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Contrôle de gestion et performance des hôpitaux universitaires : intégration des théories de l'agence, des ressources et de la contingence

Management control and performance of university hospitals: integrating agency, resource, and contingency theories.

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Résumé

Les hôpitaux universitaires font face à des défis complexes liés à la conciliation des missions de soins, d'enseignement et de recherche dans un environnement marqué par des contraintes budgétaires et réglementaires fortes. Cet article adopte une approche qualitative et analytique fondée sur une revue documentaire approfondie pour examiner l'apport des théories de l'agence, des ressources et de la contingence dans l'optimisation du contrôle de gestion hospitalier.

L'analyse s'appuie sur des travaux théoriques récents et sur une comparaison des pratiques de gestion observées dans les hôpitaux universitaires marocains et internationaux, en mettant l'accent sur les mécanismes de réduction des coûts d'agence, l'allocation stratégique des ressources et l'adaptation des outils de contrôle aux spécificités contextuelles.

Les résultats montrent que la mise en œuvre de systèmes de pilotage intégrés, associant tableaux de bord, audits internes et dispositifs d'incitation, favorise une meilleure gouvernance, une utilisation efficiente des ressources et une amélioration mesurable de la qualité des soins. La principale conclusion souligne que l'adaptation du contrôle de gestion aux contingences locales constitue un levier majeur de performance et de satisfaction des patients.

Mots-clés : Contrôle de gestion hospitalier, hôpitaux universitaires, théorie de l'agence, théorie des ressources, théorie de la contingence, allocation des ressources, performance organisationnelle

Abstract

University hospitals face complex challenges in balancing their healthcare, teaching, and research missions in an environment marked by significant budgetary and regulatory constraints. This article takes a qualitative and analytical approach based on an in-depth literature review to examine the contribution of agency, resource, and contingency theories to optimizing hospital management control.

The analysis draws on recent theoretical work and a comparison of management practices observed in Moroccan and international university hospitals, with a focus on mechanisms for reducing agency costs, strategic resource allocation, and the adaptation of control tools to specific contextual factors.

The results show that the implementation of integrated management systems, combining dashboards, internal audits, and incentive schemes, promotes better governance, efficient use of resources, and a measurable improvement in the quality of care. The main conclusion emphasizes that adapting management control to local contingencies is a major lever for performance and patient satisfaction.

Keywords: Hospital management control, university hospitals, agency theory, resource theory, contingency theory, resource allocation, organizational performance

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Introduction

University hospitals play a central role in healthcare systems, combining healthcare, teaching, and research missions. This dual, or even triple, mission gives these institutions a particular organizational complexity, marked by the coexistence of sometimes divergent interests between managers, medical staff, teacher-researchers, and supervisory authorities. In a context characterized by budgetary constraints, strict regulatory requirements, and growing demand for quality care, the effective management of financial, human, and material resources is a major challenge for the performance of university hospitals.

Management control appears to be an indispensable strategic tool for meeting these challenges. It makes it possible to monitor performance, align the behavior of stakeholders with institutional objectives, optimize resource allocation, and support strategic decision-making. Economic and organizational theories provide a solid analytical framework for understanding and improving these practices. Agency theory highlights the need to reduce agency costs associated with opportunistic behavior and information asymmetries. Resource theory emphasizes human capital and organizational skills as key factors in sustainable performance. Finally, contingency theory stresses the importance of adapting control systems to organizational and environmental specificities in order to ensure their effectiveness in complex contexts.

In this context, the central issue of this article can be formulated as follows: How can management control help reduce agency costs, optimize resource allocation, and improve the overall performance of university hospitals while reconciling their missions of care, teaching, and research?

To address this issue, this article pursues the following objectives:

analyze the contribution of agency, resource, and contingency theories to the optimization of hospital management control,

Identify control mechanisms and tools for reducing agency costs and optimizing resource allocation, and

Assess the impact of these practices on organizational performance, quality of care, and patient satisfaction.

The article is structured as follows: the first part presents the theoretical framework, exploring agency, transaction cost, resource, and contingency theories. The second part focuses on mechanisms for reducing agency costs and on the strategic allocation of resources through performance monitoring tools, incentives, and internal audits. The third part analyzes the effects of these practices on performance, quality of care, and patient satisfaction. Finally, the last part discusses the results and highlights the practical implications for improving management control in university hospitals.

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1. Agency theory and transaction cost theory

University hospitals, as complex structures, perform multiple functions combining healthcare, teaching, and research, which leads to interactions between various actors with sometimes divergent interests. Agency and transaction cost theories provide a relevant framework for improving their governance and optimizing their processes. Agency theory, which focuses on reducing opportunistic behavior linked to information asymmetry, advocates control and incentive mechanisms to align the interests of stakeholders. At the same time, transaction cost theory highlights the challenges of coordination and contract management, requiring strategies such as centralization and automation. These approaches underscore the key role of management control in minimizing conflicts and improving the efficiency of university hospitals.

Agency theory provides a fundamental analytical framework for understanding the governance and management challenges of university hospitals, where the missions of care, teaching, and research give rise to complex relationships between different actors. In this context, information asymmetry, conflicts of interest, and opportunistic behavior by agents make it essential to put in place appropriate control mechanisms to align individual objectives with those of the organization. This section explores the origins and applications of agency theory, highlighting its contributions to reducing agency costs and improving transparency and efficiency within university hospitals through mechanisms such as performance monitoring systems, incentives, and internal audits.

2. Resource theory and hospital management control

In the context of university hospitals, strategic resource management is crucial to meeting the combined demands of healthcare and academic training. The Resource-Based View theory, developed by Barney, provides a conceptual framework for optimizing organizational performance by leveraging unique, valuable, and difficult-to-imitate internal resources. Faced with budget constraints and growing demand, these institutions must strategically allocate their financial, technological, and human resources to simultaneously improve the quality of care and medical education. By focusing on resource optimization and human capital development, university hospitals can not only meet the challenges of their dual mission, but also develop a sustainable competitive advantage in a complex and demanding sector.

Strategic resource allocation is a key issue in the management of university hospitals, where the combined demands of quality care, academic training, and research require a rigorous and targeted approach. Faced with budget constraints and growing demand, these institutions must optimize the use of their material, financial, and human resources to maintain a balanced performance across their various missions.

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By mobilizing advanced management tools and key performance indicators, they can effectively meet the expectations of patients, students, and regulatory authorities, while strengthening their ability to adapt to an increasingly complex hospital environment.

3. Contingency theory and the specificity of hospital environments

Contingency theory, developed by Lawrence and Lorsch and Burns and Stalker in the 1960s, proposes that organizations must adapt their management structures and practices to the specific characteristics of their environment in order to achieve optimal performance. This approach, which rejects universal management models, is particularly relevant in the context of university hospitals, where healthcare, training, and research missions require complex and adaptable management. These institutions must balance often conflicting demands, such as quality of care, budgetary constraints, and academic performance, while responding to internal constraints (coordination of clinical and academic teams) and external constraints (regulations and societal expectations). By applying contingency theory, university hospitals can adjust their management control practices, particularly through flexible reporting, human resources management, and budget allocation strategies, to adapt to fluctuations in their environment while fulfilling their fundamental missions. This approach thus provides an essential framework for optimizing the management of these complex organizations.

Contingency theory emerged in the 20th century as an alternative to universalist theories that claimed to provide unique solutions to organizational problems. Rooted in a contextual vision, this theory posits that an organization's effectiveness depends on its ability to align its management practices, structures, and systems with the specific characteristics of its internal and external environment. In academic hospitals, where academic, clinical, and economic rationales coexist, contingency theory offers a framework for adapting management control mechanisms. It helps us understand why practices that are effective in one context may fail in another.

4. Reducing agency costs through management control

In agency theory, agency costs refer to the expenses and efficiency losses resulting from the opportunistic behavior of agents, as well as the efforts made by principals to monitor and encourage agents to act in accordance with the organization's objectives. In a university hospital, where medical, administrative, and academic staff often have considerable decision-making autonomy, these costs can include wasted resources, a decline in the quality of care, or a divergence between the priorities of agents and those of the institution. Management control, by integrating incentive, monitoring, and performance evaluation systems, plays a central role in reducing these agency costs, thereby contributing to more efficient management of university hospital resources.

One of the main strategies for reducing agency costs in a university hospital is to implement performance monitoring systems. These systems include the use of dashboards that allow managers to track various

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key performance indicators in real time, such as staff productivity, bed occupancy rates, average length of stay, and patient satisfaction. These dashboards promote greater transparency by making actions and results visible to leaders, thereby reducing information asymmetry between healthcare staff and hospital management. In addition, healthcare quality indicators, combined with financial indicators, provide an integrated view of performance, enabling managers to quickly detect any deviations from the organization's strategic objectives.

In addition to monitoring systems, financial and non-financial incentives are essential for aligning the individual interests of employees with those of the organization. In teaching hospitals, it is common to offer performance bonuses based on specific criteria such as quality of care, efficiency of clinical practices, or involvement in training and research activities. These incentives aim to encourage physicians and nursing staff to adopt behaviors that are consistent with the hospital's expectations by recognizing their contributions to the institution's objectives. For example, a bonus may be awarded to teams that maintain a low readmission rate, indicating optimal quality of care and effective patient management. These incentives not only reduce opportunistic behavior, but also create a culture of a culture of performance that improves the quality of services provided to patients.

Internal audits are another important lever for minimizing agency costs in university hospitals. By conducting regular audits, the hospital can assess the compliance of medical and administrative practices with established standards and detect deviations that could indicate behavior contrary to the institution's interests. Audits often include reviews of resource management, compliance with medical protocols, and quality of care, allowing for objective verification of the performance of different departments. For example, an audit may reveal excessive use of costly medical resources in certain departments, requiring a reassessment of practices to optimize costs while maintaining quality of care. This type of control limits opportunistic behavior by reminding agents of the importance of accountability and transparency in their daily actions.

Finally, continuing education and skills management are crucial aspects of management control for reducing agency costs in a university hospital. Training helps align staff skills with institutional standards, thereby reducing the risk of errors and inefficiencies that can generate additional costs. By investing in staff skills development, the hospital can ensure that staff are up to date with best clinical practices and technological advances, which enhances the quality of care while reducing deviant behavior linked to a lack of knowledge. In the same vein, a skills management program makes it possible to identify high-potential employees and support them in their professional development, thereby promoting an organizational culture based on commitment and responsibility.

In short, reducing agency costs in a university hospital requires a combination of control mechanisms that aim to align employee behavior with the institution's objectives. Through performance monitoring

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systems, financial and non-financial incentives, internal audits, and continuing education, management control plays a fundamental role in minimizing opportunistic behavior and ensuring optimal use of resources. This approach not only promotes better governance, but also contributes to the continuous improvement of quality of care and patient satisfaction, thereby meeting the strategic and ethical requirements of the university hospital.

5. Link between resource allocation and performance indicators

Effective resource allocation is a key factor in the performance of university hospitals, directly impacting clinical outcomes, patient satisfaction, and the achievement of academic objectives. To assess the effectiveness of this allocation, hospitals rely on monitoring tools and performance indicators that enable them to accurately measure the impact of investments and resources mobilized on the organization's objectives. When integrated into rigorous monitoring systems, these indicators provide a clear and objective view of performance, while facilitating the adjustments necessary to optimize the use of resources. Performance monitoring

Dashboards and reporting systems are essential tools for monitoring performance in university hospitals. These systems make it possible to centralize key data on all resources and monitor the effectiveness of their use in different departments in real time. Hospital management control is thus based on dynamic dashboards, which bring together the main performance indicators and provide an overview of the institution's financial situation, quality of care, and academic activities.

Dashboards also enable continuous monitoring of resource allocation based on strategic priorities. For example, emergency departments, which are often subject to high demand, can benefit from specific monitoring to adjust staffing and equipment resources as needs change. These reporting systems make it easier to identify gaps between defined objectives and actual results, allowing managers to make corrections in real time. By providing transparency on the use of resources, dashboards strengthen the hospital's ability to meet quality and efficiency requirements.

A- Key performance indicators

Performance indicators are central to hospital management, as they enable the evaluation of the effectiveness of resources mobilized to achieve clinical, academic, and financial objectives. Among the most commonly used indicators in university hospitals are bed occupancy rates, average length of stay, and patient satisfaction. These indicators provide an accurate measure of the performance of different departments and supply essential information for decision-making.

Bed occupancy rate: This indicator measures the percentage of beds occupied in a given department over a given period. A high occupancy rate may indicate good use of hospital resources, but too high a rate could also signal a risk of department saturation, impacting the quality of care and patient comfort.

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Average length of stay: The average length of patient stays is another key indicator. It measures the effectiveness of treatments and the speed with which patients are cared for and rehabilitated. An optimized length of stay can indicate good resource allocation and increased efficiency, while reducing the costs associated with prolonged care.

Patient satisfaction: This indicator measures the patient experience within the hospital and is essential for assessing the quality of care. Patient satisfaction depends on several factors, including the competence of medical staff, the availability of equipment, and the speed of care. Effective resource allocation directly contributes to improving these aspects, thereby increasing overall patient satisfaction.

These performance indicators help identify areas where resources are well allocated and services that need improvement. They serve as benchmarks for managers, facilitating informed decision-making to optimize the hospital's overall performance.

B- Comparative analysis

A comparative analysis of hospitals that have optimized their resource allocation versus those that have not clearly illustrates the impact of strategic resource management. Facilities that invest in effective monitoring tools, targeted budget allocation, and human resource optimization strategies generally perform better in terms of clinical performance and patient satisfaction. For example, a hospital that has invested in an effective inventory management system and advanced diagnostic infrastructure can offer faster access to care and reduce wait times for patients, compared to a hospital that has not optimized its resources.

This comparison also highlights the importance of proactive and continuous resource management to cope with changes in demand. By allocating resources flexibly and adapting management practices to changing needs, hospitals can not only improve their operational efficiency, but also offer a higher level of quality of care, thereby meeting the expectations of patients and regulatory authorities. Effective resource allocation thus translates into reduced unnecessary costs, better quality of care, and an improved reputation for the institution in the university hospital sector.

6. Contributions of contingency theory to management control

Contingency theory marked a turning point in the design of management control systems by highlighting the importance of adapting them to organizational and environmental specificities. By contextualizing control tools and mechanisms, such as the use of dashboards or information systems, this approach makes it possible to respond effectively to the needs of complex environments, such as those of university hospitals. It also highlights the key role of technologies and information systems in improving decision-making and performance monitoring.

The contextualization of control systems

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Contingency theory has profoundly influenced the design of management control systems. OTLEY emphasizes that control practices must reflect organizational and environmental specificities. For example, in a hospital environment characterized by high uncertainty, rigid control systems such as budgets may be less effective than flexible mechanisms such as performance indicators tailored to care and research.

In university hospitals, contextualization involves, in particular:

- The adoption of dashboards specific to care and student training.
- The implementation of rapid feedback mechanisms to adjust clinical practices in response to changing patient needs.
- The importance of technology and information systems

WOODWARD's work offers a useful perspective for understanding the impact of technology on management control. University hospitals, which use complex information systems to manage patient records and financial data, require control practices that are aligned with these technologies.

For example, modern hospital information systems allow for the integration of real-time indicators, facilitating more responsive and informed decision-making.

Moroccan university hospitals operate in a complex environment characterized by budgetary constraints, strict regulatory requirements, and a diversity of missions. Contingency theory provides a relevant analytical framework for adapting control systems to these local specificities. Aligning management tools, whether decentralized mechanisms in underserved regions or flow optimization in large cities, makes it possible to meet diverse needs and improve overall performance.

A complex and uncertain environment

University hospitals in Morocco operate in an environment marked by unique challenges, including:

- Budgetary constraints: Public funding is often insufficient to meet the growing needs of patients.
- Strict regulations: Public policies impose high standards of quality and performance.
- A diversity of missions: These institutions must balance their teaching, research, and healthcare delivery functions.

These contingencies require appropriate control systems capable of reconciling economic, academic, and clinical requirements.

Aligning control tools with local contingencies

Contingency theory suggests that management tools should be adapted to local specificities. For example:

- In regions with low medical density, decentralized control tools may be more appropriate for responding quickly to patient needs.

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- In large cities, where institutions face high demand pressure, flow optimization mechanisms (such as queue management) can improve efficiency.

Contingency theory provides a powerful theoretical framework for analyzing and designing management control practices in academic hospitals. It offers tools for understanding how contextual factors influence organizational choices and enable performance improvement. However, its application requires in-depth analysis of local specificities and the ability to integrate complementary approaches to address the complex challenges of the hospital sector.

7. Methodology:

The study is based on a qualitative and analytical approach combined with an in-depth documentary review. It draws on:

- Theoretical analysis: use of key organizational theories (agency, resources, contingency) to structure the conceptual framework.
- Documentary review: examination of recent publications on university hospital management control, performance indicators, and resource monitoring practices.
- Comparative analysis: identification of best practices in Moroccan and international university hospitals, comparing the impact of control systems on performance, quality of care, and patient satisfaction.

The data analyzed includes key performance indicators such as bed occupancy rates, average length of stay, and patient satisfaction, as well as organizational mechanisms such as dashboards, internal audits, and incentive systems.

8. Results

1- Reduced agency costs:

Performance monitoring systems and dashboards reduce information asymmetry and align agents' objectives with those of the institution.

Financial and non-financial incentives encourage staff to adhere to strategic objectives, thereby improving the quality of care and productivity.

Internal audits and continuing education help limit opportunistic behavior and strengthen staff skills.

2- Strategic resource allocation:

Proactive management of financial, human, and technological resources optimizes clinical and academic performance.

Hospitals that use advanced reporting systems and dynamic dashboards demonstrate greater efficiency and increased patient satisfaction.

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3- Adaptation to the organizational context:

Contingency theory shows that control tools must be adapted to local specificities, such as regional medical density or demand pressure in large cities.

The integration of modern information systems improves responsiveness and decision-making.

9. Discussion

The results confirm that the effectiveness of university hospital management control depends on a combination of several mechanisms: performance monitoring, incentives, audits, and resource management. Agency theory explains why opportunistic behavior can be limited by appropriate control systems. Resource theory highlights the importance of human capital and the optimization of internal resources. Contingency theory allows control practices to be adapted to organizational and environmental specificities.

This theoretical integration provides a robust framework for designing flexible and effective control systems capable of reconciling quality of care, academic excellence, and financial efficiency. The results also highlight the importance of adapting to local contexts, particularly in the case of Moroccan university hospitals facing strict budgetary and regulatory constraints.

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Conclusion

The objective of this article was to analyze how management control can contribute to improving the performance of university hospitals by drawing on the combined contributions of agency, resource, and contingency theories. In a hospital environment characterized by organizational complexity, multiple stakeholders, and increasing pressure on resources, management control proves to be an indispensable strategic lever for ensuring efficient, transparent, and results-oriented management.

The analyses conducted have shown that the implementation of appropriate control mechanisms reduces agency costs by limiting opportunistic behavior and strengthening the accountability of stakeholders. Management control also contributes to better resource allocation by ensuring consistency between institutional objectives, operational needs, and budgetary constraints. Furthermore, the integration of resource theory highlights the importance of human capital, organizational skills, and a culture of performance as drivers of sustainable success. Finally, the contingent approach emphasizes that the effectiveness of the control system depends on its ability to adapt to the specific structural, cultural, and environmental characteristics of each university hospital.

Thus, management control should not be seen as a simple technical tool for budget monitoring, but rather as an instrument of strategic management and governance. It promotes transparency, cross-functional coordination, and communication between medical, administrative, and academic stakeholders, while supporting decision-making based on objective data and relevant performance indicators.

From a managerial perspective, the results of this study encourage hospital managers to strengthen internal control mechanisms, develop integrated information systems, and establish a culture of performance shared by all staff. On a theoretical level, the combination of agency, resource, and contingency approaches provides a robust conceptual framework for understanding the complexity of hospital management and proposing more flexible management models that are better suited to the realities on the ground.

Finally, this research opens up interesting avenues for further exploration. It would be useful to extend the analysis to other hospital contexts, both public and private, in order to compare control practices and their effects on performance. Similarly, future empirical studies could explore the impact of digitalization, artificial intelligence, and decision support systems on the effectiveness of hospital management control. These extensions would enrich academic thinking and strengthen the link between research and managerial practice in the healthcare sector.

Ultimately, management control appears to be an essential driver of performance, transparency, and sustainability within university hospitals. When implemented in an appropriate, participatory manner that is aligned with organizational specificities, it represents a major lever for reconciling economic imperatives, quality of care, and the social mission of the hospital institution.

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