




Article

Investigating the Relationships among High-Performance Organizations, Knowledge-Management Best Practices, and Innovation: Evidence from the Greek Public Sector

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Abstract: The paper aims to investigate the relationships among high-performance organizations (HPOs), knowledge-management (KM) best practices, and organizational innovation in the Greek public sector. To achieve this goal, we employed the PLS-SEM method to validate and assess the research model. A total of 270 responses were collected from employees in the Greek public sector. The results indicate that KM best practices serve as mechanisms for developing organizational innovation within the relationships between HPOs and organizational innovation in the Greek public sector. Additionally, positive relationships among the model constructs were observed. This research holds significant implications and contributions for both theory and practice. It offers novel theoretical insights by being the first study to investigate this relationship and explore the connections of HPOs with other managerial constructs such as KM. Moreover, the research findings hold importance for decision-makers in the public sector, equipping them with insights to formulate more-effective strategies for enhancing performance, quality, and innovation within their organizations.



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Keywords: knowledge management (KM) best practices; high performance organization (HPO); organizational innovation; public sector; PLS-SEM

1. Introduction

In a knowledge-based society, knowledge management (KM) is a critical factor for performance and innovation improvement, as well as sustainability [1]. The complementarity between innovation and KM is highlighted by many authors. For example, innovation has been defined as “new knowledge creation for an organization” [1]. In addition, previous researchers have found that the implementation of KM-processes has a positive impact on quality, innovation, and performance in public organizations [2]. In this context, high-performance organizations (HPOs) operate as drivers for knowledge-management improvements which can provide the foundation for supporting and fueling innovation within an organization [3]. Essentially, HPOs are organizations that outperform their peers in terms of financial outcomes over an extended duration by effectively adjusting to shifts, promptly responding to events, employing a long-term management approach, establishing a cohesive management framework, consistently enhancing their fundamental strengths, and genuinely valuing their employees as their primary resource [3]. This highlights the potency of skillful knowledge-management implementation and organizational innovation, as it facilitates the processes of KM (knowledge creation, storage, dissemination, and application) and the influx of knowledge into the organization. This, in turn, culminates in the accomplishment of organizational innovation.

Specifically, in the public-sector context, there are several research gaps and challenges relating to the above-mentioned links. First, there are limited studies about KM and organizational innovation concepts in the public sector, indicating the need for more scientific data about this research field [2,4,5]. Specifically, considering that public organizations

are characterized by numerous knowledge-intensive activities, there is, therefore, a need for effective KM best-practices implementation in order to develop innovative services. Additionally, the capability of innovation development depends on both inner and outer knowledge management [6]. This implies that investigation of context plays a significant role in the relationship between KM and innovation in public sector, which, as Della Peruta et al. [6] state, is poorly discussed in the literature. Second, it is noteworthy that there are very few publications for HPOs in the public sector [7], and there exists only one framework for the HPO concept, necessitating further exploration of the connection between the HPO framework and other management constructs, such as knowledge management [8]. Most of the research on HPOs focuses on testing the implementation of this framework. Furthermore, as highlighted by a review of the literature, there is a research gap which focuses on the lack of studies regarding the:

- Investigation of the relationship between knowledge management (KM) and innovation in the public sector;
- High-performance organizations—HPO investigation as a contextual factor which affects KM practices and innovation in the public sector;
- Holistic investigation of the relationships among KM, innovation, and HPOs in the Greek public sector.

The objective of this study is to explore the relationships among HPOs, KM best practices, and organizational innovation in the Greek public sector. Specifically, this paper delves into the influence of HPOs on organizational innovation by means of implementing best practices in knowledge management within the Greek public sector. This research holds a novel theoretical contribution, as it marks the first instance of an investigation of the interplay between HPOs, KM best practices, and organizational innovation. As mentioned earlier, previous studies have hitherto exclusively examined the implementation of the HPO framework, devoid of any exploration into other constructs. Therefore, this study presents a fresh body of knowledge and has the potential to stimulate and encourage other researchers to further delve into this domain. Ultimately, this research serves as a valuable resource for public sector managers and decision-makers seeking to enhance organizational performance, quality, and innovation through the adoption of contemporary managerial approaches.

The paper is organized in the following manner. Initially, each one of the concepts under investigation is presented: HPO, KM best practices, and organizational innovation. Then, the relationships between the aforementioned concepts are analyzed. Subsequently, the research methods used in the paper are presented. Following that, the results are presented; and, finally, the results are discussed, outlining the theoretical and practical contribution of the findings.

2. Literature Review

2.1. KM Best Practices

KM includes knowledge-creation, knowledge-storage, knowledge-dissemination, and knowledge-application processes, wherein the appropriate knowledge is shared with the right individuals at the appropriate moment to enhance organizational performance [4,9]. Specifically, knowledge-creation processes include knowledge identification, capture, and acquisition. In the knowledge-storage process, tacit knowledge may be codified in explicit knowledge. Knowledge dissemination includes K-sharing and K-transfer processes within and outside of an organization. And knowledge application focuses on the use of knowledge in the organization's value-adding process [9]. Throughout this process, there are numerous KM best practices that can be applied to achieve effective knowledge-management implementation. "Knowledge-management best practices" refers to a set of strategies and approaches that organizations use to effectively create, store, disseminate, and apply knowledge within their workforce. Implementing these practices can enhance collaboration, productivity, and innovation while ensuring that critical knowledge is preserved and accessible across the organization [4]. It is important to mention that knowledge

management is an ongoing process, and organizations need to be adaptable and receptive to changes in technology and business needs in order to maintain successful knowledge-management practices [9]. Examples of KM best practices are: (a) knowledge identification and collection from various sources, including employees, documents, databases, and other repositories; (b) KM systems development, knowledge-sharing culture fostering within and outside of the organization; (c) application of technological tools; (d) training and education; (e) incentives and recognition; (f) learning from failures; and (g) executive support.

KM in the Public Sector

Knowledge management (KM) in the public sector has not been studied as extensively and in detail as in the private sector. Therefore, there are a limited number of relevant studies [2]. There have been significant efforts that have provided valuable knowledge, information, and data which can serve as the basis for the existing literature. Taking into account recent research data regarding the evaluation of KM processes in the public sector, it appears that there is a lack of both a coordinated, official KM strategy and official knowledge-sharing networks within organizations [10,11]. This can weaken the implementation of KM and, consequently, its impact on the organization. An ironic element that emerges is related to the fact that although KM, and specifically the knowledge diffusion process, is perceived as being highly significant for the effectiveness of a public organization by the employees themselves, individuals tend to protect their individual knowledge (usually tacit) [11]. Additionally, as concluded by Amayah [12], employees' personal interests negatively affect the knowledge diffusion process in the public sector.

In public-sector organizations, based on the perceptions of Syed-Ikhsan and Rowland [13], there is generally a documented KM strategy, according to the majority of employees, and the importance of having an official KM strategy is considered to be high. Moreover, according to the employees' perceptions, KM contributes to improving the quality and the availability of updated information, as well as the effectiveness of the organization. Nevertheless, public organizations have (consciously and explicitly) implemented KM models in practice, such as Inukshuk, the Canadian KM model, to achieve the desired organizational change, relying on five common factors (in various contemporary KM models) [14]: leadership, culture, technology, measurement, and processes. Furthermore, KM processes are applied to some extent in public organizations, and their relationship with the attainment of quality, innovation, and performance is evaluated as a positive one [2]. Finally, it is remarkable that the research of Xanthopoulou et al. [9] created KM toolkits for effective common assessment framework implementation in the public sector.

2.2. HPOs

An HPO is characterized by its ability to consistently achieve outstanding results and surpass competitors. It focuses on maximizing efficiency, effectiveness, and adaptability to achieve strategic objectives. Specifically, according to Bagorogoza et al. [3], the HPO framework, which has been scientifically validated, offers managers a conceptual structure for enhancing organizational performance and ensuring its sustainability [15]. De Waal introduced five factors, comprising 35 characteristics, that organizations worldwide can utilize. Managers can exert influence on these characteristics, empowering the managers to implement specific measures and attain exceptional outcomes. The initial pair of elements concerns the calibers of both leadership and staff, while the subsequent trio pertains to attitudes regarding work and goal orientation. These elements encompass managerial excellence, workforce excellence, a forward-looking perspective, ongoing enhancement, and a spirit of transparency and proactive engagement [15].

Specifically, the "management quality" factor in the HPO framework represents the level of effectiveness and capability of the organization's management team [7]. This factor encompasses various aspects related to how well the management team leads, guides, and governs the organization [3].

The “workforce quality” factor in the HPO framework refers to the characteristics, competencies, and engagement levels of the employees within the organization [7]. This factor focuses on ensuring that the organization has a skilled, motivated, and committed workforce that can contribute significantly to the organization’s success [3].

The “long-term orientation” factor in the HPO framework refers to the organization’s ability to think and plan strategically for the future. It involves having a forward-looking approach that extends beyond short-term gains and focuses on sustainable success over the long term [7]. This factor emphasizes the importance of considering future challenges, opportunities, and trends to position the organization for continued excellence [3].

The “continuous improvement” factor in the HPO framework refers to the organization’s commitment to consistently enhancing its processes, products, services, and overall performance. It involves a culture of ongoing learning, innovation, and refinement to achieve higher levels of efficiency, effectiveness, and quality [3]. The continuous improvement factor is crucial for maintaining competitiveness, adapting to changes, and driving sustainable success [7].

The “openness and action orientation” factor in the HPO framework refers to the organization’s ability to foster a culture of transparency, receptiveness to new ideas, and a proactive approach to taking action [3]. This factor emphasizes the importance of encouraging open communication, embracing feedback, and swiftly implementing changes to drive improvement and innovation [7]. It involves a combination of being open to external influences while also being proactive in initiating and executing plans.

HPO in the Public Sector

Public organizations now operate under the prism of the new public management (NPM) approach, which enhances the transparency of public agencies through the implementation of performance management. Research in the public sector has demonstrated that the adoption of performance management is associated with a greater likelihood of achieving organizational objectives, providing improved services to citizens and businesses, and enhancing overall efficiency [16]. The primary goal of performance management in the public sector is to clarify objectives, performance measures, and resource utilization, integrate financial and non-financial information, synchronize policy and budget cycles, and enhance the quality, accessibility, and content of management information [16].

NPM programs have emphasized the need for public agencies and politicians to demonstrate improved results promptly in response to growing dissatisfaction among citizens as to government performance. Consequently, there is a demand for innovative approaches to enhance the performance of government organizations, one of which is the high-performance organization (HPO) framework. Knowledge of these HPO factors enables management to assess the HPO status of their organization. Characteristically, Blackman et al. [17] said that a high-performing public sector organization is best defined by the exceptional quality of results it delivers to the community. The emphasis on high performance has led to the development of various performance management systems and techniques. The HPO framework introduced by De Waal [18] is considered one of the most recent frameworks that can be applied in both public and private sector organizations [19]. Nevertheless, there is limited data available regarding the application of this framework in public organizations [7].

2.3. Organizational Innovation

Innovation refers to the creation and implementation of new ideas, processes, products, or services that bring value to an organization’s influence [20]. It involves generating and applying knowledge in novel ways to improve efficiency, create competitive advantages, and meet evolving customer needs [21]. Different researchers can assess innovation using various criteria, such as product innovation, market innovation, and technological innovation [22]. On the other hand, research examining organizational innovation

could involve assessing the innovations with regard to process innovation, structural (strategic/administrative) innovation, and competence (behavioral) innovation [22,23].

Aligning with Mafabi et al. [21] in this study, we concentrated on measuring innovation through structural innovation, process innovation, and competence innovation, as they are crucial in developing an organization's adaptive capacity to withstand disruptions [23].

Structural innovation refers to the introduction of significant changes or modifications in an organization's overall framework, design, or architecture [21]. It involves altering the fundamental elements and components that constitute the organization's structure in order to improve its efficiency, effectiveness, and adaptability to changing circumstances [24]. This type of innovation typically involves redefining roles, responsibilities, hierarchies, and relationships within the organization. It may also encompass changes in reporting lines, communication channels, decision-making processes, and coordination mechanisms [24]. The objective of structural innovation is to create a more streamlined and agile organization that can respond quickly to market dynamics, technological advancements, and other external influences [20].

Process innovation refers to the implementation of new or improved methods, techniques, or systems that lead to significant enhancements in how an organization carries out its operations or delivers its products and services [21]. It involves rethinking and redesigning existing processes to achieve greater efficiency, productivity, cost-effectiveness, and overall performance. Process innovation focuses on the "how" of doing things rather than the "what influences" [20]. The primary objectives of process innovation are to streamline workflows, eliminate bottlenecks, reduce waste, and enhance the quality of outputs [24].

Competence innovation, also known as behavioral innovation, refers to the development and enhancement of the skills, knowledge, capabilities, and behaviors of individuals and teams within an organization [21]. This type of innovation focuses on improving the human resources and the way people work and interact to drive innovation and improve overall organizational-performance influences [20]. Competence innovation involves fostering a learning culture, encouraging employees to acquire new skills, and promoting a mindset of continuous improvement and creativity [24].

Organizational Innovation in the Public Sector

The public sector is facing significant challenges in delivering new public services due to resource constraints [5]. These challenges include increased demands for improved services, cost-effective solutions, and innovative ways to engage with citizens. Innovation emerges as a potential solution for enhancing the effectiveness and problem-solving capabilities of public sector organizations [5]. Additionally, in a global landscape marked by rapid technological advancements and competition, public sector entities are compelled to foster organizational innovation to effectively implement new ideas and processes by addressing problems and seizing fresh opportunities [5]. It serves as a positive catalyst, motivating public sector organizations to break free from stagnation, enhance performance, and establish a robust foundation for sustainable development [25]. In particular, Moore and Hartley [26] view innovation within the public sector as a fundamental avenue for surpassing the quality-enhancement strategies employed in the 1980s and 1990s. Their perspective emphasizes achieving a substantial improvement in the overall efficiency, effectiveness, and adaptability of government and public service organizations. They acknowledge that, while certain researchers perceive innovation as a means to enhance service "delivery," others recognize its capacity to rejuvenate the government's standing as a value-creating institution by being more attuned to the desires and expectations of citizens and service recipients [26] (p. 3).

It is worth noting that there is a growing demand for research conducted on innovation within organizations encompasses studies conducted in both the private and public sectors [25]. While many studies underscore the significance of organizational innovation, our comprehension of innovation within the public sector context remains underdeveloped [27,28]). Furthermore, the existing literature lacks a "clear theoretical underpinning"

and often fails to align with established theories of organizational innovation [25], resulting in limited contributions to date [29].

In conclusion, research on innovation in the public sector has tackled various aspects, including defining public sector innovation, examining the frequency and scale of innovative changes, identifying significant innovations, exploring the factors influencing or hindering such innovations, and investigating collaborative innovation efforts [25].

2.4. The Relationship among KM Best Practices, HPOs, and Organizational Innovation

Innovation and KM are key drivers in creating and sustaining high performance. High-performance organizations, KM best practices, and organizational innovation are interconnected and mutually supportive concepts. Specifically, the relationships among these concepts can be described as follows:

2.4.1. KM Best Practices and Organizational Innovation

KM best practices facilitate the efficient capture, storage, and dissemination of knowledge within an organization. This enables employees to access relevant information, learn from past experiences, and leverage existing knowledge to drive innovation [4]. The complementarity between innovation and KM is highlighted in the definition given by Obeidat et al. [1], in which innovation is regarded as “new knowledge creation for an organization”. Additionally, Ahbabi et al. [2] investigate the relationship between KM and innovation and underline that the implementation of KM processes has positive impacts on quality, innovation and performance in public organizations. Innovation thrives in organizations that have established effective knowledge-management practices. By providing employees with easy access to relevant information and promoting collaboration, organizations can stimulate creative thinking, problem-solving, and idea generation. Drawing upon the resource-based view of the firm, Gold et al. [30] assert that an organization’s accumulated knowledge resources should be leveraged to create and implement novel organizational forms of significant strategic value. Robinson et al. [31] emphasize the crucial role of a knowledge management strategy, encompassing acquisition, creation, sharing, memory [32,33], and capture, in driving organizational innovation. In addition, it is notable that tacit knowledge is valuable for developing core competencies within an organization due to the fact that it is difficult for competitors to replicate or imitate [21].

Therefore, the development of core competencies requires an established system for generating and incorporating knowledge [34], which can then be harnessed to promote innovation in corporate structures and processes.

Taking into consideration the above analysis, the following research hypothesis arises:

H1. *KM best practices have a positive and significant relationship with organizational innovation in the Greek public sector.*

2.4.2. HPO and KM Best Practices

HPOs actively promote a culture of innovation and knowledge sharing. They recognize the value of leveraging knowledge as a strategic asset to drive continuous improvement and maintain a competitive edge. Effective knowledge management practices and a focus on innovation contribute to their ability to consistently achieve outstanding results [3].

The initial two aspects of the HPO framework pertain to the quality of both management and employees [7], with knowledge residing within the human resources. As a result, there exists a connection between the HPO framework and knowledge management (KM) [35]. Typically, the company’s knowledge base is considered to be the primary factor influencing performance levels [36]. Knowledge resources have gained significant attention from organizations due to their strategic importance [36,37]. Furthermore, the HPO factor of openness and action orientation suggests that employees in HPOs dedicate ample time to communication, knowledge exchange, and learning [7]. This indicates a relationship between the HPO framework and KM. Finally, the “openness and action orientation” factor of HPO framework suggests that employees in HPOs engage in extensive communication,

knowledge exchange, and learning [7]. This indicates a notable relationship between the HPO framework and KM.

Drawing on the above-mentioned analysis, the following research hypothesis arises:

H2. *HPO has a positive and significant relationship with KM best practices in the Greek public sector.*

2.4.3. HPOs and Organizational Innovation

HPO framework characteristics could be drivers for organizational innovation [38]. Specifically, the HPO factors of continuous improvement and openness and action orientation could be used for innovation achievement. Thus, the relationship between an HPO (high-performance organization) and innovation is significant, and HPOs tend to foster a conducive environment which promotes and supports innovation. Finally, there is lack of research efforts that investigate the above-mentioned relationship in the public sector.

Considering the analysis provided above, the following research hypothesis emerges:

H3. *HPOs have a positive and significant relationship with organizational innovation in the Greek public sector.*

2.4.4. HPO, KM Best Practices and Organizational Innovation

Taking into consideration the above-mentioned analysis regarding the relationships between HPO and KM best practices; KM best practices and organizational innovation, and HPOs and organizational innovation, the following research hypothesis arises:

H4. *HPOs have a positive and significant relationship with organizational innovation through the mediation role of KM best practices in the Greek public sector.*

3. Research Methods

3.1. The Research Instrument

This research aims to investigate the relationship among HPO, KM best practices, and organizational innovation in a Greek public sector context. Specifically, we focused on the context of Greek public organizations that use performance management methods, and thus could be regarded as HPOs. We employed a quantitative case study methodology and developed a structured online questionnaire with a 5-degree Likert scale (1: “I strongly disagree”–5: “I strongly agree”) which we tested with the PLS-SEM method. The questionnaire’s structure is described as follows:

- 35 questions for “HPO” [39] that refer to MQ (management quality), OAO (openness and action orientation), LTO (long-term orientation), CI (continuous improvement), and EQ (employee quality);
- 20 questions for “KM best practices” [2,4,9] that refer to KM best practices at each KM sub-process: KA (knowledge application), KS (knowledge storage), KD (knowledge dissemination), KC (knowledge creation);
- 15 questions for “organizational innovation” [21] that refer to SI (structural innovation), PI (process innovation), and I (competence innovation).

More details about the question’s description are presented in Table 1.

Table 1. Description of the questions and variable loadings according to the PLS method.

Construct	Items	Questions	Loadings
HPO	CI1	My organization has adopted a strategy that clearly differs from that of other organizations	0.631
	CI2	In my organization, processes are continuously improved	0.870
	CI3	In my organization, processes are continuously simplified	0.827
	CI4	In our organization, processes are constantly aligned/synchronized with the organizational goals and strategies.	0.860

Table 1. Cont.

Construct	Items	Questions	Loadings
HPO	CI5	In my organization, anything related to organizational performance that occurs is explicitly reported	0.791
	CI6	In my organization, both financial and non-financial information is communicated to its members	0.568
	CI7	My organization constantly innovates in terms of its core competencies (e.g., collaboration, communication, leadership and organizational skills, problem-solving abilities, flexibility, etc.)	0.869
	CI8	My organization continually innovates regarding its services and processes	0.856
	OAO1	The management of our organization frequently engages in a dialogue with employees	0.862
	OAO2	Organizational members spend much time on communication, knowledge exchange and learning	0.822
	OAO3	Organizational members are always involved in important processes	0.812
	OAO4	The management of our organization allows making mistakes.	0.744
	OAO5	The management of our organization welcomes change	0.829
	OAO6	Our organization is performance driven	0.820
	MQ1	The management of our organization is trusted by organizational members	0.755
	MQ2	The management of our organization has integrity	0.825
	MQ3	The management of our organization is a role model for organizational members	0.858
	MQ4	The management of our organization applies fast decision-making	0.857
	MQ5	The management of our organization applies fast action taking	0.809
	MQ6	The management of our organization coaches organizational members to achieve better results	0.772
	MQ7	The management of our organization focuses on achieving results	0.753
	MQ8	The management of our organization is very effective	0.692
	MQ9	The management of our organization applies strong leadership	0.751
	MQ10	The management of our organization is confident	0.802
	MQ11	The management of our organization is decisive with regard to non-performers	0.771
	EQ1	The management of our organization always holds organizational members responsible for their results	0.889
	EQ2	The management of our organization inspires organizational members to accomplish extraordinary results	0.897
	EQ3	Organizational members are trained to be resilient and flexible	0.736
	EQ4	Our organization has a diverse and complementary workforce	0.732
	LTO1	Our organization grows through partnerships with suppliers and/or customers	0.842
	LTO2	Our organization maintains good and long-term relationships with all stakeholders	0.853
	LTO3	Our organization is aimed at servicing the customers as best as possible	0.817
	LTO4	The management of our organization has been with the company for a long time	0.714
	LTO5	New management is promoted from within the organization	0.812
LTO6	Our organization is a secure workplace for organizational members	0.802	

Table 1. Cont.

Construct	Items	Questions	Loadings
KM best practices	KC1	My organization has official or unofficial processes for generating new knowledge from existing knowledge (implicit individual and/or explicit organizational)	0.859
	KC2	My organization has official or unofficial processes for acquiring knowledge about new services or processes in the public sector	0.853
	KC3	My organization has official or unofficial processes and provides the necessary Knowledge Management (KM) tools (technological and non-technological) for creating new knowledge from external sources (e.g., consultants, other organizations within the country or abroad)	0.894
	KC4	My organization has official or unofficial processes and provides the necessary KM tools (technological and non-technological) for acquiring knowledge related to best practices from other public organizations (in Greece or internationally) that lead to performance improvement	0.873
	KC5	My organization has official or unofficial processes and provides the necessary KM tools (technological and non-technological) for acquiring knowledge about the needs, requirements, and desires of its customers (citizens, businesses, and other stakeholders)	0.860
	KC6	My organization has teams responsible for identifying best practices.	0.795
	KS1	In my organization, there are archived organizational processes in the forms of forms, procedures, work guides, written protocols, manuals, etc	0.837
	KS2	Lists with comprehensive employee details (such as phone numbers, emails, organization, department, responsibilities) are available, indicating specific knowledge areas, making it easy to find the right person for acquiring required knowledge and completing tasks	0.827
	KS3	Updated databases and information renewal are in place	0.779
	KS4	My organization uses KM tools (technological and non-technological) to detect new ideas from its employees and store them for further development	0.741
	KS5	My organization has mechanisms and tools for storing knowledge from employees, citizens, businesses, and partners	0.811
	KD1	Employees in my organization are often encouraged to engage in informal discussions to share knowledge among themselves	0.859
	KD2	Knowledge sharing is encouraged among individuals within my organization	0.803
	KD3	Individuals are interested in knowing the knowledge and skills possessed by their colleagues	0.698
	KD4	My organization has processes and uses tools to disseminate knowledge within the organization	0.885
	KD5	My organization has processes and uses tools to disseminate knowledge outside the organization (e.g., among other public organizations within and outside Greece)	0.780
	KA1	My organization has official or unofficial processes and utilizes the necessary KM tools to apply knowledge generated through learning from relevant past experiences to address shortcomings	0.869
	KA2	Employees are encouraged to apply their knowledge using KM tools to solve problems that arise in their daily activities	0.874
	KA3	My organization swiftly responds to citizens' demands by utilizing KM tools	0.861
	KA4	My organization possesses the necessary KM tools to remain flexible and ready to adapt its services according to prevailing circumstances	0.892
Organizational innovation	SI1	We are redesigning different strategies to achieve our goals	0.863
	SI2	We are revising the functions of departments within our organization	0.817
	SI3	We evaluate performance plans within our organization	0.860
	SI4	We improve our systems concerning risk management	0.868
	SI5	We review our programs	0.908

Table 1. Cont.

Construct	Items	Questions	Loadings
Organizational innovation	SI6	We revise job descriptions within our organization	0.872
	SI7	We have succeeded in improving the methods of delivering our services	0.843
	PI1	We are redesigning workflow using communication and information technology	0.904
	PI2	We design the provision of services through the internet	0.897
	PI3	We change workflow by removing specific activities	0.848
	PI4	We change workflow by merging specific activities	0.819
	I1	We improve leadership behavior	0.822
	I2	We improve our behavior in serving citizens	0.817
	I3	We create new networks for our organization	0.882
	I4	We change our behavior regarding the management of organizational resources we possess	0.862

3.2. The Sample

The above-mentioned questionnaire was delivered to 621 Greek public sector organizations that use performance management tools based on the official platform of the Department of Quality and Efficiency of the Hellenic Ministry of the Interior, Public Administration and Decentralization. We collected 270 full responses (a 43.48% response rate) from public sector managers of the above-mentioned organizations. Specifically, the questionnaire was answered by a responsible member-manager of the performance and quality department of each organization. The sample includes: 10% Ministries, 8% Decentralized Administration, 15% Regions, 50% Municipalities, 12% Independent Authorities, and 5% hospitals. The data collection took place from January 2022 to February 2022, effecting the distribution of the questionnaire through the Google Forms platform.

3.3. The Validity Assessment

To analyze the data, we used the “Smart PLS 3” software for the assessment of the structural model, and tested the hypotheses by means of partial least squares (PLS) structural equation modelling (SEM) [40]. PLS-SEM has gained increased popularity over the years in social sciences [41], and recently in KM research [42–45]. We opted for PLS-SEM due to its various benefits in comparison to conventional covariance-based SEM methods. For instance, it does not rely on distributional assumptions like normality, and it is suitable for analyzing data from limited sample sizes. Moreover, PLS-SEM accommodates both formative and reflective constructs, along with hierarchical component models (HCMs). HCMs offer the opportunity to minimize the quantity of relationships in the structural model, simplifying the PLS path model and enhancing its comprehensibility [46]. In our structural model, HPO, KM best practices, and organizational innovation were operationalized as “reflective–formative” higher-order components. The hierarchical component measurement model was created by using the “repeated indicators approach” combined with the “two-step approach” [46,47] (pp. 230–233, p. 135). Specifically, the HPO is the independent variable; KM best practices is the mediator variable; organizational innovation is the dependent variable. Figure 1 shows both a direct effect (c) between HPO and organizational innovation and an indirect effect of HPO on organizational innovation in the form of an HPO→KM best practices→organizational innovation sequence. The indirect effect of $a \cdot b$ represents the mediating effect of the construct of KM best practices on the relationship between HPO and organizational innovation. The aforementioned concept highlighted in Figure 1 is supported by theoretical evidence, and our empirical testing of the cause-and-effect relationship helps us obtain precise and accurate results regarding the mediation effect of KM best practices [46]. The total effect of Figure 1 is: direct effect + indirect effect [$c = c' + (a \times b)$]. Additionally, the indirect effect equals the reduction of the effect of the causal variable on the outcome, or: $ab = c - c'$ (indirect

effect = total effect – direct effect). When estimating the effects in a mediation model, $a \cdot b$ is the measure of the amount of mediation.

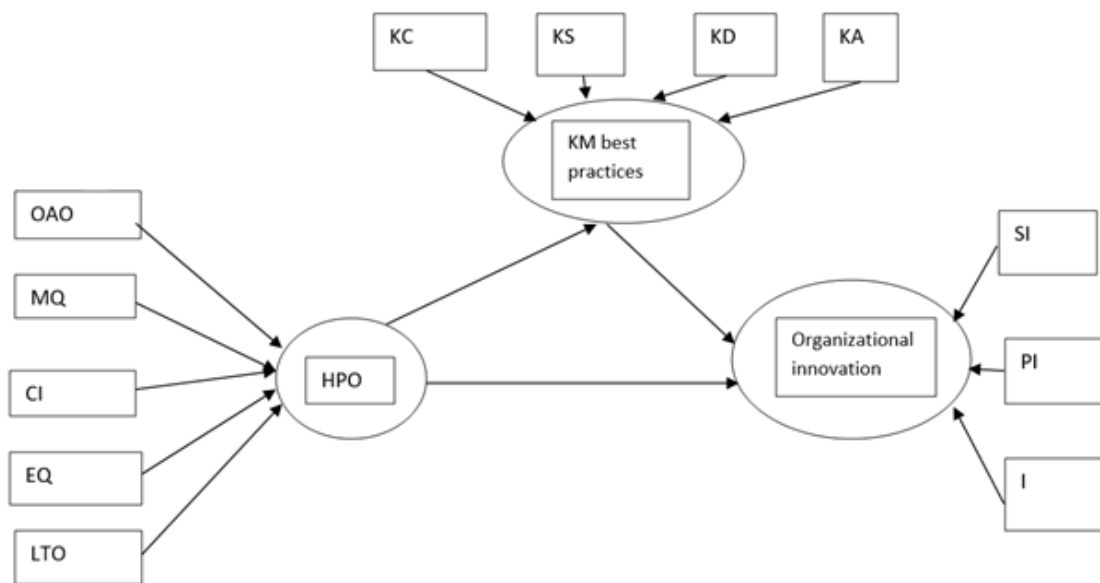


Figure 1. The conceptual model.

To assess convergent validity and reliability for reflective indicators, we calculated AVE (average variance extracted), Cronbach's α , and composite reliability (CR) [46]. To establish discriminant validity, we applied the "Fornell–Lacker" and "Heterotrait–Monotrait Ratio" (HTMT) criteria, with a threshold of less than 0.85 or 0.9. For formative indicators (HPO, KM best practices, and innovation) we examined the "multicollinearity" by the "Variance Inflation Factors" (VIF) [46] ($VIF < 3.33$ or 5.0).

Finally, the bootstrapping procedure was applied (5000 randomly drawn samples) for the structural model analysis and hypotheses testing.

Furthermore, we utilized the Stone–Geisser Q-square test to assess the predictive relevance of the structural model's quality [46]. This test involved two separate analyses, with omission distances of 7 and 25 (conducted using the blindfolding technique in SmartPLS), to evaluate the robustness of the results ($Q\text{-squares} > 0$). In line with Mihail and Kloutsiniotis [48], we made the decision not to include the goodness-of-fit (GoF) as an evaluation criterion for PLS-SEM. This choice was based on the belief that GoF may not effectively distinguish valid models from invalid ones, particularly in cases involving formative measurement models [46,49].

4. Results

In this section, the results of the quantitative analysis conducted in the Smart PLS 3 software are presented. First, the conceptual model is depicted in Figure 2, and the results of the two-step approach are shown in Figure 1. These figures represent the independent variable (HPO), mediator variable (KM best practices), and dependent variable (organizational innovation) of the research model.

Convergent validity and reliability were estimated with the use of AVE, Cronbach α and composite reliability (CR), for which all values are in the acceptable level, as presented in Tables 1 and 2 (Cronbach $\alpha > 0.7$, AVE > 0.5 , CR > 0.7). Additionally, all loading of the variables is over 0.5, which is the threshold. Thus, the above-mentioned results are indicators of convergent validity.

For discriminant validity we used the "Fornell–Lacker" and the "Heterotrait–Monotrait ratio" (HTMT < 0.85 or 0.9) criteria. Tables 3 and 4 show that discriminant validity was achieved.

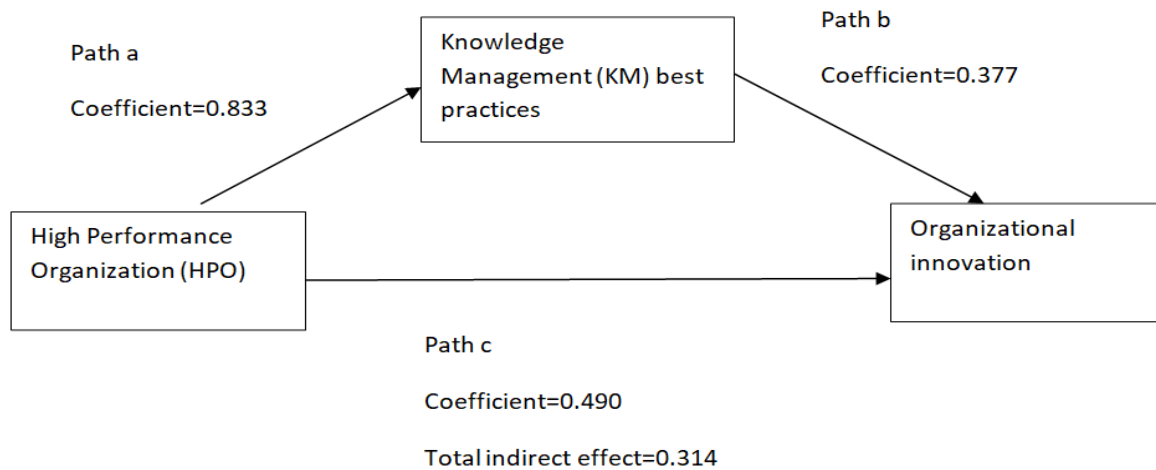


Figure 2. Two-step approach.

Table 2. Convergent Validity.

	Cronbach’s Alpha	Composite Reliability	Average Variance Extracted (AVE)
KM	0.924	0.946	0.814
HPO	0.938	0.953	0.801
INNOVATION	0.923	0.951	0.866

Table 3. Fornell–Lacker Criterion.

Fornell-Lacker Criterion			
	KM	HPO	INNOVATION
KM	0.902		
HPO	0.833	0.895	
INNOVATION	0.785	0.804	0.931

Table 4. Heterotrait–Monotrait Ratio (HTMT).

Heterotrait–Monotrait Ratio (HTMT)			
	KM	HPO	INNOVATION
KM			
HPO	0.894		
INNOVATION	0.845	0.861	

Regarding the separate analyses with respective omission distances of 7 and 25, conducted using the blindfolding technique in Smart PLS, the values remained consistent. In two out of three cases, the Q2 values exceeded zero (0.559 and 0.585), while the Q2 value for the HPO construct reached zero, which is at the lower limit of acceptable values (refer to Table 5). Consequently, there is evidence to suggest that the model was stable, and the criteria for predictive relevance were met.

Table 5. Quality Assessment.

	SSO	SSE	Q ² (= 1 – SSE/SSO)
KM	1080.000	475.958	0.559
HPO	1350.000	1350.000	0.00
INNOVATION	810.000	336.263	0.585

Regarding the VIF value, the result of the VIF estimation is acceptable if $VIF < 3.33$ or 5.00 [41]. Finally, Table 6 presents the results of the hypotheses-testing through the bootstrapping procedure, as follows:

Table 6. Hypotheses Testing.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	p Value
HPO→KM→INNOVATION	0.314	0.315	0.058	5.395	0.000
KM→INNOVATION	0.377	0.377	0.068	5.522	0.000
HPO→KM	0.833	0.833	0.020	42.379	0.000
HPO→INNOVATION	0.804	0.804	0.027	29.918	0.000

For the analysis of the structural model, we employed the bootstrapping procedure, which involved drawing 5000 random samples (as indicated in Table 6). Table 6 presents data indicating that KM best practices ($\beta = 0.377, p < 0.001$) is positively and significantly related to organizational innovation, HPO ($\beta = 0.804, p < 0.001$) is positively and significantly related to organizational innovation, and HPO ($\beta = 0.833, p < 0.001$) is positively and significantly related to KM best practices. Thus, these findings support our hypotheses (H1, H2, and H3). In addition, H4 is supported, because the HPO construct has a positive and significant relationship with organizational innovation through the mediation role of KM best practices ($\beta = 0.314, p < 0.001$). Specifically, the above-mentioned mediation effect is complementary mediation while the indirect effect and the direct effect are both significant and point in the same direction [41]. In a complementary partial mediation, the direct effect (c') and indirect effect ($a*b$) point in the same positive direction. It is an often-observed result that $a*b$ and c' are significant, and $a*b \times c'$ is positive, which indicates that a portion of the effect of the HPO construct on organizational innovation is mediated through KM best practices, whereas the HPO construct still explains a portion of organizational innovation that is independent of KM best practices. This complementary-mediation hypothesis suggests that the intermediate variable explains, or possibly confounds or falsifies, the relationships between the independent and dependent variables.

5. Discussion and Conclusions

The aim of this paper is the investigation of the relationships among HPOs, KM best practices, and organization innovation in the Greek public sector. The results of this research indicated that KM best practices operated as a mechanism for organizational innovation development in the relationship between the HPO construct and organizational innovation in the Greek public sector. These results are novel because it is the first time that this conceptual model has been investigated in the literature. For this reason, we could not make a comparison of the mediation role of KM best practices in the relationship between the HPO construct and organizational innovation with other findings in previous publications. However, we can discuss the direct positive relationships between the HPO construct and KM best practices, KM best practices and organizational innovation, and the HPO construct and organizational innovation. Regarding the positive correlation between HPOs and KM best practices, this finding aligns with prior studies [7,35]. Similarly, Ahbabi et al. [2] and Dutrenit [50] also reported a positive link between KM best practices and organizational innovation. Moreover, a noteworthy aspect is the validation of the positive relationship between HPOs and organizational innovation, as confirmed by Mroueh and Wall [38]. Hence, these results are consistent with earlier research, providing novel perspectives on the existing evidence.

The paper has significant implications for both theory and practice. First, this study makes a unique theoretical contribution by being the inaugural attempt to explore the interactions among HPOs, KM best practices, and organizational innovation. As previously mentioned, earlier research has solely focused on implementing the HPO framework with-

out considering other aspects. The literature review has highlighted the necessity to explore the relationship of the HPO construct with other managerial concepts, such as knowledge management, in order to depict the contribution of the HPO framework to the effective implementation of contemporary administrative systems that lead to organizational performance improvement, quality enhancement, and innovation. This holds significant value in today's era and the society of knowledge, where we are inundated with vast amounts of data and information, and where innovation stands as the solution for the sustainable development of organizations, even in the public sector. Taking into consideration all of the above, combined with the demand for new scientific knowledge within the field of public administration, this research can contribute to, and to some extent address, the areas with the aforementioned research gaps. As a result, this study introduces a new realm of knowledge, and could inspire and motivate other researchers to delve deeper into this subject matter.

Second, the results are important for practitioners and policy makers for the incorporation of KM best practices in their strategies, which could lead to the development of innovations and performance improvement. The implementation of modern managerial tools that lead to innovation, whether in services or in the structure and behavior of an organization, has become a necessity for achieving the sustainability of these entities. It is not coincidental that these specific factors also serve as criteria for sourcing funding for public organizations. After all, enhancing performance and achieving innovation are solutions for effectively managing the crises that have affected organizations over the last decade. Therefore, both those involved in formulating organizational strategy and those performing administrative duties will benefit from the outcome of this research. They will know in advance that they should focus on adopting a knowledge-management system in order to benefit from performance improvement and achieve organizational innovation. In addition, it is important to report some critical recommendations to public-sector administrators and policy makers. This entire undertaking directed towards the development of organizational innovation (developing new services, processes, and management methods) and functioning as an HPO (high-performance organization) through the application of knowledge-management best practices is a change process that must be managed effectively to maximize its benefits. In this context, the research provides ready data on which knowledge-management best practices can be utilized and what an organization needs to perform to operate as an HPO and innovate. With this data in hand, senior executives of public organizations and policy makers should create a strategy and an action plan for implementing this change. The first and fundamental step is the practical commitment of leadership and management to provide everything necessary for the effective implementation of the above change. Once this is done, a team should be appointed to develop a specific strategy based on the results obtained through the validated questionnaire tool provided by this research. Subsequently, based on the results that will be generated, specific actions can be proposed, and measures that the organization should take to evolve into an HPO can be determined. This plan includes the implementation of best practices of knowledge management, and, of course, the organizational innovations which will be created. Once this step is completed, a detailed analysis of the entire organization should be conducted to inform and persuade stakeholders about this change, and the phase of implementing the strategy should commence, initially on a pilot basis, and then throughout the entire organization. After the action plan is implemented, it will be crucial to monitor the progress of the change using the same self-assessment tool used in the initial phase.

Nonetheless, it is important to acknowledge the limitations of this study. The primary limitation lies in the relatively small number of respondents included in the survey. Therefore, in order to enhance the generalizability of the findings, further validation is necessary, with a larger and more diverse sample size. Generalization is not possible because the number of organizations that participated in the research is small. Furthermore, another limitation of the research is that only one responsible person from each organization responded. Another limitation of this study pertains to the exclusive focus on data collected

from Greek public sector organizations. Consequently, our findings are confined to a specific geographical context. Given that the study's respondents were based in Greece, it is plausible that their responses may have been shaped by the cultural, organizational, and professional dynamics specific to that region, potentially differing from those in other public organizations worldwide. Additionally, data have not been collected from all categories of public organizations operating in Greece, such as public schools and universities.

Further research with increased participation from more public sector organizations around the world is required to bolster the validity and broaden the applicability of the results while extracting more pertinent managerial insights. Additionally, it would have been valuable if all individuals involved with the subject matter within each organization participating in the research could have responded, in order to obtain a more representative result for each organization. Finally, once multiple responses are collected from all relevant employees within each organization, a comparative study could be conducted across different categories of public organizations, at either the national or international level.

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References

- Obeidat, B.Y.; Al-Suradi, M.M.; Masa, E.; Tarhini, A. The impact of knowledge management on innovation: An empirical study on Jordanian consultancy firms. *Manag. Res. Rev.* **2016**, *39*, 1214–1238. [\[CrossRef\]](#)
- Al Ahbabi, S.A.; Singh, S.K.; Balasubramanian, S.; Gaur, S.S. Employee perception of impact of knowledge management processes on public sector performance. *J. Knowl. Manag.* **2018**, *23*, 351–373. [\[CrossRef\]](#)
- Bagorogoza, J.K.; Herik, J.V.D.; Waal, A.D.; Walle, B.V.D. The mediating effect of knowledge management in the relationship between the HPO framework and performance. *Int. J. Product. Perform. Manag.* **2023**; ahead of print. [\[CrossRef\]](#)
- Teixeira, E.K.; Oliveira, M.; Curado, C. Linking knowledge management processes to innovation: A mixed-method and cross-national approach. *Manag. Res. Rev.* **2019**, *43*, 332–349. [\[CrossRef\]](#)
- Maqdlıyan, R.; Setiawan, D. Antecedents and consequences of public sector organizational innovation. *J. Open Innov. Technol. Mark. Complex.* **2023**, *9*, 100042. [\[CrossRef\]](#)
- Della Peruta, M.R.; Del Giudice, M.; Lombardi, R.; Soto-Acosta, P. Open innovation, product development, and inter-company relationships within regional knowledge clusters. *J. Knowl. Econ.* **2018**, *9*, 680–693. [\[CrossRef\]](#)
- De Waal, A. Creating high-performance organizations in Asia: Issues to consider. *Int. J. Manag. Appl. Res.* **2020**, *7*, 86–103. [\[CrossRef\]](#)
- Do, T.T.; Mai, N.K. High-performance organization: A literature review. *J. Strategy Manag.* **2020**, *13*, 297–309. [\[CrossRef\]](#)
- Xanthopoulou, S.; Kessopoulou, E.; Tsiotras, G. KM tools alignment with KM processes: The case study of the Greek public sector. *Knowl. Manag. Res. Pract.* **2023**, *21*, 361–371. [\[CrossRef\]](#)
- Amber, Q.; Khan, I.A.; Ahmad, M. Assessment of KM processes in a public sector organisation in Pakistan: Bridging the gap. *Knowl. Manag. Res. Pract.* **2018**, *16*, 13–20. [\[CrossRef\]](#)
- Sandhu, M.S.; Jain, K.K.; bte Ahmad, I.U.K. Knowledge sharing among public sector employees: Evidence from Malaysia. *Int. J. Public Sect. Manag.* **2011**, *24*, 206–226. [\[CrossRef\]](#)
- Titi Amayah, A. Determinants of knowledge sharing in a public sector organization. *J. Knowl. Manag.* **2013**, *17*, 454–471. [\[CrossRef\]](#)
- Syed-Ikhsan, S.O.S.; Rowland, F. Knowledge management in a public organization: A study on the relationship between organizational elements and the performance of knowledge transfer. *J. Knowl. Manag.* **2004**, *8*, 95–111. [\[CrossRef\]](#)
- Girard, J.P.; McIntyre, S. Knowledge management modeling in public sector organizations: A case study. *Int. J. Public Sect. Manag.* **2010**, *23*, 71–77. [\[CrossRef\]](#)
- De Waal, A.A. The characteristics of a high performance organisation. *Bus. Manag. Strategy* **2012**, *3*, 14–31. [\[CrossRef\]](#)
- De Waal, A.A. Achieving High Performance in the Public Sector. *Public Perform. Manag. Rev.* **2010**, *34*, 81–103. [\[CrossRef\]](#)

17. Blackman, D.A.; Buick, F.; O'Donnell, M.; O'Flynn, J.L.; West, D. Developing high performance: Performance management in the Australian Public Service. *SSRN Electron. J.* **2012**, 1–59. [[CrossRef](#)]
18. De Waal, A.A. The secret of high performance organizations. *Manag. Online Rev.* **2008**, *2*, 100–108.
19. Arshad, M.A.; Kalimullah; Khan, S.; Shahid, Z. High performance organisation: The only way to sustain public sector organisations. *Int. J. Public Sect. Perform. Manag.* **2020**, *6*, 806–816. [[CrossRef](#)]
20. Senbeto, D.L.; Hon, A.H. Market turbulence and service innovation in hospitality: Examining the underlying mechanisms of employee and organizational resilience. *Serv. Ind. J.* **2020**, *40*, 1119–1139. [[CrossRef](#)]
21. Mafabi, S.; Munene, J.; Ntayi, J. Knowledge management and organisational resilience: Organisational innovation as a mediator in Uganda parastatals. *J. Strategy Manag.* **2012**, *5*, 57–80. [[CrossRef](#)]
22. Wang, C.L.; Ahmed, P.K. The development and validation of the organisational innovativeness construct using confirmatory factor analysis. *Eur. J. Innov. Manag.* **2004**, *7*, 303–313. [[CrossRef](#)]
23. Christensen, K.S. Losing innovativeness: The challenge of being acquired. *Manag. Decis.* **2006**, *44*, 1161–1182. [[CrossRef](#)]
24. Rehman, U.U.; Iqbal, A. Nexus of knowledge-oriented leadership, knowledge management, innovation and organizational performance in higher education. *Bus. Process Manag. J.* **2020**, *26*, 1731–1758. [[CrossRef](#)]
25. Hijal-Moghrabi, I.; Sabharwal, M.; Ramanathan, K. Innovation in public organizations: Do government reforms matter? *Int. J. Public Sect. Manag.* **2020**, *33*, 731–749. [[CrossRef](#)]
26. Moore, M.; Hartley, J. Innovations in governance in The New Public Governance. In *Emerging Perspectives on the Theory and Practice of Public Government*; Osborne, L., Ed.; Routledge: New York, NY, USA, 2010; pp. 68–87.
27. Sørensen, E.; Torfing, J. Enhancing collaborative innovation in the public sector. *Adm. Soc.* **2011**, *43*, 842–868. [[CrossRef](#)]
28. Torfing, J.; Triantafillou, P. *Enhancing Public Innovation by Transforming Public Governance*; Cambridge University Press: Cambridge, UK, 2016.
29. Demircioglu, M.A.; Audretsch, D.B. Conditions for innovation in public sector organizations. *Res. Policy* **2017**, *46*, 1681–1691. [[CrossRef](#)]
30. Gold, A.H.; Malhotra, A.; Segars, A.H. Knowledge management: An organizational capabilities perspective. *J. Manag. Inf. Syst.* **2001**, *18*, 185–214. [[CrossRef](#)]
31. Robinson, H.S.; Anumba, C.J.; Carrillo, P.M.; Al-Ghassani, A.M. STEPS: A knowledge management maturity roadmap for corporate sustainability. *Bus. Process Manag. J.* **2006**, *12*, 793–808. [[CrossRef](#)]
32. Nonaka, I. Knowledge management: Theoretical and methodological foundations. In *Great Minds in Management: The Process of Theory Development*; Smith, K.G., Hitt, M.A., Eds.; Oxford University Press: New York, NY, USA, 2007; pp. 373–393.
33. Gloet, M. Knowledge management and the links to HRM: Developing leadership and management capabilities to support sustainability. *Manag. Res. News* **2006**, *29*, 402–413. [[CrossRef](#)]
34. O'Regan, N.; Ghobadian, A. The importance of capabilities for strategic direction and performance. *Manag. Decis.* **2004**, *42*, 292–313. [[CrossRef](#)]
35. Bagorogoza, J.; de Waal, A. The role of knowledge management in creating and sustaining high performance organisations: The case of financial institutions in Uganda. *World J. Entrep. Manag. Sustain. Dev.* **2010**, *6*, 307–324. [[CrossRef](#)]
36. Abualoush, S.; Bataineh, K.; Alrowwad, A.a. The role of knowledge management process and intellectual capital as intermediary variables between knowledge management infrastructure and organization performance. *Interdiscip. J. Inf. Knowl. Manag.* **2018**, *13*, 279–309. [[CrossRef](#)] [[PubMed](#)]
37. Masa'deh, R.E.; Obeidat, B.Y.; Tarhini, A. A Jordanian empirical study of the associations among transformational leadership, transactional leadership, knowledge sharing, job performance, and firm performance: A structural equation modelling approach. *J. Manag. Dev.* **2016**, *35*, 681–705. [[CrossRef](#)]
38. Mroueh, M.; de Waal, A. Applicability of the HPO framework in non-profit organizations: The case of the Emirates Insurance Association. *Int. J. Organ. Anal.* **2017**, *25*, 468–484. [[CrossRef](#)]
39. Yadav, N.; de Waal, A. Comparison of Indian with Asian organizations using the high performance organization framework: An empirical approach. *J. Transnatl. Manag.* **2020**, *25*, 176–194. [[CrossRef](#)]
40. Ringle, C.; Wende, S.; Becker, J. SmartPLS 3. Available online: www.smartpls.com (accessed on 1 October 2021).
41. Hair, J.; Matthews, L.; Matthews, R.; Sarstedt, M. PLS-SEM or CB-SEM: Updated guidelines on which method to use. *Int. J. Multivar. Data Anal.* **2017**, *1*, 107–123. [[CrossRef](#)]
42. Kashyap, A.; Agrawal, R. Scale development and modeling of intellectual property creation capability in higher education. *J. Intellect. Cap.* **2020**, *21*, 115–138. [[CrossRef](#)]
43. Zhang, X.; Wang, X. Team learning in interdisciplinary research teams: Antecedents and consequences. *J. Knowl. Manag.* **2021**, *25*, 1429–1455. [[CrossRef](#)]
44. Berraies, S.; Zine El Abidine, S. Do leadership styles promote ambidextrous innovation? Case of knowledge-intensive firms. *J. Knowl. Manag.* **2019**, *23*, 836–859. [[CrossRef](#)]
45. Rezaei, G.; Mardani, A.; Senin, A.A.; Wong, K.Y.; Sadeghi, L.; Najmi, M.; Shaharoun, A.M. Relationship between culture of excellence and organisational performance in Iranian manufacturing companies. *Total Qual. Manag. Bus. Excell.* **2018**, *29*, 94–115. [[CrossRef](#)]
46. Hair, J.; Hult, T.; Ringle, C.; Sarstedt, M. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, 2nd ed.; Sage Publications: Thousand Oaks, CA, USA, 2017.

47. Lowry, P.B.; Gaskin, J. Partial least squares (PLS) structural equation modeling (SEM) for building and testing behavioral causal theory: When to choose it and how to use it. *IEEE Trans. Prof. Commun.* **2014**, *57*, 123–146. [[CrossRef](#)]
48. Mihail, D.M.; Kloutsiniotis, P.V. Modeling patient care quality: An empirical high-performance work system approach. *Pers. Rev.* **2016**, *45*, 1176–1199. [[CrossRef](#)]
49. Henseler, J.; Ringle, C.M.; Sarstedt, M. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *J. Acad. Mark. Sci.* **2015**, *43*, 115–135. [[CrossRef](#)]
50. Dutrénit, G. Building technological capabilities in latecomer firms: A review essay. *Sci. Technol. Soc.* **2004**, *9*, 209–241. [[CrossRef](#)]

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