Relationship between management control systems and organizational change:
Results of an exploratory study

Relation entre les systèmes de contrôle de gestion et le changement organisationnel :
Résultats d'une étude exploratoire

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Abstract :

The objective of this study is to understand the relationship between management control systems (MCS) and organizational change as perceived and implemented by administrative staff within public healthcare organizations. After reviewing existing literature, the authors chose to adopt (Simons,1995) levers framework, with a particular focus on the two styles (interactive and diagnostic), resource-based view (RBV) (Barney, 1991), (Penrose, 1959), (Wernerfelt, 1984), and literature on organizational change. The authors' methodology relies on qualitative analysis, primarily based on data collected through semi-structured interviews with hospital administrative staff (n=25). The results suggest that the interactive use of management control systems has a positive and significant impact on strategic flexibility, employee empowerment, and organizational learning. Furthermore, it has been confirmed that these three capabilities play a mediating role in the relationship between interactive use of MCS and organizational change. Conversely, no correlation was observed between diagnostic use of management control systems and organizational change through these three capabilities.

Keywords: MCS ; organizational change ; organizational dynamic capabilities.

Résumé :

L'objectif de cette étude est de comprendre la relation entre les systèmes de contrôle de gestion (SCG) et le changement organisationnel tel que perçu et mis en œuvre par le personnel administratif au sein des organisations hospitalières publiques. Après avoir examiné la littérature existante, les auteurs ont choisi d'adopter le cadre des leviers de (Simons,1995), en mettant particulièrement l'accent sur deux styles (interactif et diagnostique), la vision basée sur les ressources (VBR) (Barney, 1991) ,(Penrose, 1959), (Wernerfelt, 1984), et la littérature sur le changement organisationnel. La méthodologie des auteurs repose sur une analyse qualitative, principalement basée sur des données recueillies à travers des entretiens semi-structurés avec le personnel administratif hospitalier (n=25). Les résultats suggèrent que l'utilisation interactive des systèmes de contrôle de gestion a un impact positif et significatif sur les capacités de la flexibilité stratégique, la responsabilisation des employés et l'apprentissage organisationnel. De plus, il a été confirmé que ces trois capacités jouent un rôle de médiation dans la relation entre le style ineractif d'utlisation des SCG et le changement organisationnel. À l'inverse, aucune corrélation n'a été observée entre l'utilisation diagnostique des (SCG) et le changement organisationnel à travers ces trois capacités.

Mots-clés : SCG, changement organisationnel, capacités dynamiques organisationnelles.

INTRODUCTION

Morocco, like other countries, especially in the West, has adopted a strategy for modernizing the public sector based on the principles of New Public Management (NPM). Consequently, the healthcare sector has been among the most affected by (NPM) practices. According to (BELGHITI, 2001), the healthcare sector reform is "a sustained and decisive change to enhance the effectiveness, fairness, and efficiency of the healthcare sector." However, despite the efforts made and declared ambitions, the results of the reforms implemented in the public sectors in general, and the healthcare sector in particular, in Morocco, remain below the expected outcomes. The annual reports of the Court of Auditors and the reports of parliamentary investigative commissions are indisputable evidence of the poor governance in Morocco's public sectors, as noted by (Arbaoui and Oubouali, 2023). Faced with these shortcomings, it is necessary to examine the role of control systems promoted within the framework of (NPM), considering their potential to combat administrative procedural complexity and bureaucratic governance.

MCS are the driving force behind organizational change (Nuhu et al., 2019). In the literature on management accounting research, the central role of (MCS) in organizational change is well established (Evans et al., 2015). This line of research is relevant in many respects. Firstly, few studies have delved into the impact of the use of (MCS) on organizational change (Kober et al, 2007), (Naranjo-Gil and Hartmann, 2007), (Nuhu et al, 2019). Additionally, according to (Henri ,2006), the impact of (MCS) on organizational outcomes seems to lie at the level of capabilities. Furthermore, while earlier studies (Bisbe et al, 2004), (Henri, 2006) have examined the impact of MCS on organizational dynamic capabilities, they have primarily focused on the mediating role of these dynamic capabilities in the relationship between styles of MCS use and organizational performance, ignoring other organizational outcomes, such as organizational change (Nuhu et al., 2019).

In Morocco, despite the attention given to MCS in the context of public policies and public management, no study analyzes these internal mechanisms of public sector organizations to understand how decision-makers use MCS to drive organizational outcomes and support the creation of a sustainable competitive advantage. In this context, this article aims to address the main question: "To what extent could the introduction of a management control system become an essential lever for organizational change in public hospital organizations in Morocco?". This

article is organized as follows: after the introduction and literature review, we present the methodology, research results, conclusion, and bibliographical references.

1. LITERATURE REVIEW

1.1 Theoretical Arguments

In recent years, several theories and models have been employed to explain the relationship between the design and use of (MCS) and organizational strategy in various organizational contexts. Notable frameworks include the control framework by Merchant and Van der Stede (2007), Malmi and Brown's framework (2008), and Snell's three types of controls (1992). A highly popular framework in this regard is Simons framework (1995), which focuses on four control levers: belief systems, boundary systems, diagnostic control systems, and interactive control systems. According to (Simons,1995), the development of this framework serves two objectives: implementing the organization's strategy and reformulating it. Additionally, Simons' model has been validated by various researchers (Abernethy and Brownell, 1999), (Bisbe and Otley, 2004), (Henri, 2006b), (Kober et al, 2007), (Ferreira and Otley, 2009). Simons model has also undergone multiple improvements and adaptations, initiated by the author himself (2000), (Widener , 2007), (Tessier and Otley (2012). In the literature, contingency theory and the resource-based view (Henri, 2006) are among the discussed theories. By consolidating and enhancing previous research on the use of control systems, the created model builds on the conceptual and empirical similarities of these theories. Simons model is considered a substantial contribution to research, synthesizing over twenty-five years of research on the use of control systems by aggregating multiple variables that have significant effects on organizational outcomes (Evan, 2015).

1.2. Previous research

Within the realm of (MCS) efficiency, the majority of studies that have examined the relationship between MCS and organizational outcomes have particularly focused on organizational performance and organizational learning (Evan, 2015). A limited number of studies have explored the impact of using control systems on organizational change as an organizational outcome (Kober et al, 2007), (Naranjo-Gil and Hartmann, 2007), (Nuhu et al, 2019). Among these authors, (Nuhu et al, 2019) conducted original empirical work on the effects of (MCS) on organizational change through the roles of dynamic capabilities. In this vein, this study refocuses its attention on Simons (1995) framework and extends the work of

(Nuhu et al, 2019). It aspires to broaden this understanding by integrating the critical dimension of organizational learning in the unique context of Morocco, with a particular emphasis on public sector hospital organizations (El Kezazy and Hilmi, 2023).

### 1.3. Formulation of hypotheses and research model

Figure 1 consolidates our research hypotheses. Within Simons' levers of control framework, the variable "diagnostic style of (MCS) use" refers to the utilization of MCS as a feedback mechanism for monitoring and correcting performance (Simons, 1994). Researchers have demonstrated that this variable stifles creative and innovative efforts. Indeed, we posit that the diagnostic style of MCS use may not be a conducive antecedent for generating and maintaining capacities for strategic flexibility, employee autonomy, and organizational learning. Therefore, we hypothesize the following:

H1.1: The diagnostic style of (MCS) use is negatively correlated with strategic flexibility in public healthcare organizations.

H1.2: The diagnostic style of MCS use is negatively correlated with employee autonomy in public healthcare organizations.

H1.3: The diagnostic style of MCS use is negatively correlated with organizational learning in public healthcare organizations.

Figure 1: Research Model (Developed In-House)
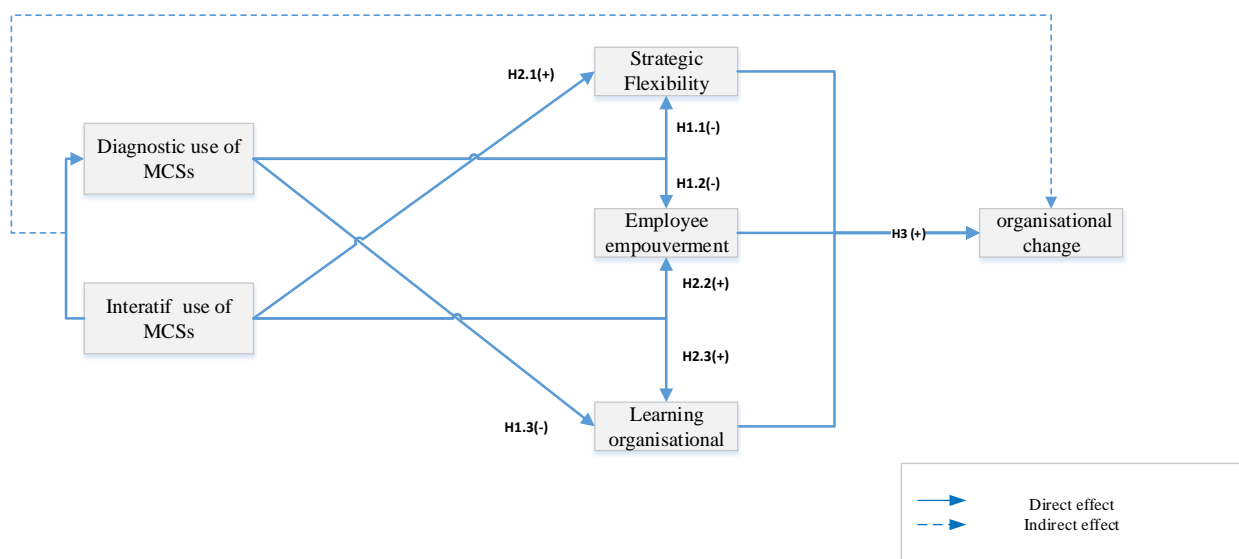
Source: Authors

The variable "interactive style of (MCS) use" refers to the utilization of MCS to promote learning and opportunity-seeking behavior (Theriou et al, 2009). We believe that the interactive style of MCS use may serve as a favorable antecedent for generating and sustaining capacities for strategic flexibility, employee autonomy, and organizational learning. Therefore, we hypothesize the following:

H2.1: The interactive style of (MCS) use is positively correlated with strategic flexibility in public healthcare organizations.

H2.2: The interactive style of MCS use is positively correlated with employee autonomy in public healthcare organizations.

H2.3: The interactive style of MCS use is positively correlated with organizational learning in public healthcare organizations.

According to the resource-based theory, organizational dynamic capabilities refer to internally developed attributes that enable organizations to coordinate and leverage their resources to perform tasks and/or activities (Ulrich and Lake, 1991). Three organizational dynamic capabilities are examined in this study:

The variable "strategic flexibility" refers to the degree associated with an organization's capacity to adapt and respond to anticipated and unforeseen changes (Young and Wiersema, 1999), (Nadkarni and Herrmann, 2010). Researchers have found that organizations developing strategic flexibility are better equipped to implement successful organizational changes.

The variable "employee empowerment" refers to the extent to which the decentralization of decision-making processes within an organization provides frontline employees with more discretion and autonomy (Brymer, 1991). The results of certain research studies have indicated that employees with a high level of empowerment are more inclined to support and actively participate in change initiatives.

The variable "organizational learning" refers to processes and certain types of activities taking place within an organization aimed at developing knowledge, disseminating it, and using it to foster growth, innovation, and excellence (Argyris and Schön, 1978),(Kloot, 1997). Research has revealed that organizations promoting an environment conducive to organizational learning are more likely to integrate positive organizational changes (Hilmi, 2024).

We contend that these three capabilities are essential factors in promoting organizational adaptation and success; therefore, we posit the following hypothesis:

H3.1: Strategic flexibility is positively correlated with organizational change.

H3.2: Employee empowerment is positively correlated with organizational change.

H3.3: Organizational learning is positively correlated with organizational change.

Throughout the preceding sections, we have presented hypotheses regarding the hypothetical correlations between the style of management control system use and the organization's dynamic capabilities such as strategic flexibility, employee autonomy, and organizational learning (H1.1, H1.2, H3.3, H2.1, H2.2, H2.3, respectively), as well as the impact of these capabilities on organizational change (H3.1, H3.2, H3.3). These hypothetical correlations suggest that the effect of the style of management control system use on organizational change will occur through the influence of the aforementioned dynamic capabilities. To be more specific, we believe that the style of management control system use has an indirect effect on organizational change because it has a positive and significant impact on the organization's dynamic capabilities, which, in turn, will drive organizational change. As a result, we formulate Hypothesis 4, which states that: "The capacities of strategic flexibility, employee empowerment, and organizational learning play a mediating role in the relationship between the style of management control system use and organizational change." In this context, sub-hypotheses have been formulated as follows:

H4.1: The diagnostic use of MCS is negatively correlated with organizational change in the presence of the influence of strategic flexibility in public healthcare organizations.

H4.2: The diagnostic use of MCS is negatively correlated with organizational change in the presence of the influence of employee autonomy in public healthcare organizations.

H4.3: The diagnostic use of MCS is negatively correlated with organizational change in the presence of the influence of organizational learning in public healthcare organizations.

H4.4: Interactive use of MCS is positively and significantly correlated with organizational change in the presence of the influence of strategic flexibility in public healthcare organizations.

H4.5: Interactive use of MCS is positively and significantly correlated with organizational change in the presence of the influence of employee autonomy in public healthcare organizations.

H4.6: Interactive use of MCS is positively and significantly correlated with organizational change in the presence of the influence of organizational learning in public healthcare organizations.

2. MATERIALS AND METHODS

2.1 Research Context

Morocco has undergone a wave of reforms aimed at making public organizations more effective and efficient in delivering services to the population, and enhancing transparency and accountability in administrative processes. However, despite the efforts made and the declared ambitions, the outcomes of the reforms in the public sectors, particularly in the healthcare sector in Morocco, fall below expected standards. The annual reports of the Court of Auditors and parliamentary investigative commissions unequivocally demonstrate the governance challenges in Morocco's public sectors (Arbaoui, Oubouali, 2023). Faced with these shortcomings, it is necessary to investigate the role of management control systems within the (NPM) framework, given their potential to address administrative burdens and bureaucratic governance. Recently, an implementation decree n° 2-22-580 has been launched by the Ministry of Finance. It provides guidance and instructions to managers on the operationalization of the management control function within various ministerial departments. However, it does not fully exploit the potential offered by management control systems due to shortcomings regarding their various ways of utilization.

2.2 Study Design

In this research, our main objective is to examine the relationship between management control systems and organizational changes observed within Moroccan public healthcare organizations. To achieve this goal, we have chosen a methodological approach grounded in qualitative analysis. This methodology is inspired by philosophical and psychological principles, aiming to describe individuals' personal experiences regarding a given phenomenon, as directly reported by the participants. This detailed description allows us to extract essential elements from the experiences shared by different individuals facing this phenomenon (Creswell,

2014).Our approach is inductive, starting with a thorough examination of the collected data to identify emerging general themes (Punch, 2005). The researcher begins by collecting detailed information from participants, then organizes them into categories or themes. These themes, in turn, evolve into broader patterns, theories, or generalizations, which are then contextualized with participants' individual experiences and existing knowledge in the literature on this subject (Creswell, 2014).

2.3 Sample and Data Collection

In this research, we applied the principle of maximum diversity to select administrative staff from public healthcare organizations. Our target group included administrative personnel, management controllers, and financial executives. These participants were required to have at least one year of experience in the public healthcare sector. In the context of our qualitative research approach, we chose to use purposive sampling, a non-probabilistic approach recommended, especially when studying a specific cultural domain based on experts. We made this choice to obtain rich and in-depth information from participants related to our research questions. To conduct this qualitative study effectively and achieve our research objectives, it was necessary to gather information and insights from these individuals. Therefore, we decided to use semi-structured interviews as the data collection method (the interview guide is available in Annex 1). Between January and March2023, we conducted 25 interviews, of which 15 were face-to-face and 10 were conducted via telephone, with 10 of them being transcribed. The average duration of each interview was approximately 45 minutes. The decision to conclude the interviews was based on the principle of saturation, which involves continuing data collection until no new or relevant information is added to our understanding of the issue. According to this principle, data saturation was achieved, aligning with recommendations for sample size in qualitative research, as suggested by (Tongco, 2007). All interviews with healthcare organization stakeholders were conducted by the same researcher, and the study's objectives were carefully explained to the participants.

2.4 Data Processing and Analysis

In this qualitative study, our aim is to elucidate the relationship between MCS and organizational change as perceived by administrative staff within public healthcare organizations. To achieve this understanding, we collected data through semi-structured interviews. These interviews were recorded and fully transcribed for future coding. After

conducting twenty-five interviews, we observed that responses were no longer contributing to an increased understanding of our research question. We are now commencing the data analysis to identify themes that shed light on the relationship between MCS and organizational change from the perspective of stakeholders within healthcare organizations. These themes will then be grouped based on the constituent variables of our research model, and significant excerpts will be selected to illustrate each theme.

3. RESULTS AND DISCUSSIONS

3.1 Characteristics of the Respondents

Twenty-five administrative staff voluntarily participated in this study. The majority of the participants were male (n = 15), with an average age of 36 years and an average experience of 8 years. All these participants work in public healthcare organizations in Morocco.

3.2 Thematic Analysis:

The guidelines developed by Braun and Clarke are recognized as the most systematic guide for conducting in-depth thematic analysis (Howitt and Cramer, 2017), (Wilson and MacLean, 2011). Therefore, the thematic analysis of qualitative data in this study was conducted following the guidelines established by (Braun and Clarke, 2006). Specifically, the researcher initiated the analysis by becoming familiar with the collected data through examination and reexamination, taking notes on initial thoughts. Next, comments containing multiple ideas were broken down into statements based on the number of ideas they contained. This phase was followed by the systematic assignment of codes to all statements relevant to the research question of this study. After obtaining a list of all codes, they were grouped into themes or sub-themes based on their relevance to each other. An initial thematic map was established to present these themes and sub-themes. After verifying the alignment of these themes and sub-themes with the original statements, misassociation of some codes was identified. This issue was resolved by merging and renaming certain themes, and grouping some codes under other themes. Finally, the themes and sub-themes were precisely named to reflect what they represent. Throughout this analysis process, Microsoft Excel was used to manage the collected data and information.

Theme 1: Perception of the relationship between the diagnostic use of MCS and strategic flexibility.

According to the interviews with administrative staff associated with this research, MCS are often used to monitor achievements and track progress towards targets, evaluate past performances, and detect deviations from pre-established objectives. According to them, this practice limits their organization's ability to seize opportunities presented by emerging markets and adapt to various changes in their internal environment. The following textual excerpts illustrate this point:

"The MCS we have in place are more focused on backward-looking data, checking what we have achieved. It's not really helping us to be agile and flexible in responding to new opportunities." Questioned 5

"Our current use of management control tends to be more diagnostic, looking at past performances. This hinders our ability to proactively respond to emerging trends and changes in the market." Questioned 7

"We are so focused on analyzing past data, and it's like we are missing out on what's happening now and what could happen in the future. It's not helping us in adapting quickly to new challenges." Questioned 9

The thoughts and perceptions of our interviewees confirm the idea that the diagnostic use of MCS limits strategic latitude. The ability to innovate, make bold decisions, and adapt to new realities is often hindered, potentially reducing competitiveness and the capacity to respond to the ever-changing demands of the healthcare market. This observation aligns with studies by (Simons, 1990, 1995), (Nuhu et al, 2019), (Tessier and Otley, 2012), (Henri , 2006). However, it contradicts the findings of (Cools et al, 2017), who demonstrated that diagnostic use of MCS can support creative efforts by providing clear processes and procedures to guide creative activities.

Theme 2: Perception of the relationship between diagnostic use of MCS and employee empowerment.

All interviewees emphasize a perception that MCS are more often used as instruments of strict control rather than as tools facilitating operational decision-making. The following textual excerpts illustrate this point:

"The way we use management control here is more about monitoring and controlling what we do. It's not really empowering us to make decisions on our own." Questioned 18

"Management control is seen as a way to ensure compliance rather than empowering employees to take initiative or contribute ideas." Questioned 10

"We feel like we are constantly being watched and evaluated. It doesn't give us the freedom to take ownership of our work or feel empowered to suggest improvements." Questioned 1

This analysis highlights the need for healthcare organizations to strike a delicate balance between the necessity for control and the promotion of employee autonomy. Excessive use of the diagnostic style of MCS can lead to detrimental consequences, such as decreased staff motivation, resistance to change, reduced adaptability, and repercussions on the quality of care. This observation aligns with studies by (Tessier and Otley, 2012), (Henri, 2006), and (Simons, 1994).

Theme 3: Perception of the relationship between diagnostic use of MCS and organizational learning.

The majority of individuals participating in this study agree on the idea that the predominantly diagnostic use of MCS limits an organization's ability to learn and adapt. According to them, this may discourage employees from sharing their experiences, experimenting with new approaches, and learning proactively. The following textual excerpts illustrate this point:

"The focus on diagnostic use of management control doesn't encourage a culture of learning. It's more about looking at what went wrong rather than how we can improve and learn from our experiences." Questioned 12

"When everything is about control and checking past performances, there's little room for trying new things or encouraging a culture of continuous learning." Questioned 13

"Our MCS are not designed to facilitate organizational learning. It's more about identifying errors than fostering a culture where mistakes are seen as opportunities to improve." Questioned 11

The diagnostic control system hinders actions and measures of organizational learning. This observation is consistent with the findings of the study by (Simons , 1995).

Theme 4: Perception of the relationship between Interactive use of MCS and strategic flexibility.

According to individuals interviewed in this study, when MCS are used interactively, real-time data can be utilized to monitor performance, identify emerging trends, and make strategic decisions more swiftly. Managers can respond to real-time data and adjust strategy more promptly than if they had to wait for periodic reports. The following textual excerpts illustrate this point:

"The interactive use of MCS allows us to be more agile in our decision-making. We can quickly adapt our strategy based on real-time data, which is crucial in today's dynamic healthcare environment." Questioned 10

"With interactive management control, we can identify issues as they arise, rather than waiting for quarterly reports. This flexibility enables us to respond to challenges and opportunities in a more timely manner." Questioned 17

"Real-time data through interactive management control helps us stay ahead of changes in the healthcare landscape. It's about being proactive in our strategy rather than reactive." Questioned 25

Strategic flexibility represents a significant advantage of using MCS interactively within healthcare organizations. Organizations employing interactive MCS demonstrate a greater ability to quickly adapt to strategic and environmental changes. This result aligns with findings from previous studies (Kober et al., 2007), (Naranjo-Gil and Hartmann, 2006), (Bisbe et al, 2004), (Bruining et al, 2004), (Sakka et al, 2013), (Chenhall et Morris, 1995), (Nuhu et al, 2019).

Thème 5: Perception of the relationship between interactive use of MCS and employee empowerment.

According to the interviews with the participants in this study, when MCS are used interactively, official channels and standards ensuring the participation of frontline employees in the strategic decision-making process can be strengthened to facilitate the exchange of information and knowledge. This fosters a collaborative and open work environment, consequently enhancing employee empowerment. The following textual excerpts illustrate this point:

"Interactive use of MCS promotes a collaborative atmosphere where frontline employees feel empowered to contribute to strategic decision-making. It opens up channels for information exchange and knowledge sharing." Questioned 22

"By employing MCS interactively, we create a more transparent and inclusive decision-making process. Frontline employees have a voice in strategic discussions, which leads to a sense of empowerment." Questioned 8

"The interactive use of MCS facilitates a culture of openness and collaboration. It empowers employees by involving them in decision-making processes and valuing their contributions to strategic initiatives." Questioned 2

Organizations that adopt an interactive approach to MCS, involving employees more in the planning and decision-making process, experience more autonomous and motivated employees. This finding is consistent with previous studies by (Sakka et al, 2013), (Henri, 2006), and (Malmi and Brown, 2008). However, it contradicts the results of studies by (Bisbe and Otley, 2004), and (Nuhu et al, 2019).

Theme 6: Perception of the relationship between the interactive style of using MCS and organizational learning of employees.

For the employees who agreed to participate in this study, the interactive use of MCS is a key precursor to organizational learning. It enables employees to collaborate, analyze real-time data, and share insights. This fosters an environment conducive to continuous learning, where employees can draw lessons from data, experiences, and contributions of other team members. The following textual excerpts illustrate this point:

"The interactive use of MCS allows us to work together, analyze data as it happens, and share valuable insights among team members." Questioned 5

"Through interactive MCS, our organization has created an environment where learning is continuous, and employees benefit from each other's experiences and contributions." Questioned 20

The interactive use of MCS appears to be a catalyst for organizational learning. Organizations that promote interactive use of MCS encourage better knowledge sharing and enhance organizational learning. This finding aligns with (Simons , 1995, 2000), who proposed that the

interactive approach to using control systems promotes organizational learning, as well as other studies by (Abernethy and Brownell, 1999).

Theme 7: Perception of the relationship between strategic fexibility and organizational Change

In our interviews with the employees participating in this study, it became evident that strategic flexibility is closely linked to the organization's ability to undertake significant changes. Administrative staff emphasized that strategic flexibility allows their organization to adapt quickly to market developments, new technologies, and changes in the external and internal environment. This capacity for rapid adaptation is considered crucial for addressing the evolving challenges in the sector and fostering proactive responsiveness to market dynamics. The following textual excerpts reflect this perspective:

"Strategic flexibility is a key element that allows us to stay ahead. Through it, we can react quickly to market trends, adopt new technologies, and adjust our approach based on internal and external changes." Questioned 21

"Our ability to make significant changes relies on our strategic flexibility. It provides us with the agility needed to navigate in an ever-changing environment." Questioned 18

"Strategic flexibility is not merely an option; it's a necessity to remain competitive. It enables us to anticipate changes, innovate, and stay in tune with the changing needs of our stakeholders." Questioned 16

Organizations that exhibit strategic flexibility are better equipped to navigate an ever-changing environment, making them more capable of initiating and effectively managing the organizational changes necessary to remain competitive and develop a sustainable competitive advantage. This conclusion aligns with findings from studies such as (Feletto et al, 2011), (Tienari and Tainio, 1999), and (Nuhu et al, 2019).

Theme 8: Perception of the relationship between employee empowerment and organizational change

The majority of employees interviewed in this study reported that they encourage the empowerment of their employees by giving them the opportunity to actively contribute to decision-making, including operational managers, senior executives, and lower-level employees. Some emphasized that with a high level of autonomy, their employees become

engaged agents in the organizational transformation process, which can facilitate the implementation of changes, whether related to organizational structure, processes, or culture. The following textual excerpts illustrate this point:

"Yes, that's the idea. We always ensure the autonomy of our employees; as a result, they become internal change agents, strengthening our institution's ability to adapt, innovate, and succeed in an ever-evolving environment." Questioned 19

"Our autonomy gives us the confidence to experiment with new approaches. This creates an environment where we are open to change and continuous improvement." Questioned 7

"In our case, the most innovative projects often come from autonomous teams. This reinforces our belief that autonomy unleashes creativity and encourages the exploration of new ideas." Questioned 23

Employee empowerment is a crucial driver of organizational change. Hospital organizations can effectively respond to market shifts, innovate, lead changes, and achieve sustainable advantages in a dynamic healthcare environment. This conclusion aligns with the findings of studies by (Chang and Liu, 2008), (Gal-Or and Amit, 1998), (Iverson, 1996), (Lawler, 1994) and contradicts the study by (Nuhu et al, 2019).

Thème 9: Perception of the relationship between organizational learning and organizational change

The authors highlight the significance attributed by individuals participating in this study to continuous learning practices as essential drivers for successful organizational change. This capability has a meaningful impact on various aspects of the organization. The following textual excerpts illustrate this point:

"In the field, teams with a learning culture are more inclined to experiment with new approaches. This willingness to experiment serves as a strong indicator of a positive attitude towards organizational change." Questioned 14

"Teams undergoing regular training are more adept at adjusting their working methods to meet the changing needs of the market." Questioned 20

"Following a series of specific training sessions, our employees actively incorporate research findings into their daily practices. This enhances our ability to stay at the forefront of medical advancements and provide state-of-the-art care." Questioned 25

The study revealed that organizations that promote continuous organizational learning were more likely to successfully integrate innovations into their production processes, leading to positive organizational changes. This finding aligns with the work of (Simons, 1995) and the proposition put forth by the authors (NAFZAOUI & BELKINDOUSSI, 2021).

Thème 10: Perception of the mediating relationship of strategic flexibility between the diagnostic style of MCS use and organizational change

The majority of participants in this study asserted that despite the role played by the diagnostic use of Management Control Systems (MCS) in achieving organizational objectives and its significance in maintaining the status quo within their organization, it can be associated with resistance to change. In the public hospital sector, this resistance might be exacerbated when strategic flexibility is limited. The following textual excerpts illustrate this point:

"By focusing on correcting deviations from past objectives, it can create a reactive culture rather than a proactive one. At the same time, when strategic flexibility is limited, our organization may struggle to quickly adapt to the changing needs of the healthcare sector, hindering the change process." Questioned 5

"We primarily use our MCS diagnostically to assess past performances. So, if an opportunity for change arises, our diagnostic culture leads to resistance because our employees are accustomed to adhering to established practices rather than anticipating and adopting new approaches." Questioned 17

"Yes, exactly. To foster organizational change, it may be necessary to rethink how MCS are used and promote a more flexible strategic culture capable of quickly adapting to changes in the healthcare environment." Questioned 7

Therefore, the hypothesis suggests that the diagnostic use of MCS and low strategic flexibility may impede organizational change in public hospital organizations. This finding aligns with the study by (Nuhu et al, 2019).

Theme 11: Perception of the mediating role of employee empowerment in the relationship between diagnostic use of MCS and organizational change.

Based on interviews conducted in this study, the authors concluded that the diagnostic use of MCS hinders initiatives for organizational change, especially when employee autonomy is limited. The following excerpts illustrate this point:

"Indeed, the diagnostic use of MCS is predominant in our organization, with a strict focus on past performance. When a change initiative is proposed, our employees, who have limited autonomy, may perceive it as an undesirable disruption because they have not been actively involved in the decision-making process." Questioned 3

"Yes, that's the idea. To promote organizational change, it may be beneficial to reconsider how MCS are used and to foster an organizational culture that values employee autonomy, thereby promoting engagement and acceptance of change." Questioned 9

"Employee autonomy is impeded by a persistent reliance on diagnostic models of MCS. Even when employees have the freedom to act autonomously, a preference for existing models can inhibit the exploration of new approaches." Questioned 6

The diagnostic use of MCS is negatively correlated with organizational change, especially when employee autonomy has limited influence in public-sector hospital organizations. This result aligns with the studies conducted by (Simons, 1990, 1994, 1995) and contradicts the findings of (Nuhu et al, 2019).

Theme 12: Perception of the mediating role of organizational learning in the relationship between diagnostic use of MCS and organizational change.

All personnel involved in this study have indicated the idea that the diagnostic use of MCS can impede organizational change, especially when organizational learning is limited. They emphasized that if the organization does not proactively learn, resistance to change can be more predominant. The following excerpts illustrate this point:

"Our MCS are primarily used diagnostically, analyzing past results without actively seeking insights for the future. If a change initiative is proposed, the lack of organizational learning can lead to increased resistance because the organization has not developed a culture of adaptability." Questioned 14

"We will create a mindset focused on the status quo, where decisions are made based on historical data rather than anticipating future needs. So if organizational learning is limited, the organization may lack agility to adapt and innovate, thereby hindering change." Questioned 2

The diagnostic use of MCS and a low level of organizational learning can impede organizational change in public-sector hospital organizations. This result aligns with the studies conducted by (Simons,1990, 1994, 1995) and contradicts the findings of (Nuhu et al, 2019).

Theme 13: Perception of the mediating role of strategic flexibility in the relationship between interactive use of MCS and organizational change.

Feedback from our interviewees revolves around the idea that the interactive use of MCS, characterized by active engagement with data for decision-making, can promote organizational change, especially when strategic flexibility is high. The combination of these two elements can create a dynamic conducive to adaptation and innovation. The following excerpts illustrate this point:

"Our leadership always ensures active integration of MCS into its decision-making processes, encouraging managers and teams to collaborate in real-time for data analysis. Consequently, if an opportunity for change arises, this interaction allows for a quick assessment of implications, facilitating the transition to new initiatives." Questioned 1

"By using our MCS interactively and cultivating strategic flexibility, we can create an environment conducive to constant adaptation, thereby fostering the success of organizational change initiatives." Questioned 10

Strategic flexibility plays a mediating role between the interactive use of MCS and the drive for organizational change. This is consistent with the findings of the study by (Nuhu et al, 2019).

Theme 14: Perception of the mediating role of employee empowerment in the relationship between interactive use of MCS and organizational change.

For an overwhelming majority of administrative staff who agreed to participate in this research, employee empowerment is a mediating factor between the interactive use of control systems and organizational change. They emphasize that active employee participation in the decision-making process promotes organizational change, especially when employees have high

autonomy. The combination of these two elements can stimulate innovation and a willingness to embrace new approaches. The following excerpts illustrate this point:

"The interactive use of MCS allows employees to actively participate in data analysis, decision-making, and strategy formulation. When employees have high autonomy, they are more inclined to engage in the change process, propose innovative ideas, and actively support change initiatives." Questioned 6

"Imagine a hospital where MCS are used interactively, encouraging employees to participate in information-sharing sessions and contribute to decision-making. When a change initiative is introduced, employees with high autonomy are more likely to see it as an opportunity to make improvements and innovate." Questioned 11

Despite the coexistence of various professional logics in the hospital environment, the realization of organizational change initiatives within hospital organizations requires the creation of an environment conducive to adaptation and change acceptance, thereby strengthening their ability to evolve effectively. This finding is not consistent with the results of previous studies by (Nuhu et al, 2019).

Theme 15: Perception of the mediating role of organizational learning in the relationship between interactive use of MCS and organizational change.

The majority of administrative staff interviewed in this research have stated that the interactive use of MCS creates an environment conducive to organizational learning, fostering communication, real-time responsiveness to information, rapid identification of best practices, and reflection on mistakes. This continuous learning enhances the organization's ability to adapt and innovate, thereby facilitating organizational change.

"By using management control systems interactively, we tracked the impact of restructuring on workload and employee satisfaction in real-time. The data fueled regular discussions within teams, promoting continuous learning. We identified necessary adjustments, improved our internal and external communication processes, and integrated these lessons into our future human resources management initiatives". Questioned 19

"Recently, we implemented a new electronic medical records management method. Through the interactive use of our management control systems, we were able to monitor the transition in real-time, identify potential issues, and adjust our approach. Feedback was crucial in swiftly

resolving obstacles, and the learning from this experience was applied to other change initiatives". Questioned 13

The combination of interactive use of MCS and a high level of organizational learning stimulates organizational change in public-sector hospital organizations. Hospital organizations can strengthen their ability to adapt to changes, innovate, and succeed in a constantly evolving environment. This result is novel and stems from a proposition by the authors, (NAFZAOUI & BELKINDOUSSI, 2021).

CONCLUSION :

The objective of this study was to use Simons' theoretical model (1995) to understand the factors influencing the relationship between Management Control Systems (MCS) and organizational change by key actors in public-sector hospital organizations in Morocco. Our work aims to contribute to the success of the implementation of a modern management control system in Morocco and to provide practitioners and decision-makers with the benefits of this new approach to using MCS. Our results suggest that the interactive use of MCS has a positive and significant impact on organizational change when influenced by three dynamic capabilities: strategic flexibility, employee empowerment, and organizational learning. From a practical standpoint, the findings of this study can assist the entities responsible for implementing a management control system at the ministerial level in understanding key factors affecting the effectiveness of this modern approach to MCS. They can also help in developing specific strategies and targeted policies for successful implementation. From a theoretical perspective, our study validates and extends the model from the study by Nuhu et al. (2019) by adding a mediating variable as a dynamic capability from the scientific literature. This responds to numerous calls for examination in studies by (Ford, 2005) and Nuhu (2019), encouraging researchers to test this new model, particularly in other sectors within the public service or in an entirely private context in Morocco or another emerging country. The authors view the results of this study as a logical and reasonable starting point in exploring factors that may affect the relationship between MCS and organizational change in Moroccan hospital organizations. To advance our understanding, the next step in our research will involve testing the proposed results in the conceptual model using a confirmatory quantitative approach.

APPENDIX 1: Semi-Structured Interview Guide for Administrative Staff in Moroccan Hospital Organizations

1. Introduction to the Framework, Interest, and Purpose of Our Research: Hello, thank you for taking the time to participate in this interview. The objective of our research is to study and analyze the relationship between Management Control Systems (SCG) and organizational change. Your opinions and insights will be crucial to our research. We appreciate your time, and please be assured that all information will be treated anonymously.

2. Presentation of Administrative Personnel (Age, Gender, Experience, Education Level) and Their Responsibilities, Tasks... Position Age Status Gender Experience Workplace

3. Definitions: What do you understand by Management Control Systems, Organizational Dynamic Capabilities, and Organizational Change?

Theme 1: Relationship between the Interactive Use of MCS and Strategic Flexibility

1. Do you believe that identifying strategic uncertainties and developing action plans will influence strategic flexibility?

2. Do you think scheduling face-to-face meetings between operational managers and senior control management executives will influence strategic flexibility?

3. Do you believe continuous interaction between operational managers and senior control management executives will influence strategic flexibility?

4. Do you think if information generated by the SCG is a recurring agenda in discussions between operational managers and senior control management executives, it will influence strategic flexibility?

5. Do you think discussions between operational managers and senior control management executives about potential changes will influence strategic flexibility?

Theme 2: Relationship between the Interactive Use of MCS and Employee Empowerment

1. Do you believe that identifying strategic uncertainties and developing action plans will influence employee empowerment?

2. Do you think scheduling face-to-face meetings between operational managers and senior control management executives will influence employee empowerment?

3. Do you believe continuous interaction between operational managers and senior control management executives will influence employee empowerment?

4. Do you think if information generated by the SCG is a recurring agenda in discussions between operational managers and senior control management executives, it will influence employee empowerment?

5. Do you think discussions between operational managers and senior control management executives about potential changes will influence employee empowerment?

Theme 3: Relationship between the Interactive Use of MCS and Organizational Learning

1. Do you believe that identifying strategic uncertainties and developing action plans will influence organizational learning?

2. Do you think scheduling face-to-face meetings between operational managers and senior control management executives will influence organizational learning?

3. Do you believe continuous interaction between operational managers and senior control management executives will influence organizational learning?

4. Do you think if information generated by the SCG is a recurring agenda in discussions between operational managers and senior control management executives, it will influence organizational learning?

5. Do you think discussions between operational managers and senior control management executives about potential changes will influence organizational learning?

Theme 4: Relationship between the Diagnostic Use of MCS and Strategic Flexibility

1. Do you think tracking objectives and controlling results will influence strategic flexibility?

2. Do you think operational planning will influence strategic flexibility?

3. Do you think performance analysis will influence strategic flexibility?

4. Do you think identifying variances and proposing corrective actions will influence strategic flexibility?

Theme 5: Relationship between the Diagnostic Use of MCS and Employee Empowerment

1. Do you think tracking objectives and controlling results will influence employee empowerment?

2. Do you think operational planning will influence employee empowerment?

3. Do you think performance analysis will influence employee empowerment?

4. Do you think identifying variances and proposing corrective actions will influence employee empowerment?

Theme 6: Relationship between the Diagnostic Use of MCS and Organizational Learning

1. Do you think tracking objectives and controlling results will influence organizational learning?

2. Do you think operational planning will influence organizational learning?

3. Do you think performance analysis will influence organizational learning?

4. Do you think identifying variances and proposing corrective actions will influence organizational learning?

Theme 7: Relationship between Strategic Flexibility and Organizational Change

1. Do you think the evolution of technological needs will influence organizational change?

2. Do you think changes in environmental conditions will influence organizational change?

3. Do you think opportunities in emerging markets will influence organizational change?

4. Do you think changes in business partnerships will influence organizational change?

Theme 8: Relationship between Employee Empowerment and Organizational Change

1. Do you think high levels of collaboration and employee involvement in the decision-making process will influence organizational change?

2. Do you think the existence of official channels and certain norms or rules to ensure employee participation in the decision-making process will influence organizational change?

3. Do you think employees having the power to make and implement decisions regarding their tasks will influence organizational change?

4. Do you think the direct contribution of employees in the decision-making process will influence organizational change?

Theme 9: Relationship between Organizational Learning and Organizational Change

1. Do you think the ability to learn is key to improvement and will influence organizational change?

2. Do you think fundamental values considering learning as the key to improvement will influence organizational change?

3. Do you think that when we stop learning, we put our future at risk, influencing organizational change?

4. Do you think employee learning is an investment, not an expense, influencing organizational change?

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