

The Impact of Smart Management Methods in Competitive Advantage “An Empirical Study on Jordanian Chemical and Cosmetics Companies”

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Abstract

The purpose of the study was to investigate The Impact of Smart Management Methods (Coordination mechanisms, supporting mechanisms, Developing methods) in Competitive advantage . An Empirical Study on Jordanian chemical and cosmetics companies. The study focused on 55 businesses in the Jordanian chemical and cosmetics sector. These businesses were chosen at random from a list of 232 in Jordan. A total of 600 questionnaires. To attain the research objective, a questionnaire was designed for data collection .The principal conclusions of the research demonstrated that participants' opinions on competitive advantage and smart management were both highly positive. Additionally, the research revealed a noteworthy influence of The Impact of Smart Management Methods on Competitive Advantage in companies operating in the Jordanian chemical and cosmetics industry. Based on the study's results, several key recommendations were made, including: The recommendation urges companies operating in the chemical and cosmetics industry in Jordan to enhance employee performance levels and promote smart management practices in the workplace to achieve a competitive advantage. Companies should focus on increasing employee awareness, fostering their involvement in decision-making, and providing training and educational opportunities that contribute to improved performance and loyalty, thereby strengthening organizational citizenship.

Keywords: Smart Management Methods, Coordination mechanisms, supporting mechanisms, Developing methods, Competitive advantage.

أثر أساليب الإدارة الذكية في الميزة التنافسية "دراسة تطبيقية على شركات الكيماويات ومستحضرات التجميل الأردنية"

المخلص

هدفت الدراسة الى التعرف على أثر أساليب الإدارة الذكية (آليات التنسيق، الآليات الداعمة، أساليب التطوير) على الميزة التنافسية. دراسة تطبيقية في الشركات العاملة في صناعة الكيماويات ومستحضرات التجميل الأردنية. ركزت الدراسة على (55) شركة في قطاع الكيماويات ومستحضرات التجميل الأردني. تم اختيار هذه الشركات بشكل عشوائي من قائمة تضم (232) شركة في الأردن، تم توزيع (600) استبانة لجمع البيانات من عينة الدراسة، أظهرت نتائج الدراسة أن آراء المشاركين حول إدارة الذكية والميزة التنافسية كانت إيجابية للغاية، بالإضافة إلى ذلك، كشفت الدراسة عن تأثير ملحوظ لأساليب الإدارة الذكية على الميزة التنافسية في الشركات العاملة في صناعة الكيماويات ومستحضرات التجميل الأردنية.

بناءً على نتائج الدراسة أوصت الدراسة بعدة توصيات أبرزها: حث الشركات العاملة في صناعة المواد الكيماوية ومستحضرات التجميل في الأردن على تعزيز مستويات الأداء لدى الموظفين ورفع درجة الممارسات الإدارية الذكية في مكان العمل، وذلك من أجل تحقيق ميزة تنافسية.

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ويتضمن ذلك زيادة الوعي بين الموظفين، وتعزيز مشاركتهم في اتخاذ القرارات، وتوفير فرص التدريب والتعليم التي تدعم الأداء الأفضل والولاء، مما يؤدي بدوره إلى تعزيز روح المواطنة التنظيمية.
الكلمات المفتاحية: أساليب الإدارة الذكية، آليات التنسيق، الآليات الداعمة، أساليب التطوير، الميزة التنافسية.

1. Introduction

Many refer to the twenty-first century as the "smart things" century (smart systems, smart cars, smart homes, etc.). It's time for "smart management," which entails smart managers as well as clever procedures and systems. Several characteristics of clever industrial firm and other organizational structure management strategies enable society to grow in a dynamic way. First of all, clever management techniques and systems can be an effective teaching aid.

Since it is extremely difficult to modify consciousness, it is impossible to accept that the well-known statement that "being determines consciousness" is true. A modern man's IQ is not that different from that of a primitive man. It would be more accurate to read the aforementioned remark as "being determines behavior." Human behavior will change if management processes are altered. For example, employees who have been passive and inert will start working harder, and those who have overstated the value of their job will start telling the truth about it. Second, smart management techniques enable workers to have a more positive attitude toward their work by encouraging them to use resources sensibly, operate machinery efficiently, use efficient production techniques, and use cutting-edge computer techniques and technologies to analyze and process data. Criado, et al., (2019), Troshani et al., (2019), Slomski et al., (2019).

Global sustainability has become a crucial component of firms' plans to stay competitive in a dynamic business environment, as a result of major developments in the business world including globalization and technology advancements. Businesses work to handle modern technology components in accordance with sustainable methods. The application of thorough and flexible strategic approaches, which serve as the cornerstone of sustainable strategy, is one of the essential components. Numerous administrative concepts have been altered by these techniques in addition to new legislation. Consolidation of this strategy has been substantially aided by the principles brought about by the information technology revolution, which makes it essential for gaining competitive advantage, especially for businesses in the goods and services industries Kasasbeh, (2021), Al-Serhan, A. et al., (2021).

Organizations can move toward a competitive, sustainable future with the help of a sustainable strategy. This entails creating a company that can modify every aspect of its

operations to accommodate both normal and abnormal changes. Reaching this degree of flexibility enables companies to handle both expected and unforeseen changes and match their present operations with their modern capabilities. Moreover, in order to maintain their activities without jeopardizing the resources accessible to future generations, organizations need to strike a balance between environmental and economic (social) concerns. Another important component of these sustainable solutions is Competitive advantage. Alzureikat, K. et al., (2021), Ferdman, H. et al., (2022). Organizations can more effectively foresee and reduce possible risks to their investments by including Competitive advantage into their strategic planning process. In addition to safeguarding their financial interests, this proactive strategy promotes stability and resilience in the face of societal changes, ensuring long-term viability. Therefore, in a corporate environment that is changing quickly, Competitive advantage is crucial to preserving an organization's sustainability and accomplishing its strategic objectives.

2. Problem of Study

In the fiercely competitive world of today, modern businesses are always looking for new methods to succeed and be the best at everything. Getting a competitive edge and lowering Competitive advantage have been key factors in explaining organizational success, according to a survey of administrative literature. Lately, innovative approaches have surfaced to improve the capacity of businesses to adjust to their surroundings; one prominent instance of these approaches is the use of Smart Management Methods. This strategy makes use of a certain kind of mental ability that managers, leaders, and strategic thinkers need in order to fully foresee the future of the company and deal with uncertainty, scarcity, and incomplete knowledge. Smart Management Methods enable leaders to seize opportunities and adjust to changing circumstances while assisting businesses in achieving their long-term objectives. As a result, the success of an organization greatly depends on how well its decisions are made in response to opportunities and risks presented by the environment. The degree of Smart Management Methods guiding these decisions and other administrative duties determines how effective they are in helping the organization effectively manage environmental concerns.

The purpose of this study is to examine how Smart Management Methods (Coordination mechanisms, Supporting mechanisms, Developing methods) The Impact in Competitive advantage. It will offer a theoretical analysis of the important works that deal with the pertinent factors. Smart management uses contemporary electronic techniques that are fast,

efficient, effective, and able to handle conventional management issues in order to improve organizational performance.

3. The objectives of study:

The study's goals were to determine how Smart Management Methods (**Coordination mechanisms, supporting mechanisms, developing methods**)) affect Competitive advantage in companies operating on the Jordanian chemical and cosmetics industry.

And reaching the subsequent Goals:

1. Determining How Coordination Mechanisms Affect Competitive advantage in companies operating on the Jordanian chemical and cosmetics industry.
2. Determining How Supporting Mechanisms Affect Competitive advantage in companies operating on the Jordanian chemical and cosmetics industry.
3. Determining How New Mechanisms Will Help Lower Competitive advantage in companies operating on the Jordanian chemical and cosmetics industry.

4. The importance of study:

Competitive advantage occasionally limits an organization's ability to advance and prosper, so it is important to study within academic trends. Research and scientific studies are among the most significant ways that organizations can take Contemporary as a step on the path of progress, development, and survival. In particular, with regard to the theoretical literature of organizations Smart management and crises and the role of these characteristics in addressing and confronting those Competitive advantage, which is considered one of the most important, the study's significance stems from its handling of a topic that is thought to be the most important and contemporary with the reality of organizations at the present time.

The crucial conceptual underpinnings that this small study aims to strengthen in order to create a framework Decision-makers at the hospitals that were surveyed find it useful, particularly in light of the research that addressed the procedure of Thus, this study takes a very limited look at reducing Competitive advantage through the traits of a smart organization. An intriguing addition to science.

5. Model of study:

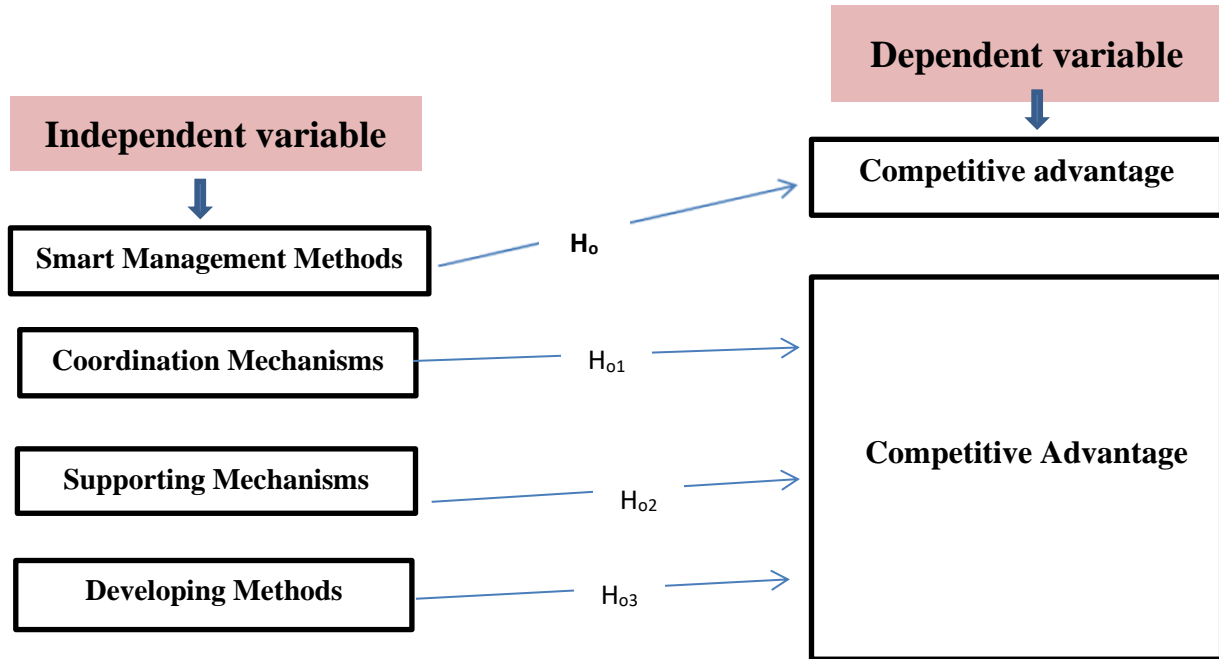


Figure 1- The model of study.

6. Study Hypotheses:

Ho1: Coordination mechanisms have no impact on Competitive Advantage in companies operating in the Jordanian chemical and cosmetics industry.

Ho2: Supporting mechanisms have no impact on Competitive Advantage in companies operating in the Jordanian chemical and cosmetics industry.

Ho3: Developing methods have no impact on Competitive Advantage in companies operating in the Jordanian chemical and cosmetics industry.

7. Literature Review:

According to Elshawarb, R. M. (2020). Study, most developing nations have consistently used smart management to gain a competitive edge. This study used secondary data from company annual reports to investigate the connection between strategic management and gaining a competitive advantage in Egypt. The study did point out that gaining a competitive advantage is typically positively impacted by wise management. Utilizing astute management strategies, organizations must fulfill quality requirements. The outcomes of enhancing the clients' perception of themselves and offering them services that fulfill their wants and preferences while protecting their money and privacy, among other aspects of

delivering care. The study by Anna Baczyńska (2017) demonstrates relationships between analytical, practical, and emotional intelligence with behavioral dimensions of performance of top managers. The behavioral dimensions of leadership, initiative, goal orientation, attitude toward change, and employee development were linked to analytical intelligence and business intelligence, but not to emotional intelligence, practical intelligence, or practical intelligence. These findings offer a unique perspective on the relationships between different types of intelligence and managerial behavioral dimensions. The rustles of Prashant Ahire (2017) demonstrate that despite smart management employing authorization and authentication, industrial management systems in India are currently dealing with loss, which raises administrative costs, reduces administrative time, and necessitates the follow-up of administrative resources. This issue is recalled in these systems. By employing intelligent management systems, various employee status-related issues can be resolved Liudmyla Ivashova et al., 2022 The paper, especially in light of enhancing Ukraine's national security, supports the necessity of and illustrates the characteristics of incorporating SMART management into the system of public management of regional development. Examining the management standards within SMART management, the paper criticizes the exhaustibility of current SMART criteria and proposes the inclusion of two more components: inspiration and ethics. In order to improve regional development and national security in Ukraine, it also outlines two key principles assessment and review that must be followed while using SMART management in public management systems. Kareem, J. M. (2024). The purpose of this study is to determine how astute quality management techniques affect the financial performance of significant Asian businesses. The results show a strong and positive correlation between profitability and astute quality management. The goal of smart quality management, a contemporary method of business process management, is to increase productivity and profitability. The report emphasizes how an integrated system of smart quality management is essential to raising a company's profile, earnings, and market share.

The study by Khuntia and Rueda Torres (2017) delves into strategies for enhancing the forecasting of future maintenance operations within the Netherlands, aiming to facilitate informed decision-making processes. Specifically, the focus is on determining optimal timings and locations for maintenance activities, particularly concerning electricity infrastructure, leveraging the abundance of available data. However, despite the wealth of data, its sheer volume poses challenges in extracting meaningful insights, compounded by inherent

uncertainties. Given the continuous stream of data collected on asset conditions, the central query revolves around effectively harnessing this information. The concept of "data richness" juxtaposed with "information poverty" underscores the dilemma of analyzing vast datasets, further complicated by the advent of modern information technologies like the Internet. The analysis of extensive data holds significant implications for maximizing the benefits derived from electricity infrastructure, with the overarching objective being to elevate the intelligence of current assets. The study provides nuanced descriptions of the administrative landscape surrounding these endeavors.

The primary objective of the research conducted by Goh (2016) was to evaluate the competency levels of contracting sector firms in Singapore, with a focus on their transition into smart organizations. This assessment involved comparative analyses with counterparts from various nations, including Denmark, Sweden, Finland, and the broader North region. The study yielded several significant findings, notably highlighting the pivotal role of information technology adoption within the construction industry in fostering smart organizational practices. Through meticulous evaluation, the research delineated six key trajectories for both Singaporean and global contracting enterprises. These trajectories encompassed leveraging communication infrastructure, adhering to legal and regulatory frameworks, implementing Enterprise Resource Planning (ERP) systems to facilitate seamless integration across databases and applications, investing in enhancing workforce intelligence, engaging in business process re-engineering, prioritizing individual technology requirements, and adeptly managing change within medium and small-scale enterprises.

The study by Jose Moura and colleagues in 2015 delves into the intricacies of leveraging Intelligent Management and Efficient Operation of Big Data within networks and infrastructure computing. It elucidates a comprehensive approach aimed at addressing three key facets: Firstly, the expedient extraction of pertinent insights from vast, often disorganized, and heterogeneous data repositories. Secondly, enhancing the performance of processing infrastructure and (cloud) networks, which serve as pivotal foundations for large-scale data applications or services. Lastly, devising novel methodologies for the effective management of network infrastructure through integrated high-level policies, facilitating the seamless transfer of substantial data volumes with varying requirements (e.g., video versus text). The paper includes a case study illustrating an intelligent management solution for directing traffic with

diverse requirements across a wide area, exemplified by an Internet exchange point. This case study is thoroughly examined within the realm of big data and subsequently evaluated.

8. Methodology:

Choosing a suitable research approach is essential for a successful study. To ascertain the kind of data required, how to gather the data, and what kind of sampling strategy to use, a suitable research design is crucial. Consequently, the research design is essential to achieving the goals of the study. In this study, a quantitative research design was used. The researcher will be able to examine the link between the research variables thanks to quantitative research design. Additionally, it will make it possible for the researcher to objectively assess which concepts or ideas are superior to the others. In order to clarify, visualize, and regulate events, it can also react to inquiries about the connections between the variables that are being monitored. Because it allows for the application of statistical techniques to examine the relationship between variables, the quantitative research design is thus a suitable strategy for this study (SPSS 22). our aligns with the primary goal of our research, which is Because it enables the use of statistical techniques to examine the relationship between variables, the quantitative research design is a suitable strategy for this study.

8.1 The Study population and Sample

The study population comprised 55 businesses in the Jordanian chemical and cosmetics sector, from which data was collected using a questionnaire. These businesses were randomly selected from a total of 232 in Jordan. For this study, 400 surveys targeting employees in senior and middle management were distributed, with 380 responses received. Out of these, 364 responses were valid, resulting in an 82% validity rate (Kara et al., 2020). The methodology employed in this study is based on a descriptive analytical approach, which includes a field survey to collect data. This data was then statistically analyzed to address the study questions.

8.2 Assessing Validity and Reliability

Item analysis, or careful investigation of each item, is the first step in evaluating the validity and reliability of the instrument. This is done before establishing the overall reliability. This analysis is centered on evaluating the merits of specific leadership values-related elements. According to Hair et al., (2006), a critical need for item quality is that the alpha value following the deletion of an item must be lower than the specified item alpha. After doing an item analysis for leadership values, it is clear that every item satisfies the requirements, as indicated by the Cranach's alpha of 0.87. Hair et al., (2006), in turn, defines dependability as the consistency of

a variable assessed more than once. The reliability assessment for the entire scale in this study is shown in Table 1, where Cronbach's alpha produced a result of 0.88. This value exceeds both the generally accepted bottom limit of 0.70 as indicated by Hair et al. (2006) and the threshold of 0.60 of the leadership values.

Table 1. Reliability Statistics

Variable	Cronbach's Alpha	N of Items
Coordination Mechanisms	0.89	5
Supporting Mechanisms	0.86	5
Developing Methods	0.85	5
	0.87	15
Competitive Advantage	0.82	8

This survey questionnaire, which was created to measure leadership values, is generally recognized and considered valid, according to the results of the item analysis and the Cronbach's alpha coefficient.

8.3 Analytical Statistics Methods

Were used, using the statistical package (SPSS.16). The following is a presentation of the statistical methods that will be used for each question:

1. Descriptive Statistic Measures to describe the characteristics of the study sample, depending on frequencies and percentages, in order to answer the study questions, and to know the relative importance using arithmetic averages and standard deviations.
2. Using Multiple Regression Analysis to test the validity of the study models and the effect of the independent variable and its dimensions on the dependent variable and its dimensions, and Stepwise Multiple Regression Analysis to test the entry of the independent variables into the prediction equation of the dependent variable.

9. Data Analysis and Discussion

9.1 Descriptive Statistics:

The arithmetic averages and standard deviations were calculated for the degree of smart management and Competitive advantage practice from the point of view of in companies operating in the Jordanian chemical and cosmetics industry. As follows:

Table 2: Descriptive of dimensions of smart management and Competitive advantage

Variable	Mean	SD	Ranking	LEVEL
Coordination Mechanisms	3.90	.69	1	high
Supporting Mechanisms	3.89	.70	2	high
Developing Methods	3.88	.67	3	high
Competitive Advantage	3.85	.66	4	high

Table No. (2) shows that the arithmetic averages of the respondents' answers to the dimensions of smart management (Coordination mechanisms, Supporting mechanisms, Developing methods) were average, that the total average of the dimensions of smart management amounted to (3.89), A standard deviation of (0.69), and the dimension of Coordination mechanisms ranked first with an arithmetic mean of (3.90), and a standard deviation of (.69), followed by of Supporting mechanisms mean of (3.88), and a standard deviation of (.67), and came in third place after Developing methods with a mean of (3.88), and a standard deviation of (.67).

9.2 Hypotheses Testing

Before applying regression analysis to answer this question, some tests were performed in order to ensure that the data fit the assumptions of the regression analysis, as follows: With regard to the assumption that there should be no high correlation between the independent variables "Multicollinearity", the researcher performed the Variance Inflation The VIF Factor, and the Tolerance test for each of the independent variables, and Table No. (6) Indicates that if the Variance Inflation Factor (VIF) for the variable exceeds (10) and the allowable variance value is greater than (0.05), then It can be said that this variable has a high correlation with other independent variables and thus will cause a problem in regression analysis. This rule was used to test the "Multicollinearity" between the independent variables. As Table No. (7) indicates, which contains the independent variables, the value of the variance inflation factor (VIF) and the allowable variance "tolerance" for each variable, we note that the value of (VIF) for all variables was less than (10) and ranged (2.692 - 4.190) as we note that The allowable variance value for all variables was greater than (0.05) and ranged between (0.239 - 0.405), so it can be said that there is no real problem related to the existence of a high correlation between the independent variables.

Table 3. The variance inflation factor test, the permissible variance and the skew modulus.

Variables	Tolerance	Variation Evaluation Factor (VIF)	Skewness Modulus
Coordination Mechanisms	0.372	2,692	0.207
Supporting Mechanisms	0.345	2.896	0.210
Developing Methods	0.239	4.190	0.159

In order to investigate the assumption of the normal distribution of the data, it was based on calculating the value of the skewness coefficient for the variables, and (Malhotra & Briks,) indicates that the data approach the normal distribution if the skewness coefficient value for all variables is less than (1), and as Table No. (7) Indicates that the value of the skewness coefficient for all study variables was less than (1), and therefore it can be said that there is no real problem related to the normal distribution of the study data.

Table 4 results of multiple regression analysis to test the effect of smart management with its various dimensions in Competitive advantage.

Roaming Guidance	B	Standard Error	Beta	Calculated t Value	t . Significance Level
Coordination mechanisms	0.171	0.038	0.207	4.529*	0.000
Supporting mechanisms	0.043	0.040	0.051	1.065**	0.288
Developing methods	0.174	0.042	0.235	4.113*	0.000

* Statistically significant at the level of significance ($\alpha < .05$)

Table 4 results of multiple regression analysis to test the effect of smart management with its various dimensions in reducing Competitive advantage. It is clear from the statistical results contained in Table No. (4), and from the follow-up to the (t) test values that the following related sub-variables (Coordination Mechanisms, Supporting Mechanisms, Developing Methods) are the most influential smart management variables in Competitive advantage. The calculated (t) amounted to (4.529, 1.065, 4.113), respectively, which are significant values at the level of significance ($\alpha < .05$).

Table 5 Results of "Stepwise Multiple Regression" analysis

The order of entry of the independent elements in the prediction equation	R2 . Value The Coefficient of Determination	Calculated t Value	Denotation Level *
Coordination mechanisms	0.474	8.871*	0.000
Supporting mechanisms	0.574	4.024*	0.000
Developing methods	0.564	4.984*	0.000

* Statistically significant at the level of significance ($\alpha < .05$).

Table 5 Results of "Stepwise Multiple Regression" analysis to predict of Competitive advantage through the dimensions of smart management (Coordination Mechanisms,

Supporting Mechanisms, Developing Methods) as independent variables. When conducting a stepwise multiple regression analysis to determine the importance of each independent variable in contributing to the mathematical model, which represents the impact of smart management (Coordination Mechanisms, Supporting Mechanisms, Developing Methods) in Competitive advantage. The reason for this may be due to the importance of the clarity of the future direction of companies and the goals they seek to achieve, by developing and raising the efficiency of workers, training and encouraging their creative initiatives, allowing participation in decision-making Competitive advantage and monitoring the financial capabilities and human energies necessary for this. Sufficient to demonstrate his creative potential, encourage investment, and ways to present suggestions and observations, and exchange views on alternative plans. This result is explained that the sense of smart management works to provide the appropriate environment for Competitive advantage, as this factor is considered one of the stimulating influences on creating new Competitive advantage.

10. Conclusion

The outcomes of the multiple regression analysis point to the importance of coordination mechanisms, supporting mechanisms, and developing procedures as three aspects of smart management that significantly affect competitive advantage. These results are consistent with earlier research by Elshawarb (2020), which highlighted the benefits of wise management for obtaining a competitive edge, especially in emerging countries such as Egypt. Elshawarb's research emphasized the significance of prudent management tactics in fulfilling quality standards, improving customer satisfaction, and providing personalized services that respect customers' privacy and security preferences.

Additionally, the 2017 study by Anna Baczyńska clarified the connections between various forms of intelligence and managerial behavioral traits. Emotional and practical intelligence did not significantly correlate with behavioral aspects of leadership and initiative, but analytical and business intelligence did. This emphasizes how management conduct is complex and how different forms of intelligence have varied effects.

The research conducted in 2017 by Prashant Ahire brought to light the difficulties that Indian industrial management systems still face in spite of the use of smart management practices. Problems like resource follow-up, loss, and higher administrative expenses show that

although smart management might help with some problems, it might not be able to completely eliminate all of the difficulties that arise in intricate organizational settings.

Furthermore, the research conducted by Kareem (2024) highlighted the favorable association between clever quality control and financial results in major Asian companies. The significance of integrated management systems in improving business performance was highlighted by the identification of astute quality management strategies as necessary for raising productivity and profitability.

Furthermore, with an emphasis on power infrastructure, Khuntia and Rueda Torres (2017) investigated methods for streamlining maintenance operations in the Netherlands. In order to maximize the returns on infrastructure investments, the study stressed the difficulties presented by large datasets and the necessity of competent data analysis.

Additionally, Goh's 2016 study assessed how Singapore's contracting sector companies transformed into smart organizations. The research pinpointed crucial paths for implementing intelligent organisational strategies, such as optimising workforce intelligence, capitalising on information technology, and competently handling change.

Finally, a 2015 study by Jose Moura and colleagues examined how big data is managed inside network infrastructure, stressing the significance of deriving insights from diverse data sources and optimizing processing infrastructure for applications using vast amounts of data.

In summary, prior research offers important insights into the complex nature of managerial practices, the difficulties in putting smart management techniques into practice, and the significance of efficient data management and infrastructure optimization in achieving organizational goals, even though the results of the multiple regression analysis show a significant impact of some aspects of smart management on competitive advantage.

11. Recommendations

In light of the study results, the study proposes a number of recommendations:

1. Companies operating on the Jordanian chemical and cosmetics industry strive to improve employee levels and the degree of smart management practices in the workplace in order to give their clients a competitive advantage. These efforts include raising employee awareness, encouraging greater employee participation in decision-making,

and providing training and educational opportunities that encourage better performance and loyalty, which in turn leads to organizational citizenship.

2. Encouraging managers to utilize smart management since it gives them ample time to gather information, spot issues, enhance communication, and accomplish growth, inventiveness, and a competitive edge.
3. The necessity for Companies operating on the Jordanian chemical and cosmetics industry to adopt many concepts that achieve the dimensions of smart management, which is reflected in it as a behavior in identifying the degrees of personality in decision-making among its members, and removing the obstacles in competitive edge.
4. Conducting more studies to cover the aspects that the study did not address, and which constitute the relationship between smart management and competitive edge.

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