



When Innovation and Commitment Don't Pay: Evidence from Moroccan State-Owned Enterprises

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ABSTRACT

Purpose: Innovation capability and organizational commitment are widely assumed to enhance organizational performance, yet evidence from state-owned enterprises (SOEs), especially in developing countries, remains limited. This study examines how innovation capability and two forms of organizational commitment—affffective and calculative—relate to financial and social performance in Moroccan public commercial offices (MPCO).

Design/methodology/approach: A conceptual model was developed and tested using Partial Least Squares Structural Equation Modelling (PLS-SEM) based on survey data from 140 managers in five major Moroccan SOEs (ONCF, ONDA, ONP, ONEE and ONHYM). Organizational performance was operationalized as a multidimensional construct, distinguishing financial and social performance.

Findings: Contrary to prevailing assumptions, the three hypothesized positive relationships between innovation capability, affective commitment, calculative commitment and overall organizational performance are not supported. At the disaggregated level, innovation capability is positively associated with financial performance but has no significant effect on social performance.

Affective organizational commitment shows a paradoxical pattern: it significantly enhances social performance while simultaneously exerting a significant negative influence on financial performance. Calculative commitment does not display any significant effect on either performance dimension. These results highlight the complex and sometimes conflicting pathways through which internal organizational drivers affect different aspects of SOE performance.

Research limitations/implications: The study focuses on Moroccan SOEs and relies on cross-sectional, self-reported data from managers, which may limit generalizability and does not allow for causal inference. Future research should employ longitudinal and mixed-methods designs and extend the analysis to other national and sectoral contexts.

Practical implications: For policymakers and SOE leaders, the findings underscore that innovation and commitment are not uniformly performance-enhancing. Strategies should explicitly balance financial and social objectives and be tailored to the specific institutional and bureaucratic constraints of SOEs. Affective commitment can be leveraged to strengthen social outcomes, but without appropriate governance and performance systems it may undermine financial sustainability.

Originality/value: This study challenges the widespread assumption that innovation capability and organizational commitment are universally beneficial. By disentangling financial and social performance in a sample of SOEs in a developing country, it provides novel empirical evidence on the contingent and multidimensional nature of performance drivers in the public enterprise context.

Keywords: Organizational performance; State-Owned-enterprises; Innovation capability; Organizational commitment JEL classification: 000; O31; D91



List of abbreviations

SOEs = State-Owned Enterprises
MPCO = Moroccan Public Commercial Offices
OP = Organizational performance (overall)
FP = Financial performance
SP = Social performance
InOC = Innovation capability
ImO_Aff = Affective organizational commitment
ImO_Cal = Calculative organizational commitment
KMO = Kaiser–Meyer–Olkin criterion
AVE = Average Variance Extracted

INTRODUCTION

The prevailing narrative linking innovation capability and employee's organizational commitment directly to organizational performance encounters nuanced challenges in the realm of state-owned enterprises (SOEs), especially within the context of Morocco's public sector. While theorists like Solow (1956) have traditionally aligned technological innovation and organizational commitment with economic advancement, recent empirical studies, such as those by Liu & al. (2021), suggest that this correlation might not be as pronounced in SOEs as it is in private enterprises.

This scholarly article aims to explore the distinct dynamics of all five of the Moroccan public commercial offices including the National Railway Office (ONCF), the National Airports Office (ONDA), the National Fisheries Office (ONP), the National Office of Electricity and Drinking Water (ONEE), and the National Office of Hydrocarbons and Mines (ONHYM). These entities serve as crucial pillars within Morocco's economic framework, providing a unique lens through which to examine whether the capability of innovation and employees' organizational commitment impact public sector performance in the same way it does in the private sector.

The exploration begins with a review of the theoretical underpinnings of both innovation capability and organizational commitment in organizations, enriched by insights from other authors (Aghion & al. 2005, El-Azzouzi et al. 2024), who discuss the role of competitive pressures and market dynamics in fostering innovation and others such as Anwar & Abdullah, (2021) who stress the importance of engaged employees in order to reach high levels of performance. However, in contrast to private firms, SOEs such as those studied may not exhibit a strong link between innovation and performance, nor between organizational performance and commitment. This is in theory due to their operational goals focused more on public service delivery than on profitability and market competition. This divergence is underscored by Fang & al. (2017), who suggest that the absence of competitive necessity in many public sectors could reduce the imperative for innovation. No other studies have mentioned an effect other than positive for organizational commitment.

Further complicating the landscape are the bureaucratic characteristics inherent to SOEs, which may impede rapid innovation. SOEs have a mission to deliver services, this objective doesn't depend on employees' commitment. This observation aligns with the findings of Ayyagari & al. (2011), who note that organizational structure and governance can significantly influence innovation outcomes. The slower decision-making processes and the potential for risk aversion in public enterprises raise questions about the applicability of conventional private sector innovation strategies within public sector frameworks.

On the other hand, as an important part of national governance, the public sector bears the burden of providing public services and allocating resources to the population. Improving the organizational commitment of public sector employees is key to achieving efficient and high-quality public services (Adebawojo & Akindehinde, 2017). In recent times, there has been a growing focus on the commitment of employees to their organizations and the various elements that influence it (Adebawojo, Oladipupo Akindehinde, et al., 2015). Superior trust perceived by individuals is reflected by perceived reliance and disclosure from superiors, whose help and support

may minimize their work stress (Azzarradi & Fikri, 2017), which is an important positive work characteristic that explains organizational commitment in individuals (Boubakri et al., 2019). Employees often view their superiors' support positively due to the trust and openness shared, leading to enhanced organizational commitment (Lee et al., 2017; Zhang et al., 2021), creating a positive work atmosphere (Outmane, 2021). Thus, this study will analyse the impact of organizational commitment, specifically affective and calculative commitment, on the organizational performance of Moroccan Public Commercial Offices (MPCO).

Given the sparse literature specifically addressing the nuances of innovation in SOEs, particularly in a developing country context, this study contributes to filling that gap. In fact, a quick search on ScienceDirect using the formula “innovation capability” AND (“SOE” OR “public sector”)” and another one using the formula ““innovation capability” AND (“SOE” OR “public sector”)” in the title and abstract fields yields only 1 and 8 articles respectively across all fields and years combined. Naturally, the question as to “why is there such a limited body of research on innovation capability within state-owned enterprises and the public sector?” naturally arises. This question is valuable because it not only acknowledges the gap but also invites exploration into the reasons behind it and the potential impacts on how SOEs are managed and how innovation policies are formulated. This could lead to further investigations, including: What are the barriers to conducting research on innovation in SOEs and the public sector? How does the lack of academic focus on innovation in these sectors affect the development and implementation of innovation strategies? What can be done to stimulate more research and discussion on this topic within the academic and policy-making communities?

Exploring these aspects could contribute significantly to enhancing our understanding of innovation dynamics in the public sector and could guide effective policy-making and management strategies tailored to the unique needs of SOEs. This also challenges the assumption that innovation capability is universally beneficial across different types of organizations and highlights the need for a differentiated approach in applying innovation strategies to public enterprises.

This analysis seeks to provide a comprehensive perspective that could guide policymakers and organizational leaders in crafting innovation policies tailored to the specific operational realities and strategic objectives of SOEs. By integrating the theoretical insights of Stiglitz (1989) regarding the public good nature of innovation and its externalities, alongside the empirical evidence from the Moroccan context, this study not only enriches our understanding of public sector innovation but also emphasizes the complexity of translating innovation capability into enhanced performance in state-owned entities.

Hypothesis development

The impact of innovation capacity on organizational performance

The reputation of innovation in the public sector has long been associated with mixed perceptions. Traditionally, the public sector has been viewed as less innovative than the private sector due to factors such as bureaucratic rigidity, budgetary constraints, and hierarchical organizational structures. Nevertheless, there is growing recognition that innovation within the public sector is essential to address the evolving needs of citizens, enhance the efficiency of public services, and respond to complex societal challenges.

Examining innovation capability rather than innovation outcomes per se offers several advantages in the public sector context. First, this approach allows for the consideration of contextual and organizational determinants that shape innovation capacity, including organizational culture, public policies, available resources, and inter-organizational partnerships. By understanding these determinants, it becomes possible to identify organizational strengths and weaknesses related to innovation and to design tailored improvement strategies.

Furthermore, focusing on innovation capability promotes a long-term and holistic perspective. Rather than limiting the analysis to the immediate outcomes of specific innovation initiatives, the study of innovation capability enables the examination of the processes, structures, and practices that sustain a supportive environment for continuous innovation. This approach facilitates the identification of leverage points that can strengthen innovation capacity over time.



Scholars have demonstrated that sustainable organizational performance is rooted in the simultaneous exploitation of existing capabilities and the exploration of new opportunities (Gibson & Birkinshaw, 2004; He & Wong, 2004). The concepts of exploration and exploitation (Benner & Tushman, 2003), or exploratory and exploitative innovation (Benner & Tushman, 2003), have been widely discussed in relation to organizational learning, technological innovation, and organizational adaptation (e.g., Benner & Tushman, 2003; Holmqvist, 2004; Lee et al., 2003).

Organizational innovation capabilities refer to the competencies required by organizations to achieve competitive advantage. They function as strategic instruments through which managers and entrepreneurs can guide their organizations toward sustained success. Innovation-driven development of new products and services acts as a growth engine, generating increases in sales, profitability, and market power. Innovation capability is widely regarded as a strategic mechanism enabling firms to secure competitive advantages and outperform rivals. It enhances the ability of firms to respond to customer needs, anticipate competitors' actions, and align internal strengths with market opportunities (Le et al., 2019).

The competitive nature of the corporate landscape (Battor & Battor, 2010; Sivadas & Dwyer, 2000) is closely associated with organizational improvement and performance enhancement (Calantone et al., 2002; Hult et al., 2004; Keskin, 2006; Thornhill, 2006). Consequently, innovation capability encompasses the processes and organizational arrangements that generate and implement new product and service ideas, thereby contributing to unprecedented growth dynamics in national economies, employment expansion, and profit generation for innovative firms (Urabe et al., 1988; Taleb et al., 2023). Prior research further indicates that organizations possessing dynamic managerial capabilities positively influence organizational performance by improving competitiveness, financial outcomes, marketing effectiveness, and innovation performance to meet the needs of employees, customers, and investors (Kongrode et al., 2023).

Innovation is conceptualized as a continuous decision-making process that begins with idea generation and extends through implementation (Afuah, 2020). Innovations may be classified according to market characteristics, technological dimensions, and managerial requirements, including organizational structure, communication mechanisms, and resource allocation necessary for innovation to occur (Eisenhardt & Martin, 2000). It is therefore crucial for organizations to provide the necessary inputs and resources to support innovation, thereby leading to superior performance (Wang & Ahmed, 2004).

Product and process innovation capabilities are considered prerequisites for organizational survival and long-term success. Innovation capability enables small and medium-sized enterprises (SMEs) to develop new ideas and implement changes in products, processes, and management systems, thereby enhancing their resilience in competitive markets. Within the broader innovation ecosystem, technological innovation capability depends not only on the internal innovative assets of SMEs but also on value co-creation with the industrial chain and the surrounding ecosystem (Yue, 2023).

Table 1 - Synthesis of authors on innovation capability

Author	Contribution
Gibson & Birkinshaw (2004)	The study highlights that sustainable organizational performance is linked to the exploitation of existing capabilities and the exploration of new opportunities. It refers to the concepts of exploration and exploitation within the framework of organizational innovation capability.
He & Wong (2004)	The authors emphasize that exploration and exploitation are essential for organizational learning, technological innovation, and organizational adaptation. They underline the importance of these concepts in creating competitive advantages and responding to changing market dynamics.
Kongrode et al. (2023)	Kongrode and colleagues highlight the link between dynamic management capabilities and organizational performance. They demonstrate that these capabilities enhance organizational effectiveness in terms of



	competitiveness, finance, marketing, and innovation by responding to the needs of employees, customers, and investors.
Afuah (2020)	The author emphasizes the importance of the continuous innovation process for organizations, from idea generation to implementation. He classifies innovations according to market characteristics, technology, and managerial requirements. He stresses the crucial role of innovation skills for organizational survival and success, as well as the need to allocate sufficient resources to innovation to achieve superior performance.
Benner & Tushman (2003)	Benner & Tushman address the concepts of exploratory innovation and exploitative innovation. They suggest that both forms of innovation are crucial for organizational development and growth, especially in a constantly evolving competitive environment.
Le et al. (2019)	This study highlights the importance of organizational innovation capability in achieving competitive advantage in the market. The authors emphasize that this capability enables firms to better meet customer needs, outperform competitors, and align with market opportunities, leading to economic growth and profit generation.
Wang & Ahmed (2004)	The authors stress the importance of product and process innovation capability for organizations. They suggest that these capabilities are prerequisites for survival and success in a competitive market environment. Innovation capability enables firms to develop new ideas and implement changes in products, processes, and management systems, thereby increasing their chances of survival.
Yue (2023)	The study emphasizes the importance of technological innovation capability for SMEs. The author highlights the need for SMEs to develop new ideas and collaborate within the innovation ecosystem to enhance survival in competitive markets. The study also underlines the crucial role of value co-creation with the industrial chain and ecosystem in strengthening SME innovation capability and boosting performance.

In this study, innovation capability (InOC) is defined as the organization's capacity to generate, mobilize and implement new ideas and managerial potentials aimed at creating and sustaining competitive advantage. It encompasses decision-making processes, resource allocation and technological and process-related capabilities that support continuous improvement and adaptation. Prior research has generally shown that higher innovation capability is associated with superior economic, social and environmental performance (e.g. Shahzad et al., 2020; Somwethee et al., 2023; Yang et al., 2023).

H1. The level of innovation capability (InOC) of MPCO positively influences their level of organizational performance (OP).

The impact of organizational commitment on organizational performance

The acquisition, retention, and development of human resources are central to the human resource management strategy within the public sector (Adebawojo & Akindehinde, 2017). Authors even go above and beyond to say that the leader's social intelligence directly impacts the firm's ambidexterity which in extension, helps support the global performance (Benkirane & Benazzi 2023). This strategy plays a crucial role in the public sector, which is distinguished by its social mission and diversity in terms of human resources. In this study, we seek to understand how human resource management, including career management, training, and evaluation, influences organizational commitment in the public sector.

Human resource management is a complex and multidimensional field that can have a significant impact on the performance of public organizations (Adebawojo, Oladipupo Akindehinde, & al., 2015). It is influenced by the context in which these organizations operate as well as by their overall strategy. However, it is important to note

that human resource management in the public sector is also subject to specific regulations and institutional reforms aimed at ensuring the efficiency and transparency of public management. In the public sector, the social objective is of paramount importance (Azzarradi & Fikri, 2017; Boubakri et al., 2019; Lee et al., 2017, Ang et al. 2022). Human resource management practices must not only aim to improve organizational performance but also meet the needs and expectations of society. The relationship between staff and citizens is at the heart of the public sector's mission, and a motivated and committed workforce is essential for achieving this goal. Career management, training, and employee evaluation are essential components of human resource management in the public sector (Zhang et al., 2021). They aim to develop employees' skills, knowledge, and abilities, which can have a direct impact on their organizational commitment. Studies show that employees are more likely to engage in their work and invest in their organization when their skills are valued and they have career development opportunities. Moreover, meeting career advancement needs is a key factor in developing organizational commitment. Employees are more likely to invest in their organization when it offers them prospects for professional advancement and career development.

Affective organizational commitment reflects the emotional attachment, involvement, and identification employees feel towards their organization. This type of commitment is characterized by a genuine concern for the organization's welfare and a strong belief in its values and goals. Meyer, Becker, and Vandenberghe (2004) discuss how affectively committed employees are likely to exert extra effort, leading to enhanced organizational performance. Adebawojo and Akindehinde (2017) further emphasize the role of human resource practices in fostering this commitment through career management, training, and evaluation in the public sector. According to Zhang & al. (2021), such practices not only improve skills but also enhance employees' attachment and loyalty, thereby boosting productivity and organizational success.

Additional support comes from (Boubakri et al., 2019) and Lee & al. (2017), who note the importance of aligning HR practices with the social mission of public organizations, thereby cultivating a workforce that is committed and driven by shared goals and values.

Affective organizational commitment reflects employees' emotional attachment, identification and involvement with their organization (Meyer et al., 1993; Meyer et al., 2004). Numerous studies suggest that affectively committed employees are more willing to exert discretionary effort and contribute to higher levels of performance (Adebawojo & Akindehinde, 2017; Gong et al., 2009; Zhang et al., 2021). In public organizations, affective commitment is also seen as a key lever for improving the quality and responsiveness of public services (Adebawojo et al., 2015; Outmane, 2021).

In line with this literature, we formulate the following hypothesis:

H2: Affective organizational commitment positively influences the achievement of organizational performance of MPCO.

Calculative commitment, on the other hand, reflects the degree to which employees remain with an organization based on an awareness of the costs associated with leaving it. This form of commitment is influenced by a rational evaluation of the benefits provided by the organization versus the potential costs of departure. While it is considered a less ideal form of commitment than affective, it can still positively impact organizational performance, particularly in environments with fewer alternative employment opportunities.

Gellatly, Meyer, and Luchak (2006) cited by (Ahamed & Noboa, 2022) suggest that even if the commitment is calculative, employees may maintain adequate performance levels due to the perceived high cost of leaving. Azzarradi and Fikri (2017) highlight how public sector reforms aimed at enhancing efficiency and transparency can make these positions more attractive, thus reinforcing calculative commitment. Outmane, (2021) highlights the challenge of maintaining employee involvement in health establishments, pointing towards the necessity of calculative strategies in unstable and uncertain environments to ensure continuous commitment and performance.



Calculative commitment (also referred to as continuance or normative-like commitment in some studies) reflects employees' perceived obligation to remain with the organization and their evaluation of the costs associated with leaving (Gellatly et al., 2006; Stinglhamber et al., 2004). Although often considered less desirable than affective commitment, prior work suggests that calculative commitment can still sustain adequate performance, particularly when external job opportunities are limited and public sector positions offer stability and benefits (Azzarradi & Fikri, 2017; Outmane, 2021).

Accordingly, we propose:

H3. Calculative organizational commitment (ImO_Cal) positively influences the achievement of organizational performance (OP) of MPCO.

By integrating these insights from both traditional and recent research, and explicitly referencing the broad spectrum of academic work cited in before, we acknowledge that both affective and calculative organizational commitments play distinct but complementary roles in influencing organizational performance within a public sector context like MPCO.

MATERIAL AND METHODS

The Moroccan context

This study focuses on Moroccan public commercial offices (MPCO), highlighting their vital role in Morocco's economic and social stability. Legislative measures have been introduced to improve governance and management of state-owned enterprises (SOEs), exemplified by the establishment of the National Agency for Strategic Management of State Holdings and Performance Monitoring of SOEs (ANGSPE).

The New Development Model (NMD), introduced in 2021, emphasizes SOE reforms for national competitiveness and sectoral advancement. It promotes increased SOE autonomy and performance management to reduce financial dependence on the state, allowing SOEs to generate revenue, invest in projects, and make strategic decisions independently. The goal is to minimize state interference while ensuring accountability for performance and public funds use. The NMD stresses clear, measurable objectives and performance indicators to align SOEs with their mission and citizens' needs.

Despite recent positive financial indicators, challenges persist. In 2022, net results for SOEs improved by 34% over the previous year, yet significant deficits remain, especially for the National Office of Electricity and Drinking Water (ONEE) and the National Railways Office (ONCF). This underscores the need for a comprehensive examination of organizational performance, encompassing both financial and social dimensions.

Data and variables

The study employed a convenience sampling technique to gather data from 140 employees across all five major commercial offices in Morocco: ONDA (National Airports Office), ONCF (National Railway Office), ONEE (National Office of Electricity and Drinking Water), ONP (National Fisheries Office), and ONHYM (National Office of Hydrocarbons and Mines). To participate, individuals were required to hold managerial roles to ensure a comprehensive understanding of the questionnaire, which was designed to probe into various aspects of organizational dynamics. The questionnaire was composed of four sections: nine questions aimed at assessing organizational performance (OP) (five for financial performance FP and four for social performance SP), seven questions focused on evaluating innovation capability (InOC), eleven question measuring organizational commitment (six for affective commitment and five for calculative commitment), six questions related to the respondent's own profile.

Prior to the main data collection phase, the questionnaire underwent a rigorous pre-testing process involving a thesis supervisor and two external employees from related public sectors. This preliminary testing was crucial for refining the questions and ensuring their relevance and clarity. Ultimately, the study garnered 187 responses. However, after a thorough review, 47 responses were discarded due to either incomplete data or the respondents'



non-managerial status, culminating in a final effective sample size of 140. This meticulous approach to data collection and sample selection was fundamental in ensuring the reliability and validity of the research findings.

Method of evaluation

As mentioned earlier, this study aims to explore the impact of organizational commitment of employees and innovation capability on organizational performance as a whole then on each of financial and social performances separately. Nowadays, Morocco is on the road to switch from a resources-based view to a performance-based view. Traditional methods from new public management, derived from private sector practices for evaluating organizational performance, have proven inadequate in the Moroccan setting, suggesting possible misalignment in the dimensions evaluated or the models applied. To mitigate this, our study implemented stringent measures to ensure respondents were adequately equipped to comprehend and respond to the survey. Initially, data were gathered across various hierarchical levels, but only respondents at or above the managerial level were retained for analysis. The study utilized a convenience sampling strategy as it aligns best with the extensive research objectives.

A five-point Likert scale (ranging from 1 = Total Disagreement to 5 = Total Agreement) was employed to capture employee responses, as outlined in the self-administered survey distributed among the five major offices studied. Using a convenience sampling method, 300 questionnaires were initially distributed across the offices in different Moroccan cities. From these, 187 were completed, providing a 62% response rate, which is acceptable within social sciences norms (Jhantasana, 2023; Zouaghi, 2013). Post data screening, 47 responses were excluded, leaving 140 complete responses for in-depth analysis using SmartPLS (v.3.2.7) and IBM SPSS (v.24.0).

The choice of PLS-SEM, known for its robustness in handling complex structural models and its efficacy in assessing relationships and measurement errors (Farooq & Radovic Markovic, 2016; Hair Jr. et al., 2021), was deliberate due to the exploratory nature of this study. The method's suitability for our research was further validated by following Hair & al.'s (2017) PLS-SEM best practice guidelines, ensuring each measurement model was thoroughly evaluated before the main structural analysis. To ensure the integrity and quality of our data, various tests were conducted including the KMO test, screenings for missing values, outliers, common-method variance, and non-response bias, alongside other checks for reliability and validity. The discussion now continues with the methods used for data screening and pre-analysis in this investigation.

Operationalization of constructs

Operationalization of the constructs in a conceptual model proposed is critical in any study (Hair Jr. & al., 2021; Pallant, 2020). Particularly in the social sciences, reliable scales are essential for measuring cognitive phenomena, which encompass self-reported emotions and the behavioural aspects of respondents (Salam & al., 2019; Yi & Gong, 2013). As previously mentioned, this study includes four latent constructs in the initial model and five in the detailed model, namely organizational performance as the dependent variable (divided into two latent variables: financial and social performances), along with innovation capability, affective commitment, and calculative commitment as the independent variables. These constructs were operationalized using comprehensive multi-item scales adapted from prior studies (e.g., or an empirically validated method to assess social performance. It is important to note that due to the unique context and different settings of our study, the items in the scales were significantly revised and, in some instances, substantially rephrased to enhance their comprehensibility and readability for this study.

This research utilizes quasi-perceptual measures to evaluate all reflective 27 items used to evaluate all 5 latent variables in our model, applying a Likert scale from 1 (strongly disagree) to 5 (strongly agree) for participant responses

As of organizational performance, our approach captures both financial and social performance aspects, acknowledging that an organization's overall success extends beyond mere financial metrics to include its impact on society. This dual-focus methodology is informed by literature that ties organizational performance closely



to its foundational objectives, typically oscillating between financial gains and social contributions in public enterprises (Adebawojo & Akindehinde, 2017b; Moullin, 2017; Poppelwell & Overton, 2022).

For financial performance, we relied on (Durand, 2010), who adopted a bidimensional perspective on organizational performance. This dimension's items include sales growth, value creation, return on investment, cash flow management, and debt management. The high Cronbach's alpha of 0.926 for these items indicates robust internal consistency, thereby enhancing the reliability of our financial performance assessments.

Conversely, social performance was evaluated through a context-specific approach at the National Airports Office, including analysis of complaint records, user satisfaction measurements, and evaluations of progress toward customer orientation—factors that highlight the organization's impact on its stakeholders. To study the influence of the independent variables on organizational performance, all nine items were reduced to a single latent variable “OP” (through dimension reduction on SPSS). However, to understand the interactions of all three main variables, the five items of financial performance were reduced to a single latent variable “FP”, while the other four measuring the social dimension of organizational performance were reduced into another latent variable “SP”.

Innovation capability was measured based on the framework established by Somwethee & al., (2023), focusing on seven indicators with an impressive Cronbach's alpha of 0.979, highlighting the consistency of these measures. The dimensions of innovation capability considered include:

- Synergies with other sectors or fields.
- Allocation of adequate financial resources to support innovative initiatives.
- The ability to quickly adapt to market changes and seize new opportunities.
- Having a competent team capable of generating and implementing innovative ideas.
- Having detailed action plans for innovation projects.
- Ease of access to necessary resources and information to facilitate innovation.
- Timeliness of project completion in innovation efforts.

As for organizational commitment, the literature highlights the ongoing debate over the conceptualization and measurement of the variable, with models such as those by Porter, O'Reilly and Chatman, and Meyer and Allen. While Porter & al. (1974) introduced a measurement scale characterizing a strong adherence to the values and goals of the organization, Meyer and Allen (1991) identified two dimensions of organizational commitment: affective and calculative. Although distinct, these dimensions are often correlated, fuelling discussions about their validity. Some authors emphasize the strong correlation between affective and calculative commitment, while others question the conceptual uniqueness of calculative commitment. Despite these critiques, the Meyer and Allen model provides a comprehensive characterization of the contours of organizational commitment.

In this study, organizational commitment is assessed using two well-established measurement scales in the literature. First, we utilize the shortened scale of Allen, Meyer, and Smith (Meyer & al., 1993), adapted into French by Stinglhamber & al., (2004), which includes 6 items. This scale measures both the affective and calculative dimensions of organizational commitment. For the affective dimension, the 6 items from the scale of Allen, Meyer, and Smith (1993) were used. For example, a typical item is ‘I feel a strong emotional connection to my company.’. For the calculative dimension, we rely on the facets of perceived sacrifice and perceived lack of alternatives, with 5 items from the scale by Stinglhamber, Bentein, and Vandenberghe (2004), also adopted by Delobbe, Herrbach, and Mignonac (Delobbe & al., 2005). An example of an item for this dimension is ‘I do not see many other career options outside of my company.’

This comprehensive measurement structure allows for a nuanced analysis of the interplay between financial metrics, social impact, and innovation capability, providing a well-rounded view of organizational performance within Morocco's public commercial offices.



Results of data analysis

Data screening and pre-analysis

In preparation for the final comprehensive analysis, we conducted a screening process and systematic pre-analysis to ensure the integrity of the data used in our study. The data underwent meticulous checks for errors of normality, incomplete responses, missing values, outliers, and the demographic characteristics of the respondents. We encountered a small number of missing values, which were subsequently excluded using list-wise deletion. Although the mean replacement method is commonly used, it alters the internal model, list-wise deletion was preferred. This approach, while reducing our sample size, maintains the original model structure, which is crucial especially when evaluating interactions among variables (Cohen, 1992) cited (Jhantasana, 2023), and considering the sensitivity of our data measured on a 5-point Likert scale where minor fluctuations could significantly impact the results.

Additionally, we carefully assessed the demographic attributes of the respondents, examining their professional categories, office distribution, age, academic degree, affiliation within the office and gender. This thorough demographic analysis helps to contextualize the findings and ensures that our conclusions are drawn from a representative and well-understood sample base.

An initial step involved conducting a descriptive analysis of the respondents' profiles. In our study sample, Middle Management is the most prevalent professional category, accounting for 51.4%, followed by Top Management at 18.6% and Senior Management at 7.9%, indicating a significant representation of middle and senior management levels. In terms of office distribution, ONEE is the predominant entity, comprising 27.9% of the sample, emphasizing its pivotal role in Morocco's water and electricity sectors, followed by ONP at 21.4%, while ONCF and ONDA account for 14.3% and 11.4%, respectively, with the variability in mentions of ONHYM highlighting a potential need to investigate different perceptions across offices. Age-wise, the largest group within our sample is the 26-35 years range, constituting 45.7%, followed by those aged 36-45 at 37.1%, with the under 25 and over 45 categories making up 5% and 12.1%, respectively, showcasing a broad age spectrum with a concentration in the mid-age range. The gender distribution is relatively balanced, with males representing 57.9% and females 42.1%, ensuring diverse perspectives in the analysis.

Table 2 - Demographic attributes

Attributes	Distribution	Frequency	%
Respondent status	Executive Management (Senior Management)	11	7.9
	General Management (Top Management)	26	18.6
	First-Level Supervision	31	22.1
	Middle Management (Intermediate Supervision)	72	51.4
Office name	ONCF	21	15.0
	ONDA	25	17.9
	ONEE	39	27.9
	ONHYM	25	17.9
	ONP	30	21.4
Respondent's age	Between 26 & 35	64	45.7
	Between 36 & 45	52	37.1
	Less than 25	7	5.0
	More than 45	17	12.1
Respondent's gender	Female	59	42.1
	Male	81	57.9
Respondent's affiliation	Commercial	12	8.6
	Direction	20	14.3
	Finance & accounting	52	37.1



	Legal	3	2.1
	Logistics	11	7.9
	Production	6	4.3
	Quality & environment	2	1.4
	RH	27	19.3
	Information system	2	1.4
	Technical	5	3.6
Respondent's academic degree	BTS, DEUG	9	6.4
	DEA, DES, PhD	19	13.6
	Business school	54	38.6
	Engineering	47	33.6
	Bachelor degree	11	7.9

Common method variance test

Common-method variance is a significant concern in cross-sectional studies (Hair Jr. & al., 2021; Ho, 2006). To mitigate this issue, we adhered to the guidelines set by (Podsakoff & al., 2003) for assessing the potential common-method variance in our research. Specifically, Harman's, (1976) one-factor test was employed by inputting all 27 items of our measurement scale into a single factor analysis using the varimax rotation approach in IBM SPSS (v.24.0). The analysis resulted in the extraction of four distinct factors from the 27 items—organizational performance, innovation capability, affective organizational commitment, and calculative organizational commitment—with the rotation converging in five iterations. These outcomes substantiate that common-method variance does not compromise the integrity of this study.

Analysis of measurement models

As previously noted, the principal conceptual model in this study includes four reflective constructs: organizational performance, innovation capability, affective organizational commitment, and calculative organizational commitment. Following the guidelines set forth by Hair & al. (2017), all reflective constructs were thoroughly assessed for their reliability and validity. Initially, factor loading values were examined and found to be within an acceptable range of 0.50 to 0.90. Additionally, Cronbach's alpha values and Kaiser-Meyer-Olkin (KMO) indicators were evaluated, both exceeding the 0.70 threshold level recommended by Cohen (1989), indicating satisfactory internal consistency and sampling adequacy. Furthermore, the constructs were evaluated for average variance extracted (AVE) values, which surpassed the 0.50 threshold suggested by Hair & al. (2017), confirming the adequacy of the measures. The detailed results of the reliability, validity, and correlations among all the latent constructs are comprehensively presented in Table 3.

Table 3 - Reliability, Validity and Correlations among Latent Constructs

Latent construct	Cronbach's alpha	KMO	AVE	Fornell-Larcker Criterion			
				InOC	ImO_Aff	ImO_Cal	OP
InOC	.888	.845	0.629	0.957			
ImO_Aff	.869	.775	0.696	.304	0.932		
ImO_Cal	.869	.775	0.696	.367	.592	0.880	
OP	.873	.795	0.795	.560	.817	.528	0.876

Furthermore, to assess the discriminant validity of the constructs used in this study, Fornell-Larcker criterion and cross-loading values were evaluated, adhering to the recommendations of and Hair & al. (2017). The findings indicated that all Fornell-Larcker values were below the critical threshold of 0.85, as suggested by Jhantasana, (2023) and Hair Jr. & al., (2021), confirming sufficient discriminant validity. Additionally, to further validate the

discriminant validity of our constructs, we examined their cross-loading values. According to Jhantasana, (2023), measurement items of each construct should exhibit their highest loadings with their respective latent constructs rather than with other constructs in the conceptual model. The comprehensive details of all cross-loading values for our measurement models are documented in Table 4. The findings demonstrated that all cross-loading values exceeded the recommended threshold of 0.5, as suggested by Jhantasana, (2023), thus meeting the criterion for discriminant validity. Overall, these results confirm the validity and reliability of all measurement models involved in this study. The discussion now proceeds with the evaluation of the structural model in this research.

Table 4 - Cross loading values

	Organizational performance	Innovation capability	Affective organizational commitment	Calculative organizational commitment
POF04	.866			
POF02	.846			
POF05	.832			
POF01	.823			
POF03	.775			
POS02	.886			
POS03	.877			
InOC01		.757		
InOC02		.840		
InOC03		.793		
InOC04		.658		
InOC05		.806		
InOC06		.860		
InOC07		.825		
ImOA01			.754	-.380
ImOA02			.794	
ImOA03			.752	-.318
ImOA04			.860	
ImOA05			.801	
ImOA06			.729	-.303
ImOC01				.772
ImOC02			.307	.737
ImOC03			.400	.791
ImOC04			.448	.750
ImOC05			.465	.727

Analysis of structural model

We will test the hypotheses to quantify the relationships between different variables, using fit coefficients to evaluate the regression model's performance and relevance:

1. Coefficient of determination (R^2): Indicates the percentage of variability explained by the explanatory variables. The adjusted R^2 is 0.851 for the training sample, meaning the model explains about 85.1% of the variance in organizational performance. The adjusted R^2 is slightly lower at 83.7%, which is excellent as it exceeds 50%. The F statistic is significant (p -value < 0.001), indicating the independent variables have a global effect on organizational performance.
2. Durbin-Watson (DW) test: Detects autocorrelation in the residuals. A value close to 2 indicates no autocorrelation. Our DW value is 2.036 for the training sample, confirming the construct's discriminant validity.
3. Amemiya ratio: At 0.180, it suggests acceptable predictive capability.
4. Mallows' prediction criterion: A value of 13 indicates overall predictive efficiency.



5. Schwarz Bayesian criterion: A value of -203.100 measures the model's quality in terms of complexity and performance.

In summary, the linear regression results suggest the model is robust and capable of explaining a significant portion of the variation in organizational performance. This stage evaluates the postulated relationships between the various concepts.

The validation or rejection of the hypotheses in the context of this study depends on the satisfaction of the conditions established by Jhantasana (2023). We relied on a bootstrap analysis to obtain the necessary test statistics. According to Jhantasana (2023), hypotheses are considered statistically significant at thresholds of $p < 0.01$, $p < 0.05$ and $p < 0.10$ only if their t-values are greater than or equal to the absolute values of 2.58, 1.96 and 1.645, respectively. With a significance level of 95%, we retain hypotheses only if $|t| \geq 1.96$.

The structural model was then estimated to test the three hypotheses regarding the effects of innovation capability (InOC), affective commitment (ImO_Aff) and calculative commitment (ImO_Cal) on overall organizational performance (OP). Table 5 summarizes the PLS-SEM results.

As shown in Table 5, innovation capability (H1) has a very small and statistically non-significant effect on OP ($\beta = -0.009$, $t = 0.71$, $p = 0.479$). Similarly, calculative organizational commitment (H2) exerts no significant influence on OP ($\beta = -0.009$, $t = 0.65$, $p = 0.520$). In contrast, affective organizational commitment (H3) displays a statistically significant but negative effect on OP ($\beta = -0.320$, $t = 2.85$, $p = 0.004$). Since H1–H3 were formulated as positive relationships, all three hypotheses are rejected.

To better understand these unexpected findings, particularly the negative effect of affective commitment on overall performance, we further disaggregated OP into its two underlying components: financial performance (FP) and social performance (SP), and re-estimated the model with FP and SP as separate dependent variables. The disaggregated results are reported in Table 6.

The disaggregated results reveal a more nuanced pattern. Innovation capability significantly improves financial performance (InOC $\rightarrow$ FP: $\beta = 0.21$, $t = 3.33$, $p = 0.001$), but has no significant effect on social performance (InOC $\rightarrow$ SP: $\beta = -0.01$, $t = 0.39$, $p = 0.696$). Affective organizational commitment shows a clear trade-off between the two performance dimensions. It has a significant negative effect on financial performance (ImO_Aff $\rightarrow$ FP: $\beta = -0.18$, $t = 3.00$, $p = 0.003$) while exerting a significant positive effect on social performance (ImO_Aff $\rightarrow$ SP: $\beta = 0.30$, $t = 5.00$, $p = 0.000$). This pattern explains why, when FP and SP are combined into a single OP construct, the overall estimated effect of affective commitment on OP is negative.

Finally, calculative organizational commitment does not display any statistically significant effect on either financial or social performance (ImO_Cal $\rightarrow$ FP: $\beta = 0.09$, $t = 1.47$, $p = 0.141$; ImO_Cal $\rightarrow$ SP: $\beta = 0.02$, $t = 0.14$, $p = 0.893$). This confirms that, in the context of MPCO, calculative attachment alone is insufficient to drive performance improvements.

Table 5 - Results of PLS-SEM analysis

Hypothesis	Relation	Beta value	Student's T	Significance	Decision
H1	InOC $\rightarrow$ OP	-.009	0.71	.479	Hypothesis rejected (non-significant)
H2	ImOCal $\rightarrow$ OP	-.009	0.65	.520	Hypothesis rejected (non-significant)
H3	ImOAff $\rightarrow$ OP	-.32	2.85	0.004	Hypothesis rejected (significant but negative)

Table 6 - Results of Bootstrapping Analysis

Path	Beta	STDEV	t-value	p-value	Significance
InOC → FP	0.21	0.06	3.33	0.001	Significant (+)
InOC → SP	-0.01	0.03	0.39	0.696	Not significant
ImO Aff → FP	-0.18	0.06	3.00	0.003	Significant (-)
ImO Aff → SP	0.30	0.06	5.00	0.000	Significant (+)
ImO Cal → FP	0.09	0.06	1.47	0.141	Not significant
ImO Cal → SP	0.02	0.02	0.14	0.893	Not significant

DISCUSSION OF FINDINGS

The empirical findings concerning the impact of innovation capability on the organizational performance of Moroccan Public Commercial Offices (MPCO) show significant divergences from theoretical expectations. Theoretical perspectives supported by Hottenrott & Peters, (2012), Somwethee & al., (2023), Yang & al., (2023), and other scholars suggest a beneficial effect of innovation capability on organizational performance. Several authors have observed a direct or indirect positive impact of innovation capability on organizational performance. Elleuch & Affes, (2023) highlighted that previous studies have demonstrated that a strong capability to absorb new knowledge leads to a high degree of innovation and the attainment of a competitive advantage. Similarly, Ouyang et al., (2024) stated that the optimal use of existing knowledge is a key aspect of acquiring new knowledge. Cohen and Levinthal (1998, 1990) cited by (Elleuch & Affes, 2023) advanced that the ability to exploit external knowledge is a critical determinant of a company's innovation capability, highlighting the importance of organizational learning. Zahra & George (2002) emphasized that the absorption capability promotes the speed, frequency, and scope of innovations, thus strengthening the company's absorption capability. (Peterková & Franek, 2018) added that innovation is a complex process where knowledge is generated and transformed, emphasizing the importance of external knowledge in the success of innovation. (Han et al., 2019) insisted on the crucial role of exploiting external knowledge in the development of innovation capability. (Bouguerra et al., 2022) emphasized that companies with a strong absorption capability are better positioned to seize opportunities and create value, thanks to their relationships with their technology partners. Moreover, Schilling (1998) cited by (Elleuch & Affes, 2023) asserted that the absorption capability allows companies to expand their knowledge and skills, thus improving their performance in terms of technological innovation. In summary, a strong capability to innovate can promote the acquisition, assimilation, and effective use of external and internal knowledge, leading to better organizational performance.

However, our findings suggest a more complex picture. In the aggregate model, the effect of innovation capability on overall perceived performance (OP) is very small and statistically non-significant. When performance is disaggregated, innovation capability significantly enhances financial performance but has no significant effect on social performance. This suggests that, in MPCO, innovation efforts are more strongly linked to financial outcomes (e.g. efficiency gains, revenue or cost effects) than to improvements in social outcomes as perceived by managers.

This discrepancy might be attributed to the bureaucratic nature and fiscal limitations characteristic of the public sector, which likely stifle innovative efforts (Fan et al., 2020; Tomo, 2019).

Additionally, the complexity within MPCO's decision-making processes and organizational structures could be curtailing the effectiveness of innovative initiatives (Ang & al., 2022; Castelnovo, 2022; Poppelwell & Overton, 2022). Despite these challenges, it's important to reflect on the theoretical importance of innovation for addressing societal needs, enhancing the efficiency of public services, and tackling complex societal challenges. An in-depth analysis comparing financial performance (FP) and social performance (SP) models indicated that while innovation capability positively affects FP, it does not significantly impact SP, suggesting that its benefits might be more narrowly confined than previously thought.

Understanding the specific organizational context when assessing innovation's impact on performance is crucial (Bouguerra & al., 2022; Kahiya, 2020; Martínez-García & al., 2021). While theoretical literature generally supports a positive impact of innovation, the complexities revealed by empirical data within MPCO highlight the nuanced dynamics at play. Regarding organizational commitment, our findings reveal a notable dissonance compared to prevailing literature which generally argues that higher organizational commitment enhances a company's performance. The scholarly work posits that human resources are pivotal for creating competitive advantages (Adebawojo & Akindehinde, 2017b; Anwar & Abdullah, 2021; Ferguson & Reio, 2010; Gong & al., 2009; Meyer & al., 1993). Previous studies have emphasized that enhancing human resource management practices can resolve many challenges faced by companies, thereby boosting their market position and competitiveness (Abraham & al., 2021; Al-Matari & al., 2013; Ogbonnaya & Aryee, 2020).

In the specific context of public enterprises, the capability of human resources is crucial for organizational performance (Bradshaw & al., 2019). Yet, our empirical results suggest that both calculative and affective commitments, as measured, do not positively impact MPCO's performance, which contradicts the expected positive influences validated for years by researchers like Meyer et al., (1993) and Herzberg. This could be due to bureaucratic constraints and budget limitations typical of the public sector, which might inhibit the effectiveness of engagement-promoting practices (Jiang & al., 2021; Rich & al., 2010).

Further examination of SP and FP interactions provides more insight. Affective commitment has a significantly negative impact on FP, while positively influencing SP, which is not sufficient to mitigate the adverse effects on financial outcomes. These complex dynamics between affective commitment and organizational performance underscore the importance of adapting management practices to the unique challenges faced by public sector organizations to fully leverage the potential benefits of organizational commitment without compromising financial integrity.

In conclusion, while literature generally highlights a positive effect of organizational commitment on performance, the empirical evidence from MPCO suggests a need for tailored management strategies to maximize impact effectively in the public sector context.

CONCLUSIONS, LIMITS AND PERSPECTIVES

Conclusions

The exploration of innovation capability and organizational commitment within Moroccan State-Owned Enterprises (SOEs) presents a nuanced narrative that diverges from conventional understandings. This study, set against the backdrop of Morocco's economic pillars—such as ONCF, ONDA, ONP, ONEE, and ONHYM—challenges the traditional correlation between innovation and performance, particularly in the public sector. The findings illuminate the complex interplay between innovation capability, organizational commitment, and organizational performance, offering insights into the unique dynamics within Moroccan SOEs.

Despite theoretical assertions from scholars such as (Bouguerra & al., 2022; Kahiya, 2020; Martínez-García & al., 2021; Adebawojo & Akindehinde, 2017; Anwar & Abdullah, 2021; Ferguson & Reio, 2010; Gong & al., 2009; Meyer & al., 1993), which link innovation capability and organizational commitment positively with organizational performance enhancement, our empirical evidence suggests a more complex scenario. Notably, the bureaucratic nature and fiscal constraints inherent in the public sector appear to dampen the positive impacts of innovation capability, limiting its effectiveness within the operational framework of Moroccan SOEs. Additionally, the complex decision-making processes and organizational structures prevalent in these entities further complicate the direct application of innovation, often stifling its potential benefits.

Empirically, three main results stand out. First, the three hypothesized positive relationships between innovation capability, affective commitment, calculative commitment and overall organizational performance are not supported. Innovation capability has no significant effect on aggregated performance, although it positively and significantly affects financial performance only. Second, affective organizational commitment is associated with a significant improvement in social performance but a significant deterioration in financial performance,



resulting in a net negative effect on overall performance. Third, calculative organizational commitment does not significantly influence either financial or social performance. Together, these findings challenge the assumption that innovation capability and organizational commitment are uniformly performance-enhancing in state-owned enterprises.

Moreover, the analysis reveals significant discrepancies between the theoretical expectations of organizational commitment's impact on performance and the actual empirical findings. While the literature emphasizes the potential of organizational commitment to enhance performance through strategic human resource management, the results within Moroccan SOEs suggest a different reality (Lin et al., 2024). Specifically, affective commitment has shown a negative impact on financial performance, indicating that while employees may be committed on an emotional level, this does not necessarily translate into financial prosperity for the organization.

This study contributes to the broader discourse on innovation and organizational performance by highlighting the need for a tailored approach when applying these concepts within the public sector. The unique challenges and operational realities of SOEs require strategies that recognize the limitations imposed by bureaucratic structures and the specific goals of public service delivery. Moving forward, it is essential for policymakers and organizational leaders to consider these factors when designing and implementing innovation strategies to ensure they align with the overarching objectives of public enterprises.

In conclusion, the insights gained from this investigation not only challenge existing assumptions about the universal benefits of innovation capability but also emphasize the importance of contextual understanding in the management of SOEs. The implications of this study extend beyond academic discourse, offering practical guidance for enhancing the efficacy of innovation initiatives within the public sector. It is hoped that these findings will spur further research and discussion, leading to more effective and nuanced applications of innovation and commitment strategies tailored to the unique needs of state-owned enterprises.

Perspectives of the study

This study sets the stage for further research into innovation capability and organizational commitment in public sectors. Future studies could extend these findings to different national contexts and use qualitative methods to explore barriers to successful innovation strategies. Cross-sector comparisons can highlight challenges and opportunities unique to different industries, enhancing our understanding of innovation's impact on performance.

SOE managers must balance financial and social performance objectives. Strategies should not prioritize financial gains over social outcomes, especially in public welfare sectors. Innovation strategies should fit SOEs' bureaucratic and fiscal constraints, fostering a culture of adaptable innovation. Managers should also revise commitment-enhancing practices to align with organizational goals and employee expectations. Policymakers should revise innovation policies to better fit the public sector, providing more resources, training, and managerial autonomy within public accountability frameworks. Policies should encourage SOEs to balance financial and social objectives, possibly through benchmarks that incentivize successful integration of these goals.

As for organizations, these need strategic plans that integrate financial and social performance objectives. Implementing monitoring and evaluation frameworks allows regular assessments of innovation and commitment initiatives, enabling timely adjustments. Addressing these implications helps researchers provide comprehensive insights and practitioners develop effective strategies for SOEs.

Limits of the Study

This study has limitations, such as reliance on self-administered questionnaires, which may introduce personal biases. Future research should use mixed methods to gain deeper insights. The study's focus on Moroccan public commercial offices limits its generalizability. Expanding research to include more SOEs across different countries could provide a broader understanding. The cross-sectional data collection limits the ability to observe changes over time or establish causality. Longitudinal studies could provide a more dynamic view. The sample



size and sampling method might also limit generalizability. Future studies should use stratified or random sampling for more representative results. Despite these limitations, this study offers valuable insights into innovation capability and organizational commitment in Moroccan SOEs.

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Disclosure statement: We declare that there are no conflicts of interest or competing interests. We declare that this is our original work and that those works used but do not belong to us were duly cited. We also declare that this study is currently not under consideration elsewhere.

Data availability : Data will be made available on reasonable request

Ethics approval and consent to participate :

Ethics Approval

My research study did not require ethics approval. The study employed a snowball sampling method involving 140 respondents. It did not involve the collection of sensitive data, nor did it include procedures that could cause stress or pose any risks to the participants. The nature of the study, which focused on non-sensitive information, ensured that there was minimal risk to participant well-being.

Voluntary Participation

All respondents participated voluntarily in the study. Each participant was informed about the purpose of the research and the voluntary nature of their participation. They were assured that they could withdraw from the study at any time without any negative consequences.

Anonymity and Confidentiality

The study guaranteed the anonymity and confidentiality of all participants. No personally identifiable information was collected, and all data were aggregated to ensure that individual responses could not be traced back to any participant. This approach helped maintain the privacy of the respondents and encouraged honest and open participation.

Informed Consent

Before participating, all respondents were provided with an information sheet detailing the study's aims, procedures, and their rights as participants. Consent was obtained from all participants through a verbal agreement or a written consent form, depending on the method of contact. The consent process emphasized that participation was entirely voluntary and that respondents could opt out at any stage of the research.

Justification for Lack of Ethics Approval

Given the study's methodology and the nature of the data collected, it was determined that formal ethics approval was not required. The specific criteria and considerations that led to this conclusion include:

1. **Minimal Risk:** The study posed no more than minimal risk to participants as it did not involve any interventions or sensitive topics.
2. **Voluntary Participation:** Participation was entirely voluntary, and participants were free to withdraw at any time.
3. **Anonymity and Confidentiality:** Measures were in place to ensure the anonymity and confidentiality of all participants.
4. **Non-Sensitive Data:** The data collected were non-sensitive and related to general opinions and experiences, rather than personal or sensitive information.



This detailed explanation justifies the decision that formal ethics approval was not necessary for this study. All ethical considerations were addressed to ensure the integrity of the research and the protection of the participants.

Consent for publication : Consent for publication was obtained from all authors and companies involved prior to their involvement in the study, on the condition to not disclose specific information to one of the five enterprises.

Appendix 1: Measurement Scale Items

Please indicate your level of agreement with following statements (Total Disagreement = 1, Total Agreement = 5)

Organizational performance (adapted from (Durand, 2010) and the method uses by ONDA to evaluate social performance)

POF04 - 7-1-4: I am satisfied with our level of cash flow maintenance.
POF02 - 7-1-2: I am satisfied with our level of value creation.
POF05 - 7-1-5: I am satisfied with the debt management in the office.
POF01 - 7-1-1: I am satisfied with the sales growth rate.
POF03 - 7-1-3: I am satisfied with our level of return on investment (ROI).
POS02 - 7-2-2: The office adheres to the customer-oriented approach guidelines.
POS03 - 7-2-3: Our customers are satisfied with the quality of our main services.
POS04 - 7-2-4: Our customers are satisfied with the quality of our ancillary services.
POS01 - 7-2-1: The office conducts regular analysis of complaints.

Innovation capability (adapted from Somwethee & al., (2023))

InOC01-The organization explores synergies with other sectors or fields to stimulate innovation.

InOC02-The organization allocates adequate financial resources to support its innovative initiatives.

InOC03-The organization demonstrates the ability to quickly adapt to market changes and seize new opportunities.

InOC04-The organization possesses a competent team capable of generating and implementing innovative ideas.

InOC05-The organization develops detailed action plans for its innovation projects.

InOC06-The organization facilitates access to the resources and information necessary to foster innovation.

InOC07-The organization seeks to minimize delays in the completion of its innovation projects.

Affective commitment (adapted from (Meyer & al., 1993), translated into French by Stinglhamber & al., (2004))

ImOAff01. I would willingly spend the rest of my professional life at my company.

ImOAff02. I truly feel the problems of my company as if they were my own.

ImOAff03. I do not consider myself a 'family member' of my company.

ImOAff04. I do not feel emotionally attached to my company.

ImOAff05. My company has a lot of personal meaning to me.

ImOAff06. I do not feel a strong sense of belonging to my company.



Calculative commitment (adapted from Stinglhamber, Bentein, and Vandenberghe (2004))

ImOCal01. I feel an obligation to stay with my current employer.

ImOCal02. Even if it were to my advantage, I would not feel right leaving my company now.

ImOCal03. I would feel guilty if I left my company now.

ImOCal04. The company deserves my loyalty.

ImOCal05. I will not leave my company at the moment because I feel a sense of obligation towards the people who are part of it.

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