

Adapting the Balanced Scorecard to Public Universities: A Conceptual Framework for University Performance Management

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Disclosure Statement:	The authors declare that they have not received any financial support that could have influenced the objectivity of this study. They take full responsibility for any potential plagiarism, the use of artificial intelligence in the writing process, as well as for the results presented in this article.
Conflict of Interest:	The authors report no conflicts of interest.
Cite this article:	HIDDIOUI, N., & CHEKELKBIRE, M. (2026). Adapting the Balanced Scorecard to Public Universities: A Conceptual Framework for University Performance Management. <i>International Journal of Accounting, Finance, Auditing, Management and Economics</i> , 7(13), 587–611. https://doi.org/10.5281/zenodo.23549032
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International Journal of Accounting, Finance, Auditing, Management and Economics - IJAFAME

ISSN: 2658-8455

Volume 7, Issue 13 (2026)

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Abstract:

Adapting the Balanced Scorecard (BSC) to public universities remains challenging due to their diverse missions, multiple stakeholders, and specific governance requirements. Although the literature on the BSC in higher education is substantial, an integrated conceptual understanding of how university missions can structure its four perspectives and how relationships between them vary across institutional settings remains underdeveloped. This article addresses this gap by developing a conceptual framework for university performance management. It draws on a critical and conceptual review of literature identified through Scopus, Web of Science, and HAL, focusing on the BSC, public-sector performance management, and higher education. The review critically examines theoretical contributions and previous applications to reconsider the content and relationships of the four BSC perspectives. The proposed framework places teaching, research, innovation, and contribution to society at the center of strategic reflection and articulates four complementary perspectives: students and stakeholders; financial resources and efficiency; internal processes and governance; and learning and growth, including research and innovation. Its main contribution lies in aligning these perspectives with university missions and conceptualizing their relationships as context-dependent interdependencies rather than a universal causal sequence. The framework provides a theoretical basis for understanding performance management in public universities, while further empirical research is needed to assess its applicability and implementation conditions.

Keywords: Balanced Scorecard, public universities, university performance, public governance, conceptual framework

Classification JEL: H76, H83, I23

Paper type: Theoretical research

Résumé

L'adaptation du Tableau de Bord Prospectif (TBP) aux universités publiques demeure complexe en raison de la diversité de leurs missions, de la pluralité de leurs parties prenantes et des exigences spécifiques de la gouvernance publique. Bien que la littérature sur le TBP dans l'enseignement supérieur soit abondante, une compréhension conceptuelle intégrée de la manière dont les missions universitaires peuvent structurer ses quatre axes et de la façon dont leurs relations varient selon les contextes institutionnels reste à approfondir. Cet article répond à cette lacune en proposant un cadre conceptuel de pilotage de la performance universitaire. Il s'appuie sur une revue critique et conceptuelle de la littérature, à partir de travaux identifiés dans Scopus, Web of Science et HAL, portant sur le TBP, le pilotage de la performance dans le secteur public et l'enseignement supérieur. Le cadre proposé place la formation, la recherche, l'innovation et la contribution à la société au cœur de la réflexion stratégique. Il articule quatre axes complémentaires : étudiants et parties prenantes ; ressources financières et efficacité ; processus internes et gouvernance ; apprentissage et développement, incluant la recherche et l'innovation. Sa contribution réside dans l'articulation de ces axes autour des missions universitaires et dans la conception de leurs relations comme des interdépendances contextuelles, plutôt que comme une séquence causale universelle. Des recherches empiriques restent nécessaires pour évaluer sa pertinence et ses conditions de mise en œuvre.

Mots-clés : Tableau de Bord Prospectif, universités publiques, performance universitaire, gouvernance publique, cadre conceptuel.

Classification JEL : H76, H83, I23.

Type d'article : Recherche théorique.

1. Introduction

Public universities play a vital role in economic, social, and scientific development through their core missions of teaching, research, innovation, and service to society. In a context of public management reforms and increasing demands for transparency, accountability, and quality assurance, they are expected to demonstrate the achievement of their objectives and the responsible use of public resources. In Morocco, this context is shaped by the legal framework governing higher education, notably Law No. 01-00 and Framework Law No. 51-17. These developments reinforce the need for performance management systems that align institutional strategies, resources, and activities with universities' diverse missions.

In this article, *public universities* refer to publicly established higher education institutions operating within a framework of public governance and accountability. *University missions* encompass teaching, research, innovation, and contribution to society. *University performance* is understood as the multidimensional achievement of educational, scientific, organizational, and societal objectives, considering both the effective use of public resources and the quality of institutional outcomes.

The Balanced Scorecard (BSC), introduced by Kaplan and Norton (1992), provides a framework for translating strategy into a set of interrelated performance perspectives. Its four original perspectives financial, customer, internal business processes, and learning and growth have encouraged applications in public organizations and higher education institutions, where performance extends beyond financial outcomes.

Existing studies have examined the adaptation of the BSC to higher education, proposing modifications to its perspectives, indicators, and stakeholder dimensions (Al-Hosaini & Sofian, 2015). These contributions demonstrate the relevance of the framework while revealing the diversity of approaches adopted. A remaining conceptual challenge concerns how university missions can be represented across the four perspectives while preserving their distinct functions and the strategic coherence of the overall framework. Modifying indicators or introducing separate perspectives for individual missions does not necessarily clarify how institutional objectives, resources, processes, and expected outcomes should be connected within a coherent performance management system.

This article addresses this issue by examining BSC adaptation as a question of conceptual architecture rather than simply modifying perspective labels. It proposes that university missions should form the strategic core of the framework and be reflected across its four perspectives, rather than being treated as a fifth perspective. This approach aims to clarify the relationship between institutional missions and the dimensions through which university performance can be assessed.

The central research question is therefore: *How can the Balanced Scorecard be adapted to the specific characteristics of public management and the diversity of university missions while preserving its strategic coherence and usefulness for performance management?* To address this question, the article examines three related sub-questions: (1) Which aspects of the original BSC perspectives are insufficiently suited to public universities, and why? (2) How can the four perspectives be reconfigured to reflect the diversity of university missions while maintaining strategic coherence? (3) What design principles can support the alignment of university missions, resources, internal processes, and performance objectives?

Accordingly, this article aims to critically examine the suitability of the original BSC perspectives for public universities and to propose an integrated conceptual framework comprising four adapted perspectives: students and stakeholders; financial resources and efficiency; internal processes and governance; and learning and growth. Within this framework, teaching, research, innovation, and contribution to society remain central institutional missions that can be considered across all four perspectives.

The article offers two intended contributions. Theoretically, it proposes a mission-oriented approach to BSC adaptation that distinguishes institutional missions from the perspectives used to assess performance. Managerially, it outlines design principles for aligning university missions with resource allocation, governance processes, organizational capabilities, and expected outcomes. As the proposed framework remains conceptual, its applicability and potential contribution to university performance management require further empirical examination.

The article is structured as follows. Section 2 reviews the literature on the BSC, its application in public universities, and international experiences, highlighting the limits of transferring existing models across different institutional contexts. Section 3 presents the methodological approach adopted for the literature review and explains the development of the proposed conceptual framework. Section 4 examines the principles underlying the adaptation of the BSC to university missions, focusing on the configuration of the four perspectives and the relationships between them. Finally, Section 5 discusses the framework's theoretical contributions, managerial and policy implications, implementation conditions, limitations, and directions for future research.

2. Literature Review and Theoretical Framework

2.1. Public Management Requirements for Performance Management

Developments in public management have progressively strengthened the emphasis on results, managerial accountability, and performance evaluation. Commonly associated with New Public Management (NPM), this shift reflects an effort to move beyond management approaches primarily focused on resource allocation and compliance with administrative procedures (Hood, 1991). However, it does not imply that private-sector management principles can be transferred directly to public organizations. As Bouckaert and Halligan (2008) emphasize, public performance management operates within complex institutional environments in which objectives, control mechanisms, and evaluation criteria are shaped by the collective missions of public organizations. Performance cannot therefore be assessed solely in terms of profitability or cost containment; it must also account for the effectiveness of public action, service quality, equity, and the capacity to respond to diverse, and sometimes competing, expectations. This broader understanding of performance also requires considering the public value generated by organizational activities rather than focusing exclusively on measurable outputs.

A first challenge lies in reconciling managerial autonomy with institutional oversight. Effective management requires sufficient decision-making discretion to adapt actions to operational needs. Such autonomy, however, remains constrained by administrative regulations, budgetary procedures, and accountability requirements. Management control must consequently extend beyond verifying compliance to include the interpretation of performance variances, the identification of their underlying causes, and the adjustment of managerial decisions. In Morocco, Organic Law No. 130-13 on the Finance Act illustrates the institutionalization of a management approach structured around programs and performance objectives. Nevertheless, the formal establishment of such a framework does not, in itself, ensure that the information generated is effectively used in decision-making. The central challenge is to establish a meaningful connection between institutional oversight and the operational use of management information.

A second challenge arises from the multidimensional nature of public performance. Efficiency, effectiveness, service quality, equity, and user satisfaction represent complementary objectives that may nevertheless conflict in practice (Hood, 1991; Bouckaert & Halligan, 2008). Reducing expenditure does not necessarily improve performance if it compromises service quality or

accessibility. Similarly, an increase in activity levels does not automatically indicate that intended objectives have been achieved. Efficiency concerns the relationship between resources used and outcomes produced, whereas effectiveness refers to the extent to which intended objectives are achieved. The longer-term effects of public action concern the changes to which public interventions contribute, although establishing attribution may be difficult. These dimensions differ in their time horizons and in the difficulty of measuring results and establishing causal relationships. Consequently, performance management systems that rely primarily on readily available data risk privileging what is easily measurable over what is substantively important.

In this context, management control tools play a key role in translating strategic objectives into measurable targets, organizing information flows, and monitoring results. Their usefulness, however, depends less on their technical sophistication than on their capacity to inform managerial decisions. Cavalluzzo and Ittner (2004) highlight the influence of organizational and technical factors, on the implementation and use of performance measurement systems in public organizations. Behn (2003) further emphasizes that performance measurement can serve different managerial purposes, while Moynihan (2008) examines how performance information can be used within organizational processes of learning and management. Taken together, these contributions suggest that the formal adoption of a management tool therefore does not guarantee its integration into everyday management practices. When indicators serve primarily to satisfy reporting requirements, their contribution to organizational learning and strategic adjustment may remain limited. By contrast, when performance information is incorporated into managerial discussions, it can support the interpretation of results, the identification of corrective actions, and the revision of priorities. This distinction highlights the importance of examining not only the adoption of performance measurement tools but also their appropriation and effective use within organizational practices.

Against this background, the Balanced Scorecard (BSC), introduced by Kaplan and Norton (1992), offers a relevant framework for linking strategic objectives to multidimensional performance measurement. By combining the financial, customer, internal business processes, and learning and growth perspectives, it seeks to move beyond an exclusively financial assessment and establish connections between strategic priorities and performance indicators. Its application to public and nonprofit organizations nevertheless requires a reconsideration of the relationship between financial performance and mission accomplishment (Kaplan, 2001). However, the inclusion of multiple perspectives does not automatically ensure an adequate representation of public-sector performance. When their content fails to reflect organizational missions, stakeholder expectations, and institutional constraints, the BSC may reproduce a partial understanding of performance within a more structured measurement system. Its adaptation must therefore address not only the selection of indicators but also the meaning assigned to each perspective, the objectives it encompasses, and the relationships established among the perspectives.

These challenges are particularly significant in public universities, whose missions of teaching, research, innovation, and service to society involve different activities, stakeholders, and time horizons. University performance encompasses educational quality, student outcomes, research production, the efficient use of resources, the effectiveness of academic and administrative processes, and the development of organizational capabilities. It must also account for the diverse expectations of students, academic and administrative staff, public authorities, employers, and society. These stakeholders do not necessarily share identical priorities, and their expectations may sometimes conflict. Under these conditions, neither budgetary control nor immediate user satisfaction provides a sufficient basis for evaluating institutional performance. Adapting the BSC to public universities therefore requires an integrated approach

capable of reflecting the diversity of their missions without reducing them to a disconnected set of indicators.

Overall, public management faces a dual requirement: to strengthen the transparency and accountability of performance while preserving the diversity of objectives that management systems must represent. The BSC can contribute to addressing this challenge, provided that it is treated as a framework requiring contextual adaptation rather than as a universal model that can be transferred unchanged across organizational settings. This perspective provides the basis for examining how its four perspectives can be reconfigured to reflect the specific characteristics of public universities and to establish more coherent relationships between institutional missions, resources, processes, and expected outcomes.

2.2. The Theoretical Foundations of the Balanced Scorecard and the Challenges of Adapting It to the Public Sector

2.2.1. The Theoretical Foundations of the Balanced Scorecard

Developed by Kaplan and Norton (1992, 1996), the Balanced Scorecard (BSC) is grounded in a multidimensional approach to strategic management that seeks to overcome the limitations of an exclusively financial assessment. It integrates four perspectives financial, customer, internal business processes, and learning and growth to connect strategic objectives with operational activities and expected results. Its contribution lies in combining performance indicators with the strategic drivers that may influence their achievement, thereby supporting both performance measurement and strategy implementation. The BSC is therefore not simply a collection of indicators, but a management framework intended to align performance measures with organizational objectives and establish meaningful relationships between them (Kaplan & Norton, 1996).

Nevertheless, the assumptions underlying the original model require critical examination when it is applied to public organizations. The emphasis on financial performance and the use of the customer perspective reflect a framework initially developed for private-sector companies. In public organizations, financial resources primarily serve as means of fulfilling collective missions, while beneficiaries may simultaneously be service users, rights holders, and stakeholders in the pursuit of the public interest. Performance cannot therefore be assessed solely against a dominant financial objective or through individual satisfaction. Kaplan (2001) emphasizes the need to align performance measurement with mission accomplishment in nonprofit organizations. Rather than rejecting the BSC, the challenge is to reconsider the purpose and content of its perspectives in light of public-sector objectives, institutional responsibilities, and the diversity of stakeholders.

Research on the application of the BSC in public organizations further highlights the importance of adapting the framework to the institutional contexts in which it is implemented. More broadly, the literature on public and nonprofit organizations suggests that the relevance of the BSC depends on the relationship between its design, organizational missions, and governance requirements. This issue is particularly important in public universities, where performance encompasses educational quality, research output, administrative efficiency, resource utilization, and contributions to society. Adapting the BSC therefore requires more than modifying the terminology of its four perspectives, it involves reconsidering their content, the objectives they encompass, and the relationships established between them.

2.2.2. The Challenges of Adapting the TBP to the Public Sector

One challenge concerns the tensions that may arise between public missions, available resources, and expected outcomes. Public organizations must reconcile resource efficiency, service quality, operational effectiveness, and accountability requirements, although these objectives do not always converge. Expenditure reductions may improve certain financial

indicators while weakening operational capacity, whereas investments in staff competencies or innovation may produce benefits only over the longer term. The BSC can help make these trade-offs more explicit, provided that performance indicators are interpreted in relation to one another and that financial considerations remain connected to the broader objectives of public action. The issue is therefore not simply to measure resource use, but to assess it in relation to institutional objectives and the conditions under which results are achieved.

A further limitation concerns the causal relationships underlying the original model. Kaplan and Norton (1996) propose a strategic logic in which investments in learning and growth can strengthen internal processes, which may subsequently improve customer-related outcomes and contribute to financial performance. However, Nørreklit (2000) critically examines the assumptions of cause-and-effect relationships between the BSC perspectives and questions whether these relationships can be established as straightforward causal mechanisms. This critique is particularly relevant to public organizations, where performance outcomes are shaped by multiple institutional, social, and organizational factors. Effects may be indirect, delayed, or difficult to attribute to a particular intervention. Accordingly, the relationships between the BSC perspectives should be treated as strategic hypotheses requiring contextual justification and empirical examination rather than as universally valid causal mechanisms.

Furthermore, the relevance of the BSC depends not only on its formal design but also on how it is implemented and used within organizations. Cavalluzzo and Ittner (2004) identify organizational and technical factors that influence the implementation and use of performance measurement systems in public-sector settings, including management commitment, decision-making authority, training, and difficulties relating to data availability and measurement.

Behn (2003) emphasizes that performance measurement can serve different managerial purposes, while Moynihan (2008) examines the organizational processes through which performance information can support management and learning. These contributions suggest that the formal adoption of a management tool does not necessarily ensure its integration into everyday managerial practices. When performance indicators are used primarily to satisfy reporting requirements, their contribution to strategic management and organizational learning may remain limited. By contrast, when performance information informs managerial discussions, supports the interpretation of results, and guides corrective action, it can contribute to organizational learning and strategic adjustment. This distinction underscores the need to differentiate the formal design of a performance measurement system from its effective appropriation by organizational actors.

These issues are particularly significant in public universities, whose missions of teaching, research, innovation, and service to society involve diverse resources, multiple stakeholders, and outcomes that emerge over different time horizons. University performance cannot be adequately assessed through indicators such as graduation rates, publication counts, or budget execution alone. These measures must be interpreted in relation to the quality of academic activities, the resources mobilized, the institutional context, and the objectives pursued. Beard (2009), in examining the application of the BSC in higher education, discusses its potential as a performance management framework while highlighting the importance of aligning its implementation with the specific characteristics and objectives of academic institutions. Studies such as Karathanos and Karathanos (2005) and Umashankar and Dutta (2007) also provide relevant foundations for examining the application of the BSC to educational and higher education settings. Collectively, this literature supports the need to adapt the framework to the distinctive missions and organizational requirements of public universities rather than assuming that its original configuration is universally appropriate.

From this standpoint, the four traditional perspectives provide a useful starting point, but they should not be reproduced without contextual adjustment. Their reconfiguration must reflect the university's missions, the diversity of its stakeholders, the role of public resources, the

importance of academic and administrative processes, and the capabilities required for long-term development. The precise implications for each perspective are examined in the following section, which considers how the BSC can be adapted to the specific characteristics of public universities.

Ultimately, the central question is not whether the BSC can be applied to the public sector, but under what conditions its underlying framework can be adapted to organizational missions and performance criteria that differ from those of private-sector companies. Three requirements emerge from this discussion: reinterpreting the four perspectives in light of public objectives, critically examining the relationships between the different dimensions of performance, and accounting for the ways in which the framework is actually used in managerial practices. For public universities, these requirements call for an adaptation that preserves the strategic coherence of the BSC while reflecting the diversity of university missions and the specific demands of public governance.

2.3. The Unique Characteristics of Public Universities and the Reconfiguration of the Balanced Scorecard's Perspectives

Adapting the Balanced Scorecard (BSC) to public universities requires careful consideration of the specific nature of their activities and the institutional conditions that shape their performance. Unlike private-sector organizations primarily oriented towards market objectives, universities pursue several interrelated missions, including teaching, scientific research, innovation, knowledge dissemination, and contributions to economic, social, and cultural development. These missions involve different objectives, time horizons, and expected outcomes, making their assessment through standardized indicators particularly challenging. Research on the application of the BSC to educational and higher education institutions highlights the importance of aligning performance measures with institutional objectives and the specific characteristics of academic organizations (Karathanos & Karathanos, 2005; Umashankar & Dutta, 2007). From a stakeholder perspective, university performance must also account for the interests of students, academic and administrative staff, public authorities, employers, and society (Freeman, 1984). Accordingly, educational quality cannot be assessed solely through enrolment figures or graduation rates, it also requires consideration of learning outcomes, acquired competencies, and graduates' prospects in the labour market. This multidimensional understanding reflects the public value that universities are expected to generate through their educational, scientific, and societal missions (Moore, 1995).

Research performance likewise cannot be assessed exclusively through publication counts. It also encompasses scientific quality, the relevance of research questions, knowledge development, and the contribution of research to societal needs. Although quantitative indicators can facilitate monitoring and comparison, relying excessively on readily measurable outputs may overlook differences in disciplinary practices, research time horizons, and the wider contributions of academic work. The central challenge is therefore not simply to increase the number of indicators, but to develop a coherent performance management framework that reflects the diversity of university missions while maintaining strategic alignment. From a contingency perspective, the relevance of particular measures depends on institutional priorities and operating conditions rather than on the universal applicability of a standardized model (Donaldson, 2001). The BSC consequently needs to be interpreted in relation to the missions and strategic priorities of public universities, rather than transferred mechanically from the private sector.

This complexity is reinforced by the diversity of stakeholders involved in university governance. Students, academic staff, administrative personnel, university leaders, public authorities, employers, research partners, and local communities may have different, and sometimes competing, expectations regarding institutional performance. Stakeholder theory

provides a basis for recognizing these multiple interests, while stakeholder salience draws attention to differences in stakeholders' power, legitimacy, and urgency (Freeman, 1984; Mitchell et al., 1997). In the university context, these differences mean that no single stakeholder group can automatically be treated as the sole reference point for performance assessment. A framework designed for public universities must therefore consider not only whether institutional objectives are achieved, but also whose expectations are taken into account, how priorities are established, and how potential conflicts between missions are managed.

These competing expectations can generate strategic trade-offs. For example, expanding access to higher education may increase pressure on financial, human, and infrastructural resources, while investment in research capacity may require a longer time horizon before results become visible. Similarly, indicators emphasizing immediate outputs may not adequately reflect the longer-term value of teaching, research, or engagement with society. Such tensions should not be understood as inevitable consequences of performance measurement, but as risks that arise when indicators are selected without sufficient consideration of institutional missions and strategic priorities. The BSC can provide a structure for making these tensions more explicit by connecting objectives and measures across its perspectives. However, its effectiveness depends on how these perspectives are configured and used within the university's governance and decision-making processes.

2.3.1. From the Customer Perspective to the Student and Stakeholder Perspective

In the original Balanced Scorecard (BSC), the customer perspective focuses on customer satisfaction and the value delivered by the organization (Kaplan & Norton, 1992, 1996). However, its application to public universities requires a broader interpretation of the relationship between the institution and its beneficiaries. Unlike conventional customers, students are not merely consumers of an educational service, they are active participants in the learning process. Furthermore, universities fulfil public missions that extend beyond student satisfaction and employability, including the production and dissemination of knowledge and contributions to social and economic development. Consequently, a direct transfer of the customer perspective to higher education may overlook the diversity of university objectives and stakeholders. As discussed by Svensson and Wood (2007), the customer-oriented approach to higher education raises questions about the nature of the relationship between students and universities and the implications of treating education as a market-based service.

Accordingly, this article proposes adapting the customer perspective into a « Student and Stakeholder Perspective ». This perspective encompasses student satisfaction, educational quality, learning outcomes, student progression, graduation rates, graduate employability, and the institution's responsiveness to the expectations of other stakeholders, including academic and administrative staff, public authorities, employers, research partners, and society. The selection of indicators should reflect the university's missions and strategic priorities rather than rely exclusively on satisfaction or quantitative output measures. Moreover, stakeholder expectations may differ or conflict, and their relative importance may vary according to their power, legitimacy, and urgency (Freeman, 1984; Mitchell et al., 1997). The proposed perspective therefore aims to balance the interests of students and other stakeholders while preserving the public and academic missions of the university.

2.3.2. The Financial Perspective: From Budgetary Control to Resource Efficiency

In public universities, the financial perspective differs from its application in private-sector organizations, where financial returns and shareholder value traditionally occupy a central position. Public universities are primarily concerned with fulfilling their educational, scientific, and societal missions using the resources available to them. Financial performance should

therefore not be assessed exclusively through budgetary control or expenditure reduction, but also through the capacity to allocate and use public resources efficiently in support of institutional objectives. Kaplan (2001) highlights the need to adapt the BSC to the objectives and accountability requirements of public and nonprofit organizations, while Niven (2003) also emphasizes the importance of aligning performance measurement with organizational mission. Within this perspective, relevant indicators may include budget execution, resource allocation, the cost of educational activities, infrastructure utilization, and the alignment between financial resources and strategic priorities. These measures can help assess whether the resources allocated to teaching, research, and other university activities are being used appropriately. However, financial indicators should be interpreted alongside non-financial measures because expenditure reduction does not necessarily indicate improved performance if it compromises educational quality, research capacity, or access to university services. Similarly, increased expenditure cannot automatically be considered evidence of better performance unless it contributes to the achievement of institutional objectives.

The financial perspective should also account for differences in institutional missions, student populations, resource availability, and operating conditions. Applying identical financial benchmarks to universities with different responsibilities and constraints may produce misleading comparisons. From a contingency perspective, the relevance of performance measures depends partly on the organizational and institutional context in which they are applied (Donaldson, 2001). Accordingly, the proposed adaptation emphasizes resource efficiency, responsible budget management, and the alignment of financial decisions with university priorities, while maintaining accountability for the use of public funds.

2.3.3. The Internal Processes Perspective: Balancing Operational Efficiency and University Governance

The internal processes perspective concerns the activities through which an organization implements its strategy and delivers value (Kaplan & Norton, 1996). In public universities, these activities include not only administrative procedures but also teaching, research, programme development, student support, quality assurance, and cooperation with external partners. The assessment of internal processes must therefore reflect the specific characteristics of academic organizations, where administrative efficiency and procedural compliance are important but cannot fully represent institutional performance. The quality and effectiveness of educational and scientific activities must also be considered.

Adapting this perspective to public universities involves identifying the processes that contribute most directly to their missions and strategic objectives. Potential indicators include the efficiency of administrative services, the quality of programme development and review, the implementation of quality assurance procedures, the effectiveness of research support, and coordination between academic and administrative units. These indicators should be selected according to the university's priorities and interpreted in relation to its institutional context. The objective is not to multiply performance measures, but to identify those that provide meaningful information about the functioning of internal processes and their contribution to educational, scientific, and organizational outcomes.

University governance should be reflected through indicators relating to the clarity of responsibilities, the quality of information flows, coordination mechanisms, and the implementation and monitoring of decisions. Although external requirements and formal procedures can encourage the adoption of performance management systems, their existence does not necessarily mean that performance information is effectively integrated into decision-making. A distinction must therefore be made between the formal adoption of management tools and their actual use in organizational practices. As Behn (2003) and Moynihan (2008) emphasize, performance information can serve different purposes, including accountability,

managerial control, learning, and improvement. Its contribution depends partly on how it is interpreted and used by organizational actors. The proposed perspective consequently considers both the efficiency of internal processes and their role in supporting coordination, governance, and informed decision-making.

2.3.4. The Learning and Growth Perspective: Integrating Research, Organizational Learning, and Innovation

In the original BSC, the learning and growth perspective concerns the capabilities required to support organizational improvement and the achievement of strategic objectives over time (Kaplan & Norton, 1996). In public universities, these capabilities include staff competencies, professional development, organizational learning, knowledge sharing, and the development of innovative practices. However, the university context requires a broader interpretation of this perspective because research and knowledge production are not merely means of improving internal processes, they are also central missions of the institution. The adaptation of the BSC should therefore reflect the relationship between human and organizational capabilities and the university's educational and scientific objectives, without confining research and innovation to this perspective alone.

The proposed perspective incorporates research capacity, staff development, innovation, and organizational learning. Relevant indicators may include opportunities for professional development, participation in research activities, interdisciplinary collaboration, knowledge dissemination, innovation in teaching practices, and the development of research partnerships. These indicators should be selected in accordance with the university's strategic priorities. Furthermore, research and innovation often involve long time horizons, and their outcomes cannot always be adequately assessed through short-term quantitative measures. Publication counts, training hours, and the number of research projects may provide useful information, but they should not be treated as sufficient measures of research quality, knowledge development, or institutional learning.

Organizational learning is particularly important because performance information can contribute to improvement when it is interpreted, discussed, and used to reconsider existing practices. In this respect, the BSC should not be regarded solely as a reporting instrument. It can also provide a framework for identifying performance gaps, encouraging dialogue about strategic priorities, and supporting organizational adaptation. Nevertheless, these benefits are not automatic: they depend on the willingness and capacity of university actors to engage with performance information and incorporate it into their practices. This distinction between the availability of performance information and its actual use is consistent with the broader literature on public-sector performance management (Behn, 2003; Moynihan, 2008).

Finally, the development of these capabilities depends on organizational conditions, including leadership support, staff participation, access to resources, and opportunities for collaboration. The learning and growth perspective should therefore connect individual competencies with organizational learning, research capacity, and innovation. By doing so, it highlights the capabilities needed to sustain improvements in teaching, research, and institutional performance over time, while recognizing that their development is shaped by the specific context of each university.

The adaptation of the BSC to public universities requires a reconsideration of the content and relationships of its four perspectives rather than a simple change in terminology. The student and stakeholder perspective addresses the educational, scientific, and societal value expected from universities, the financial perspective examines the alignment and efficient use of public resources, the internal processes perspective focuses on the quality and effectiveness of educational, research, and administrative activities, as well as the governance arrangements that support them; and the Learning, Development, Research, and Innovation Perspective considers

the organizational capabilities that sustain institutional development. University missions are thus embedded across the four perspectives rather than treated as a separate fifth perspective. These perspectives should not be treated as independent categories or as relationships that operate uniformly across institutions. Their relevance depends on the missions, governance arrangements, institutional priorities, and operating conditions of each university. The relationships between them should therefore be formulated as strategic hypotheses to be examined in context, rather than assumed to follow universal causal patterns. Such an approach preserves the BSC's integrative strategic logic while recognizing the multidimensional nature of university performance. It also highlights the distinction between the formal adoption of the framework and its effective use in organizational learning, decision-making, and institutional steering.

2.4. International University Experiences and the Limits of Transferability

International studies provide different insights into the adaptation of the Balanced Scorecard (BSC) to higher education. However, they differ in their research designs and levels of empirical evidence. Some examine implementation practices in universities, while others propose conceptual models or compare institutional strategies. These distinctions are important when assessing what can be learned from existing applications and the extent to which their findings can be transferred to other public university systems.

Taylor and Baines (2012) conducted a qualitative study of BSC implementation in four UK universities, drawing on interviews with senior managers. Their study examined the role of the BSC in strategy and policy formulation, monitoring, and evaluation, as well as issues related to motivation, implementation, and format. Del Sordo et al. (2012), in contrast, developed a university-oriented BSC model and applied it to an Italian university to examine reporting practices and identify gaps. Pietrzak (2014) compared the missions, visions, and strategic objectives of four Polish universities, offering insights into strategic priorities and institutional differences, although the study does not constitute a direct evaluation of the outcomes of an implemented BSC. Umashankar and Dutta (2007) discussed the potential application of the BSC in Indian higher education, drawing on existing literature rather than an empirical case study of an Indian university.

Taken together, these studies suggest that the BSC can provide a framework for connecting institutional missions, strategic objectives, and performance information. Nevertheless, they do not offer a uniform basis for concluding that the same configuration will be effective across different university systems. Their approaches and levels of evidence differ, and the information available does not consistently establish the effects of BSC implementation on educational quality, research performance, or institutional governance.

The transferability of these approaches is further constrained by differences in university missions, funding arrangements, governance structures, institutional autonomy, and student populations. A configuration developed for a research-intensive university may not adequately reflect the priorities of an institution primarily focused on teaching, widening access, or regional development. Similarly, the formal adoption of a scorecard does not necessarily demonstrate its effective integration into decision-making or organizational learning.

These limitations support the need for a context-sensitive approach to BSC adaptation in public universities. Rather than reproducing an existing configuration, the framework should align performance objectives and indicators with institutional missions and clarify the relationships between resources, organizational processes, capabilities, and expected outcomes. The present article builds on this insight by retaining the four BSC perspectives while placing teaching, research, innovation, and contribution to society at the strategic core of the proposed framework. This is a conceptual proposition whose relevance and practical effects require further empirical assessment.

The literature reviewed above highlights both the potential of the Balanced Scorecard (BSC) for university performance management and the limitations of transferring existing models across different institutional contexts. These findings provide the theoretical basis for developing a framework that reflects the specific missions and governance conditions of public universities. To address this objective, the next section presents the methodological approach adopted for the literature review and explains how the proposed conceptual framework was developed, including its scope and limitations.

3. Research Methodology and Conceptual Framework Development

3.1. Literature Review Approach

This article adopts a conceptual approach based on a review of the literature on the Balanced Scorecard (BSC), public-sector performance management, and higher education. The review draws primarily on references previously examined in the author's doctoral research and is supplemented by additional publications relevant to the adaptation of performance management frameworks to public universities.

Literature searches were conducted using Scopus, Web of Science, and HAL. The literature was examined to identify the theoretical foundations of the BSC, the challenges associated with its application to public organizations, and the specific requirements of university performance management. Particular attention was paid to the role of public missions, the interpretation of the four BSC perspectives, the relationships between performance dimensions, and the distinction between the formal adoption of a management tool and its effective use in organizational practices. The review is intended as a narrative and conceptual synthesis rather than a systematic review conducted under a fully predefined and reproducible protocol. Although multiple sources and thematic criteria informed the selection and interpretation of literature, the absence of a predefined chronological period and a fully documented screening procedure limits the reproducibility and comprehensiveness of the review. The proposed framework should therefore be interpreted in light of these methodological limitations.

3.2. Development of the Conceptual Framework

The conceptual framework was developed by integrating insights from the literature on the BSC, public-sector performance management, and the specific characteristics of public universities. The analysis focused on three interrelated issues: the adaptation of the traditional BSC perspectives to public missions, the relationships between performance dimensions, and the conditions under which a management tool can become effectively integrated into organizational practices.

First, the literature highlights the limitations of transferring the original BSC model directly from the private to the public sector. In public organizations, financial resources generally constitute a means of fulfilling institutional missions rather than the ultimate objective of organizational activity. Performance must also account for service quality, accountability, resource efficiency, and the fulfilment of collective needs. As a result, adapting the BSC requires reconsidering the meaning and hierarchy of its perspectives rather than merely replacing the terminology used in the original model.

Second, the literature raises questions about the relationships between performance dimensions. Although the BSC provides a framework for articulating strategic objectives, these relationships should not automatically be interpreted as universal causal sequences (Nørreklit, 2000). In public universities, the relationships between resources, organizational capabilities, internal processes, teaching, research, and societal contribution may vary according to institutional priorities and operating conditions. Accordingly, the framework treats these

relationships as context-dependent strategic propositions rather than predetermined causal mechanisms.

Third, the distinction between formal adoption and effective use is central to the proposed framework. The introduction of a performance measurement system does not necessarily ensure that performance information informs managerial decisions or organizational learning. Its contribution depends partly on implementation conditions and the capacity of organizational actors to interpret and use the information generated (Cavalluzzo & Ittner, 2004).

These considerations informed the development of a framework that retains the four traditional BSC perspectives while positioning university missions at the strategic core. Teaching, research, innovation, and contribution to society are treated as overarching missions that inform objectives and indicators across the four perspectives rather than as a separate fifth perspective. The framework thus seeks to preserve the integrative logic of the BSC while adapting its content to the specific requirements of public universities.

3.3. Scope, Theoretical Status, and Limitations

The proposed framework is intended for public universities whose performance management arrangements must reconcile multiple missions, public accountability, and resource constraints. However, public universities cannot be regarded as a homogeneous category. Differences in institutional missions, governance arrangements, financial autonomy, funding, and organizational priorities may influence the relevance of particular objectives and indicators. The framework should therefore be understood as an adaptable conceptual architecture rather than a standardized model applicable identically to every institution.

The article adopts a conceptual and interpretative orientation. Its purpose is to propose a theoretically informed framework for adapting the BSC to public universities, rather than to establish empirically verified causal relationships. The proposed relationships between perspectives should consequently be treated as theoretical propositions that require further examination.

The framework has not undergone formal empirical validation. Its applicability, internal coherence, and operational feasibility therefore remain to be assessed. Future research could examine its relevance through comparative case studies, expert consultation, and empirical investigations involving public universities with different missions and governance arrangements. Such studies could also explore how institutional missions are translated into objectives and indicators and how performance information is incorporated into decision-making and organizational learning.

Despite these limitations, the proposed framework offers a basis for further discussion of how university missions can be integrated into a multidimensional performance management system while preserving the four-perspective architecture of the BSC. Its value lies in providing a structured theoretical proposition that can be examined, refined, and tested in subsequent research.

4. Analysis of Conceptual Principles for Adapting the Balanced Scorecard to University Missions

Adapting the Balanced Scorecard (BSC) to public universities requires more than transferring the original framework to a different organizational setting. It involves reconsidering its perspectives, objectives, and performance relationships in light of the specific missions and institutional characteristics of higher education. Teaching, research, innovation, and engagement with society generate diverse outcomes whose effects may emerge over different time horizons and cannot always be captured through standardized quantitative indicators. The literature on BSC applications highlights the importance of accounting for the strategic and organizational contexts in which the framework is implemented (Kumar et al., 2023).

Three principles underpin the proposed adaptation. First, university missions should provide the foundation for defining strategic objectives and selecting performance indicators. Second, performance should be approached multidimensionally, with explicit consideration of the relationships between resources, organizational processes, institutional capabilities, and expected outcomes. Third, the framework should reflect the specificities of university governance, stakeholder diversity, and the institutional and budgetary constraints associated with public-sector management. These principles aim to establish a coherent strategic framework in which indicators serve clearly defined institutional priorities rather than constitute a fragmented collection of measures.

4.1. Reconfiguring and Integrating the Four Perspectives

The proposed adaptation retains the four-perspective structure of the BSC while reinterpreting the content of each perspective in relation to university missions. This approach preserves the integrative logic of the original framework while recognizing that the meaning and relative importance of performance dimensions vary across institutional contexts. Research on performance management in higher education provides a basis for considering approaches that account for academic outcomes, resource allocation, governance arrangements, and stakeholder expectations (Jugo & Armas, 2025; Kumar et al., 2023).

The **student and stakeholder perspective** focuses on educational quality, academic achievement, student support, graduate employability, and relationships with external partners. Its objectives may be assessed through indicators such as graduation rates, student feedback, graduate employability, and the development of partnerships with societal stakeholders. These indicators should be interpreted cautiously, since student satisfaction does not necessarily demonstrate learning quality, and employability is influenced by factors beyond the university's direct control.

The **financial resources and efficiency perspective** addresses budgetary sustainability, resource allocation, and the effective use of public funding. Financial performance should be assessed in relation to the university's missions and strategic priorities rather than equated automatically with expenditure reduction. Relevant indicators may include budget execution rates, expenditure allocated to teaching and research, and resource allocation in relation to institutional priorities. Such measures require contextual interpretation because differences in disciplines, student populations, institutional missions, and funding arrangements can limit comparisons between universities. Research on strategic planning in higher education similarly highlights the importance of adapting management approaches to the financial and organizational challenges faced by universities (Al-Filali et al., 2024).

The **internal processes and governance perspective** encompasses educational, research, and administrative activities, together with the coordination, information flows, and decision-making mechanisms that support their implementation. Possible indicators include the time required to process administrative requests, the completion of planned research projects, and the implementation of quality-assurance procedures. These measures help examine how institutional processes contribute to strategic objectives, while their interpretation should account for academic autonomy, procedural requirements, and differences in organizational arrangements.

The **learning and growth perspective**, extended to encompass research and innovation capabilities, focuses on staff competencies, organizational learning, knowledge sharing, and the development of scientific, pedagogical, and technological capabilities. Illustrative indicators include participation in professional development, research collaboration, and staff involvement in innovation activities. However, research and innovation should not be reduced to enabling capabilities within this perspective: they remain core university missions whose objectives and outcomes may also be reflected in the other three perspectives.

The four perspectives are complementary rather than independent. Each university mission teaching, research, innovation, and contribution to society may be examined through all four perspectives, although the relevance of particular objectives and indicators will vary. For example, teaching involves the allocation of financial resources, the organization of educational processes, the development of teaching competencies, and the assessment of student outcomes. Research similarly depends on funding, research-management processes, scientific capabilities, and the relevance and dissemination of research outputs. Innovation and societal engagement also require resources, appropriate organizational processes, relevant competencies, and attention to the outcomes generated for external stakeholders.

This alignment should not be understood as a standardized set of indicators applicable to every institution. Rather, it provides a basis for selecting objectives and measures according to each university's missions, governance arrangements, resources, and available information. Quantitative indicators may be complemented by qualitative evidence, particularly where educational quality, scientific impact, innovation, or long-term societal contribution cannot be adequately represented by numerical measures alone.

4.2. Interdependence Between Resources, Processes, Capabilities, and Outcomes

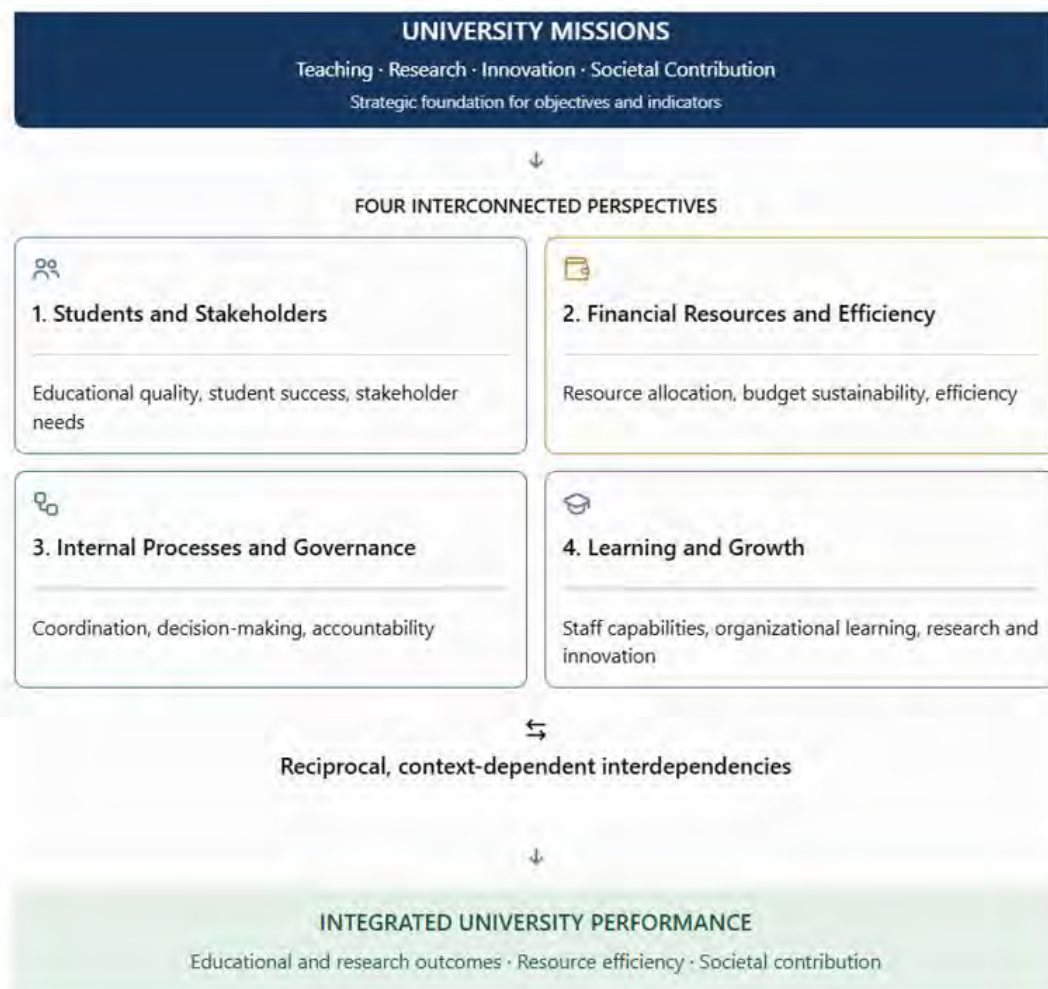
The proposed framework conceptualizes university performance as emerging from interactions among resources, organizational processes, institutional capabilities, and outcomes. Financial and human resources provide the means to undertake educational, research, and administrative activities. The quality of these activities, in turn, depends on staff competencies, governance arrangements, coordination mechanisms, and the availability of relevant information. The outcomes achieved may subsequently inform the reassessment of strategic objectives, resource allocation, and management practices.

This perspective challenges the assumption that additional resources necessarily produce better outcomes or that faster administrative procedures automatically improve service quality. The effects of managerial decisions depend on the way resources are deployed, the institutional context, the quality of implementation, and the time required for outcomes to materialize. The contribution of the BSC therefore lies not in presupposing predictable relationships between performance dimensions, but in providing a structured basis for formulating and examining strategic assumptions.

Consistent with the critical literature on the BSC, these relationships should be understood as context-dependent propositions rather than universal causal mechanisms (Kumar et al., 2023; Nørreklit, 2000). For example, investments in staff development may strengthen teaching and research capabilities, but their effects depend on whether newly acquired competencies are incorporated into professional practices and supported by appropriate organizational conditions. Similarly, improvements in internal processes may contribute to better university services, although their effects may be moderated by resource constraints, governance arrangements, and the characteristics of the populations served.

Drawing on the strategy-map approach developed by Kaplan and Norton (2004), the proposed framework places university missions at the strategic core and connects them to the four complementary perspectives. Learning and growth concerns the capabilities required to pursue institutional priorities, the Internal Processes Perspective addresses the activities through which these priorities are implemented; the Financial Perspective concerns the allocation and use of resources; and the Student and Stakeholder Perspective reflects relevant educational, institutional, and societal outcomes. These relationships are indicative rather than prescriptive. Furthermore, feedback from outcomes to resource allocation, organizational learning, and subsequent strategic decisions may influence how the framework operates over time.

Figure 1. Proposed conceptual framework for adapting the Balanced Scorecard to public universities.



Source: Author's conceptualization based on the literature.

The framework can be expressed through three exploratory propositions:

- 1:** Aligning the four BSC perspectives with university missions can support greater coherence between strategic objectives and performance measurement.
- 2:** The contribution of organizational capabilities and internal processes to university outcomes depends on institutional and resource conditions.
- 3:** The usefulness of the adapted BSC depends not only on its formal design but also on the extent to which performance information is incorporated into decision-making and organizational learning.

These propositions identify relationships that may be examined in future research, they do not establish universal or empirically validated causal effects. Their relevance may vary according to governance arrangements, financial autonomy, institutional missions, and the characteristics of the populations served. The proposed framework is therefore intended to support strategic reflection and the examination of performance relationships rather than impose a uniform causal sequence on public universities.

By making interdependencies and potential trade-offs more explicit, the BSC can support the interpretation of performance information, the revision of priorities, and the coordination of managerial decisions. Nevertheless, the relationships between perspectives must be examined in light of institutional evidence rather than assumed to hold uniformly across universities.

4.3. Summary of the Proposed Conceptual Framework and Its Theoretical Implications

The proposed conceptual framework places university missions at the centre of strategic performance management and organizes institutional performance around four complementary perspectives: students and stakeholders; financial resources and efficiency; internal processes and governance; and the Learning and Growth Perspective. Research, teaching, innovation, and contribution to society remain central to the framework and are considered across these perspectives rather than treated as a separate fifth perspective.

Its theoretical contribution rests on three interrelated principles. First, public missions provide the reference point for defining performance objectives and interpreting results. Second, university performance encompasses diverse outcomes and stakeholder expectations that cannot be adequately represented by a single measure. Third, the relationships between performance dimensions should be conceptualized as context-dependent interdependencies that require examination rather than as a predetermined causal sequence.

The framework provides a conceptual basis for selecting indicators aligned with institutional priorities, identifying appropriate data sources, and clarifying responsibilities for performance monitoring. Its practical application requires particular attention to indicator reliability, data availability, comparability, and the risk of encouraging institutions to prioritize easily measured outputs over more complex educational, scientific, or societal outcomes.

The proposed framework remains a conceptual proposition derived from the literature and has not been empirically validated. Formalizing a dashboard is not sufficient to ensure its effective use. Its contribution also depends on how organizational actors interpret performance information, incorporate it into managerial discussions, and use it to guide institutional action. The proposed adaptation thus shifts the emphasis from the accumulation of indicators to the construction of a coherent strategic management framework. By connecting university missions, stakeholder expectations, resource allocation, internal processes, and organizational capabilities, it provides a conceptual basis for examining how the BSC may support the governance and performance management of public universities. Its relevance ultimately depends on the extent to which the framework can be adapted to institutional conditions and integrated into actual management practices.

5. Discussion : Theoretical Contributions, Managerial Implications, and Limitations

5.1. Theoretical Contributions and Positioning in the Existing Literature

The literature review suggests that adapting the Balanced Scorecard (BSC) to public universities requires more than transferring the original model to a different organizational setting. It involves reconsidering its perspectives, objectives, and performance relationships in light of the diversity of university missions, the plurality of stakeholders, and the institutional characteristics of public governance. Previous research has already emphasized the need to adapt the BSC to non-profit and higher education settings. The contribution of the present framework should therefore be understood in relation to these existing developments rather than as the introduction of an entirely new approach.

Kaplan (2001) argues that the mission of a non-profit organization should occupy a central position in its performance management architecture, since financial results are not its ultimate purpose. This principle provides an important foundation for the present framework. However, placing university missions at the centre does not, by itself, constitute a new theoretical contribution. The proposed framework extends this principle by considering teaching, research, innovation, and contribution to society as interconnected institutional missions that guide the interpretation of all four BSC perspectives.

The distinction between missions and perspectives is central to this approach. University missions express the purposes that institutional activities are intended to fulfil, whereas the four perspectives organize the analysis of the resources, capabilities, processes, and outcomes associated with those purposes. Accordingly, the missions are not treated as an additional perspective, nor are they assumed to be adequately represented by any single existing perspective. Instead, they provide the strategic reference point for defining objectives and interpreting performance across the four perspectives. This preserves the multidimensional structure of the BSC while making its orientation towards public university missions explicit. This positioning also addresses a limitation associated with locating research and innovation exclusively within the learning and growth perspective. Although scientific capabilities, staff development, and organizational learning are important enabling conditions, research and innovation are also substantive university missions with their own objectives and outcomes. Research activity, for example, depends on staff competencies and funding, but it also involves research processes, scientific outputs, knowledge dissemination, and potential contributions to society. The proposed framework therefore treats research and innovation as missions that can be examined across the four perspectives, rather than as activities confined to organizational capability development.

Comparison with previous models further clarifies the scope of the contribution. Kaplan (2001) provides a general non-profit adaptation in which mission accomplishment guides the performance management system. The present framework applies this principle specifically to the plurality of public university missions and distinguishes these missions from the perspectives used to assess their implementation and outcomes.

Del Sordo et al. (2012), in their university application of the BSC, emphasize the multidimensional nature of university performance and the importance of deriving strategic themes from the university's mission and vision. The present framework shares this mission-oriented approach. Its additional conceptual emphasis lies in explicitly connecting four distinct university missions to all four BSC perspectives, rather than treating the mission only as a starting point for defining the scorecard.

Taylor and Baines (2012), through their study of BSC implementation in four UK universities, examine how the tool relates to strategy formation, monitoring, evaluation, and organizational practices. Their work highlights the practical and organizational challenges associated with implementing performance management in higher education. Building on this implementation-oriented perspective, the present framework distinguishes between the formal configuration of a BSC and its effective integration into decision-making and organizational learning. It consequently emphasizes that the existence of a coherent scorecard does not, by itself, establish that performance information will influence institutional practices.

Finally, Stejskal et al. (2020) develop a strategy map based on stakeholder expectations in a publicly funded post-secondary institution and examine relationships between key success factors. Their work demonstrates the relevance of stakeholder-oriented strategic mapping in higher education. The present framework differs in its primary analytical emphasis: rather than seeking to establish a specific set of causal relationships, it formulates context-dependent propositions about the relationships between missions, perspectives, and institutional conditions. These propositions remain open to empirical examination.

Taken together, these comparisons indicate that the contribution of the proposed framework does not lie in claiming that mission orientation, multidimensional performance measurement, or contextual adaptation are new ideas. Rather, it lies in combining three elements within a single conceptual architecture: the explicit positioning of four university missions as the strategic reference point; their cross-perspective interpretation, including the treatment of research and innovation as missions as well as capability-related activities; and the conceptualization of relationships between performance dimensions as context-dependent

propositions whose relevance depends on institutional conditions and actual management practices.

The framework should therefore be understood as a conceptual synthesis and refinement of existing approaches. Its originality rests on the way these elements are integrated and specified for public universities, rather than on the invention of an entirely new BSC structure. Its explanatory value and practical usefulness nevertheless require further assessment.

5.2. Managerial Implications for Public Universities

From a managerial perspective, the proposed framework encourages university leaders to approach the BSC as a strategic management tool rather than merely as a system for monitoring indicators. Its design should begin with institutional missions and translate them into strategic objectives and performance measures that can inform decision-making.

This implication is particularly relevant to Moroccan public universities, which operate within public governance and accountability arrangements while addressing diverse educational, scientific, and societal priorities. The use of the BSC should be considered in relation to institutional responsibilities, the degree of managerial and financial autonomy, contractual commitments, budgetary programming, and external evaluation requirements. The proposed framework could help university leaders connect these requirements with institutional missions, rather than treating reporting obligations and strategic management as separate activities.

A first practical implication concerns the alignment between strategic priorities and budgetary decisions. When universities define objectives relating to teaching quality, research development, innovation, and societal contribution, these objectives need to be considered alongside available resources and budgetary constraints. The BSC may provide a structure for examining whether resource allocation reflects declared institutional priorities and for making trade-offs more explicit. It cannot, however, resolve resource shortages or guarantee that budgetary decisions will lead to the intended outcomes.

A second implication concerns the relationship between institutional strategy and contractual or external evaluation requirements. Performance indicators may help universities monitor progress against agreed objectives, provided that these indicators remain consistent with their missions and operating conditions. University leaders should avoid allowing externally required measures to displace institutional priorities or encouraging a narrow focus on compliance. The framework is intended to facilitate the interpretation of performance information in relation to institutional strategy, not simply to reproduce reporting requirements in dashboard form.

A third implication concerns indicator selection and use. Financial and operational measures should be complemented by indicators relating to educational quality, student achievement, research development, staff capabilities, innovation, and societal contribution. The aim is not to increase the number of indicators, but to select a manageable set that reflects institutional priorities and provides useful information for decision-making. Where outcomes are difficult to quantify or emerge over long periods, qualitative evidence and contextual interpretation may be necessary.

The framework also highlights the importance of involving academic staff, administrative personnel, and university leaders in defining objectives and interpreting results. Such involvement may help ensure that indicators reflect operational realities and are understood as instruments for strategic discussion rather than imposed requirements. The effective use of the BSC consequently depends on the organizational processes through which performance information is interpreted, discussed, and incorporated into decisions.

Finally, university leaders should consider the potential unintended effects of performance measurement. When indicators are linked too rigidly to evaluation, resource allocation, or individual assessment, organizational actors may prioritize measured outputs over less visible but important activities. Potential risks include focusing on publication counts rather than

research quality, prioritizing graduation rates without adequately considering student characteristics, or emphasizing rapid administrative processing at the expense of the quality of support provided. Indicators may also encourage short-term decision-making when educational, scientific, and societal outcomes require sustained investment.

To mitigate these risks, indicators should be interpreted in combination rather than in isolation, reviewed periodically, and supplemented where necessary by qualitative evidence. Their purpose should be to support accountability and organizational learning without undermining academic autonomy or reducing university performance to a numerical ranking.

5.3. Implementation Conditions

The implementation of a BSC adapted to public universities requires consistency between institutional missions, strategic objectives, indicators, and available resources. It also depends on clearly assigned responsibilities, reliable information systems, stakeholder engagement, and the capacity to use performance information in management discussions.

First, each institution needs to clarify its strategic priorities before selecting indicators. Although the proposed framework provides a common conceptual structure, the relative importance of teaching, research, innovation, and societal contribution may differ across universities and organizational units. Adaptation should therefore reflect differences in missions, student populations, research profiles, regional responsibilities, governance arrangements, and resource availability.

Second, indicator definitions and data sources should be sufficiently clear to support reliable interpretation. Universities need to consider the availability, consistency, and comparability of information across academic departments and administrative services. Indicators should also be proportionate to the institution's data-management capacity to avoid excessive reporting burdens and information overload.

Third, the framework should be integrated into existing planning, budgeting, monitoring, and evaluation processes rather than introduced as an isolated management instrument. In the Moroccan context, this means considering how institutional objectives and indicators can inform budgetary programming, contractual commitments, and external evaluation while remaining aligned with the university's own missions. The precise arrangements would need to be adapted to the governance framework and responsibilities of each institution.

Finally, implementation should be progressive. Initial application could focus on a limited number of strategic priorities and indicators, followed by periodic review of their relevance and usefulness. This would allow universities to identify difficulties in data collection, interpretation, and stakeholder engagement before extending the framework. Such an approach may also help distinguish formal adoption from effective appropriation, which depends on whether the scorecard becomes part of actual management and decision-making practices.

5.4. Limitations of the Study

This study has several limitations. First, the proposed framework is conceptual and has not been empirically validated. Although it draws on the literature to formulate a coherent architecture for adapting the BSC to public universities, it does not establish that the proposed configuration improves organizational performance or that the relationships between perspectives operate as anticipated. The propositions should therefore be understood as exploratory and open to further investigation.

Second, the literature synthesis was based on relevant academic sources identified through searches in Scopus, Web of Science, and HAL, complemented by references used in the author's doctoral research and additional readings. As the review was conceptual rather than systematic, it did not follow a fully predefined and documented screening protocol. The selection of sources may consequently reflect limitations in search coverage, the availability of

publications, and the author's analytical choices. The framework may not encompass all existing BSC adaptations or alternative approaches to university performance management.

Third, the framework has a normative and interpretative orientation. It proposes how the BSC could be structured to better reflect university missions, but this does not demonstrate that the proposed configuration is necessarily the most effective approach in practice. Alternative architectures may be more appropriate for institutions with different missions, governance arrangements, or resource constraints.

Fourth, the diversity of public universities limits the generalizability of the framework. Institutions may differ in their degree of financial autonomy, research intensity, student populations, regional responsibilities, and relationships with external stakeholders. The relevance of particular perspectives and indicators must therefore be assessed within the institutional context rather than assumed to be uniform.

Finally, some university outcomes are difficult to measure because they emerge over extended periods and cannot always be attributed directly to individual managerial decisions. Research quality, innovation, graduate trajectories, and societal contribution may depend on multiple institutional and external factors. A focus on short-term or easily quantifiable indicators may therefore provide an incomplete account of university performance. These limitations reinforce the need to interpret the BSC as a framework for strategic reflection rather than as a definitive representation of institutional effectiveness.

5.5. Future Research Directions

Future research should examine the conceptual coherence, contextual relevance, and practical usefulness of the proposed framework through complementary methodological approaches.

First, multiple-case studies involving public universities with different institutional profiles could examine how the four missions are translated into strategic objectives and performance indicators. In the Moroccan context, such studies could compare universities or organizational units with different research profiles, student populations, resource constraints, and governance arrangements. Interviews with university leaders, academic staff, and administrative personnel, combined with documentary analysis of strategic plans, budgets, and performance reports, could help identify the conditions that facilitate or constrain implementation and effective appropriation.

Second, a Delphi study involving experts in university governance, public management, higher education, and performance measurement could assess the relevance and clarity of the proposed perspectives, objectives, and indicators. This process could help refine the framework and identify areas of agreement or disagreement among experts. Such consultation would constitute an additional assessment of content and contextual relevance, rather than definitive empirical validation of the framework's effects.

Third, subsequent quantitative research could develop and validate measurement scales for relevant constructs, including perceived strategic alignment, effective use of performance information, organizational learning, and the perceived contribution of the BSC to university management. Following preliminary item development and assessment of content validity, survey data could be used to examine measurement properties and test theoretically specified relationships through partial least squares structural equation modelling (PLS-SEM), where justified by the research questions, measurement model, and data characteristics. Such research would need to distinguish perceptions of performance from objective institutional outcomes and avoid treating cross-sectional associations as proof of causality.

Finally, longitudinal research could investigate whether and how the use of the BSC becomes embedded in institutional routines and whether changes in performance-management practices are associated with subsequent organizational outcomes. This approach would be particularly

relevant for examining long-term educational, scientific, and societal effects that may not be observable immediately after implementation.

Overall, the proposed framework provides a conceptual basis for reconsidering the role of the BSC in public university management. Its contribution lies in connecting institutional missions with the four BSC perspectives while recognizing the contextual nature of performance relationships and the distinction between formal design and effective use. Whether this approach provides a useful basis for university governance and performance management remains an empirical question that future research should address.

6. Conclusion

This article examined the conditions under which the Balanced Scorecard (BSC) can be adapted to the specific characteristics of public universities. The analysis suggests that, although the BSC provides a multidimensional approach to performance, its application in higher education requires more than a straightforward transfer of the original model. The diversity of university missions, the plurality of stakeholders, resource constraints, and the requirements of public governance call for a contextual reinterpretation of its perspectives and their relationships.

In response to these challenges, the article proposes a conceptual framework that places university missions teaching, research, innovation, and contribution to society at its center. These missions guide the configuration of four complementary perspectives: students and stakeholders, financial resources and efficiency, internal processes and governance, and learning and growth, including research and innovation. The framework views university performance as an integrated construct arising from the relationships between institutional objectives, available resources, organizational processes, and development capabilities. Rather than assuming a universal causal sequence, it emphasizes that these relationships must be interpreted in light of each university's strategic priorities and institutional context.

The main contribution lies in this contextualized approach to the BSC. It shifts attention from the formal adoption of a standardized measurement model towards the coherence of its design and its integration into university governance and decision-making. The relevance of the BSC therefore depends not simply on the perspectives and indicators selected, but also on how performance information is interpreted, discussed, and used to support strategic decisions and organizational learning. In this respect, the framework provides a basis for understanding the BSC as a context-sensitive management tool rather than a universally transferable model.

From a public policy perspective, university authorities and supervisory bodies should ensure that performance objectives and indicators remain aligned with institutional missions, available resources, and the specific characteristics of each university. In the Moroccan context, this includes articulating performance management with budgetary programming, contractual commitments, and external evaluation, while avoiding an excessive focus on quantitative targets that may overlook the quality and diversity of university outcomes.

Nevertheless, the proposed framework remains conceptual and has not yet been empirically validated. Future research could examine its applicability through comparative case studies of Moroccan public universities operating under different governance arrangements and with different teaching and research profiles. Interviews with university leaders, academic staff, and administrative personnel, combined with analyses of strategic plans, budgets, and external evaluation reports, could investigate how institutional missions are translated into objectives and indicators and how performance information is used in decision-making. A Delphi study could subsequently assess the relevance of the proposed perspectives and indicators. Survey-based research could then develop and validate measures of strategic alignment and effective BSC use and test the proposed relationships between resources, organizational processes, development capabilities, and perceived performance through partial least squares structural

equation modelling (PLS-SEM), where appropriate. Longitudinal studies could further examine how these relationships evolve over time.

Ultimately, adapting the BSC to public universities is not primarily a matter of multiplying indicators or reproducing an established model. It requires constructing a coherent management framework that connects institutional missions, resources, processes, and organizational capabilities while respecting the specific characteristics of each university. Empirical investigation will be essential to determine how this conceptual proposal can be operationalized and under what conditions it can contribute to the strategic management of university performance.

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