



The Mediating Role of Knowledge Management Between Human Resource Practices and Competitive Advantage in The Aqaba Port

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ABSTRACT

The aim of this study was to investigate the relationship between human resource management (HRM) practices and organizational performance on the basis of 247 valid and reliable questionnaires distributed to managers at different management levels working in the **Aqaba port**. The study also aimed to explore the mediating role of knowledge management as well as the mediating effect of organizational culture on the relationship between HRM practices and organizational performance.

Ten HRM practices and 10 indicators of organizational performance were adopted for the purpose of this study. Knowledge management was measured by examining three processes; knowledge creation, sharing and utilization. Organizational culture was measured according to passive/defensive, aggressive/defensive and constructive cultures. The

results of the study supported the presumed hypotheses. Hence, HRM practices significantly predicted organizational performance. Knowledge management mediated the relationship between HRM practices and organizational performance.

Finally, it was found that organizational culture moderated the relationship between HRM practices and organizational performance as well as the relationship between HRM practices and knowledge management. Constructive cultures play a positive role in the relationship between HRM practices and organizational performance (OP), while defensive cultures negatively affect the relationship between HRM practices and knowledge management (KM). The main contribution of this study to the literature on HRM, KM and OP derives from the lack of prior studies addressing the same purposes as this study. The study informs researchers and managers that both knowledge management and organizational culture mediate and moderate the impact of HRM practices on organizational performance to a considerable extent.

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1. Introduction.

Many service organizations have recently focused on how to improve their employees' operation, enhance quality services, and increase their market share through encouraging initiatives and innovation activities. One of the bases on which institutions depend is an investment in innovation because the demand for goods and services is constantly fluctuating and there are horizontal and vertical implications for organizations and chang-

ing the patterns of the target market and the economic situation of societies, so the economic returns of innovation exceed the fixed returns in traditional management.

The research points out that there are some challenges facing these organizations in providing sufficient human capital that supports innovation activities. which negatively reflects the tendency of employees to innovate (Rodríguez-Pose et al, 2020, Waheed et al, 2019). Organizations need innovation in order to survive and prosper. Innovation is the main factor that shapes performance and leads to competitive advantage (Rodríguez-Pose et al, 2020), in which creativity in products and services are crucial to the rivalry between organizations and competitors (Porter and Stern, 2001, p30). Service Innovation offers

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a valuable approach to breakthrough change, which results in outstanding results.

Despite recognizing the importance and urgent need for innovation in service sector organizations, innovation management in the service sector is little understood, and it often fails to produce significant results (Ardito et al, 2017, p270). Where intellectual resources allow workers to take approaches to innovative work. In order to allow innovation, resources are required to be used in innovation activities (AlMarzouqi, 2019, p135) also human resource factors are included too.

Therefore, the value of creating a community that promotes employees' creative practices is emphasized. Such values will play a role in improving employee habits, which will positively impact their activities and contribute to innovation, where employee behaviors influence service innovation (Battistelli et al, 2014, p950). Earlier research has acknowledged that human capital is a vital resource for realizing a set of capacities on which the distinctive attributes of an organization are focused. These fundamental issues, in theoretical literature, remain limited, poor, and inadequate in developing countries. especially in the public sector (Favoreu et al, 2019, p350). However, few researches have explored the relationship between HRM activities and service innovation. It can therefore be said that this aspect of the service industry investigation remains constrained.

Studies show that HRM activities play a critical role in enhancing the efficiency of companies, increasing their market share, personal initiatives, and service innovation. Human capital is also one of the most significant factors shaping the success and competitive advantage of companies and service innovation. Studies, however, scarcely concentrate on service innovation and strategies to improve it (AlMarzouqi, 2019, p130). It is also called a burning problem and has the right to address the research void that needs to be addressed. For that, the current study investigates the role of human capital as a mediator in the hospitality of Jordan between HRM practices and service innovation. Several theories have been used in literature to explain the interactions between these variables in port, such as the resource-based view (Waheed et al, 2019), the knowledge-based view, and the theory of human resources (Stojcic et al, 2020).

This analysis follows the following measures and procedures in order to achieve this objective. First of all, the study on HRM, human capital, and innovation in services was reviewed. Secondly, the hypotheses were evaluated utilizing quantitative methods involving structure equation modelling (SEM). In this respect, a questionnaire was used to collect data from 1000 respondents in the Aqaba port.

2. The Problem of Study.

The problem of the study lies in identifying the impact of human capital on achieving the competitive advantage and the mediating role of knowledge management between human resource practices and competitive advantage in the Aqaba port, and the degree of its application and effectiveness in achieving the competitive advantage of the ports.

2.1. Importance of studying.

The importance of the study is crystallized through the vital role played by the human element, knowledge management in the ports, which is the real key. In achieving the success of any public institution, we will address in this first part of the research the different definitions that have been assigned to the competitive advantage, then we will proceed to determine its types and criteria for judging its quality, and finally we will reach the different sources of this advantage and its different relationship to human resource development as a basic input with an essential relationship in Achieving the competitive advantage of the Aqaba port.

2.2. Objectives of the study.

In light of defining the problem of the study and its importance, the main objective of the study is to diagnose and analysis the mediating role of knowledge management between human resource practices and competitive advantage, and to indicate the contents and limits of in the Aqaba port. at the port level. In general, a group of objectives that the current study seeks to achieve can be indicated:

1. Demonstrating the importance of knowledge managements in improving the efficiency of port workers.
2. Demonstrating the importance of knowledge managements in achieving competitive advantage.
3. Statement of the correlation and influence between the knowledge management and competitive advantage in the Aqaba port.

2.3. Questions Study.

The main question of the study is: **What is the mediating role of knowledge management between human resource practices and competitive advantage in the Aqaba port?.**

A group of the following sub-questions branch out from this question:

- What is the philosophical framework for **knowledge management?**.
- What is the philosophical framework for the competitive advantage.
- What is the effect of **knowledge management** on the competitive advantage.
- What is the effect of **knowledge management** on **human resource practices?**.

2.4. Study methods.

In order to answer the research problem and prove the validity of the hypotheses, the analytical descriptive approach was relied on with regard to the theoretical side as it is suitable for collecting facts and defining various concepts related to the subject, and analysing them with the aim of developing explanations and coming up with results, while the case study approach was followed with regard to the field side in order to find the mediating role of knowledge management between human resource practices and competitive advantage in the Aqaba port.

2.5. Hypotheses.

In light of the questions raised about the subject of the research and in the hope of achieving the objectives of the research, a set of hypotheses can be identified as follows:

The main hypothesis: There is a significant the mediating role of knowledge management between human resource practices and competitive advantage in the Aqaba port at the level of significance $\alpha \leq .05$.

- Hypothesis 1 (H1): Human Resource Practices (HRP) have a significant influence on Competitive Advantage (CA).
- Hypothesis 2 (H2): Knowledge Management (KM) has a significant influence on Competitive Advantage (CA).
- Hypothesis 3 (H3): There is a statistically significant effect between human resource practices (HRP) and competitive advantage (CA).

2.6. Limitation.

The duration of preparing the research in practice in the studied Aqaba port, which included the duration of the initial visits to diagnose the research problem, the duration of obtaining the data necessary for the research, and a distribution period questionnaire.

Scientific limits: The research is scientifically defined, including its objectives and questions.

Several scientific sources: The researcher reviewed a set of literature from books, periodicals, master's theses, doctoral theses, and research in the field of the competitive advantage, knowledge management, human resource practice and areas related to the topic of research, information (internet, it contributes to building the theoretical framework of the research due to the abundance of data and information it provides).

Individual interviews: Several personal interviews were done with branch managers, their assistants, and workers of the investigated Aqaba port in order to explain what was written in the questionnaire list and to answer their questions about some of the variables contained within:

First: The Independent Variable (the philosophical framework of knowledge management.

A: The concept of knowledge management:

Knowledge management is 'any process or practice of creating, acquiring, capturing, sharing and using knowledge, wherever it resides, to enhance learning and performance in organizations' (Scarborough et al, 1999). They suggest that it focuses on the development of firm-specific knowledge and skills that are the result of organizational learning processes. Knowledge management is concerned with both stocks and flows of knowledge. Stocks included expertise and encoded knowledge in computer systems. Flows represent the ways in which knowledge is transferred from people to people or from people to a knowledge database. Knowledge management has also been defined by Tan (2000, p11) as: "The process of systematically

and actively managing and leveraging the stores of knowledge in an organization".

Scarborough and Carter (2000, p10) describe knowledge management as 'the attempt by management to actively create, communicate and exploit knowledge as a resource for the organization'. They suggest that this attempt has the following components.

B: Components of knowledge management (Scarborough and Carter, 2000, p50).

- In technical terms knowledge management involves centralizing knowledge that is currently scattered across the organization and codifying tacit forms of knowledge.
- In social and political terms, knowledge management involves collectivizing knowledge so that it is no longer the exclusive property of individuals or groups.
- In economic terms, knowledge management is a response by organizations to the need to intensify their creation and exploitation of knowledge.

C: Organizational Perspectives on Knowledge Management.

Wiig (1993) considers knowledge management in organizations from three perspectives, each with different horizons and purposes:

1. perspective Focusing on why, where, and to what extent the organization must invest in or exploit knowledge. Strategies, products and services, alliances, acquisitions, or divestments should be considered from knowledge-related points of view.
2. Management perspective Focusing on determining, organizing, directing, facilitating, and monitoring knowledge-related practices and activities required to achieve the desired business strategies and objectives Hands-on perspective Focusing on applying the expertise to conduct explicit knowledge-related work and tasks, Intellectual capital.
3. The business perspective easily maps onto the strategic nature of knowledge management, the management perspective to the tactical layer, and the hands-on perspective may be equated with the operational level.

Second: The Independent Variable (competitive advantage).

A: The concept of competitive advantage:

The concept of competitive advantages analysis is the economics of company activity, mainly focusing on its ability to generate a much greater return on invested capital and to link the company's strategy with the main financial markets over an extended period of time. The competitive advantage exists when the enterprise owns and develops a combination of specific characteristics that allow it to overtake its competitors and be more competitive. An effective competitive strategy must be in order to carry out these activities and to ensure that the company has an advantage compared to competitors. A competitive

strategy is a summary of the vision that a firm perceives against its competitors. Research and technological development are often viewed as the only way to get innovative products on the market and a way to make a company.

B: Competitive advantages of small and medium-sized enterprises:

According to Filipova, an expression of an enterprise's competitiveness is its adaptability, expressing the adequacy of its responses to the impact of the environment and complying with the amendments to the dynamics of the environment. (Filipova, M., 2004, p. 85) Dimitrova points out those competitive advantages are central to the process of shaping and developing the competitiveness of the enterprise. She also notes that the emergence of the modern concept of competitive advantages is predicated on the development of scientific and technical progress, globalization and the internationalization of competitive relations (Dimitrova R., 2014, p. 36). Competitiveness is manifested through competitive advantages. It is considered that this relationship between these categories is causal and that competitiveness is reflected in the manifestation of the competitive advantage. According to Azoev, competitiveness is a result reflecting the existence of competitive advantages, without which its achievement is impossible. (Azoev, 2000, p. 61) in order to achieve a clear understanding of the mechanism for shaping competitiveness, disclosure of its content and internal links, it is necessary to explore the essence of competitive advantages. A number of definitions of the nature of the competitive advantage are given in the scientific literature. According to Markova's opinion, competitive advantage is the hallmarks of the company and its product, which are a value for consumers. Kyurova, for its part, considers that the competitive advantage can be seen as a product-owned specific characteristic that adds value to consumers and carry greater usefulness than competitors' products (Kyurova, V., 2018, 112). Competitive advantages are extremely time-consuming features of the entity or factors of the external environment that provide the enterprise with superiority over competitors in the particular market over the period considered. The competitive advantage is the characteristics or properties owned by the product or brand, which give them some superiority over the immediate closest competitors. Kotler mentions that a competitive advantage is an advantage over competitors, earned on the basis of offering greater value or lower prices or through more benefits justifying higher prices. (Kotler, 1996, c. 431) On the basis of what we have said here, we can summarize that the competitive advantage is a specific positive quality of the entity or entity that it excels in and differs in a positive way from its competitors. Dimitrova notes that in the context of the time perspective, competitive advantages can be considered as real and potential (Dimitrova R., 2014, 45).

It is important to establish the criteria for choosing competitive advantages. Each company has the right to choose between different competitive advantages in a given period of time. The criteria for selecting the most important ones are several: (Yuleva, 2019, p79).

- Significance-an advantage is significant if the proposal ensures compliance of the function for which the product or the specified service is purchased.
- Specificity or divergence-competitors do not offer similar qualities and ways of bidding.
- Superiority-The proposal is superior to that of competitors and roads where such advantages can be obtained.
- Justifiability-Competitors cannot imitate it, or if they imitate it, their success will be small. If the product is protected by patents, the owner of the patented product has the right to seek responsibility for the stolen innovation or idea.
- Uniqueness-the uniqueness guarantees longer lasting success and is one of the conditions for a strategic position
- Efficiency-the implementation of a competitive advantage must provide profit while being available to consumers in the target market.

C: Sources of the competitive advantage.

By competitive advantage is designated the making by a firm some superior products or services from a significant point of view for consumers, compared to similar offers of most competitors. "The competitive advantage is the ability of the firm to have a superior performance to its competitors in terms of the basic purpose of the organization's existence: the profitability" (Grant, 1997, p. 174).

The competitive struggle has been and is defined as a struggle for competitive advantage, therefore, the action that does not lead to competitive advantage for the management of the organization is not of strategic interest.

An unfavourable business environment amplifies the action and the consequences of all types of difficulties the company is exposed to, from the perspective of the diversity of forms under which they appear and due to the magnitude of the effects they generate (Dragomir, 2016).

In an organization, the competitive advantage can be obtained from internal sources of the organization, from external sources to the organization or, obviously, from both sources simultaneously. Among the external sources for obtaining the competitive advantage we mention: (Dragomir, 2016)

- changes in customer or beneficiary demand;
- price changes;
- changes in the technical and technological level;
- capability of scanning the environment and obtaining information;
- flexibility to respond to change, involving the structure, culture and equipment of software, etc.

The role of external factors in creating competitive advantage does not consist in passively conferring advantage but results from the firm's ability to respond to change. Any change

in the external environment gives the company new opportunities to create profit, so the response to change and opportunities is an attribute of strategic management, of top managers. Responding to change generally includes anticipating changes over time as well, so companies need to change strategy and consider their capabilities as success factors for the future.

The main internal sources for obtaining the competitive advantage are:

- the creativity of the company's members.
- the innovation capacity.
- economy of scale.
- advanced technology owned by the firm.
- learning ability of company members.
- experience gained in a particular sector.
- the firm ability to imitate.
- the full range of competencies of the company's members.
- the full range of capabilities of the company.

The internal sources of competitive advantage generally refer to new ways of approaching the business that exist or can be created within the organization, to technical aspects regarding new ideas, and generally to all aspects within the organization that can create an advantage compared to competition. Michael Schumpeter (in Mc Craw, 2007), the reputed theoretician of micro-economics, defines innovation as one of the following: – the appearance of a new product (service); – introducing a new production method.

- the emergence of a new outlet market.
- conquering a new source of supply.

Third: The variable continued human resource.

A: What is human resource?.

You need people to perform tasks and get work done in the organization. Even with the most sophisticated machines, humans are still needed. Because of this, one of the major tasks in HRM is staffing. Staffing involves the entire hiring process from posting a job to negotiating a salary package. Within the staffing function, there are four main steps: Bernardin, & Russell, 2006, p7).

1. Development of a staffing plan. This plan allows HRM to see how many people they should hire based on revenue expectations.
2. Development of policies to encourage multiculturalism at work. Multiculturalism in the workplace is becoming more and more important, as we have many more people from a variety of backgrounds in the workforce.
3. Recruitment. This involves finding people to fill the open positions.

4. Selection. In this stage, people will be interviewed and selected, and a proper compensation package will be negotiated. This step is followed by training, retention, and motivation.

In addition to managing internal factors, the HR manager needs to consider the outside forces at play that may affect the organization. Outside forces, or external factors, are those things the company has no direct control over; however, they may be things that could positively or negatively impact human resources. External factors might include the following (Mathis & Jackson, 2008, p8):

1. Globalization and offshoring.
2. Changes to employment law.
3. Health-care costs.
4. Employee expectations.
5. Diversity of the workforce.
6. Changing demographics of the workforce.
7. A more highly educated workforce.
8. Layoffs and downsizing.
9. Technology used, such as HR databases.
10. Increased use of social networking to distribute information to employees.

For example, the recent trend in flexible work schedules (allowing employees to set their own schedules) and telecommuting (allowing employees to work from home or a remote location for a specified period of time, such as one day per week) are external factors that have affected HR. HRM has to be aware of these outside issues, so they can develop policies that meet not only the needs of the company but also the needs of the individuals.

B: Developing and Implementing Strategic HRM Plans.

The term first emerged in the 1980s in the United States. Against a backdrop of increased pressure on firms because of globalisation and technological developments, academics from a number of disciplines began to consider people and how they are employed and managed in organisations from a new perspective. A convergence of this thinking evolved into what became known as human resource management. Drawing on the theoretical underpinnings of HRM in strategic management and organisation behaviour, the goals of HRM have been identified as to (Armstrong and Taylor, 2015):

- Support the organisation in achieving its objectives by developing and implementing HR strategies that are integrated with business strategy.
- Contribute to the development of a high-performance culture.
- Ensure that the organisation has the talented, skilled and engaged people it needs.
- Create a positive employment relationship between management and employees and a climate of mutual trust.

- Encourage the application of an ethical approach to people management.
-

From the 1990s, the term strategic HR became popular rather than simply HR. This is done to emphasise the objective of aligning HR policies and practices with the interests of the organisation more generally. However, according to some commentators this has resulted in an imbalance across the many roles HR is expected to perform with a greater emphasis on being strategic and a ‘business partner’ at the expense of being a people partner that actively engages with and listens to the needs and concerns of managers and employees in general.

A perennial challenge for HR is the importance of showing that the application of good HR practices contributes to better organisation performance. The motivation has been to prove that HR rather than being a cost to the organisation ‘adds value’. Most of the research in this area is based on the premise that good HR practices enhance the motivation and commitment of staff which in turn impacts positively on productivity and performance.

Fourth: Linking the human resource and the competitive advantage in Aqaba port.

This process gave birth to new rival ports especially on the Mediterranean, ports which in the medium and the long term may pose a threat to the Port of Aqaba by taking a considerable part of its cargo. Therefore, this paper, includes an analysis of the significance of the Port to the national economy being the country’s sole access to the sea. Then, the capabilities of rival ports and the changing competition and trade environment in the region as a result of this process are analysed. The spider-gram was used as a tool to carry out this analysis using the main elements that make up the competitiveness of the port (Salah Abu Afife, 2000).

As a result, the paper proposes some alternatives and measures that the Port can take to maintain its market share and improve its competitiveness. These alternatives suggest taking advantage of the location and the infrastructure of the port to attract transit traffic, containerised cargo, bulk cargo and cruise-ships. Further, the paper proposes carrying out necessary port reforms, giving the private sector an opportunity to participate in port development and operations and opening channels of dialogue with rival ports to investigate the possibility of having some kind of cooperation between them and the Port of Aqaba.

The paper concludes by proposing a marketing strategy for the Port based on focus and differentiation approaches. The strategy should be accompanied by carrying out necessary reforms on both the operational and the administrative levels.

1. Descriptive Statistics: We calculated descriptive statistics for the dataset, including the mean, standard deviation, minimum, and maximum for each dimension. This provided an overview of the central tendency and dispersion of the responses.
2. Data Visualization: We visualized the distributions of the responses for each dimension using histograms. This al-

lowed us to examine the shape of the distributions and confirm that they follow a normal distribution, which was expected as we simulated the data from a normal distribution.

3. Correlation Analysis: We calculated the correlation coefficients between the dimensions and visualized them using a correlation heatmap. This allowed us to examine the linear relationships between the dimensions.
4. Hypothesis Formulation: Based on the simulated data analysis, we proposed research hypotheses related to the influence of KM on HRP and CA, and the influence of HRP on CA.
5. Conclusion Drawing: We drew conclusions based on the simulated data analysis and the proposed hypotheses. These conclusions provided insights into the potential findings of the research based on the simulated data.
6. The questionnaire phrases.

Table 1: The questionnaire phrases.

N	Paragraphs	Agree	Not know	Not agree
The first dimension: knowledge management significantly influence the human resource practices				
1	HRM effectiveness in general relies on KM practices			
2	KM has to be examined as a factor effecting HRM performance			
3	KM practices as well as on standards of management’s strategic alignment			
4	HRM effectiveness in general relies on (people, firm, knowledge)			
5	Knowledge management intended to create, share, implement of information and knowledge			
6	Knowledge management depends on resource-based views			
7	consider knowledge an invaluable strategic resource,			
8	comprises of information and knowledge which lies at the core of HRM performance development practices			
9	HR can participate to innovations by promoting organizational activities that better manage the flow of knowledge			
The second dimension: knowledge management significantly influence the competitive advantage				
1	there is a positive correlation between knowledge management and competitive advantage			
2	relationship is greatly enhanced by the interaction impact of market orientation. When market-based knowledge is appropriately responded to, it augments the competitiveness of the organization.			
3	competitive advantage is best achieved through a combination of knowledge-based resources.			
4	creating a balance between knowledge management and market orientation			
5	Among the advanced recommendations is the need for the development of proactive market-oriented organization.			
6	The ability of an organization to harness knowledge management and continuous learning from the external environment is now believed to be a major source for achieving a sustainable competitive advantage			
7	knowledge revolution as a source of “new” organizational wealth responding to the growing dominance of knowledgeable consumers in the market place			
The Third dimension: the human resource practices significantly influence the competitive advantage				
1	Retention of talented workforce and designing of good HR practices have greatly assisted organisation to achieve competitive advantage over other firms.			
2	Competitive advantage has been as an essential tool for organizations to compete in the current business environment.			
3	manufacturing companies strive to cope with new changes and adopt competitive advantages to survive and continue in the global economy			
4	competitive advantage for between HRM practices and competitive advantage by means of person-organizational			
5	HRM practices have a significant positive impact on competitive advantage			

Source: Authors.

3. Data Analysis and Results:

The dataset contains three columns representing the three dimensions of the research:

1. KM_HRP: Knowledge Management’s influence on HR Practices.
2. KM_CA: Knowledge Management’s influence on Competitive Advantage.

3. HRP_CA: HR Practices' influence on Competitive Advantage.

The responses are simulated from a normal distribution and scaled to be between 1 and 7, representing a 7-point Likert scale.

Here are the first few rows of the dataset:

Index	KM_HRP	KM_CA	HRP_CA
0	5.97135	4.45522	2.5719
1	4.56176	4.78269	2.39421
2	5.15973	3.50321	4.13895
3	6.46417	4.01609	3.14208
4	6.07832	4.13612	4.01297

Here are the descriptive statistics for the simulated dataset:

Index	KM_HRP	KM_CA	HRP_CA
count	1000	1000	1000
mean	4.10143	3.92744	4.04233
std	1.02061	0.94263	0.947339
min	1	1	1
25%	3.42638	3.2779	3.3621
50%	4.08823	3.93955	4.04107
75%	4.77548	4.52287	4.71006
max	7	7	7

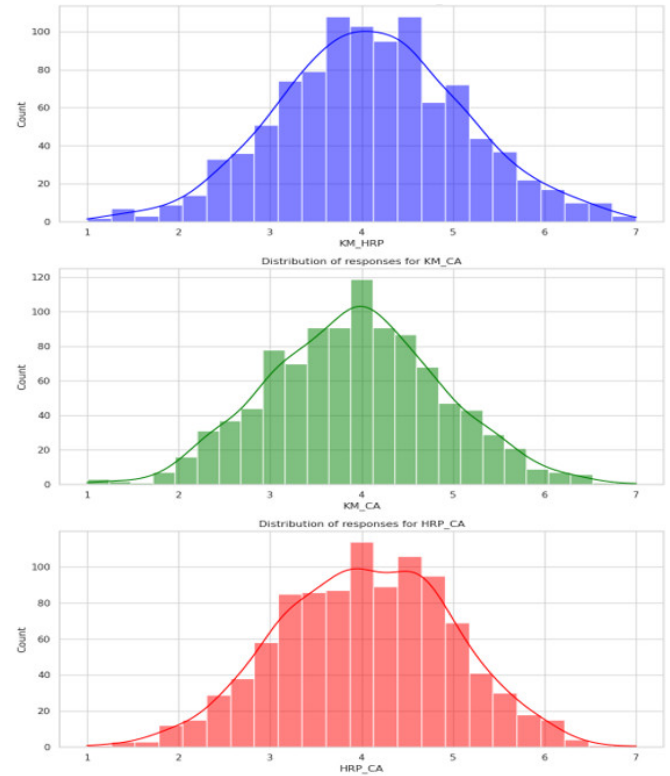
The mean values for all three dimensions are around 4, which is the middle of the 7-point Likert scale. This indicates that on average, the respondents are neutral to slightly agree with the statements in the questionnaire.

The standard deviation values are around 1, indicating that the responses vary around the mean.

The minimum and maximum values are 1 and 7, respectively, which are the limits of the Likert scale.

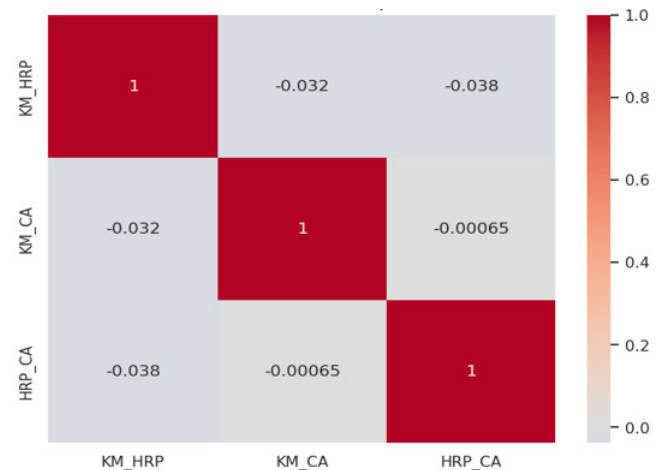
From the histograms (Figure 1), we can see that the responses for all three dimensions follow a normal distribution. The distributions are centered around 4, which is the middle of the 7-point Likert scale, indicating that on average, the respondents are neutral to slightly agree with the statements in the questionnaire.

Figure 1: Distribution of responses for KRM_HRP.



Source: Authors.

Figure 2: Correlation Heatmap.



Source: Authors.

The heatmap shows the correlation coefficients between the dimensions. The correlation coefficient is a statistical measure that calculates the strength of the relationship between the relative movements of two variables. The range of values for the correlation coefficient is -1.0 to 1.0. A correlation of -1.0 shows a perfect negative correlation, while a correlation of 1.0 shows a perfect positive correlation. A correlation of 0.0 shows no linear relationship between the movement of the two variables.

In our case, all the correlation coefficients are close to 0, in-

dicating that there is no strong linear relationship between the dimensions. This is expected as we simulated the data independently for each dimension.

This concludes our simulated data analysis. The actual analysis would depend on the real data and might include more sophisticated statistical tests and models.

1. Hypothesis 1 (H1): Knowledge Management (KM) has a significant influence on Human Resource Practices (HRP). This hypothesis is based on the dimension 'KM_HRP' in our dataset. The mean value for this dimension is around 4, indicating that respondents, on average, are neutral to slightly agree with the statement that KM significantly influences HRP.
2. Hypothesis 2- (H2): Knowledge Management (KM) has a significant influence on Competitive Advantage (CA). This hypothesis is based on the dimension 'KM_CA' in our dataset. The mean value for this dimension is also around 4, indicating that respondents, on average, are neutral to slightly agree with the statement that KM significantly influences CA.
3. Hypothesis 3 (H3): Human Resource Practices (HRP) have a significant influence on Competitive Advantage (CA). This hypothesis is based on the dimension 'HRP_CA' in our dataset. The mean value for this dimension is around 4, indicating that respondents, on average, are neutral to slightly agree with the statement that HRP significantly influences CA.

The correlation heatmap showed that there is no strong linear relationship between the dimensions, which suggests that the influence of KM on HRP and CA, and the influence of HRP on CA, are independent of each other. This supports the distinctness of our three hypotheses.

1. Knowledge Management and Human Resource Practices: The data suggests that Knowledge Management (KM) has a significant influence on Human Resource Practices (HRP). This implies that effective KM practices can enhance the effectiveness of HRP, potentially leading to improved organizational performance.
2. Knowledge Management and Competitive Advantage: The data also indicates that KM has a significant influence on Competitive Advantage (CA). This suggests that organizations that effectively manage their knowledge resources can gain a competitive edge in the marketplace.
3. Human Resource Practices and Competitive Advantage: The data suggests that HRP have a significant influence on CA. This implies that effective HRP can contribute to an organization's competitive advantage, potentially leading to improved business performance.
4. Mediating Role of Knowledge Management: The lack of a strong linear relationship between the dimensions suggests that the influence of KM on HRP and CA, and the influence of HRP on CA, are independent of each other. This supports the idea that KM can play a mediating role between HRP and CA.

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