

TOWARDS EFFECTIVE PERFORMANCE MANAGEMENT SYSTEMS: A CASE STUDY ON INTEGRATED PERFORMANCE MANAGEMENT MATURITY MODEL DEPLOYMENT

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Strategy and Performance Management has evolved in the last decades to become a critical capability adopted and nurtured by more and more organizations worldwide. While several types of performance management architectures are set in place to facilitate strategy execution and performance excellence within organizations, less emphasis is attributed to understanding how well performance management tools, processes, and resources are set to enable proper integration and allow the maturity of such architectures. To address this gap, this research focuses on developing and applying an Integrated Performance Management Maturity Model that can test the dynamics of performance management architectures. Using a structured research protocol, 5 public organizations from different sectors in Saudi Arabia were chosen to test the impact of the maturity model designed and diagnose their maturity level. Results from the study suggest moderate to advanced performance management practices among governmental. The application of the maturity model assessment allowed a diagnosis of performance management architectures' status quo while enabling the development of improvement roadmaps for the entities included in the study.

Keywords: Maturity model, Performance culture, Performance improvement, Performance management, Performance measurement, Strategy

JEL Classification: C55, L25, M10, M42

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1. Introduction

Performance management has drawn considerable scholarly attention in recent decades, as evidenced by the growing body of literature exploring its various facets (Neely, 1999; Busi & Bitici, 2006; De Waal, 2007; Taticchi et al., 2010; Bianchi, 2016; Aguinis & Burgi-Tian, 2023). These efforts extend beyond the boundaries of mere academic interest, as the usage of performance management practices spans centuries and can be identified across all types of organizational levels (Brudan, 2010; Mitrea-Curpanaru, 2021).

Notwithstanding the reservations expressed by some scholars concerning the effectiveness of performance management systems (PMS) (Brown & Armstrong, 1999; Murphy, 2020; Cunha et al., 2023), the business community acknowledges the potential of these systems to contribute to organizational improvement (Franco-Santos et al., 2007; Bititci et al., 2015; Ashtalkoska et al, 2023).

The adoption of new technologies, processes, and frameworks enables organizations to optimize their performance in a dynamic business environment. As such, performance management systems are essential for enhancing performance, as they facilitate the monitoring, collection, and analysis of data, thereby improving communication and decision-making (Neely, 2005).

Since their earliest beginnings as mere performance measurement and appraisal systems, performance management systems have undergone significant evolution and are now widely incorporated in the organizational strategic planning process, aiding the achievement of organizational objectives. This growing interest and attention, largely evident in the past decades, can be attributed to the increased pressure on managers, be they in the public or private sector, to improve the performance of their organizations (Bititci et al., 2015).

Considering the above, this paper aims to contribute to a better understanding of how an Integrated Performance Management Maturity Model (IPMMM) can be used to test and assess the maturity level of organizational performance management systems in use. Furthermore, it proposes a roadmap for continuous improvement. To that end, the IPMMM will be able to scan the performance management systems in place, assess their capabilities against a set of standard norms, and identify any gaps that require addressing. Moreover, it will be able to serve as a benchmarking tool to facilitate comparisons of the maturity levels between different organizational performance management systems.

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2. Research methodology

The present paper delves into the subject of performance management system maturity to showcase how the application of a standardized maturity model can be used as a diagnosis tool to evaluate objectively the complexity of organization practices across several capabilities that intertwine and create a holistic approach to organizational performance management.

To support this endeavor a rigorous literature review process was undertaken to clarify what maturity models are, how they can be used, and more specifically to provide arguments for the validity of the Integrated Performance Management Maturity Model used in this research.

The present paper aims to reveal and discuss the maturity level of performance management practices in public organizations in Saudi Arabia, with the following specific research objectives:

- To identify the strengths and areas of improvement among these entities in 5 areas of interest, otherwise referred to as capabilities in this paper: strategic planning, performance measurement, performance improvement, employee performance management, and performance culture.
- To analyze comparatively the entities and provide a general picture of the maturity of performance management systems in the public sector of Saudi Arabia.

Saudi Arabia and its public sector entities were considered a suitable case study for the scope of the present research due to the country's commitment to advance the performance management practices specified since 2016 in the national strategy document entitled Vision 2030 (Kingdom of Saudi Arabia, n.d). Saudi Arabia has invested in upskilling government employees and improving performance management systems for the past 8 years, even establishing a dedicated organization for supervising public sector performance, The National Center for Performance Measurement (ADAA).

To ensure industry diversity, 5 governmental entities from different sectors were included in the study. They were audited using the Integrated Performance Maturity Model, including the 5 capabilities previously mentioned. Table 1 includes details about the entities included in the research.

Table 1. Entities profile data

No.	Public sector entity	Sector	Entity size
1	Entity A	Industrial estates	501-1,000 employees
2	Entity B	Healthcare	501-1,000 employees
3	Entity C	Finance	>10,000 employees
4	Entity D	Investments	501-1,000 employees

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No.	Public sector entity	Sector	Entity size
5	Entity E	Hospitality	>10,000 employees

Source: Authors' data collection, entities profiles, 2023

The assessment methodology to calculate the maturity scores and maturity levels for each entity is specific to the tool used, namely the Integrated Performance Management Maturity Model. However, the usage of a 5-level maturity scale, the deployment of surveys, interviews, and the review of internal documentation from the entities are commonly used methods for data collection across a variety of maturity models. The data collection and findings assessment were conducted during June-October 2023 for all entities.

Additional calculations to the scores obtained by each entity were used to indicate the average maturity score obtained by all 5 entities, by applying a simple average computation of the overall maturity score of each entity. In addition, data charts included in this paper will showcase average maturity scores for each capability calculated as simple averages of five individual scores of each capability (one for each entity).

3. Maturity Models' Role and Benefits

A model is a simplified representation of the world. According to "The American Heritage Dictionary" (Murphy, 2001), a model can have multiple significations, one of the most used being "a schematic description of a system, theory, or phenomenon, that accounts for its known or inferred properties and may be used for further study of its characteristics".

The Oxford English Dictionary Online defines "maturity" as "the state of being complete, perfect, or ready; the fullness of development". This term signifies the evolution of a phenomenon from its initial stages to a more advanced state. While some define maturity as a static endpoint of completeness, it is often viewed as continuous progress towards a specific goal. This inherent dynamism highlights the value of maturity evaluation as a traditional approach to determining the level of sophistication of a system, service, or process (Tiwari & Madalli, 2021).

Maturity models (MM) describe entity development through a set of sequential levels, each characterized by specific requirements for progression. These models reflect a lifecycle approach, mirroring natural development towards a final, most mature state (Klimko, 2001). Like Maslow's hierarchy of needs, maturity models posit a necessary progression through all levels for optimal development (Maslow, 1943). They are commonly applied to assess specific organizational areas or functions (Tapia et al., 2008).

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The demand for maturity models is on the rise among companies, as they facilitate the achievement of organizational objectives (Galli, 2019). A recent bibliometric analysis (Gorski & Dumitraşcu, 2023) identifies "maturity models" as a key concept based on the analysis of author keywords and keywords plus. With an average publication year of 2017.78, it is a relatively emerging concept in academic literature, highlighting the growing scholarly interest in maturity models in performance management research.

Maturity models are structured frameworks that guide organizations toward process improvement by delineating the attributes of an effective process. As assessment tools, they identify the capabilities required to achieve optimal performance, thus offering organizations a roadmap for achieving a competitive edge through continuous improvement (Adekunle et al., 2022).

Additionally, maturity models establish a conceptual framework for evaluating the effectiveness of organizational practices (Kuo & Tsai, 2019), comparing the current state of the organization to an ideal state, and guiding its improvement efforts. Furthermore, they also facilitate comparison to established benchmarks, enabling organizations to prioritize improvement actions and achieve desired outcomes (Nikkhou et al., 2016).

The purpose of the maturity model is to facilitate an objective comparison between the current state of a given organizational entity or process and the desired state. This comparison is made possible through the existence of a sequence of levels of maturity, which serves to delineate the various stages of development (Haryanti et al., 2023). Maturity models comprise a set of hierarchical levels, with typical ranges between 1 and 5. The lower levels represent a more immature approach to business operations, whereas the upper levels signify a more developed, systematic, and organized approach. The implementation of maturity models offers organizations several key benefits (Proença & Borbinha, 2016):

- Providing a standardized framework for evaluating current practices against best practices, thus facilitating the implementation of audits and benchmarking.
- Facilitating the tracking of progress towards established goals and objectives, thus providing progress assessment.
- Helping to identify strengths, weaknesses, and opportunities, thus providing decision-making support.

Through repeated application, maturity models provide a systematic means of describing organizational processes and strategies. This enables the identification and operationalization of strengths and weaknesses, thus facilitating a continuous improvement process that ultimately leads towards a state of optimal performance (Chahidi et al., 2022).

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4. The Integrated Performance Management Maturity Model

Concerning the development of Maturity Models (MM) in the field of strategy and performance management the research in this field is still marginal. As Bititci et al., (2015) based on their literature review emphasized, it appears that while most of the research outlines the relevance of maturity assessment concepts, there is limited reflection on their practical value, which remains mostly unexplored.

Furthermore, most of these models do not reflect an integrated approach toward assessing the maturity of strategy and performance management practices within organizations but rather focus on specific concepts, capabilities, or areas of improvement (Bititci et al., 2015)

This can be due to the limited research historically undergone to explore the complexity of strategy and performance management architectures and the relations between their different capabilities and dimensions. One of the most comprehensive works in this area was developed by Franco-Santos et al (2007), who tapped into the research of Kaplan & Norton (1996), Bititci et al. (1997), Neely (1999, 2005), Marr & Schiuma (2003) or Bourne et al. (2003), many of those (except for Kaplan & Norton) working or collaborating with Cranfield School of Management, Center for Business Performance, UK, one of the first academic bodies that were created with the dedicated purpose to advance the field of strategy and performance management at the global level.

After scanning a vast body of literature on this subject, Franco-Santos et al. (2007) identified multiple characteristics of performance management systems and grouped them into 3 main streams, reflecting key features, roles, and processes. After carefully analyzing all these components, five dimensions of a performance management system reflecting core capabilities emerged on which it was decided to structure the Integrated Performance Management Maturity Model: strategic planning, performance measurement, performance improvement, performance culture, and employee performance management.

Franco Santos et al (2007) and their predecessors' work related to identifying the relevant and necessary dimensions that characterize a performance management system is supported by other scholars' research (Wettstein & Kueng, 2002; Johanson et al., 2019). When building their Performance Measurement Maturity Model academicians Thomas Wettstein and Peter Kueng from Freiburg University, Switzerland, came up with the following definition on which they built their maturity model: "A performance measurement system is a system that tracks the performance of an organization, supports internal and external communication of results, helps managers by supporting both tactical and strategic decision making, and facilitates organizational learning".

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Thus, Wettstein and Kueng (2002) performance management dimensions because of the above definition match the ones proposed by Franco-Santos with one exception only, the reward dimension. Around this dimension, specialized literature consigns much debate, regarding the role that it plays in a performance management system. Brudan (2010) argues that "measurement for rewards leaves room for interpretation in the process of setting targets and measuring results and quite often leads to abuse". He considers that using targets for control and linking the achievement of these targets to individual performance runs the risk of staff members manipulating the system to their benefit and to the expense of other teams and even of the entire organization. Therefore, it was concluded that this dimension needs to be analyzed in the broader context of an employee performance management capability to which corporate performance management systems must align to achieve proper integration.

The Integrated Performance Management Maturity Model was inspired and built on the structure of a maturity model that is commonly used in software engineering, namely the "Capability Maturity Model Integration (CMMI)", developed by the Software Engineering Institute (SEI) from Carnegie Mellon in the United States.

The purpose of the model is to assess the compliance of organizational roles and processes against best practices in the strategy and performance management field and position the entity on a maturity scale from 1 to 5 (1 represents the lowest maturity level, and 5 is the highest). The model consists of 290 evaluation items covering 5 organizational capabilities. The evaluation items as well as the scoring criteria are derived from a thorough literature review that reveals organizational best practices.

The Integrated Performance Management Maturity Model analyzes the concept of performance from a holistic perspective, focused exclusively on the system architecture (it does not include the actual business results of the entities assessed) and capturing 5 capabilities:

1. Strategic planning refers to the ability to define the organizational identity, formulate and adjust long-term and short-term objectives, define the right initiatives to reach those objectives, and monitor strategy execution. It consists of 53 items of assessment clustered in 6 dimensions: strategy envisioning (Kaplan et al., 1996; Bititci et al., 2016; Jardiou, 2020), strategy formulation (Kaplan et al., 1996; Carlucci, 2010), strategy focus (Van Aken et al., 2005; Kaplan et al., 1996), strategy articulation (Kaplan et al., 1996; Carlucci, 2010; Bititci et al., 2016), strategy review (Kaplan et al., 1996; Bititci et al., 2016), strategy governance and communication (Kaplan et al., 1996; Bititci et al., 2016).
2. Performance measurement investigates the selection and usage of KPIs, the target setting process and data gathering processes. This capability includes 59 items of assessment groups in 6 dimensions: KPI selection (Van Aken et al., 2005; Carlucci, 2010; Najmi et al., 2012), KPI documentation (Van Aken et al., 2005; Najmi et al., 2012), target setting (Van Aken et al., 2005; Meekings et al., 2009; Najmi et al., 2012), data gathering (Van Aken et al., 2005; Najmi et al.,

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2012), data visualization (Najmi et al., 2012; Jääskeläinen & Roitto, 2016; Bititci et al, 2016), KPI governance (Bititci et al., 2016).

3. Performance improvement is focused on performance reporting and decision-making, as well as on the management of strategic initiatives or actions set to address performance issues. This capability embeds 43 assessment items from 6 dimensions: data analysis (Carlucci, 2010), reporting (Van Aken et al., 2005; Meekings et al., 2009; Jardiou, 2020), performance review (Van Aken et al., 2005; Muravu, 2021), initiatives' management (Muravu, 2021), learning and improvement (Van Aken et al, 2005; Meekings et al, 2009), performance system governance (Meekings et al., 2009; Farris et al., 2011; Bititci et al., 2016; Muravu, 2021)
4. Employee performance management provides insights specifically on individual performance within the entity, from setting the expectations to measurement, actions for talent development, and the rewards system. It contains 66 items of assessment clustered in 6 dimensions namely employee performance planning (Schleicher et al., 2018; Awan et al., 2020; Lopez-Cabarcos et al., 2022; Vuong & .Nguyen, 2022; Liaquat et al., 2024), employee performance measurement (Baird, 2017; Schleicher et al, 2018; Vuong & Nguyen, 2022; Siraj & Hagen, 2023), employee performance review (Baird, 2017; Schleicher et al., 2018; Awan et al., 2020; Lopez-Cabarcos et al., 2022; Vuong & Nguyen, 2022), employee performance improvement (Baird, 2017; Schleicher et al., 2018; Vuong & Nguyen, 2022; Siraj & Hagen, 2023), employee performance recognition (Vuong & Nguyen, 2022; Liaquat et al., 2024) and employee performance governance (Schleicher et al., 2018; Lopez-Cabarcos et al., 2022; Siraj & Hagen, 2023).
5. Performance culture refers to the entity's social context in which the Performance Management System is implemented. The quality of leadership, the initiatives to support learning, and stimulate employee engagement and well-being, are all impacting the ability of the entity to generate high performance. It includes 69 items of assessment divide in 6 dimensions: integrated performance capability (Karkoulian, 2020; Lopez-Cabarcos et al., 2022), happiness and wellbeing (Taneja et al., 2015; Lopez-Cabarcos et al., 2022; Liaquat et al., 2024) communication and leadership support (Karkoulian, 2020; Lopez-Cabarcos et al., 2022), creativity and innovation (Karkoulian, 2020), education and knowledge (Saunila, 2017; Karkoulian, 2020) and benefits and recognition (Taneja et al., 2015; Liaquat et al., 2024).

4.1 Assessment process

The methodology applied to evaluate the maturity of the Strategy and Performance Management System includes 3 different data collection sources as follows:

4.1.1 Evidence-based assessment

This stage of the evaluation includes 118 items evaluation items across the 5 capabilities of the model that are scored by an assessor using standard criteria. For this evaluation, the assessor will review all documents related to the capabilities of the maturity model, a total of 60 documents. The documents requested include policies, procedures, templates, and tools

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for setting, capturing, monitoring, and reporting data, as well as proofs of internal communications, and other organizational initiatives such as workshops or training events.

Each capability of the maturity model has a set of best practices or evaluation items which are analyzed through the documentation provided by the auditee. Using clear assessment criteria for each best practice and for each score (scale 1-5, where 1-lowest, 5-highest), the assessor can provide an objective score based on the documentation review.

4.1.2 Perception-based assessment

The perspective of internal stakeholders on the strategy and performance management system is included in the maturity model to complement with review of internal documentation and validate the application of procedures and their impact on the entity. There are 172 best practice statements divided into 5 questionnaires: Strategic Planning, Performance Measurement, Performance Improvement, Employee Performance Management, and Performance Culture. Each survey has its target audience according to Table 2.

Table 2. Entities profile data

No.	Survey	Target audience
1	Strategic Planning	Top management and the Strategy/Business Planning Office
2	Performance Measurement	Top Management or middle management and the Corporate Performance Management Office
3	Performance Improvement	Top Management or middle management and the Corporate Performance Management Office
4	Employee Performance Management	Human Resources Department or Employee Performance Management Unit and representatives from each department and job grade (sample, not all employees)
5	Performance Culture	Human Resources Department or Employee Performance Management Unit and representatives from each department and job grade (sample, not all employees)

Source: Adapted by the authors based on the respondents' profile from the research, 2023

Respondents are asked to rate on a scale from 1 to 5 the extent to which the best practices mentioned in the survey are applied in their organization or department (1 – To a very small extent, 2- To a small extent, 3 – To a moderate extent, 4 – To a large extent, 5 – To a very large extent).

4.1.3 Interviews

The last part of the maturity assessment involves several interviews to clarify any aspects revealed by the documentation review or survey results. An in-depth analysis of survey results

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can indicate the topics for which there is a significant difference of opinions between internal stakeholders, and these can be further discussed in the interview.

Interviews are usually 30-40 minutes meetings between the assessor and key representatives of the Strategy/ Performance Management Office, Human Resources Department, or C-level Executives. A minimum of 5 interviews are conducted for each assessed entity and they provide contextual information to better understand the data collected and the reasoning behind certain approaches deployed in the organization.

4.2 Maturity level calculation

The maturity score for each capability is calculated as a weighted average between the score obtained from the evidence-based assessment and the score resulting from the perception-based assessment. The weight used for evidence-based assessment is 75%, while 25% is applied to the perception-based assessment. The interview answers are not scored.

To identify the final score for the Integrated Performance Management Maturity a simple average of the maturity scores of the 5 capabilities is computed. There is no weightage used for the 5 capabilities that form the integrated maturity model. The result positions the organization in one of the 5 maturity stages, as presented below in Table 3.

Table 3. Maturity level

Score	Maturity level
>4.51	Optimized
3.71 - 4.5	Integrated
2.71 - 3.7	Structured
1.51 - 2.7	Emergent
1 - 1.5	Initial

Source: Adapted by the authors based on literature review

4.3 Maturity level descriptions

Level.I – Initial (scores.0-1.5): Organizations in the initial stage of maturity are not managed using an articulated strategy plan or roadmap for success. Furthermore, performance measurement does not formally take place at any organizational layer. Data is not available for making decisions, or it is very limited in terms of business insights, managers rely mostly on their experience and instinct to guide the entity. Employee performance management is not formally handled, and performance improvement takes place naturally rather than guided by the management.

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Level.II - Emergent (scores.1.5-2.7): Strategy planning may not take place with regularity, it may be a formal procedure but it is conducted superficially. Business performance is monitored in the entity with a focus on strategic objectives. The data literacy level and usage in decision-making is low but regular reporting takes place and it does support performance improvement to some extent. In terms of employee performance management, the first initiatives to formalize such a procedure are taken, but the system set in place is rather simplistic and usually relies mostly on competencies assessment based on managerial feedback.

Level.III - Structured (scores.2.71-3.7): At this stage in the evolution of the organization, planning strategy is a regular and formal practice, the business planning horizon embeds short, medium, and long-term goals. The usage of key performance indicators is spread from corporate to operational and individual levels. Data collection and reporting have limitations in terms of automation and integration of data, requiring significant manual processing to generate corporate reports. Organizations with a structured performance management system (level III) require improvements in terms of aligning corporate objectives with operational priorities. Employee performance management is a comprehensive organizational policy, and it includes not only the evaluation of competencies but also performance indicators for each job role.

Level.IV - Integrated (scores.3.71-4.5): Organizations at this maturity stage differentiate from the previous level through an improved strategy alignment from the top to the bottom of the organization. Furthermore, data collection and reporting are facilitated by higher automation and technology. Data literacy levels are high among managerial positions, and data is available to a wide variety of internal stakeholders. Key capabilities that intertwine with performance management are synchronized such as strategic planning, corporate, operational, and individual performance measurement, strategic projects management, corporate budgeting, and talent management.

Level.V - Optimized (scores.>4.51): Reaching the ultimate maturity stage requires organizations to achieve an agile Performance management System that provides fast and relevant access to performance data, flexible strategy reviews, transparent communication, and high levels of strategy awareness and data literacy among all employees. The entity also benefits from advanced data analytics to support decision-making and strategic signaling and foresight. At the employee level, there is a strong feedback culture and performance management happens continuously with individuals taking ownership of their objectives and KPIs and constantly adapting to the objectives and priorities of the team or department.

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5. Case study

5.1 Context

The 5 entities included in the present study were evaluated using the methodology presented previously in section 3 of the present paper. The data collection was divided into 3 stages: collection of internal documents (policies, procedures, templates of work), surveys' dissemination for 2 weeks (one survey for each capability, 5 surveys in total), and online interviews. As can be seen from Table 4, all organizations provided at least 87% of the documents requested, the average response rate for all 5 surveys is 47% and interviews ranged from a minimum of 5 to a maximum of 15 meetings. The number of interviews was influenced by the availability of middle and top management to meet with the assessor, rather than the size of the organization.

Table 4. Entities data collection

No.	Public sector entity	Internal documents	Survey response rate	Interviews conducted
1	Entity A	87%	37%	8
2	Entity B	97%	24%	8
3	Entity C	97%	30%	5
4	Entity D	97%	63%	7
5	Entity E	100%	82%	15
	Average	95%	47%	8

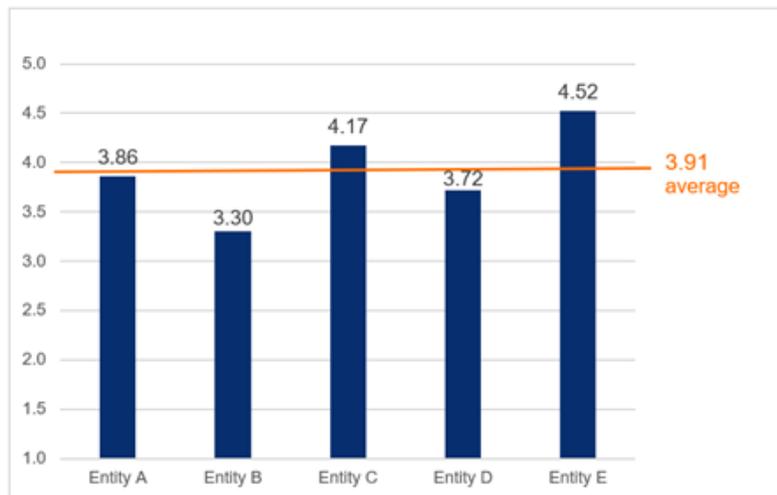
Source: Authors' data collection, entities data, 2023

5.2. Results

5.2.1 General findings

The average maturity score of the five entities evaluated is 3.91, indicating a maturity level IV on the five-level scale deployed (I-lowest maturity level, V-highest maturity level). Figure 1 illustrates the maturity score registered by each entity; the individual results range from 3.30 (entity B, healthcare sector) to 4.52 (entity E, hospitality sector). According to this data, most entities evaluated are found at maturity level IV (entity A – industrial estates, C-finance, D-Investments), there is one entity at maturity level III (entity B), and one organization that has achieved the ultimate maturity level (entity E). It is worth mentioning that the scores which position most entities in the “Integrated” stage are very close to the third maturity level. For example, entity A with 3.86, and entity D with 3.72 are slightly above the 3.7 limit of maturity stage III.

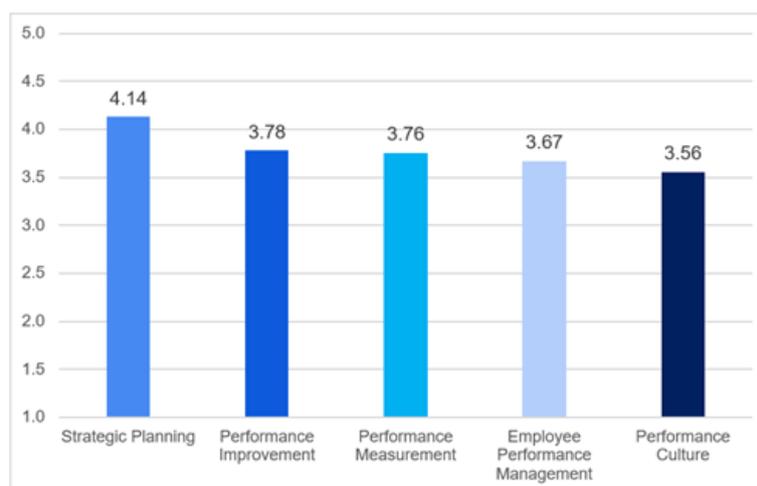
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Source: Authors' aggregated data based on maturity assessment scores, 2023

Figure 1. Overall maturity scores

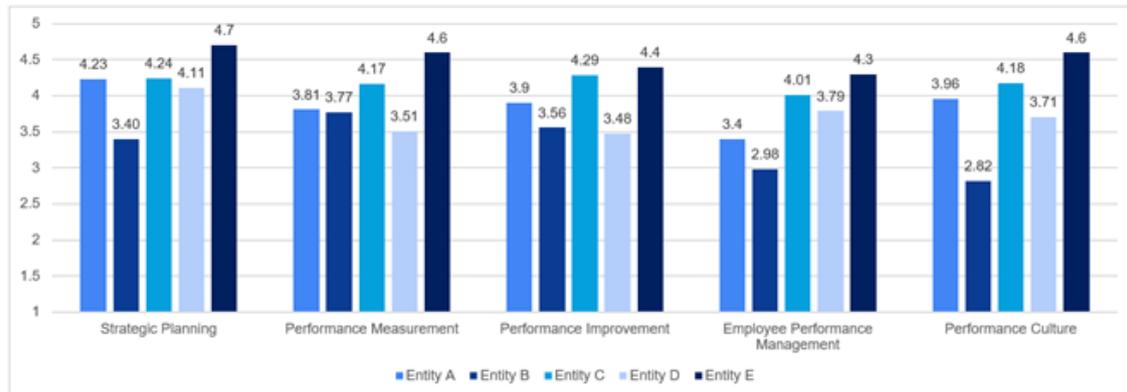
The scores' analysis at capability levels, as presented in Figure 2, reveals that the strongest capability among the entities evaluated is strategic planning, with all entities except one, recording results above 4 for this capability (see data in Figure 3). Moreover, performance improvement and performance measurement with nearly identical figures occupy the second and third positions among the best-scored capabilities.



Source: Authors' aggregated data based on maturity assessment scores, 2023

Figure 2. Overall maturity scores per capability

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Source: Authors' aggregated data based on maturity assessment scores, 2023

Figure 3. Maturity scores per capability per entity

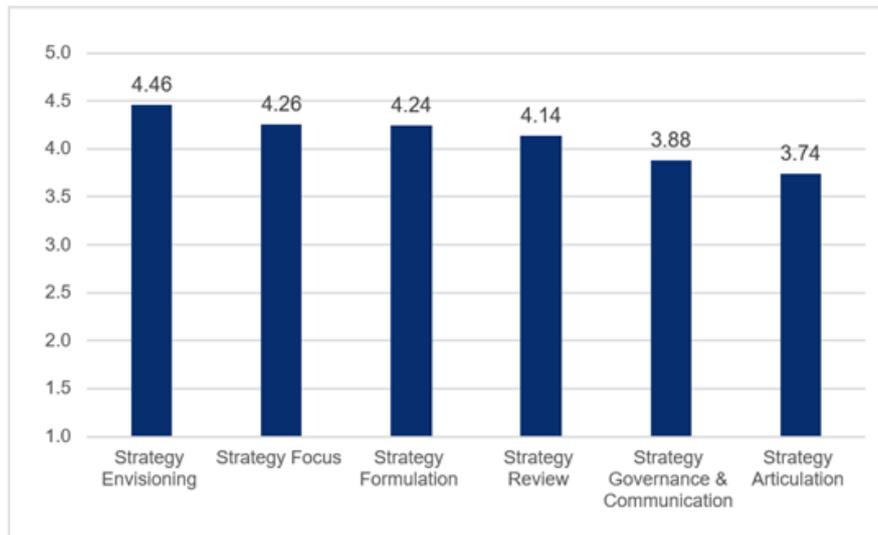
Figure 3 also indicates scores belonging to maturity level IV for all entities regarding performance measurement and performance improvement capabilities, even if the scores are borderline with maturity level III (the superior limit for maturity level III is 3.7). On the opposite spectrum, employee performance management and performance culture demonstrated a maturity level III with lower scores compared to the rest of the capabilities.

5.2.2 Insights at capability level

In terms of strategic planning, the strong point for most entities is strategy envisioning. This dimension of the maturity model investigates the best practices for formulating the entity's mission, vision, and corporate values. The scores do not vary significantly among the six dimensions of strategic planning, indicating consistently good practices in all aspects of this capability.

Figure 4 indicates that the lowest scores were registered for strategy articulation. This is the dimension that requires a comprehensive toolkit to be used by entities including a strategy map, performance scorecard and dashboard, portfolio of initiatives, KPI documentation forms, and initiatives documentation forms. While all entities in the present study used these tools at the corporate level, not all of them deployed the full toolkit at operational level. Common missing tools are functional area strategy maps, joint usage of departmental scorecards and dashboards, as well as departmental portfolios of initiatives.

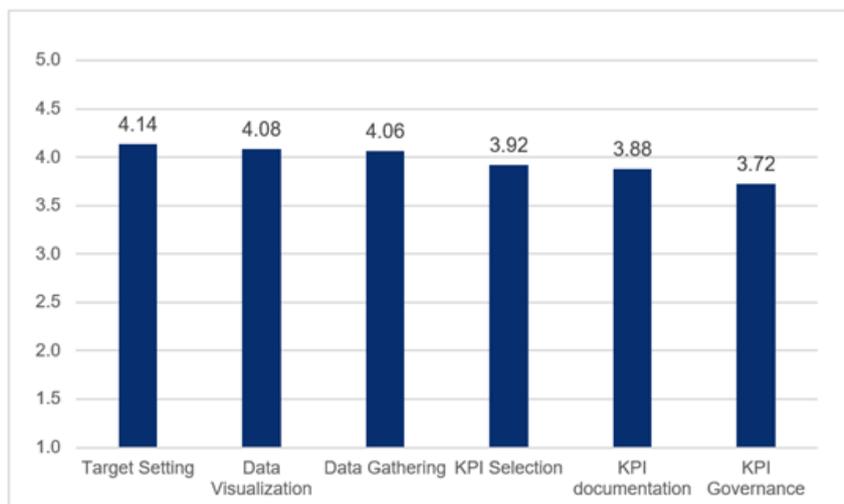
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Source: Authors' aggregated data based on maturity assessment scores, 2023

Figure 4. Strategic planning maturity scores per dimensions

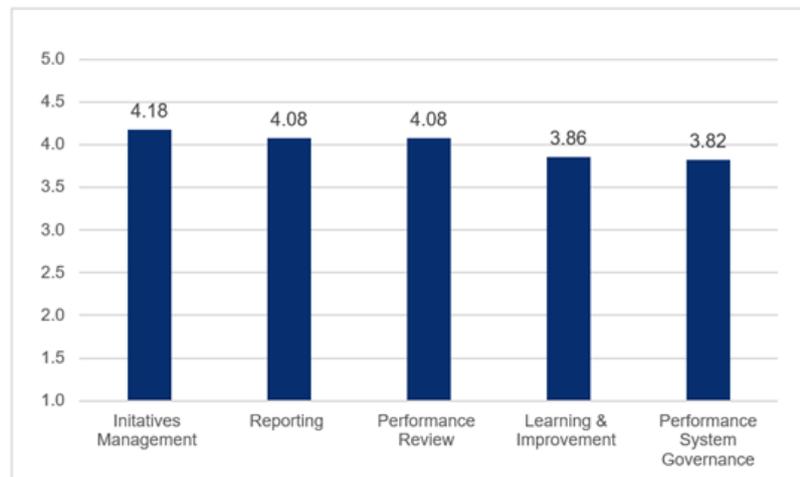
The performance measurement capability achieved scores belonging to maturity level IV, all above 3.7 as displayed in Figure 5. The strongest dimension related to performance measurement is target setting followed by data visualization and data collection. The lowest score was registered by KPI governance, which refers to clearly allocating accountability for managing data and reaching KPI targets across the internal stakeholders of the entity.



Source: Authors' aggregated data based on maturity assessment scores, 2023

Figure 5. Performance measurement maturity scores per dimensions

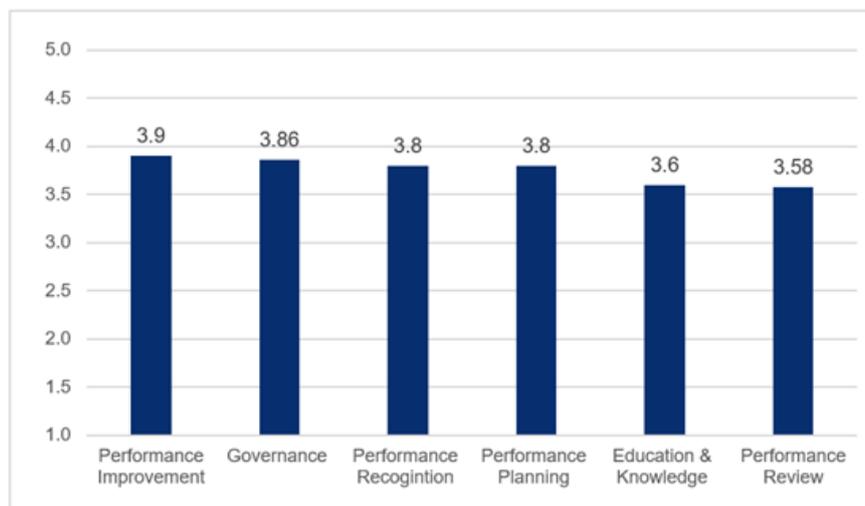
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Source: Authors' aggregated data based on maturity assessment scores, 2023

Figure 6. Performance improvement maturity scores per dimensions

Among the **performance improvement dimensions**, initiatives' management is outlined by the data set from Figure 6 as the strong point compared to the rest. These findings highlight that the entities assessed are skilled in managing corporate projects to enable strategy execution. Reporting practices, including the organization of corporate performance reviews, are also effectively deployed since they rank at maturity level IV when compared to maturity model best practices.



Source: Authors' aggregated data based on maturity assessment scores, 2023

Figure 7. Employee performance management maturity scores per dimensions

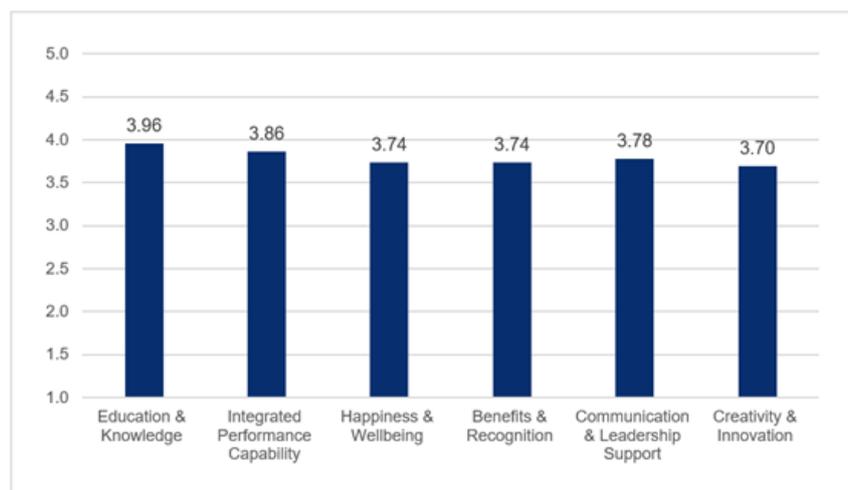
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Figure 7 reveals that the entities assessed are ranking best in terms of performance improvement and assigning clear governance when it comes to the employee performance management system. There are only two scores specific to maturity level III and they refer to continuous professional development (education and knowledge dimension) and individual performance reviews. The rest of the scores reflect an “integrated” maturity (level IV). By analyzing the scores of each entity, it can be observed that maturity can vary from entities with great practices such as entity E (maturity V) to organizations like entity B with a traditional employee performance management system positioned at maturity level III.

Building a performance culture in an organization is a challenging task for most organizations, but all entities included in this analysis demonstrated genuine and concrete initiatives to build results-driven organizations, encourage and support learning, professional development of employees, and high-quality leadership practices. As presented in Figure 8, the highest score was recorded for the dimension education & knowledge which investigates the extent to which entities invest in upskilling employees and creating a proper knowledge-sharing environment. In addition, all analyzed entities had an integrated performance management system that aligned individual performance with corporate strategy. However, there were differences among the organizations related to how effectively this alignment has been achieved.

The research data also outline a strong concern of the entities for developing an attractive and healthy work environment for employees to foster productivity and work satisfaction (happiness & wellbeing, score 3.74).



Source: Authors' aggregated data based on maturity assessment scores, 2023

Figure 8. Performance culture maturity scores per dimensions

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6. Conclusion

The research findings suggest moderate (maturity level III) to advanced performance management practices (maturity level IV and V) among the public sector entities evaluated in Saudi Arabia. The strongest capability is strategic planning with a 4.14 score, while the lowest average score was registered for performance culture - 3.56. In most cases, organizations do not present significant variations (scores belonging to the same maturity levels or at most one maturity level difference) between the scores of their capabilities which stands as proof of well-balanced performance management systems.

The application of the Integrated Performance Management Maturity Model has provided the entities with a clear roadmap of initiatives for advancing each capability to the ultimate maturity level. Even in the case of entity E which already achieved maturity level V, since the score was borderline with the inferior stage of evolution, recommendations for improvement are possible.

By reviewing in-depth the internal processes, procedures, and tools used by these organizations the following common organization practices are revealed:

- Performance management, as required by the evaluation from maturity level III upward, takes place at corporate, operational, and employee levels. In all cases, this requires the alignment of strategic objectives and key performance indicators (KPIs) at all levels in the organization through a well-developed strategic planning process.
- Entities positioned at maturity level IV, compared to those at maturity level III are characterized by improved alignment between corporate and individual objectives through the procedures set in place, and through the integration of technology and a continuous feedback culture promoted in the organization.
- Entities positioned at maturity level V, compared to those in the inferior maturity stages, differentiate themselves through better technology in all aspects of strategy and performance management from defining the objectives and KPIs, communicating strategy, to monitoring operations, and employee performance evaluations. While the usage of technology is a mandatory criterion also for maturity level IV, level V entities must achieve more agility through integrated and flexible software solutions. There is a strong performance culture, as the entity invests in raising the autonomy of employees through increased strategy awareness, in skilling managers to act as coaches for their teams, and in building a strong feedback culture.

For future development and improvement of the Integrated Performance Management Maturity Model it is proposed to conduct additional research on private sector organizations and analyze comparatively if there are any significant differences when the model is applied on a public versus private organization.

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