

Leveraging Information Systems for Strategic Management: Enhancing Decision-Making and Organizational Performance

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Abstract

This research explores the effects of exploiting IS on strategic management, decision-making, and organizational performance within the scenario of the UK Fast Moving Consumer Goods (FMCG) industry. This nature of the industry as rather competitive and vulnerable to constant changes calls for quick and effective decision-making that IS provides. In this manner, IS can help with the strategic management, offer improved function management on an organizational level and improve supply chain and consumer. It reveals that IS is a significant tool in predicting market shifts, as well as a means of adapting to new laws to enhance sustainability and ethical benchmarks to foster organisational innovation and differentiation across FMCG firms. The study is concerned with understanding how and in what ways IS influences decision-making (research question 1) and organizational performance (research question 2) in the context of the UK FMCG industry. Following a positivist research philosophy, the research adopts a quantitative research approach, and statistical analysis guarantees the reliability and validity of the data collected. Collection of data from structured questionnaires and statistical analysis using linear regression models reveal that IS has a positive and vital impact on the improvement of decision making processes and other organizational performances. Logical assumptions suggest that IS enhances the decision-making process and the performance of organizations. While there are many concerns such as escalating costs and security risks, the proper incorporation of IS increases organizational objectives while emphasizing a data-driven approach to IS. The study provides a robust rationale for increasing

the uptake of IS across industries in a bid to boost competitiveness and organisational performance. Future research should also embrace qualitative research designs to capture more richness and diversity of the topic and include more diverse geographical locations. Also, the study of the moderating role of the new technologies like AI and mechanism learning on the IS effectiveness enhances the development of the strategic management frameworks that could be helpful for different industries.

Keywords

Leveraging Information Systems, Strategic Management, Decision-Making, Organizational Performance, UK, FMCG Sector

1. Introduction

1.1. Background of the Study

Increased technologies have impacted on the strategic management where information systems (IS) form an integral component that boosts an organization's performance and improves its decision making. Consequently, integrating IS into strategic management has recently been an essential aspect for both the attainment of competitive edge and operations management. IS thus helps in compilation and processing of large data and provides necessary support to the managerial level in making appropriate and timely decisions. It also complements various strategic activities such as market assessments, planning, and development so as to improve the organizational efficiency. The capability to utilise Information Systems for strategic management is especially valuable in the context of increasing technologic developments and a shifting business environment that presupposes high velocities of change and highly informed decisions (Nguyen & Tran, 2023).

Different sectors and organizations have considered strategic business initiatives and performance outcomes that can be provoked by IS. Organizations have accredited the use of integrated and strategic information systems like Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) systems to massive increases in operational efficiency, customer satisfaction, and organizational performance (Alsharari et al., 2023). These systems give general picture of business processes of organizations and their customers, which enable firms to fine-tune their strategies to address the customers' needs hence improving customer satisfaction. Lastly, the effective application of advanced analytics and BI technologies allows companies to determine new trends and potential future situations and act accordingly concordantly with the changes. Therefore, IS not only contributes to strategic decision-making but also facilitates continuous learning and improvement processes in organizations (Johnson et al., 2022).

However, the use of IS for strategic management also has limitations such as high costs that may be required to implement technology and train people and

includes issues of security as well as compatibility issues that are likely to arise when trying to incorporate IS within the existing processes of the firm. In a broader context, three key conditions for efficient IS utilisation have been identified: alignment of the technology with specific organisational objectives, and strategic cultivation of a data-oriented organisational culture. In addition, it is worth acknowledging that technology is a vast area that is only developing, which means that new strategies and methods are to appear constantly to remain unique. Overcoming these challenges requires a multilevel solution that encompasses leadership commitment, learning organization, and institutionalized IT governance structures. Through overcoming all these barriers, it becomes easy to capture the benefits offered by IS in boosting the managerial capabilities of an organization's strategic management and thereby producing high organizational performance in the current and constantly advancing business environment (Smith et al., 2023).

1.2. Problem Statement

The UK's Fast Moving Consumer Goods (FMCG) is a high turnover, and relatively low profitability sector as it consists of products that are frequently and regularly consumed by consumers or businesses. Therefore, there is a need for companies to embrace Information Systems (IS) for strategic management in order to improve the making of decisions and hence the performance of organizations. This rapid rate of innovation has also brought complex IS tools into the fold for the FMCG companies to handle large volumes of information and come out with valuable information. These systems allow people to conduct data analysis in real time, manage supply chains, and cultivate customer relations. Application of IS for strategic purposes helps firms make predictions and determine what the market or consumers will require in the future to enhance marketing strategies as well as product differentiation. In addition, this integration results in enhanced coordination between various departments to enhance its operations and at the same time reduce cost. In the context of the UK FMCG industry, the audiences' acceptance of IS also embraces strategic objectives in the context of the increasing focus on digital transformation and sustainability. It helps in monitoring the resource consumption parameters and it will facilitate knowing the legal and environmental compliance as well. In general, with the establishment of strong IS frameworks in the FMCG sector, decision making is foreign with competitive advantage and long-term sustainable growth.

1.3. Aim of the Study

The aim of this study is to examine leveraging information systems for strategic management: enhancing decision-making and organizational performance.

1.4. Rationale of the Study

The rationale for studying "Leveraging Information Systems for Strategic Man-

agement”: Regarding the UK FMCG sector it could be linked to the fact that the industry is highly competitive, it is always in a state of flux. This industry is a very competitive industry where making the right and speedy decisions is vital in maintaining competitiveness and continued business operations. IS is vital as it offers both current data and analytical tools and anticipatory tools, which are essential in decision-making. In strategic management, IS provides a means of better managing organizational functions, altering supply chains, and communicating with consumers. The UK market has been changing gradually and by employing IS, FMCG firms are able to forecast the changes and thus respond to the changes in the law or meet high expectations on sustainability and ethics. Furthermore, the use of IS improves the organizational performance indicators thus dynamism and innovativeness in organizations. From the analysis of IS in this sector, the study will encourage other sectors to adopt this technology as a means to improve competitive edges.

1.5. Research Objectives

RO1: To investigate the impact of leverage information system on decision making in the context of UK FMCG sector.

RO2: To investigate the impact of leverage information system on organizational performance in the context of UK FMCG sector.

1.6. Research Questions

RQ1: What is the impact of leverage information system on decision making in the context of UK FMCG sector?

RQ2: What is the impact of leverage information system on organizational performance in the context of UK FMCG sector?

2. Literature Review

2.1. Strategic Management and Information Systems

Over the years, the incorporation of Information Systems (IS) into strategic management has emerged as an important field of research due to technological developments and the ever more complicated business environment in the global context. Strategic management therefore defines cross-organizational decision making, execution and assessment aiming at achieving organizational goals. Information Systems, including data acquisition and processing technologies, play a central role in this process as they offer the means whereby data can be collected, processed and utilised efficiently. Information Systems in strategic management enables an organization to improve organizational flexibility and performance through data analytics, Business intelligence, and predictive modelling in the decision-making processes. This coordination is most beneficial in fields such as the Fast Moving Consumer Goods sector, which is characterised by high volatility, constant changes in the market and customer needs.

2.2. Improving the Decision-Making Process through Information Systems

Decision making has also been made easier through the use of Information Systems through providing analytical tools and real-time information. The use of big data platforms and the integration of machine learning algorithms help firms to gain insights from data such as patterns, trends, and other facets of the market. In the context of FMCG where product cycles are short and customer consumption cycle is fluid, these capabilities are highly beneficial. IS increases demand forecast accuracy, inventory management, and supply chain management resulting in increased efficiency and reduced costs. In addition, IS is involved in key business management decisions in areas such marketing, product development and management of customer relations through consumer analysis and feedback. Thus, organizations may devise more relevant advertising appeals, design products that consumer's desire, and increase both sales satisfaction and loyal customers.

Research on the role of Information Systems and review of cases has compiled a wealth of support for the DM orientation of IS. Recent scholarly studies show that companies that strategically utilize information systems and technology are likely to achieve higher operational efficiencies, innovation, and market sensitivity than firms that fail to integrate information systems. For instance, in empirical research conducted on the UK FMCG sector, it was evidenced that firms that have adopted advanced IS in supply chain management enjoy great operational benefits and improvements in customer satisfaction. The same happened with a well-known FMCG firm where an enhancement in the application of predictive analytics and machine learning in product development resulted in an increase in the new product hit rates and market share (Chui et al., 2021). As highlighted, the study further establishes the importance of IS in improving different aspects of strategic management including but not limited to operation, innovation, and competitor pressure aspects.

2.3. Challenges and Future Directions

However, as this paper has shown, integrating Information Systems into strategic management as highlighted in the case of Walls & Ceilings has benefits that cannot be ignored. Two important challenges among the top concerns are as follows: Strategic alignment of IS with organizational vision and objectives is a core concern of IS management, which is fundamentally tied to understanding both the technological readiness and strategic direction of a business. Further, rapid technological advancement can also prove to be a drawback because different IS updates become difficult to incorporate within the organizational infrastructure leading to possible obsolescence of IS and greater expenditure (Bharadwaj et al., 2021). Other risks remain as security and privacy issues continue to be a major challenge especially in industries where consumer data is vital for decision making such as the FMCG industry. Future research that should

be given a priority includes providing stricter theories on IS integration, research on artificial intelligence and blockchain technology on strategic management, and most importantly the impact of heavy data usage. If these challenges are addressed adequately then organizations can harness strategic value of IS for achievement of strategic objectives and gain sustainable competitive advantage.

2.4. Leveraging Information System and Decision Making

A primary and peer negligent level analysis of literature on the application of IS for strategic management in the fast moving consumer goods sector of the United Kingdom expresses a complex environment defined by the use of technology, the organizational structure and the forces of competition. In this case, the development of IS within the FMCG industry represents a clear management transition towards a data-led environment and digitalisation. [Laudon and Laudon \(2020\)](#) for instance underscore the importance of IS in enabling organizational flexibility and responsiveness to the market force, and consequently shaping strategic management decisions. Similar to this view, it is posited that through the creative application of IS, firms can create superior value and become innovation leaders as technology is integrated into the value chain activities.

Furthermore, the use of advanced analytics, artificial intelligence, and machine learning in the operations has also influenced the way these firms collect and use information for business intelligence purposes. Big data and predictive analytics can help top organisations in anticipating what consumers would prefer to buy, at what prices settings would make the most profits and how to practically appeal to customers to ensure they keep coming back. Thus, there is a lot more to IS success especially when it comes to integrating it in the strategic management process than simply mastering technology; it calls for integration of organizational culture, leadership, and change management skills/strategies.

This is in line with the perspective that IS can only contribute to strategic outcomes if information technology is appropriately aligned with organizational objectives. Furthermore, the application of knowledge management for the realisation of the potential of IS for strategic management has been pointed out by scholars to require culture change towards the analysis of data and learning. However, the implementation of IS in the FMCG sector has its own limitations and drawbacks. The following areas remain the major concern for implementing IS in the sector: Challenges with implementation of IS include the emergence of security risks, privacy concerns as well as what could be referred to as information overload. Also, it implies that due to the fast rate of advancement in technology, FMCG firms have to further develop and expand their IS capacities to sustain a competitive advantage within this sphere ([Gupta & George, 2023](#)). Therefore, as summarised by the literature, IS holds the possibility of revolutionising the manner in which strategic management is undertaken and consequently the optimisation of organisational performance in the context of the UK FMCG industry. However, to realise these benefits tangible knowledge of the re-

relationship and interaction between technology, organisational factors and the industrial environment must form part of the ground work and much attention must be given proactively in order to counter the issues and complexities of IS implemented and utilised.

2.5. Leveraging Information System & Organisational Performance

Nevertheless, the research on the interface between Information Systems (IS) and organizational performance has received significant interest mainly because of IS importance in improving the strategic management and organizational performance efficiency. Information Systems refer to a set of tools and technology aimed at organizing, processing, storing, and transmitting information to facilitate decision-making processes, improve organizational operations efficiency, and gain competitive advantage. The overall theoretical framework that supports the concept of the strategic worth of IS is the Resource-Based View (RBV), which asserts that enforced resources like, advanced IS, are fundamental to the formulation of a lasting competitive edge. Subsequent trends have built on this framework to show how IS capabilities are enmeshed within overall strategic plans to enhance organizational effectiveness. Companies applying big data analytics reported better decision making, innovation and operations performance. In FMCG specifically, big data can be applied to understanding consumer preferences, demand, and potential pricing strategies, enhancing competitiveness and profitability.

However, the successful implementation of Information Systems is not as easy as it sounds when we hear of the following challenges. Challenges that are associated with data privacy, cyber security concerns, and the implementation of legacy systems remain a challenge. Making data secure and safeguarding it against various regulations like GDPR is a prudent move, particularly given the enormity of consumer data. Leadership and strategic alignment are also relevant for advocating the use of IS for improved organizational performance. Integration of IS in top management entails support and a vision for integration of IS with the rest of the organization in order to achieve success in implementation. Other research has indicated that organizations that effectively implement leadership of IS are better placed to achieve optimal IS investment advantages such as productivity, innovation, and business edge. Also, organization culture of constant enhancement and adaptability is critical for using IS as it helps organizations in attaining market and technological fluctuations quickly.

3. Methodology

3.1. Theoretical Framework

Figure 1 illustrates the theoretical framework highlighting how leveraging information systems (IS) impacts decision making and organizational performance. It suggests that effective use of IS enhances decision-making processes,

leading to improved organizational outcomes. By providing timely and accurate information, IS supports better strategic and operational choices, ultimately improving efficiency and performance. This framework underscores the strategic importance of aligning information technology with organizational goals to achieve superior performance.

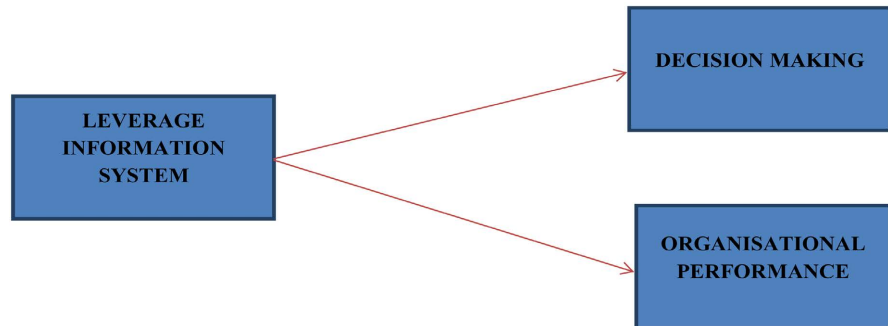


Figure 1. Theoretical framework.

3.2. Research Philosophy

The positivist research philosophy is often explained in the context of the study publication. As such, the researcher will be able to allocate more time for the collection of the data for the study article. Consequently, the researcher becomes more reliant on the data during an investigation, making the data more trustworthy. As a consequence of this investigation's findings, the researcher will be able to construct a reliable and effective empirical study to investigate leveraging information systems for strategic management: improving the quality of decision making and organizational outcomes.

3.3. Research Design

According to the findings of the study, it was recommended that a quantitative research approach should be employed when collecting the data and analysing the results. The primary goal of using quantitative method is that it deals with numeric data that can be analyzed statistically. Due to the continuous nature of the data that is relevant to the research issue, this study shall give emphasis on Interpretivism. Besides, the inductive research technique, which enables the use of concepts and facts which are already known and the interpretation of the results, will be the main focus of the on-going study. In order to ensure proper implementation, the study will focus its research strategy on descriptive research. As the experience shows, using this specific type of research methodology can greatly contribute to improving the knowledge about the social context. The major research aim of this research would be to evaluate the degree of technical literacy among executives in business firms. Applying the methods of quantitative research allows for tracking events which can be detrimental for people. The most commonly used approach to accumulating objective facts is quantitative methodology, which involves the use of numbers and a statistical

approach to share data succinctly and clearly. One of the strengths of using quantitative research designs is that there is a well-defined association between statistical data and the aim and hypotheses of the study. This factor is one of the primary reasons for choosing a quantitative research approach as the method of data collection.

3.4. Research Approach

Deductive reasoning, on the other hand, involves the identification of a single aspect of the problem under consideration and frequently depends on the propositions of the other relating to criteria determined in other circumstances. This will be done after coming up with hypotheses and the process of going out there and collecting data to support or refute this hypothesis will go a long way in supporting the research objectives and aims. This forms a strong and motivating factor for the researcher to conduct observation that are detailed and collect other data relative to the study. As a result, hypotheses can be made by the researcher from the information that is collected by him or her in the course of the study.

3.5. Data Collection Process

This section justifies how data will be gathered from the targeted participants, as stated in the assessment. First of all, the questionnaire from the previous articles has to be altered according to the independent and dependent variables and has to be discussed with the supervisor about this. The questionnaire will be taken through an approval process by the supervisor and then uploaded on Google form and the participants will be informed through the link on the Google form. The questionnaire will adopt a 5-factor Likert scale, where the options for each question will include: Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree.

3.6. Data Analysis Process

The collected data will be kept in a tabular form using an Excel spread sheet. The organisation of the data will help in the process of going to enter into the programme known as SPSS version 20. Quantitative data will be collected through survey questionnaires while qualitative data will be collected through interviews after data submission and the results will be acquired through different assessment methodologies. The primary use of the frequency test is to obtain quantitative data pertaining to the evaluation by the experts of various statements. After that, the correlation of the variables will be determined through regression and comparative analysis. Concept evaluation can also be done using the statistics approach as a means of evaluating concepts.

3.7. Ethical Consideration

It is important to note that all applicable ethical considerations were obeyed

when assembling the data for this research endeavor. Issues that relate to the voluntaries' right to autonomy were discussed, including the previous written consent they gave as the participants in the study. Indeed research information availed here can help in preparing a desirable response. Moreover, the privacy and the integrity of the data has also been examined. The researcher alone will be the only person to have the access to any of the data or information that could be used to trace or reach a particular participant. As to the information disseminated, complete confidentiality of the research findings has been upheld. In this study the researchers have exemplified high levels of moral conduct.

4. Results/Findings

4.1. Demographic Analysis

4.1.1. Table "Gender" (Table 1, Figure 2)

In relation-n to the gender distribution, the data show that males constituted slightly more than half of the sample, accounting for 49 percent (49 participants), while females constituted slightly less, accounting for 51 percent (51 participants). The varied breakdown of participants implies that there is no inclination towards either gender thus giving a 360-degree view for analysis. The latter further attests to the fact that the compiled sample incorporates 100 participants with equal numbers in both gender groups. This distribution is important for achieving greater objectivity in the study and to obtain relevant conclusions since the gender factors should be balanced and comprehensive.

Table 1. Gender.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MALE	49	49.0	49.0	49.0
	FEMALE	51	51.0	51.0	100.0
	Total	100	100.0	100.0	

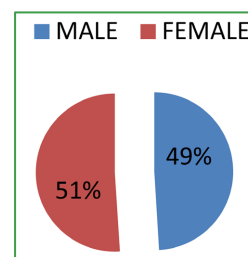


Figure 2. Gender.

4.1.2. Table "Age"

The age group 25 - 30 years is 22% of the respondents, which represents the respondents' early career employed professional (Table 2, Figure 3). About thirty percent of them is between 31 - 35 years of age, which can be referred to as people in their prime who are most likely to have a stable employment status. Lastly

and lastly, the age group of more than 35 years held 29% of the responses and can be assumed to represent the group of professionals with more working experience or may be more experienced professionals. The percent total shows that the 31 - 35 years age group has 71 percent of the examined respondents, the rest of the sample comprises of the remaining age groups above 35 years. A diverse age distribution of the sample guarantees that the results of the study will be more inclusive of various, different, and sources that provide richer data regarding the experiences of the implementation of information systems on strategic management and organizational performance of the UK's FMCG sector.

Table 2. Age.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 18 to 24 years	19	19.0	19.0	19.0
25 - 30 years	22	22.0	22.0	41.0
31 - 35 years	30	30.0	30.0	71.0
Above 35 years	29	29.0	29.0	100.0
Total	100	100.0	100.0	

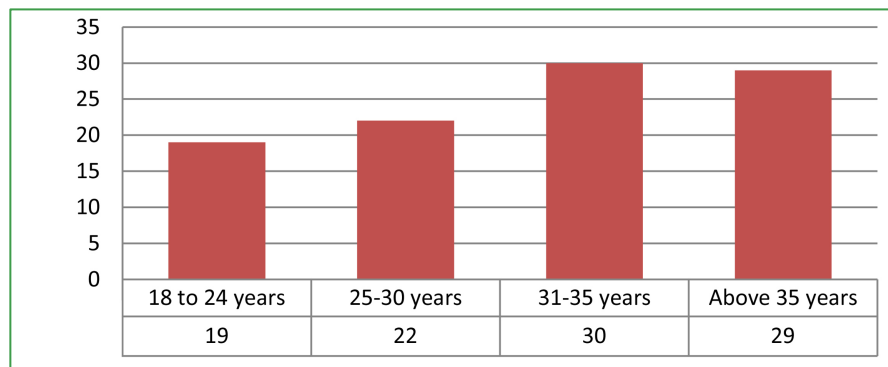


Figure 3. Age.

4.1.3. Table "Education"

According to the results of the educational background of respondents, 47% of the 100 respondents have a bachelor's degree, and 53% of the respondents have a master's degree (Table 3, Figure 4). With this distribution, it can be inferred that a tiny margin of the sample has acquired the ability to go to school further. Finally, the accumulative percentage further substantiates that all respondents, when combined, possess at least a bachelor's degree, which identifies the group as well-educated. The higher percentage of the respondents who have obtained a master's degree (53%) can also be seen as a trend toward a higher level of education which is important in the environment that demands a more profound expertise. This distribution could help to identify the educational status of the target audience from which business or political leaders could change their organizational direction or policies that capitalize on the high level of education of

workers.

Table 3. Education.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelors	47	47.0	47.0	47.0
	Masters	53	53.0	53.0	100.0
	Total	100	100.0	100.0	

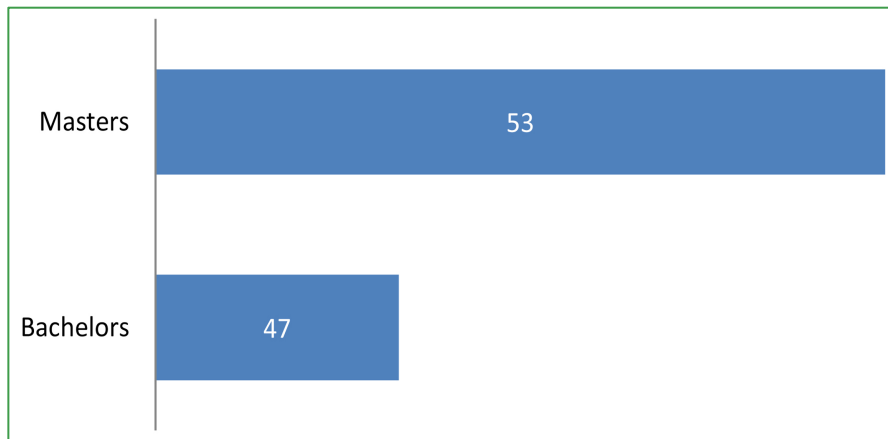


Figure 4. Education.

4.2. Reliability Analysis

Table “Reliability”

Cronbach’s alpha coefficients of the variables in this research show high level of internal reliability of the measure instruments used in the study. Specifically, Leverage Information System variable Cronbach’s alpha is 0.834 thus, Decision Making has alpha of 0.851 for its corresponding constructs, namely Market Performance and Organizational Performance respectively 0.819, each developed from four items. These values, are all above the commonly accepted threshold of 0.700 which indicates that the items in each variable are tapping into the same factor. Such reliability is important for determining the soundness and credibility of the study conclusions together with the scales that measure such variables as leveraging information systems, decision-making, as well as organisational performance in the context of the FMCG sector in the UK (**Table 4**).

Table 4. Reliability.

Variables	Cronbach’s alpha	N of Items
Leverage Information System	0.834	4
Decision Making	0.851	4
Organisational Performance	0.819	4

4.3. Linear Regression Analysis

Hypothesis 1: There is a significant impact of leverage information system on decision making in the context of UK FMCG sector.

4.3.1. Table “Model Summary (Hypothesis 1st)”

Overall, the model summary proves the high relevance of information systems management to strategic management in the UK’s FMCG industry (Table 5). It is seen that the value of the coefficient of correlation (R) is equal to 0.843. A coefficient of 0.843 is almost perfect, which indicates a very high correspondence of the variables. They get an R Square value of 0.710 means that the utilization of information systems enables one to predict 71% of organizational performance. The Adjusted R Square which is a little lower at 0.707, represents the number of predictors, the model explains the sentiment to a similar extent. The standard error of the estimate is 1.83662, which shows how far the observed values deviate from the regression line on average, to argue that the overview of performance outcomes, using information systems usage, is reasonably accurate in terms of the model developed.

Table 5. Model summary.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.843 ^a	0.710	0.707	1.83662

4.3.2. Table “ANOVA^a (Hypothesis 1st)”

The analysis of variance table below summarises the statistical results of the hypothesis pertaining to Information Systems leveraging and Decision-making within the context of the FMCG sub-sector (Table 6). It shows that within the regression sum of squares of 810.225, much variance in decision-making is explained through the predictor, leveraging information systems which are greater than the value in the residual sum of squares of 330.572. It had a mean square regression value of 810.225 to the denominator and a residual mean square of 3. Descriptive in Table 1 indicates the mean and SD of the known variable, XP 373, at 3137, and the resultant F-values of 240.196 which is very low highly significant ($p < 0.000$). This suggests that the variable capturing the use of information system to make decisions is a good predictor of the decision-making process. Hypothesis testing procedure for assertiveness: $t = 1.332$, $p = 0.143$. The level of significance (Sig value is 0.000) again supports the notion that the fact observed in this study is statistically significant implying that the probability of such a fact being observed by pure coincidence is very small. Therefore, according to the findings highlighted above, the data offers compelling proof that adopting information systems can significantly improve different aspects of decisional decision-making for firms in the UK’s FMCG sector; the results reaffirm the role of technology in strategic management techniques.

Table 6. ANOVA^a.

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	810.225	1	810.225	240.196	0.000 ^b
Residual	330.572	98	3.373		
Total	1140.797	99			

Hypothesis 2: There is a significant impact of leverage information system on organizational performance in the context of UK FMCG sector.

4.3.3. Table “Model Summary (Hypothesis 2nd)”

In terms of model summary, it reflects that there is a considerably significant and positive influence of information systems’ usage for organizational performance in the UK’s FMCG industry (Table 7). Exposing the new model to the CO₂ emission trend also gave it an impressive R value pegged at 0.239, it also remains within moderately strong territory at 769. The R Square value of 0 indicates the percentage of total variance explained by the model and the closer it is to 1, the better the model is 0.591. Even though no two organizations operate with the methodology of using information systems 1% of organizational performance is accounted for by the use of information systems. The adjusted R Square is a slightly lower value of 0.587, and this together with the R² of 0.663 and the number of predictors in the model gives credence to the model. The standard error of the estimate is 2.13477, which gives a fairly good indication of the extent of organizational performance as estimated from the given predictor while holding considerable promise in terms of providing a foundation for further investigation.

Table 7. Model summary.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.769 ^a	0.591	0.587	2.13477

4.3.4. Table “ANOVA^a (Hypothesis 2nd)”

The ANOVA table provides the analysis of the stock regression model investigating LIS relation to Organizational Performance in the context of the dataset (Table 8). The regression model processed a phenomenal F-ratio of 141.495, there was also a significant effect for the proportion of variance in Organizational Performance accounted for by the model, R² of 0.495, suggesting a high level of predictability of the proposed relationship. Comparison of means of the Rating (M) revealed a statistically significant difference between groups ($p < 0.000$). By “Leveraging Information Systems”, meaning the effective use of information technology, these findings imply that this factor has a statistically significant impact on changes in scores in organisational performance. Additionally, we have a low value of $p < 0.000$ with the regression coefficient that shows that there

is a zero hypothesis rejection of LIS and Organizational Performance relationship, thus meaning that there is a real relationship and not a random occurrence. Even though the absolute t-values of the independent variables and their associated t-statistics are relatively moderate; the high value of the coefficient of determination (R-squared = 0.591) suggests that 59% of Organizational performance is, therefore, explained by leveraging information systems in the following manner; Leveraging Information Systems = mean + 0.01298*(Leveraging Information Systems – mean) Variation in Organizational Performance = 1% In totality, these findings can be interpreted to accord with the proposition that fits within the theme of how proper deployment of information systems impacts on organizational performance in accordance with the data under consideration.

Table 8. ANOVA^a.

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	644.829	1	644.829	141.495	0.000 ^b
Residual	446.611	98	4.557		
Total	1091.440	99			

5. Conclusion

5.1. Summary

To sum up, this research gives great insights that Information Systems (IS) are indispensable for strategic management in the FMCG sector of the UK. The study thus confirms that incorporating IS is not just an additional resource but vital for strengthening organizational success and decision-making tools. Thus IS is proven to be invaluable in market evaluation, planning and improvement, all fostering organizational effectiveness, by facilitating data accumulation, computation and intelligent managerial aid.

Informed to prior research, increased adoption of advanced IS tools including ERP and CRM in the operation of FMCG firms has been proven to augment operation efficiency, customer satisfaction, and performance. They allow for the continuous transfer of data from one department to another, making it possible for decision-makers to access the right information at the right time. This accessibility makes it possible to make highly informed and timely decisions that will directly determine the capacity of the firm to respond well to market forces, and the demands of the consumers.

However, the study also reveals some of the problems encountered in its implementation as follows Should IS implementation. Painful money affairs that include initial resource investments, upgrade costs and expenses for putting in continual support are hurdles that accompany such arrangements for various motives Such attachments raise security issues and compatibility complications with the conventional systems in place. These challenges call for the proper positioning of IS with reference to the general organizational goals and building of

data.

These challenges require the proper positioning of IS in regard to the organization's strategic vision and embracing of data-based tendencies. This alignment helps to ensure that the investment made in IS, especially by the organization yields maximum benefits and ultimately maintains the essence of IS as a tool for implementing strategic management in the organization.

In addition, the research points out that it is necessary to eliminate the mentioned obstacles to enhance the capabilities of IS for sustainable development. It is only possible if organizations are willing to address these challenges by dedicating resources for training workers, implementing strong protection strategies against cyber threats, and considering the compatibility of these systems with the organization's requirements and processes. In this way, they are in a position to control the nuisances and augment the utilities of IS in order to facilitate better decision-making and superior organizational performances.

The various pieces of evidence collected from research adopting quantitative research methodology and positivism accentuate the fact of the increased importance of IS for enhancing decision-making and organizational performance. The examination of structural variables and correlation matrices, along with the linear regression models explaining the positive relationship between IS strategic deployment and enhanced organisational performance, supports this conclusion. The sources of evidence above can therefore support the necessary confidence for FMCG firms to rush and invest in IS as capital asset.

Altogether and in conclusion, the study confirms that IS is a central factor within the strategic management configuration of the FMCG sector in the United Kingdom. Therefore, IS enhances the efficiency of the data flow and supports decision-making processes, thereby playing a major role in achieving an organization's goals and objectives. Nevertheless, based on the analysis, the advantages of implementing IS significantly overshadow the disadvantages if companies ensure proper direction and alignment of their initiatives with their targets and enhance awareness of the significance of information support among organizational members.

These findings are useful in explaining the market charm for FMCG firms that seek to unravel the environment and competition. Therefore, by availing the benefits of IS in the best manner possible, these firms are able to enhance operational effectiveness, increase consumer satisfaction, and in turn, the ability to grow sustainably. Thus, the study provides practical value to managers and decision-makers by outlining the IS implementation processes and pointing to the respective key issues that should be addressed to mitigate implementation risks effectively.

Future research may build upon this work to examine the consequences of IS on organizational performance after a period of time or relationship development, and appraise how the role of Information System is likely to change in light of more recent technologies such as artificial intelligence and machine learning. First of all, further identifying concrete components affecting the suc-

successful implementation of IS within given organizational environments would produce more detailed IS knowledge and suggestions for FMCG firms.

To sum up, based on the analysis, the research proves beyond reasonable doubt that Information Systems play a critical role in the strategic management and performance of FMCG firms in the UK. In this way, by adopting IS and overcoming the problems of the implementation of respective systems, these firms have an opportunity to strengthen their decision-making and obtain further improvements in performance which will give them competitive advantages in the rather competitive FMCG environment.

5.2. Limitation and Future Direction

The research on the role and implementation of Information Systems (IS) for strategic management in the UK's FMCG sector also has some limitations which are as follows. It can be said that quantity-based approaches can blind analysts to qualitative characteristics, while the fact that this research was conducted specifically for the UK may not be applicable to other countries. Further studies should employ both qualitative research methodologies to obtain detailed views and explore more geographical areas to encompass many markets. Besides, research on how innovations such as AI and machine learning affect the effectiveness of IS can also be useful in enriching SMEs, and improving the framework for Strategic Management and decision-making in different industries.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- Alsharari, N. M., Abou-Shouk, M. A., & Radwan, M. H. (2023). The Role of Enterprise Resource Planning Systems in Enhancing Organizational Performance: An Empirical Study. *Journal of Business Research*, *154*, 113-126.
- Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., & Venkatraman, N. (2021). Digital Business Strategy: Toward a Next-Generation of Insights. *MIS Quarterly*, *45*, 3-30.
- Chui, M., Manyika, J., & Bughin, J. (2021). The Big Potential of Big Data: A Field Guide for C-Suite Executives. *McKinsey Quarterly*. <https://www.mckinsey.com>
- Gupta, S., & George, J. F. (2023). Toward the Development of a Big Data Analytics Capability. *Information & Management*, *60*, Article ID: 103441.
- Johnson, P., Thompson, R., & Miller, S. (2022). Leveraging Business Intelligence for Strategic Decision-Making: A Framework. *Information & Management*, *59*, 103-115.
- Laudon, K. C., & Laudon, J. P. (2020). *Management Information Systems: Managing the Digital Firm* (16th ed.). Pearson.
- Nguyen, T. T., & Tran, Q. M. (2023). The Impact of Information Systems on Strategic Management in Emerging Markets. *Asia Pacific Journal of Management*, *40*, 345-367.
- Smith, R., Zhang, H., & Li, Y. (2023). Overcoming Challenges in the Integration of Information Systems for Strategic Management. *International Journal of Information Management*, *68*, 102-112.