

Accounting Information Systems for Strategic Management: The Role of Intellectual Capital in Mediating the Relationship between Customer, Company, and Performance

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Abstract - This research aims to investigate the role of Intellectual Capital (IC), Managing Accounting Information Structures (MAIS), Internal Task Productivity (ITP), and Customer Performance (CP) in moderating the link between strategies and Financial Productivity (FP). The population for this study consisted of medium and enormous manufacturing enterprise business units located in Java. In this study, the enterprise unit is the specific part of the firm accountable for producing and marketing a product or group of items. It is organized based on the type of item that it deals with and operates independently from other companies or divisions within the parent organization. The company unit has a distinct set of competitors, separate from those of different units. It is overseen by an executive liable for establishing and carrying out strategies to meet the specified profit goal. An approach to invention, including product invention, task creativity, and technology, significantly influences firm performance if there is a robust ITP, dependable market analysis, intelligence systems, and effective competitive positioning.

The ITP enhances the alignment between the approach and the FP by including operational management activities, customer management chores, Invention Tasks (IT), and regulatory and social tasks. This research found no impact of IC on CP and ITP; similarly, MAIS did not influence FP. Information systems affect financial performance by ITP infrastructure and corporate processes. The contributions of this study include the novel application of the continuous invention approach, integrating product invention and task and information technological devices, which past studies have not explored; the utilization of IC, MAISs, ITP, and CP as mediating factors; the adoption of a holistic method by incorporating aspects of IC, MAIS, and non-FP as contextual factors, about contingency methods, which have not been investigated in the previous study; the development of novel ideas in conjunction with the balanced scoring framework; and the examination of both single and numerous mediating effects on the impact of sustainable approaches to the invention on FP.

Keywords: Accounting Information Systems, Intellectual Capital, Strategic Management, Company Performance

I. ACCOUNTING INFORMATION SYSTEM OVERVIEW

Firms have several obstacles due to the dynamic nature of the business ecosystem. To enhance company efficiency, the management should adopt a more proficient approach to managing resources (Hernita et al., 2021). This leads to unpredictability in the environment and a heightened degree of intense rivalry. Management must attain a certain level of efficiency beyond the industry average. Management needs help achieving the desired performance level measured by the predicted Average Annual Return (AAR) (Danielson, 2024). A solid competitive edge is crucial to surpass rivals in a constantly changing market. It is necessary to implement creative strategies to maintain this advantage continuously.

The implementation of an appropriate competitive approach attains a competitive advantage. Companies use several strategies, such as the prospector strategy classification, a differentiation approach that focuses on competitiveness via innovation, and the continuous innovation strategy (Thoumrunroje & Racela, 2022). A business strategy refers to a systematic set of choices aimed at achieving performance goals. Establishing a multidimensional organization or company strategy to align performance with the desired AAR is necessary. Performance evaluation is assessed from a narrow and holistic perspective. A singular performance measurement focuses on a single element, while an extensive efficiency assessment encompasses several aspects. More than examining productivity from a single perspective is required to provide a complete understanding (Hakkaraki, 2023). Performance assessment must include measures from

all areas to achieve comprehensiveness. A practical organizational assessment necessitates using a suitable model to depict all company aspects accurately.

Other multidimensional productivity measuring systems, such as the Balanced Scorecard (BSC) and the Integrated Performance Measuring Systems, are available (Harris et al., 2021). The BSC model has the highest level of popularity. The BSC encompasses non-financial and financial achievement and is divided into different viewpoints (Sumaneeva et al., 2021). This financial viewpoint arises from three additional views: the customer perspective, which displays Customer Performance (CP); the internal business process viewpoint, which shows the effectiveness of internal activities; and the learning and development perspective (Mio et al., 2022).

A theoretical gap exists in the approach to get a competitive advantage in terms of achievement with the anticipated AAR (Rosa et al., 2024). Industrial Organizational Theory, abbreviated as I/O, highlights the need to analyze external elements and the environment for a corporation to attain adequate performance for achieving its goals. According to the Resource-Based Theory (RBT), a corporation's features and internal variables determine AAR-suitable efficiency. This research utilizes the concept of contingency to bridge the distinction between the ideas (Zhang et al., 2021).

The rationale for using the concept of contingency is in its ability to elucidate that the effectiveness of the layout of an organization is contingent upon specific circumstances and cannot be uniformly applied. Every organization is unique; hence, the organizational architecture varies accordingly (Ribalta et al., 2021). The successful execution of RBT and I/O relies heavily on contingency factors, as outlined in the theory of contingencies (Sinha et al., 2023). Using the idea of contingencies compels researchers to discover suitable circumstances for creating a particular organization while creating ideas that substantiate it.

II. RESEARCH MODEL

The assessment of consumer value is derived from the features of a good or service, namely its function, price, and quality. Effective customer connections are evaluated based on several factors related to product shipping, such as the company's responsiveness, prompt delivery, and consumers' overall satisfaction after purchasing (Tunio et al., 2021). A firm's reputation and public image include intangible elements that entice people to engage with the business and purchase (Ge & Xu, 2021). CP fitness will influence financial performance (FP). The measures of FP include improvements in cost structure, increased usage of assets, expanded revenue opportunities, and enhanced customer value. These factors lead to increased profitability and more utilization of assets (Nasir et al., 2022).

2.1. Intellectual Capital

Intellectual Capital (IC) shapes firm operations (Ozgun et al., 2022). The company offers a range of diverse values, including enhanced acquisition of ideas from other organizations, customer loyalty, cost savings, and improved efficiency. IC encompasses human capital, consumer capital, and physical capital. Human capital refers to employees' collective understanding, abilities, and experience (Lee et al., 2023). This encompasses various aspects such as expertise, education, vocational qualifications, job-related knowledge, performance evaluation, psychological assessment, competency, independent mindset, innovation, and adaptability (Yari et al., 2020). The study's hypothesis is formulated based on the specified conceptual structure (Cheng & Love, 2022). This study hypothesis serves as a provisional solution to the issue formulation that will be evaluated using suitable statistical procedures.

2.2. The Study Examines the Correlation between Innovation Tactics, IC, Customer Efficiency, and Financial Success

Ge et al. argue that a company's performance is significantly impacted by its regular efforts to optimize its IC values (Oleksandr et al., 2024). IC offers several perspectives and a range of organizational values, including enhanced profitability, acquisition of innovations from external organizations, customer loyalty, cost reduction, and advancements in innovation and productivity. Invention is the process of leveraging abilities and resources inside a company to create something new.

In the 21st century, the key to achieving business success is the effective implementation of sustainable innovations. Invention refers to the process inside an organization where talents and assets are used to create new goods, services, or manufacturing and operational structures (Pitafi et al., 2020). Through technology and innovation across several domains, the organization effectively addresses the demands of its customers (Lee et al., 2021). Lee present empirical data demonstrating that innovation significantly impacts Intellectual Task Performance (ITP) metrics, such as firm productivity (Piwowar-Sulej, 2021). The prospector typology and differentiation approaches highlight the need to include an Innovation Task (IT) when implementing solutions to address significant environmental unpredictability and intense competition (Cheng & Love, 2022). Prior studies have shown that innovation has become an integral component of a corporate strategy that necessitates the involvement of IC (Sheth et al., 2023).

2.3. The Interplay between Invention Strategies, IC, ITP, Customer Efficiency, and Capital Efficiency

Proficient communication enhances the organization's internal efficiency (Pitafi et al., 2020). ITP is associated with innovation, functioning, and post-purchase support (Hemling et al., 2022). IT is responsible for developing goods and services that align with client requirements and leveraging technology to create novel goods (Usikalu et al., 2023). The

operational task focuses on effective manufacturing, prompt delivery, and providing consumer after-sales service. An effective ITP will positively influence CP by boosting market share, retaining current clients, attracting fresh clients, enhancing consumer satisfaction, and improving CP by delivering more excellent client value (Orozco et al., 2022).

2.4. The Study Examines the Correlation between Invention Methods, IC, ITP, and Financial Success

IC offers various firms variety, distinctiveness, and varied benefits. These include enhancing profitability via innovation, gaining a competitive edge over competitors, cultivating client loyalty, boosting effectiveness and cost-effectiveness, and improving productivity and innovation (Rebelo et al., 2021). Invention refers to the process undertaken by an organization to effectively employ its talents and resources to create novel products or services or to establish novel manufacturing and operational processes, enabling the firm to meet the demands of its customers (Beerepoot et al., 2023).

Piwowar-Sulej et al. emphasize the significance of human resource management in formulating methods for producing new products and tasks (AICPA & CIMA). Knowledge management enhances innovation performance using a combined strategy of soft human resource management methods and complex technological practices (Saleh & Al-Nimer, 2022).

According to Hemling et al., there is evidence that inventing something impacts measures of ITP, such as company efficiency (Hemling et al., 2022). The prospector tool strategy classification, differentiation approach, and integrating approach highlight the IT needs to execute strategies to address high ecological unpredictability and intense competitiveness (Dillman, 2020). ITP is associated with innovation, execution, and post-sales support. IT is crucial for optimizing manufacturing processes, ensuring prompt client delivery, and providing excellent post-sales support (Sheth et al., 2023).

2.5. The Correlation between Innovation Tactics, ITP, and Financial Success

The approach used to execute an innovation affects ITP (Orozco et al., 2022). ITP is associated with innovation, implementation, and post-sales support (Hair Jr, et al., 2020). IT is crucial for optimizing manufacturing processes, ensuring prompt client delivery, and providing excellent after-sales care after an investment. An effective ITP can positively influence CP by boosting market share, retaining current clients, attracting prospective clients, enhancing client satisfaction, and delivering more value to consumers.

2.6. The Interplay between Innovation Strategies, ITP, Customer Efficiency, and Financial Results

ITP is associated with innovation, implementation, and post-sales support. IT is crucial for optimizing manufacturing processes, ensuring prompt client delivery, and providing excellent after-sales care after an investment (Rebelo et al., 2021). The technique for implementing an innovation influences ITP. An effective ITP can positively influence CP by enhancing market share, retaining current clients, acquiring prospective clients, improving client satisfaction, and delivering enhanced value to consumers. Hence, introducing innovation in the execution of the plan will influence the ITP as it will enhance the business's efficiency and CP, eventually affecting the FP.

2.7. The Interplay between Innovation Methods, MAIS, and Financial Results

The comprehensive implementation of the company's inventive plan will impact the need for dependable information. Accurate information is crucial for executing innovative methods. In contend that using MAISs assists organizations in effectively addressing the obstacles a highly competitive market presents (Beerepoot et al., 2023). Implementing the innovation strategy is centered on enhancing the company's value proposition to surpass its rivals and aiding managers in monitoring performance in a highly competitive and unpredictable business landscape. The MAIS is a product within the field of management accounting. Mathematical models forecast the potential outcomes of different options in many tasks, including organizing, overseeing, and making choices.

2.8. The Correlation between Innovation Tactics, MAISs, ITP, and Financial Results

The comprehensive implementation of the company's inventive approach will impact the need for dependable information. Accurate information is crucial while executing innovation plans. Saleh et al. contend that including information in MAIS assists organizations in addressing the difficulties posed by a highly competitive market (Saleh & Al-Nimer, 2022). Implementing the innovation strategy aims to enhance the company's value proposition to surpass its rivals while also assisting managers in monitoring performance in a highly competitive and unpredictable business landscape. The MAIS is a product within the field of management accountancy. MAISs are crucial in forecasting the potential outcomes that arise from different options implemented across multiple functions, including arranging, overseeing, and making decisions.

III. METHODS AND DISCUSSION

The data were collected via a survey among members of the Chartered Institute of Management Accountants (CIMA) from manufacturing companies in the United Kingdom (AICPA & CIMA). The survey was sent by mail to 1500 corporate entities that meet the following criteria: a) they are

of medium or large scale (with over 200 workers), and b) they have no fewer than one CIMA membership who has been a member for an aggregate of five years. The Dillman questionnaire method yielded 150 valid replies, resulting in a final response percentage of 10% (Dillman, 2020). The primary reasons cited for abstaining were excessive workload and corporate policies. The participating companies included many industrial sectors, with no one industry having a dominant presence or accounting for more than 20% of the sample. The participants had a mean tenure of about six years in their present position and 25 years in total. The mean number of workers was 850, while the mean annual revenues amounted to £140 million. These profiles suggest that those who responded are appropriate and more inclined to possess the requisite information to answer the questions.

The assessment of non-response bias included the comparison of replies between respondents and non-participants. This was done using statistical tests such as Chi-square and Mann-Whitney U testing. The comparison focused on the type of industry and the length of the respondents' CIMA participation. These additionally served to ascertain if there were any notable disparities among early and late responses in terms of business type, number of workers, and yearly sales. The questionnaire results indicated that there were no notable disparities, so implying that bias regarding non-response is not a significant concern in our research and does not jeopardize the credibility of the results.

3.1. Outer Loadings

Based on the lowest acceptable dependability value for the measure is 0.70 (Hair Jr, et al., 2020). The study's assessment determines that the value of the outer loading should fall between the range of 0.40 - 0.70. This implies researchers can retain or exclude certain signs based on the study's validity. During the outer loading assessment, specific indicators were below 0.70. As a result, scientists established an acceptable threshold of 0.50 for indicator dependability.

As a result of the verdict, some signs were removed. After removing the unnecessary elements, the remaining components comprised 10 Business Task (BT) metrics, 15 IC metrics, and 15 MAIS markers. The most reliable indicators were BT12 (0.947), Integrated Counselling & Testing Centres (ICTC)1 (0.846), and MAIS13 (0.862), whereas the least reliable indications were BT6 (0.648), Independent Community and Health Concern (ICHC)4 (0.625), and MAIS2 (0.614).

3.2. Construct Reliability

A study tool is dependable if its construct consistency value exceeds 0.68. However, a reliability score between 0.50 and 0.80 is still good. The construct consistency score for every factor in the research exceeded 0.80, as shown by the test. The Cronbach's Alpha scores for MAISs, Commerce, and IC were 0.812, 0.852, and 0.903, respectively. The MAISs, Business Efficiency, and IC factor combined scores were

0.895, 0.906, and 0.937, respectively. The research demonstrated the reliability of the measures utilized.

3.3. Discriminant Validity

The discriminant validity testing is conducted to determine if a factor or indication in research has distinct characteristics or is only associated with itself and not influenced by other variables or indicators it represents. The Fornell Larcker Criterion testing revealed that the business performance factor had a more excellent value of 0.784 compared to 0.842 and 0.417 for the other factors. The IC variable is 0.753, corresponding to -0.352 and 0.795. The MAIS factors had a significantly higher value of 0.842 than 0.753 and 0.476. The information model examined in the research contained specific and well-defined requirements.

3.4. Test of The Hypothesis

Table I demonstrates that MAIS has a direct and positive impact (0.524) on the dependent factor, Business Productivity.

TABLE I PATH VARIABLES

Direct effect	Original sample	Sample average	Standard deviation	T statistics	P scores
MAIS with BP	0.512	0.547	0.063	8.512	0.003
MAIS with IC	0.584	0.674	0.064	13.647	0.002
IC with BP	0.884	0.912	0.068	12.843	0.001
Indirect effect	Original sample	Sample average	Standard deviation	T statistics	P scores
Mediating impact with BP	0.213	0.273	0.053	3.742	0.001

Including the mediation factor of IC in the model, the findings showed a drop from 0.573 to -0.253. Table 1 demonstrated a positive indirect impact of the MAIS on the dependent factor, Business Efficiency, with a coefficient of 0.317. The function of IC mediated this effect. According to this finding, it can be inferred that IC exhibited a quasi-mediating character. This indicates that IC was classified as a pseudo-mediator between the distinct factors of MAIS and the dependent factors of Business Productivity. IC also functions as a separate factor.

3.5. The Use of MAIS with a Favourable Impact on the Overall Business Efficiency

The test findings unequivocally demonstrated that the MAIS had a beneficial impact on company performance. The increasing unpredictability and complexities of the world need increasingly accurate information as a foundation for making effective business decisions. MAIS facilitated monitoring of any effects of the changes on the company's productivity. No entity can escape the presence of a competitive atmosphere and being unsure. The data accessible in a company's managing accounting must be efficient and practical to enhance the quality of making choices. A manager gets a wide range of benefits by possessing a well-implemented MAIS, including comprehensive coverage, timely access, and consolidated information across divisions, customers, and sub-divisions.

3.6. The Application of MAIS Has a Positive Effect on IC

The hypothesis demonstrated that the presence of MAIS was essential for the formation of IC. Green SMEs are science-based businesses that are specifically designed to have unique characteristics. Regrettably, not all environmentally conscious businesses can transform these inherent characteristics into a competitive edge. Employees require comprehensive, up-to-date, consolidated, and interconnected data to establish and implement a company strategy. MAIS facilitated organizations in adjusting their strategy planning to a dynamic and evolving environment, necessitating adaptable and innovative tactics similar to those used in IC components. Given the rapidly changing and unpredictable nature of the external and internal forces that businesses encounter, it is crucial to evaluate their strategies. The primary attributes of environmental ambiguity are dynamism, complexities, and magnitude. An organizational approach is formed depending on how the administration addresses this ambiguity.

3.7. IC Has a Positive Impact on Business Efficiency

Being a science-based company, IC was a precondition for gaining a competitive edge in the green market. This research effectively validated that IC is crucial for enhancing business results. IC encompasses the intellectual expertise, intangible property, and financial resources essential for creating and improving a good or service's value and ensuring the company's commercial sustenance. A green small and Medium-Sized Enterprise (SME) had to deal with the regular uncertainties of running a firm and catering to well-informed clients. Companies need a powerful tool to captivate the consumers' attention and position themselves in particular markets, namely the environmentally conscious clients.

3.8. Theoretical Implication

This research comprehensively understood the RBV framework for green SMEs. Highly developed MAIS gain more prominence when businesses can use them as an edge over rivals via IT. Regardless of the kind of MAIS, as long as

it transforms into separate resources, it will improve company performance.

3.9. Managerial Implication

The current research offered more empirical proof that the management of IC directly influences SMEs' success. This marked a crucial juncture for SMEs that had previously adhered to a conventional management approach, neglecting the need to invest in human resources. Instead, they prioritized hiring individuals based on family connections, cost considerations, and inadequate training responsibilities. Despite their efforts, employees needed help distinguishing the firm from other businesses. Employees needed more optimal talents in industrial companies. The workers' ability to collaborate effectively was hindered, resulting in a lack of innovative ideas and an inability to meet deadlines.

IC plays a pivotal role in implementing sustainable innovation strategies in industrial enterprises. Manufacturing enterprises are expanding and need professional ICs. However, the results of this research indicate that being empowered about the function of IC still needs to be improved.

IV. CONCLUSION

The research has reached the following findings: An innovation strategy that encompasses product innovation, process innovation, and technological advancements has a significant influence on firm performance if there is a robust innovation team, dependable management of innovation systems, and effective commercialization processes. The ITP enhances the alignment between strategic objectives and financial performance by including operations management duties, customer management chores, IT tasks, and legislative and social responsibilities. This research found no impact of IC on CP and ITP; MAIS did not influence FP. Information systems affect financial performance by influencing information technology infrastructure and corporate processes.

The following are recommendations for enhancing the company's procedures. This research offers valuable insights to manufacturing firms on the significance of integrating financial and non-financial metrics. It highlights the causal connection between these metrics and emphasizes the need to match them with the business's overall goal. The research found that IC did not mediate the association between innovation techniques and CP. It is crucial to prioritize IC due to the enduring nature of a science-driven economy that relies on data management. A firm's success depends on its ability to generate and use information for conversion and capitalization purposes.

The following are recommendations for enhancing instruction in accounting. This research enhances knowledge on the enhancement of the accounting syllabus. The results include the most recent MAIS procedures frequently utilized

in the commercial sector. Incorporating the MAIS practice into the lecture content, such as via a management accounting laboratory, is essential for ensuring students get up-to-date information on MAISs. The outcomes is a foundation for the administration and IAI instructors to assess resources and curriculum. Updating the accounting resources in line with established accounting standards is essential to address the criticism that the accounting study is only focused on academics and its outcomes are exclusively intended for academic purposes.

The following are recommendations for future study. The research needs to distinguish between respondents from industrial businesses that become publicly traded and those that do not. It is recommended that future research make this distinction to understand these two groups better. Future research should involve manufacturing organizations involved in production tasks and those providing services. The survey fails to investigate the inter-causal links among strategic goals, as is done in the BSC framework. Future studies should delve into this area.

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