLAN and NORTON (1992) developed the "Balanced Scorecard" or the Strategic / Prospective / Balanced Scorecard, which incorporates indicators of past performance and the determinants of future performance. The authors present it as follows:

« ... The Balanced Scorecard (BSC) is a new framework for integrating strategic indicators: in addition to financial indicators of past performance, it proposes indicators of future performance ... The BSC declines the mission and strategy into objectives, enhancing four axis: the financial axis, the performance axis, the internal processes axis and the organizational learning axis» (NORTON and KAPLAN, 1996, p 31).

The original model of the BSC declines the mission and strategy into objectives and measures, describing the overall performance of an organization from four areas of performance, as follows:

Figure 1: Architecture of the Balanced Scorecard according to Kaplan and Norton



Source: Kaplan R., Norton D. (1996) : « The Balanced Scorecard: Translating Strategy into Action », Harvard Business Review, p 76

Each axis contains indicators aimed at achieving a common strategy by pursuing a coherent objective.

• **Financial performance axis**

This axis aims to identify the objectives, the measures and the financial indicators contributing to improve the financial

performance expected by the decided strategy, and to evaluate efficiently the quantifiable economic effects of the past actions (KAPLAN and NORTON, 1998, p 38). The organization is therefore trying to measure the effectiveness and efficiency of the actions taken.

- **Customer axis**

According to Kaplan and Norton, this axis focuses on customer satisfaction, which is often seen as an indispensable variable for strategic success. The organization seeks here to measure a qualitative and subjective phenomenon.

- **Internal processes axis**

This axis refers to internal operations, processes and decisions within the organization. This involves identifying the most important internal processes to ensure customer satisfaction. On the other hand, it is about recognizing the key competences of the organization and the means necessary for its success.

- **Organizational learning axis**

This latter axis is generally associated with the organization's ability to create added value and to develop means such as the skills of the human resources (capacities and the strategic knowledge necessary for the staff to support the strategy) and the performance of the human resources information systems.(tools and network needed to support the strategy).

Thus, these four axes make it possible to establish a causal link between the strategy and the performance indicators, and to establish a balance between the objectives set, the results to be achieved and the determinants of these results (KAPLAN and NORTON, 1998, p 44).

The Balance Scorecard in the University Field

The BSC built from a set of indicators, could be adopted as a standardized model and as a reporting tool for decision makers and stakeholders of the Moroccan University. It could be an appropriate framework for measuring the multidimensional nature of the University's performance, whose main activity is the production of knowledge and know-how.

In addition, it represents a modern and integrated management tool, particularly likely to be appreciated by the University presidency, which sometimes fails to ensure follow-up in university management. To achieve its performance, the university must focus on two dimensions: economic and social.

The economic dimension of performance is articulated around the university's ability to ensure its survival (efficiency) and to efficiently manage its resources (efficiency) in the best possible way (quality).

As for the social dimension of performance, represented by the long-term ability to attract, retain, train and satisfy human resources, it allows the university to respond to the

needs of society through research, education and services to local authorities.

These requirements will only be evaluated by the university through the effectiveness of a management tool measuring both financial and non-financial performance, namely: the strategic scorecard or the Balanced Scorecard, which many institutions have borrowed, such as the United States (University of California, University of Vermont, University of Akron, ...), Canada (Carleton University, ...), Australia (Deakin University, Bond University, ...), or England (University of Edinburgh, Glasgow Caledonian University, ...).

In this context, the Balanced Scorecard appears as a progressive element of a new practice of governance in universities, where the role of university presidents and their teams is decisive in the university's strategy, taking in consideration the fact that it has an enhanced management autonomy.

For the university, like private and public organizations, the purpose is not good financial performance but customer satisfaction.

The customers of the university are multiple. According to (HELDENBERGH and SENECHAL, 2011), the perception of the "customer" axis can take several forms:

- Society: "represents the widest beneficiary who benefits from the different missions exercised by the university";
- Students: considering training as the main mission of the university, it is then the students who represent the direct beneficiaries;
- The labor market, the parents who finance the studies ...: the perception of the customer can indeed be extended to many other stakeholders;
- The researchers: "have many expectations: need an intellectually stimulating work environment within the research teams,...»
- The research sponsors: "expect exploitable results that allow them to create value quickly enough".

Faced with this polymorphism, the two authors note that it is judicious to transform the axis "customer" of the BSC in axis "stakeholders" and that it is in any case necessary to exclude "the normative approach of the customer traditionally offered by the BSC".

Empirical Study: case of Mohammed V University of Rabat (UM5)

This research attempts to study the possibility of applying the Balanced Scorecard to a Moroccan university by choosing Mohammed V University³ of Rabat as a case study.

³ Ranked 1st University at the national level according to QS World University Rankings 2018 and (THE) Times Higher Education BRICS & Emerging Economies Rankings 2017.

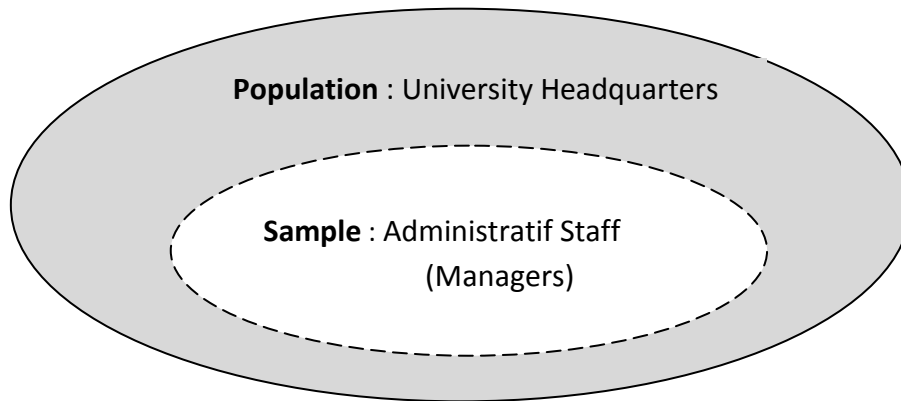
• **Data collection**

The population of our research is made up of administrative staff of the University, to which a questionnaire was administered (only the participants), selected according to two criteria:

- Being a manager⁴ within the University
- Possessing a set of performance indicators (financial, non-financial, or both).

This choice is justified by the fact that the "management control" entity is dependent on other entities in terms of feedback, requiring the participation of other managers (other services), to ensure the implementation of the Balanced Scorecard within the University.

Figure 2: Statistical population of research



Source: Made by the authors

After defining the criteria for our research population, the sample of the administrative staff of the University should be specified. We selected from 174 managers among

different departments of the University, a sample of 120 people randomly drawn using the probabilistic sampling method to which our questionnaire was sent.

Table 2: Return rate of the administered questionnaire

	Electronically	Paper support	Face to face	Total	%
Number of questionnaire mailing	38	80	2	120	100%
Number of complete responses	27	31	2	60	50 %
Number of incomplete responses	-	12	-	12	10 %
Number of unfilled questionnaires	11	37	-		40 %

Source: Made by the authors

Given the number of questionnaires administered, the response rate equals 60%. We finally kept 60 complete and usable answers, representing a real response rate of 50%.

Once the data has been collected, the following section will present and discuss the results obtained.

• **Presentation of empirical results**

Using a Lickert scale ranging from 1 to 5 points: (1: Very low utilization level VLU; 2: Low utilization rate LU; 3: Average utilization level AU; 4: Degree of high utilization, HU 5: Very high degree of utilization VHU), respondents were asked to determine the degree of use of the different

indicators. The results are shown in Table 3, schematized in the graph of Figure 3.

⁴In the public sector, a manager is a person responsible for results, able to assume administrative relations with different actors, and to ensure the satisfaction of users (Proulx, 1949).

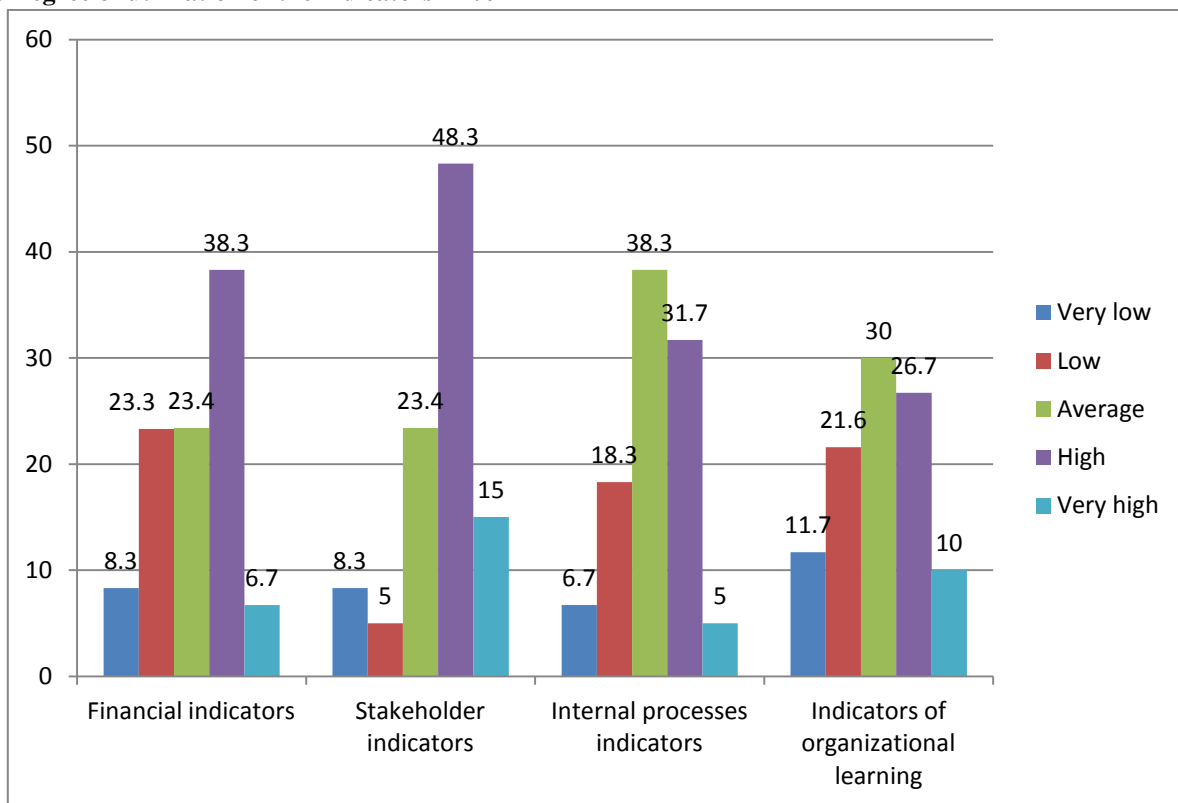
Table 3 : Respondents' assessment of the use of the different indicators

	VLU		LU		AU		HU		VHU	
	Rép.	%	Rép.	%	Rép.	%	Rép.	%	Rép.	%
Financaial indicators	5	8,3	14	23,3	14	23,4	23	38,3	4	6,7
Stackholders indicators	5	8,3	3	5	14	23,4	29	48,3	9	15
Internal process indicators	4	6,7	11	18,3	23	38,3	19	31,7	3	5
Organizational learning indicators	7	11,7	13	21,6	18	30	16	26,7	6	10

Total of respondants = 60

Source: SPSS Results

Figure 3: Degree of utilization of the indicators in %



Source: SPSS Results

Overall, the results indicate that the use of performance indicators according to the four axes of the Balanced Scorecard is moderately high, and this, on each performance measured (68.4% financial axis, 86.7% stakeholder axis, 75% internal process axis, 66.7% organizational learning axis).

As a result, 63.3% of managers use "strongly" or "very strongly" the indicators of stakeholders in their performance measurement system, compared to 45% of people using financial indicators as a measure of performance.

This is explained by the fact that, like private and public organizations, the purpose of the University is not the good

financial performance, but the satisfaction of the stakeholders (students, teachers, administrative staff, ministry of guardianship, employers ...).

In addition, the proportion of managers using internal process indicators "strongly" or "very strongly" is identical to organizational learning, representing a rate of 36.7%. This proportion is lower than using financial indicators and stakeholders.

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Table 4: Balanced Scorecard model of the University Mohammed 5

Axis	Strategic Objective	Indicator	Calculation	Periodicity	Value			Interpretation
					Real	Standard	Target	
Financial	Diversify the University's sources of funding							
Stakeholders	Establish a quality approach through permanent evaluation							
	Focus on the student's fulfillment for his success							
	Think about the training for the professional insertion of the student							
Internal Processes	Open up to his socio-cultural environment							
	Develop Research-Innovation by merging two universities							
Organizational Learning	Establish managerial culture in governance							

Source: Made by the authors

Thus, the use of the different performance indicators by the administrative staff of the UM5 is relatively balanced, as shown in the table below (Table 5), representing the average scores of the degree of use of the indicators of each axis of performance according to Kaplan and Norton.

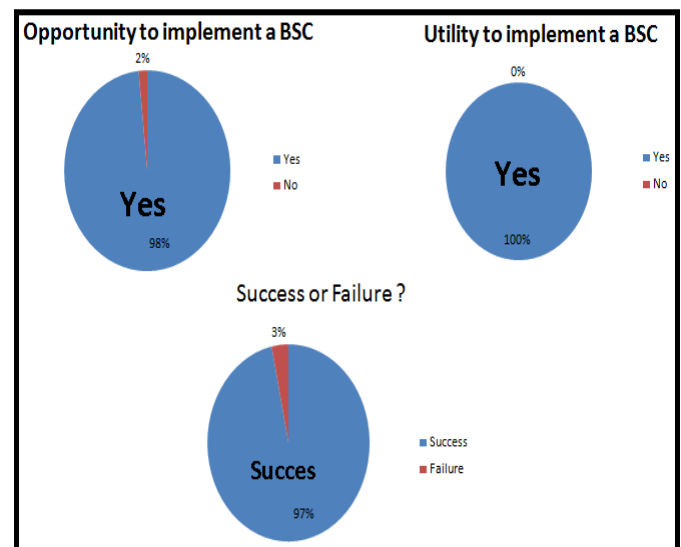
Table 5: Average scores of the use of performance indicators

Degree of use of the indicators	Average scores (out of 5 points)
Financial	3,12
Stackholders	3,57
Internal processes	3,10
Organizational learning	3,02

Source: SPSS Results

Thus, obtaining an overall average score of 3 out of 5 points relating to the degree of use of the performance indicators shows that there is a certain balance between the four axes of the Kaplan and Norton model. In addition, this observation was completed by the motivation of the management staff of the University to adopt this new piloting tool, as shown in the following figure (Figure 4).

Figure 4 : Perception of implementation of a BSC by staff



Source : Made by the authors

Thus, the results of the research reveal a possibility of setting up a BSC within the UM5, since on the one hand, the use of the performance indicators according to the four axes is balanced. On the other hand, almost all staff (+ 97%) is motivated by the implementation of the Balanced Scorecard as a steering instrument for university performance.

The utility of setting up a Balanced Scorecard within the university will therefore allow the President and his team to:

- Ensure that the results are consistent with the objectives set;
- Use corrective actions on means and activities (example: indicators that are no longer valid);
- Adapt the objectives, targets and trajectories in agreement with the stakeholders.
- Provide the university with real recognition through the valorization of its activities with regional, national and international actors
- Identify actions and measures that are both organizational, functional and budgetary;
- Make comparisons and benchmarking.

Improve internal and external communication (through predefined objectives, each collaborator has an important role in the success and performance of the university).

The Balanced Scorecard will therefore represent a compass to guide the University, which can be adjusted, modified or adapted according to changes in the environment (examples: structure, technology, legislation, etc.).

Conclusion

In a Moroccan context marked by the will to establish a good governance of the public service, and the search for the performance of the system of higher education, namely the University, which is now called to report its effectiveness and its efficiency in the use of public funds and the performance of tasks assigned to it, taking into account the autonomy granted to it by the public authorities. Faced with these imperatives, where financial and non-financial performance seem important, the Balanced Scorecard could be an ideal instrument for steering university performance, and be adopted as a standardized model and as a reporting tool for policy and decision-makers, as well as for stakeholders.

It could be an appropriate framework to measure the multidimensional nature of the University's performance, whose main activity is the production of knowledge and know-how. Moreover, it represents a modern and integrated management tool, particularly likely to be appreciated by the University presidency, which sometimes fails to ensure a follow-up in university management.

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