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Strategic priorities of Portuguese higher education institutions

Joaquim Mourato^{a,b}, Maria Teresa Patrício^b, Luís Loures^a and Helena Morgado^c

^aCentro de Investigação para Valorização dos Recursos Endógenos (VALORIZA-IPP), Instituto Politécnico de Portalegre, Portalegre, Portugal; ^bCentro de Investigação e Estudos de Sociologia (CIES-IUL), ISCTE – University Institute of Lisbon (ISCTE-IUL), Lisboa, Portugal; ^cInstituto Politécnico de Portalegre, Portalegre, Portugal

ABSTRACT

This paper presents an analysis of strategic management systems of higher education institutions (HEIs) by identifying policy and strategic priorities and monitoring their implementation. The strategic priorities are contextualized within four scenarios that structure the mission and orientation of HEIs. The methodology is based on data collected by a survey to top administrators in Portuguese HEIs. The study identifies and compares the strategic priorities of Portuguese higher education institutions. The top priorities are concern with internationalization and quality assurance, consistent with the rise of quality assurance systems and the growth of international mobility flows. The study also compares the support techniques for monitoring strategic management.

KEYWORDS

Strategic management; performance management; quality assurance; higher education; strategic priorities

1. Introduction

Higher education institutions are complex multi-level organizations, increasingly dependent upon efficient and effective management systems to convey quality and trust to internal institutional actors and external stakeholders. In this regard, it was important to provide a general context of the rise of management systems in Higher Education Institutions (HEIs), highlighting New Public Management (NPM) principles, before identifying the strategic indicators and assessing the different instruments that evaluate their performance.

In this study, we identify the main strategic priorities of Portuguese Higher Education Institutions (HEIs) based on four scenarios developed in an OCDE project and centered on key mission and policy options. The OECD project provides a structured framework of the missions of higher education institutions that enable an assessment of strategic priorities by specific orientations. Following this, we examine the practices of performance management implemented in higher education institutions.

2. Literature review

2.1. The New Public Management in higher education institutions

The identification of the main strategic priorities is increasingly recognized as a crucial step for understanding the governance and management of higher education institutions. In this regard, the present review starts with a brief overview of New Public Management (NPM) in higher education institutions, considering its impact on strategic management priorities.

CONTACT Joaquim Mourato ✉ amourato@ipportalegre.pt Centro de Investigação para Valorização dos Recursos Endógenos (VALORIZA-IPP), Instituto Politécnico de Portalegre, Portalegre, Portugal; Centro de Investigação e Estudos de Sociologia (CIES-IUL), ISCTE – University Institute of Lisbon (ISCTE-IUL), Lisboa, Portugal

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In the 1980s, beginning in the UK and Australia (Hood 1991; Hood and Jackson 1991), the term New Public Management (NPM), as a self-directed approach to liberal states, was introduced based on management models used in the private sector, with the aim of improving the efficiency of the public sector. NPM focused on financial control, orientation results, vertical management with new forms of corporate governance, customer orientation and program contracts. Organizational culture, vision, and values, in other words, strategic management, were emphasized and introduced into the public sector and changed it in a radical way.

Contributions quickly emerged for the management of higher education institutions (HEIs) to comply with the standards of the NPM, namely to criteria such as market orientation, effective measurement of performance and financial and business management concerns. The extent of NPM ideas and pressures on higher education quickly became widespread, as enumerated below (Ferlie, Musselin, and Andresani 2008):

- Market-oriented reforms;
- Practice real prices for teaching and research;
- Budgetary rigor;
- Make students financially responsible;
- Monitoring teaching and research performance (audits);
- Allocate funds to high-performing activities, as an incentive;
- Intervention of Ministries in the system through goal setting and contract program;
- Promote strong and professional leadership;
- Open and participated management;
- Salary of the teaching staff indexed to their performance.

According to Broucker and De Wit (2015, 57),

all OECD countries have implemented public sector reforms to increase efficiency and improve the effectiveness and performance of public organizations and have been classified under the New Public Management (NPM) concept, emphasizing accountability of the public sector and focus on results.

In fact, HEIs have been rapidly incorporating the criteria defined as NPM principles, although the speed and scale of the changes on HEIs varies. In Portugal, a latecomer, the most significant change was the introduction of the Legal Regime of Higher Education Institutions (RJIES) in 2007. Still, there are numerous signs of the NPM in this regime such as autonomy, accountability, quality assessment, leadership and external stakeholder involvement in management. These are just a few of the characteristics of the NPM that have entered the strategic management of HEIs (Veiga et al. 2014).

2.2. Strategic management in higher education institutions

Higher education institutions are under mounting pressure to define their mission, identify strategic priorities, to monitoring performance indicators, while bearing in mind the need to demonstrate 'value for money' through greater 'efficiency gains' given mounting international competition and increasing costs (Deem 1998). In this regard, strategic management and organizational performance has become a central issue to current public management, not only focused on financial aspects but also on quality, effectiveness and efficiency of the provided services. Public-sector reform and/or any public policy program are now required to take into account strategic and performance management. Fryer, Antony, and Ogden (2009) presents this not only as a concept but, above all, as a change and improvement agenda. It is in this evaluation and continuous improvement plan that organizations implement performance management systems.

Critical accounts of organizational management in HEIs have equated it with bureaucratic inefficiency as well as intrusive micro-management procedures (Martin 2016). Centralized top-down

procedures have led some academics to feel disillusioned, powerlessness and to identify the deterioration of morale in academic life. Top-down centralism stems from new public management emphasis on accountability, performance targets and most importantly, on greater economic efficiency. Bozeman (2015) applies organizational theory to get at the root causes of the problem of red tape and bureaucratic pathology in publicly funded university research. Red tape theory reports to rule ineffectiveness, entailing a compliance burden and leading to rules that are often 'research irrelevant,' which have nothing to do with quality. The increase in rules and regulations has also seen a rise in academic personnel working in student services, accommodation, accounting, finances, human resources, technology and library services and other support staff. The UK alone has witnessed an increase of 33% of academic managers in five years (2003–2004–2008–2009) (Tahir 2010). For many observers, the pressing question for higher education institutions is 'are administrators and staffers make(ing) the rules and setting the priorities of academic life?'

Other authors consider that HEIs should incorporate greater market orientation into the strategic planning process to achieve competitive advantage (Conway, Mackay, and Yorke 1994). This reference is based on the 1988 reform in the United Kingdom, which brought radical changes in the structure and funding process of HEIs. However, the aforementioned case finds similarities in other contexts. Slaughter and Rhoades (2004), in the paper 'Academic Capitalism in the New Economy' warn of a new reality of higher education in the United States of America, with the market orientation of the universities and colleges. The authors even speak of the need for these institutions to 'republicize', that is, changing the priorities of decision-making on academic programs. They highlight the aggressive involvement of higher education institutions in the USA in the knowledge-based economy and analyze the efforts made by these institutions in order to promote their products and services in the marketplace.

Another aspect influencing management decisions of HEIs are international rankings resulting from a combination of indicators and/or dimensions, generally presented as models for the evaluation of HEIs, some of which have a great impact, as is the case of the Shanghai Ranking Consultancy, the official publisher of the Academic Ranking of World Universities (ARWU), the World University Ranking (WUR) initiative of the Times Higher Education, and U-Multirank, among others. Numerous theoretical and methodological criticisms of the rankings have demonstrated their weaknesses and fallacies (Raaij 2005; Marginson and Wende 2007). Nevertheless, rankings continue to be widely utilized and consulted, leading administrators to consider them in their higher education strategic planning. Morrill (2000) stated that performance indicators were at the center of the attention of universities during the previous two decades, believing that they can contribute substantially to their self-understanding, self-assessment and to fix their priorities, supporting leaders in decision-making processes. This author seeks to demonstrate the main virtues of the performance indicators of universities, namely, self-assessment, contribution to trust and institutional pride, striving for continuous improvement, for general effectiveness, resulting in a closed circuit.

The OECD remains at the forefront of many initiatives to promote strategic thinking linked to efficiency, effectiveness and performance in higher education. The Strategic Education Governance (SEG) project underway in the Centre for Educational Research and Innovation (CERI), at the OECD, seeks to develop and monitor objectives that support strategic thinking and the effective realization of policies in educational systems through pilot testing and indicators.

A recent study on the future of higher education offers a balanced account of possible policy options, centered on strategic priorities. Lancrin (2017), responsible for the project 'The future of higher education,' in the Centre for Educational Research and Innovation (CERI/OECD), presented four scenarios for higher education, which can, succinctly, be described as follow:

Scenario 1: Open networking: higher education is highly internationalized and involved in an intensive network among institutions, students and other actors, such as industry. It is a model based more on collaboration than competition.

Scenario 2: Serving Local Communities: higher education institutions are focused on national and local missions. They are institutions focused within their surrounding communities and responding to their economic and social needs, through teaching and research activities.

Scenario 3: New Public Responsibility: higher education is fundamentally funded by public funds but there is an increasing focus on the use of NPM tools. This change has increased government budgetary pressure, leading to a combination of public and private resources. This trend is not unrelated to the increase in public debt in most countries, leading to the transfer of a significant part of the cost of state higher education to other stakeholders in education, especially students and their families.

Scenario 4: Higher Education Incorporated: higher education institutions compete globally in the provision of teaching and research services. Higher education institutions focus on what they consider to be their main business: teaching or research. Research universities are little concerned with teaching, while most vocational and general institutions focus almost exclusively on teaching.

These scenarios reveal possible paths for HEIs to develop according to mission orientation. Our assumption is that the policy options will have an effect on the strategic priorities of the institution and we will operationalize Lancrin's model to the strategic priorities of Portuguese higher education institutions.

2.3. Strategic management tools and procedures in higher education institutions

It is increasingly acknowledged that HEIs have shown remarkable initiative and commitment in the introduction and implementation of modern management tools. Strategic management personnel in HEIs have adopted different models and techniques to support decision-making. One of the most extensively operationalized models used by HEIs is the Balanced Scorecard (BSC) developed by Kaplan and Norton (1992 and 1996), whereby the strategic management system is monitored through indicators and by information dissemination (Chen, Yang, and Shiau 2006; Umashankar and Dutta 2007; Mourato and Afonso 2011; Taylor and Baines 2012; Abdulsattar 2012; Indrianty 2012; Beard and Humphrey 2014; Worawit, Hajdar, and Mohd 2014).

The Balanced Scorecard is a tool that evaluates organizational performance in four different areas that reflects the organization's vision and strategy (Kaplan and Norton 1992, 1996; Kaplan 2010), namely: financial, customer, internal processes and organizational capacity for learning and growth. It establishes a set of cause–effect relationships, which emerge from the obtained results. The BSC's major challenge is to link strategy to action, enabling the strategy itself to be managed, monitored, and evaluated. An organization has a strategic map, which mirrors the strategic axes and easily evaluates its compliance. This is a huge management advantage that explains why the BSC has gained in popularity over other models (Lawrie and Cobbold 2002; Abdulsattar 2012).

It is common for the public sector, particularly for HEIs, to look at the private sector when searching for performance management models, associating the BSC with quality (Cullen et al. 2003). Many HEIs have also adopted models that focus on quality management. In fact, higher education institutions are subject to numerous types of evaluation and accreditation processes, which often include course, department and institution evaluations. There are research evaluations and student evaluations of teaching, frequently conducted through independent agencies, which respect the European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) were adopted by the Ministers responsible for higher education in 2005. The adoption of quality management systems is now a regular practice, following specific models of the evaluation and national accreditation agencies, and international standards (ISO).

Total quality management (TQM) has been making progress in several countries since the 1990s. Several authors illustrate the importance of TQM in the management, application and impact in the higher education institutions in the USA and UK, (Kanji, Malek, and Tambi 1999; Zakuan 2012; Asif

et al. 2013). These studies reveal the necessary critical success factors following the implementation of total quality management in HEIs. Also, Lupo (2013) follows the same method based on services oriented to improve quality to study Italian higher education institutions. In Indonesia, Ardi, Hidayatno, and Yuri M. Zagloel (2012) evaluated unconventional dimensions of quality in higher education, such as faculty and department commitment, campus facility, customer feedback and improvement and its relationship with student satisfaction, determining a positive correlation between the variables.

Other authors have focused on the quality factors and present the dimension of quality in higher education (Owlia and Aspinwall 1996). In Portugal, a recent study discusses the perceptions of the main internal stakeholders of the universities in relation to the quality management systems implemented, considering the degree of support, adaptation or resistance (Manatos, Rosa, and Sarrico 2017).

In general, the management literature recognizes the importance of quality systems and its various applications. There are, however, also examples of the deficiencies and weaknesses of benchmarking institutional performance. A study from Hong Kong points out the difficulties in validating evaluation scales and how they are not reliable for HEIs (Pounder 1999). It is also possible to find the coexistence of different management tools (Cullen et al. 2003 and Mourato and Afonso 2011). The Balanced Scorecard (BSC) and Total Quality Management (TQM) can coexist and reinforce strategic thinking at the institutional level and help leadership in decision-making. The overview of the literature on strategic management makes clear that the framework of the new public management has proliferated, becoming a growing concern (Matos, Venâncio, and Dutra 2014). Some refer to very concrete and specific cases and fail to address comparative or international trends (Mainardes, Miranda, and Correia 2011). Others primarily focus on the basic principles required for the development of strategies in universities (Stukalina 2014).

The use of a performance management system by HEIs has been recognized as a generalized current practice. It is, however, necessary to characterize the different types of models, and to evaluate the adjustments and the effectiveness of such models to the HEIs. Our study adapts the scenarios defined by Lancrin (2006, 2017) and seeks to ascertain if administrators and managers of HEIs align with the main dimensions put forward. In other words, how relevant are dimensions such as national/international, specialization/diversification, new public management tools and public responsibility, and collaboration/competition. The analysis of strategic management in HEIs in Portugal will be analyzed in terms of how they apply to the scenarios defined above.

3. Methodology

The objective was to identify the strategic priorities of HEIs and their relevance. A list of different priorities was made available to each respondent and they were asked to define the main priorities of the institution. There was no limit to the number of priorities pursued by the HEIs and respondents were free to list other options. The respondents were high-level administrators in the institution and therefore familiar with the goals and mission of the institutions. It was therefore considered to be an easy question to answer.

The methodology used was a survey questionnaire. It was sent to all Portuguese public higher education institutions addressed to the rectors of universities and to the presidents of polytechnic institutions. Our expectation was that the rectors and presidents would ask a senior member of their staff to respond to the questionnaire. Prior to general dissemination, the questionnaire was validated with a pre-test directed to a selected group of seven HEIs. The questionnaire was applied using an online platform and sent by email during April and May 2018. A follow-up email was sent two weeks later.

The questionnaire consisted of both open and closed questions. The majority of questions were closed and structured into 4 main topics – the characterization of the institution, the strategic priorities, the implementation and monitoring of strategic management and the assessment of the

strategic management process. The open-ended question permitted the top management to comment and expand on the topics. The data collected was organized using Microsoft Office Excel 2016 spreadsheet, and then statistically analyzed using SPSS, version 25.0 for Windows. The correlation coefficient used was Spearman's Rank Order correlation (ρ) that measures the relationship between ranked variables (Figure 1).

Sixteen from a total of 28 Portuguese Public HEIs answered the questionnaire – 56.3% were polytechnic institutions, 37.5% universities and 6.2% comprised both subsystems. Our sample revealed a regular regional distribution. In terms of size, 56.3% of HEIs are small (less than 5,000 students), 37.5% are medium-sized (between 5000 and 20000 students) and 6.2% are large institutions (over 20,000 students). In the majority of HEIs international students represented between 10 and 20% of the total number of students. The own revenue in the majority of HEIs (56.3%) represents from 21% to 35% of the total budget. The general characteristics of our sample correspond to the universe of Portuguese higher education institutions, which allowed us to conclude that the sample provides a reasonably good representation of the universe of public HEIs in Portugal.

4. Results and discussion

The analysis that follows identifies the different strategic priorities of higher education institutions in Portugal and seeks to offer an explanation for their comparative importance. The strategic priorities are then weighed and contextualized within the framework model of four scenarios, as defined by Lancrin. The four scenarios permit positioning the different priorities by type of university options. Lastly, a discussion of the monitoring process and its relevance is presented. Throughout this section, similarities and differences between universities and polytechnics are reported.

Figure 2 present the strategic priorities of HEIs in Portugal identified as low, average and high priority. In general, most priorities are identified as high. Intriguingly, two items standout with low priority – recognition in the international rankings and professionalization of non-academic staff. However, upon closer reflection, it is possible to say that HEIs have little control over these two priorities. Public higher education institutions have been constrained by decreasing government budgets and employment freeze. The attribution of low priority to these items reflects the low priority attributed to investments in the future. In effect, it means that management is unable to invest in key sectors that can bring change with regard to international rankings and promoting the professionalization of non-academic staff. While some HEIs have more resources and more flexibility than others to negotiate with the ministry, the majority of HEIs recognize that they have little capacity to induce change with regard to these two strategic priorities.

Figure 3 presents only the 'high' strategic priorities of Portuguese higher education institutions. These answers represent only those that responded that these priorities were high or essential. The two top priorities are internationalization (88%) and quality assurance (81%). Internationalization has become a top priority for HEIs worldwide (Teichler 2004; Kehm and Teichler 2007). Internationalization has become 'embedded in institutional mission statements, policies and strategies as well as

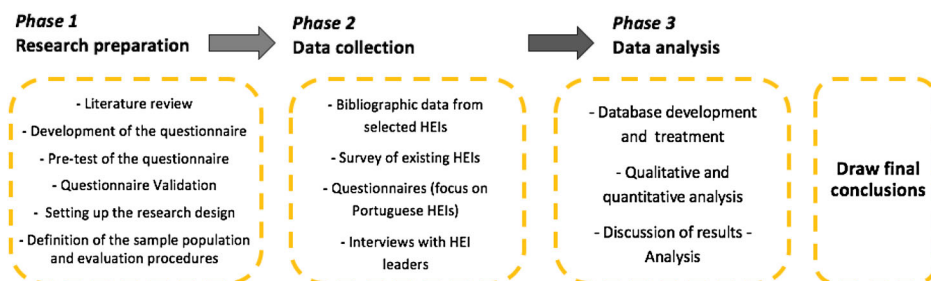


Figure 1. Methodological approach used in the research.

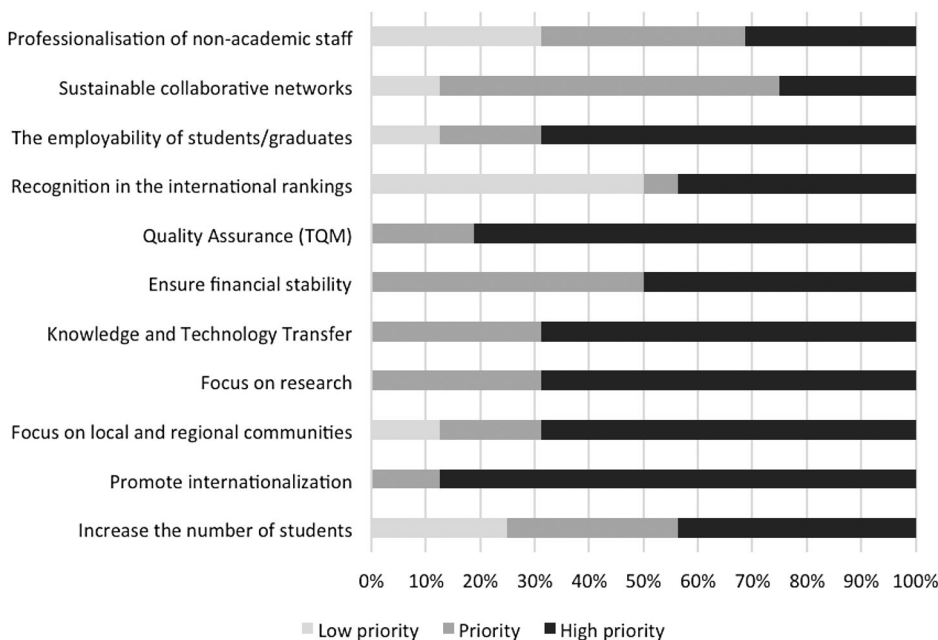


Figure 2. Strategic priorities in Portuguese higher education institutions.

national policy frameworks’ (Knight 2011). In short, it has become a catchphrase easily interpreted in many ways. It can be associated with the capacity to attract international students or foreign faculty, but it can also mean participation in international institutional agreements. Internationalization can also refer to the capacity of the faculty to engage with international partners in joint research programs and projects and to publish in international journals. The broad and general use of internationalization contributes to its top strategic priority status.

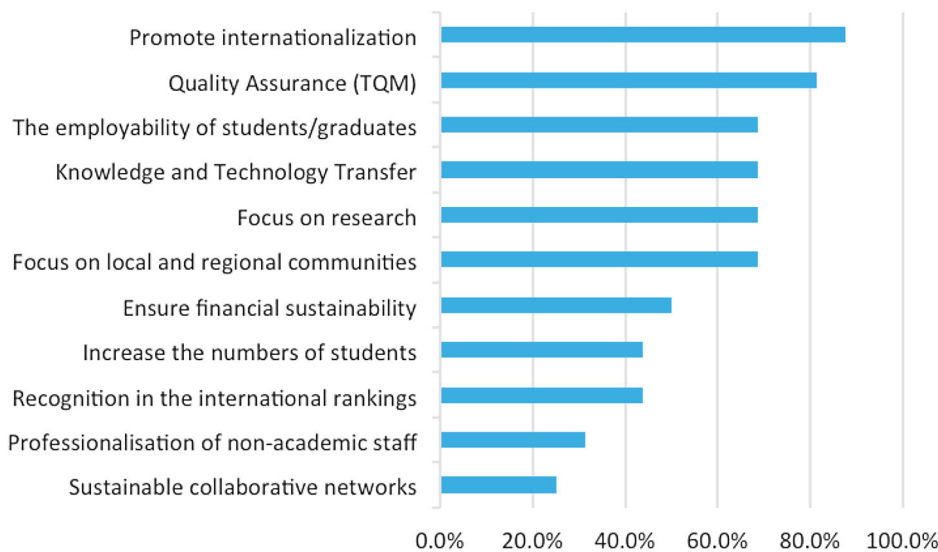


Figure 3. The ‘high’ strategic priorities of Portuguese higher education institutions.

Quality Assurance (TQM) is the second top priority with 81% of responses. Quality is a multidimensional concept, a key factor necessary for institutional survival and success (Ardi, Hidayatno, and Zagloel 2012). And yet, a comprehensive agreement on the meaning of quality remains elusive (Ryan 2015). Quality definitions and measures can vary and various stakeholders are involved. Institutions are being challenged to find new ways of self-improvement while ensuring the participation and the morale of those involved. Internal quality assurance measures in higher education institutions are seen as a cultural phenomenon as well as an added level of bureaucracy (Cardoso et al. 2019). Higher education institutions must ensure a quality framework for education and learning as well as for research and knowledge production. Higher education institutions have been implementing internal quality assurance practices as well as participating in European and international evaluation processes and arrangements. Overall, the importance of quality and the means to ensure quality in higher education has soared. Given the increased importance attributed to quality and quality assurance it is not surprising that quality assurance should be identified as a top priority in our sample.

Four other priorities are highly perceived. These are the employability of students/graduates, knowledge and technology transfer, research activities and links to local and regional communities. The priority 'employability of students' reveals the importance attributed to ensuring that students are able to find a job upon graduation. In our opinion, this priority is the result of the economic and financial crisis (2008–2012) that had major negative repercussions on youth unemployment. During the peak of the crisis youth unemployment reached very high levels and many young professionals emigrated. At the same time the number of admissions into higher education decreased. The ministry began to demand higher education institutions to follow their student body and requested data on success rates, dropout rates and employment after graduation. Most higher education institutions now collect data tracking students after graduation. The media has also regularly reported on how HEIs perform on this indicator and list the most successful courses and institutions on student employability. Inevitably HEIs have begun to pay close attention to student employability and to ensure that students acquire necessary skills to succeed in the labor market. The success of student employability has become a 'core' value in many higher education institutions.

Research is a core mission of all universities and an unquestionable priority. Research is increasingly becoming a requirement in polytechnics as well. This is evident in regulations, forms of evaluation and recent funding opportunities that aim to stimulate research in polytechnic institutes. Consequently, research is an unquestionable priority in both universities and, increasingly so, in polytechnic institutes. There are numerous means of monitoring and assessing the output of research activities and higher education institutions are ranked and compared largely based on their research accomplishments (Nobel prize winner, publications in top journals, research funding, etc.).

Knowledge and technology transfer is aligned with the 'third mission' of higher education institutions. Third mission activities contribute towards the valorization of knowledge production in universities and with increasing interaction and engagement with society. Higher education institutions are required to interact with numerous social and economic partners. Academics and managers generally recognize these activities as important for the valorization of higher education institutions.

Most polytechnic institutes and universities are closely linked to local and regional communities. This is part of their third mission of providing services to the community, of linking with different local partners, especially companies in research initiatives. Such links have been shown to play a direct and indirect role as leverage for economic and social development (Pinheiro, Young, and Sima 2018). A recent study on the socioeconomic impact of Portuguese polytechnics on regions shows the weight of direct economic impact to vary between 27 and 171 million euros, between 5% and 11% of the average GDP and to be responsible for more than 12% of employment of the active population in municipalities (Alves et al. 2015). Higher education links to local and regional communities are widely expected to contribute to regional externalities and therefore highly valued.

Another important strategic priority is the capacity to ensure financial stability of the higher education institutions. The recent financial crisis led to government budget cuts for higher education and

increase pressure for HEIs to seek alternative sources of funding. The context of dealing with financial constraints has become more and more structural thereby justifying why HEIs identify financial stability as one of the main strategic priorities.

Lastly, there is a group of four strategic priorities with lesser recognition of importance by HEIs. The priority to increase the number of students (44%) can be better understood in the context of a rigid *numerus clausus* system where the government sets total student admissions. Even if institutions have more leeway at the masters and doctoral levels, the number of new admissions is controlled nationally by the ministry of higher education. International rankings are identified by forty four percent (43.8%) of our sample as a priority. Management priorities need to consider realistic priorities within realistic timeframes.

Ensuring the professionalization of non-academic staff (32%) is also not seen as a high strategic priority. This may reflect Portugal's recent economic and financial crisis that led to brutal tax raises, cuts in salary, hiring and promotion freezes, lay-offs and the dramatic increase in temporary employment.

Only 25% of the respondents defined sustainable collaborative networks as a priority. This may be an indication that sustaining collaborative networks are of more concern to faculty and researchers than to academic administrators and managers. It may also indicate that sustaining collaborative networks has not become a high priority due to difficulties in measuring both sustainability and collaborative networks. Collaborative networks are necessary to ensure top and high priorities, for without the collaborative networks it is difficult to ensure technology transfers, to establish local and regional linkages and to achieve quality.

A deeper analysis enables us to associate the four scenarios proposed by Lancrin with the strategic priorities identified in our survey. The first scenario of Open Networking envisaged an open and collaborative environment with numerous collaborations at the international level. Priorities such as internationalization and sustaining collaborative networks fit this model. The second scenario Serving Local Communities purports to contribute towards the social and economic needs of local and regional communities. Priorities such as knowledge transfers, focus of local and regional communities and ensuring the employability of students clearly fall within this remit. The third scenario of New Public Responsibility concerns managerial and financial tools of accountability. The priorities identified with this scenario reflect both top and low priorities. Lastly, the fourth scenario of Higher Education Incorporated, reports to the core provisions of higher education, namely, research and teaching. Priorities such as the focus on research and attracting more students are within this scope. The international rankings are one tool that measures an institutions' capability with regard to research and teaching.

The strategic priorities are spread throughout the different higher education models with low priority (+), priority (++) and high priority (+++), as presented in Table 1. The priorities in these multi-dimensional models reveal the complexity of higher education institutions and the emphasis on different priorities. According to the strategic priorities arranged in the model, Portuguese higher education institutions seem to find greater identity with the priorities and values of New Public Responsibility. This is not to say that other priorities are not equally important but they seem to be of lesser priority than those attributed to Scenario 3. It should be mentioned, that the system is dynamic and priorities change over time. Nevertheless, the priorities seem to reflect that

Table 1. Assessment of strategic priorities by management using the scenario model.

Scenario 1 – Open Networking 'Promote internationalization' +++ 'Sustainable collaborative networks' ++	Scenario 2 – Serving Local Communities 'Focus on local and regional communities' ++ 'knowledge & Technology Transfer' ++ 'The employability of students/graduates' ++
Scenario 3 – New Public Responsibility 'Quality assurance' +++ 'Ensure financial stability' ++ 'Professionalization of non-academic staff' +	Scenario 4 – Higher Education Incorporated 'Focus on research' ++ 'Increase the number of students' + 'International rankings' +

environmental factors such as policy decisions and budgetary constraints explain the predominance of certain priorities over others.

Strategic management also involves follow-up and monitoring processes. The majority (81.3%) of Portuguese HEIs utilize a follow-up model to monitor the results of management. The majority of HEIs (75%) use either Quality Management Systems (QMS) or Balanced Scorecard (BSC) to monitor results. Furthermore, 60% also state that they develop their IT platforms. Most systems are managed by the rectors' office or by a specific office designed to carry out that mission. Only 31% utilize a continuous monitoring system. Overall, monitoring is an essential task that provides strategic information about the processes, procedures and implementation practices of the institution. Internal processes of monitoring can contribute towards the improvement of the institutions' self-awareness and reflection as well as serve to monitor formal and informal processes (Cardoso et al. 2019). The importance of monitoring indicates the recognition of the follow-up process of change and implementation.

The level of lack of satisfaction with the monitoring system is part of a process to identify needed improvements, becoming clear that change is anticipated. In general, the information obtained from the strategic monitoring is regularly disseminated to all internal and external stakeholders, at least by 85% of the institutions. The open-ended questions provided some insights into the relevance of monitoring. Our respondents refer to the importance of monitoring to:

- provide and ensure commitment of the top management and the entire staff to the mission and institutional policy;
- sustain a vision of the institution;
- ensure transparency and communication;
- provide measurable indicators.

On the other hand, those less satisfied with the monitoring process stress that change should be implemented with a view to:

- broaden participation in strategic management, including external stakeholders
- simplify procedures and establish a schedule to follow corrective procedures and actions
- integrate management information systems and increase communication platforms
- improve leadership
- reduce the number of goals and objectives; simplify and clarify indicators
- promote internationalization, networking and benchmarks

Our respondents generally state that they are satisfied (74%) with this process. However, a sizeable minority (26%) admits they are not satisfied with the model of monitoring strategic management. This may be the result of the overall process of monitoring or partial explanations such as the tools and corrective procedures necessary to ensure the follow-up process.

We also sought to examine possible differences in the strategic management of the binary system of higher education. The binary system composed of universities and polytechnic institutes has characterized the Portuguese system of higher education since the 1970s. Our concern was to examine if differences in strategic management can be identified with universities and/or polytechnics.

The collected data indicates a strong correlation (0.734) between the strategic priorities associated with serving local communities and typology, in which polytechnic institutes. This correlation is evident in the strategic priority of knowledge and technology transfer, followed by the priority of increasing the employability of students. In this regard, as presented in Table 1, Scenario 2 is therefore more closely associated with polytechnic institutes, than with universities. This is most likely related to polytechnic institutions as more regionally and locally based and with closer ties to the community. With a confidence level of 95%, there is a moderate correlation (0.526) between the strategic priority of the employability of students/graduates and the typology of the HEIs. Also in this case, Polytechnics are more likely to identify 'employability of students/graduates' as a priority.

We also found a correlation between smaller institutions (size) and priorities such as quality assurance, sustainable collaborative networks and professionalization of non-academic staff. With a confidence interval of 95%, there is a moderate correlation (-0.548) between strategic priority of Quality Assurance (TQM) and the dimension of the HEIs. The same applies to the priority 'Sustainable collaborative networks' and 'Professionalization of non-academic staff.'

5. Conclusion

Ever since Robert Birnbaum published the seminal work *Management Fads in Higher Education: Where They Come From, What they do, Why They Fail*, academics have been trying to reconcile management tools based on a business model to academic institutions of higher education. The main paradox resides in ensuring that a business model is compatible with institutions that function on the basis of collegiality and defend values of open science. Lancrin's scenarios provide a perspective for the analysis of higher education mission and options that stress continuums and complementarities. Strategic priorities in such a model are not incompatible opposing options but rather options that are conditioned by policy regulations, environmental conditions and specific institutional missions. Strategic priorities are not the result of inevitable management logics. Mainly it is important to avoid a 'one size fits all' model, accepting and integrating cultural distinctions in a context-specific environment with numerous regulatory pressures and demands. Our study highlights the role of diversification in strategic planning. Objectives and priorities differ.

Our results show that managers in higher education institutions tend to identify with a limited number of strategic priorities. It is only through a deeper scrutiny of the variance in levels of priority (low, average, high) and contextualizing these differences in the four models of higher education that it is possible to identify current management tendencies in Portuguese higher education. High priorities with strategic recognition are found in only two scenarios – Open Networking and New Public Responsibility – two models that express somewhat opposing tendencies in higher education. Priorities deemed to be of medium or average importance extend throughout all four models. It is scenario 2 – Serving Local Communities – that reflects a balanced level of equal priorities. The 'third mission' of universities and polytechnic institutes has taken hold with reputable concerns about local and regional communities, knowledge transfers and employability. Lower priorities, with the exception of the focus on research, can be found in scenario 4 – Higher Education Incorporated – that in the Portuguese context seem to escape the scope of higher education administrators.

It is important to recall that the survey was sent to managers of higher education institutions and that the answers reflect their hierarchical position in the system. It is therefore not surprising that the answers indicate a generally positive approach to steering and monitoring, as well as relative satisfaction with the process.

In sum, strategic management plays a critical role in the governance of higher education institutions but also in ensuring accountability and transparency. Strategic management can be more or less participatory, transparent, and accountable. But overall, strategic management processes may overcome institutional inertia and to help make difficult decisions. Strategic management issues are more and more timely and relevant not only for those responsible for the management of HEIs, but also to academics, researchers, professional staff, students, as well as to accreditation agencies, government offices and ministries, and other concerned stakeholders.

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