

# Strategic Management Accounting Practices in the Knowledge-Intensive Economy: Evaluating the Role of Intellectual Capital

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## ABSTRACT

Globalization, economic volatility, and technical improvements lead to substantial changes in the business landscape due to the transition from the industrial to an information-based economy. Therefore, the study aims to investigate the association of how intellectual capital (IC) can be measured inside the organization in the boundary of strategic management accounting practices (SMAP) in a knowledge-intensive era. Specifically, the primary issue is that if knowledge is a strategic resource, there is a logical relationship between IC and SMAP. However, the impact of intangible resources, particularly knowledge-based assets, has been observed at an extensive literature level, there is difficulty explaining the role of management control systems in managing IC. The article demonstrates it is commonly recognized that IC, whether in the form of knowledge, expertise, competency, positive relationships, or technical capability, is a significant source of organizational sustainability, while much emphasis has been paid to the IC for external reporting purposes, significantly less in internal reporting practices. Based on contingency theoretical assumptions, this study acknowledges social capital (SOIC) in conjunction with traditional IC dimensions, such as human capital (HC), structural capital (SC), and relational capital (RC), to see if companies with a higher degree of IC are more likely to value contemporary management accounting (MA) practices, e.g. performance measurement systems and style of use of information. Additionally, the study combines multifaceted views of IC as a knowledge-based driver, resulting in a more effective method for measuring IC in a comprehensive framework by integrating diverse academic fields because knowledge is not valuable until it is evaluated meticulously. Practically, the proposed model may inspire senior management to demonstrate how knowledge-related assets are managed and measured in businesses and how the resources are strategically aligned with specific management processes to provide real value to the organizations. Therefore, this research leads to a critical emerging topic of IC's demonstration, emphasizing SMAP's position and offering future research possibilities.

**Keywords:** *Contingency theory, Intellectual Capital, Strategic Management Accounting Practices,*

## 1. INTRODUCTION

In modern knowledge-based economies, the primary source of competitive advantage has been transferred from tangible assets to intangible factors [1]. During the past twenty years, knowledge-based resources, including IC, have been a leading substance in the organizational philosophy in accounting [2] management and finance territory as a major source of competitive advantage as well as in fostering business sustainability [3]. To maintain organizational competitive strength, the principle of investing in human capital, technology, research and development and consumer connections has

become the cornerstone in the knowledge-intensive economy for future advancement [4]. Furthermore, strategic management accounting (SMA) is a significant mechanism in knowledge management operations [5], where IC includes both financial and non-financial measures [6]. As the organizational performance was initially established on knowledge related elements however crystal perspectives into the creation, measurement and management of IC are still in a vague position [7]. In conjunction with the persistent acceptance of IC in creating firms value creation, there is an unfolding argument on the contribution of SMA within the IC horizon [6]; [8]; [9]; [10]; [11]; [12]; [13].

The reason for implementing SMA as traditional financial statements and MA tools are no longer effective in today's information-intensive world, in which companies rely heavily on knowledge related resources for performance. Despite the ongoing discussion on the relevance of IC, it's still ambiguous the potential contribution of SMA while the senior organizational level requires accurate and timely information to inform their subsequent decision-making [10]. The state of the art of literature has reviewed the major three dimensions e.g. HC, SC and RC of IC which is, in essence, a multifaceted concept [12] ; [14]. While the incorporation of social capital (SOIC) is the relatively current one in accounting context considered as intrinsically organizational network e.g. peoples, social networking, and norms that profoundly influence productivity with social well-being [15]. The cause of acknowledging SOIC as it provides a more comprehensive view of the dimensions of IC for creating an effective connection in the internal organizational systems [16]. With this aim, [6] have provided the importance of IC by considering four components i.e. HC, SC, RC, SOIC from SMA perspectives. From the lens of contingency theory, an effective management control structure will assist and promote IC advancement to thoroughly comprehend the potential of intangibles [17]. Furthermore, knowledge is vague until it is meticulously captured, assessed and managed for managerial purposes [9]. There is a growing matter of concern that current management control systems are becoming redundant when they struggle to solve the particular characteristics of knowledge-based enterprises [10]. Contingency theory also exposes that there is no universally unique model in the organizations, which can illustrate the differences of organizational structure and design in uncertain circumstances [18]. Despite all of the attempts to build and use a variety of IC assessment methods such as reporting and disclosure [19] ; [20]; [21]; [22]; [23] as in the integrated reporting [24]; [25]; [26] internal reporting practices is more effective in knowledge-based organizations [9]; [13]. Based on the ongoing arguments, the paper aims to illustrate the potential appearance of SMAP to measure and manage the multifaceted perceptions of IC. Moreover, many studies focus on improving organizational performance rather than driving forces including human capital, information technology, customer interactions, and internal connections. To the best researcher knowledge, SMAP is undervalued intrinsically in fostering and measuring IC in the context of knowledge management activities [9]. Therefore, this research contributes to the development of IC and SMAP literature by presenting multifaceted dimensions in a solitary framework.

The rest segment of the paper is articulated as follows. Section 2 portrays the conceptualization of key variables i.e. IC and its dimensions as well as SMAP showing the selected components utilized in the study with a relevant illustration of these variables relationship. Section 3 proposes the conceptual framework by developing hypotheses. Section 4 illustrates the methodology

adopted for explaining the connections of IC and its dimensions on SMAP. Section 5 provides implications in research and practice while Section 6 illustrates conclusions with future research directions. Finally, the study has been ended by listing pertinent references used in the study.

## **2. LITERATURE REVIEW**

This section illustrated the preferred variables elaborately, IC (HC, SC, RC, SOIC) as an independent variable and SMAP (Performance measurement systems and Type of information concentrated by management accounting systems) as a dependent variable, to explain the empirical connections necessary for validating the study.

### ***2.1. Multidimensional Views of Intellectual Capital (IC)***

In contemporary knowledge-intensive economics, "intellectual capital" presenting knowledge, skills, abilities, intellectual properties, values, norms, customer relationship etc. have become the keystone of "economy improvement production forces" compared with tangible assets [27]. These types of resources are considered as the concealed components in the financial statements named as intellectual capital (IC) [28]. The term IC aims to emphasize implicit knowledge level which has a phenomenal contribution to economic development because of the appearance of a knowledge-based community. More specifically, IC, in all of its dimensions, offers a strategic advantage to compete over rivals in an unpredictable business setting, related to expertise, skills, and innovativeness [29] employees innovation, knowledge, information technology, intellectual properties, customer relationships [30] social connections within the organizational network, social perceptions [31] that could bring wealth to the companies. Most of the literature has provided the most accepted and standard dimensions of IC i.e. human capital (HC) organizational capital presenting structural capital (SC) and relational capital (RC) also consider as customer capital [32]; [30]. The study of [14] interacts between human capital, organizational capital and social capital (SOIC) where these categories of IC significantly influenced innovative capabilities. There is numerous level of literature consistently focused on the traditional IC and regarded as the standard measurement of IC [33]; [1]; [34] where inclusion of SOIC is considered as the unnoticeable one for the measurement of IC in the context of SMA [8].

To explain the categories of IC firstly, HC can be described as the sum of all individuals' talents, skills, abilities, qualifications, and experiences that can be used to assist the company to achieve its goals [35]; [30]. In addition, HC is considered the most valuable IC element and implicit [36]. Recently, [37] have also demonstrated as the most critical aspect of IC is human resources from a managerial perspective. More Recently, [38] also pointed out that HC is described as a collection of

knowledge and personal qualities in a brief way. While HC indicates knowledge-based capabilities, structural capital (SC) represents an organization-oriented non-human source of knowledge stated by [39]; [1]. According to [10] companies are expecting to retain a competitive advantage. That's why they should either invest directly or indirectly in their SC. The study of [38] has represented SC as databases, process manuals, cultural and management styles, as well as any procedure aimed at increasing anticipated value. On the other hand, [8] have illustrated that relational capital (RC) is similar to social networking. It defines the external connections with organizations, stakeholders, customers, suppliers, distributors, etc., to maintain customer-centric relationships in an organization. While maintaining social interactions is crucial to RC, the business should also consider the importance of knowledge in influencing stakeholder needs. The study of [40] defined RC as customer capital, one of the significant components of IC such as brand value, employee satisfaction and commitment, etc. Besides social networking, intrinsic networking in the organization is a significant element in which implicit knowledge and information are exchanged to maintain consistent connections with outsiders [8] ; [41]. Furthermore, SOIC can assist in the development of professional organizations through trust and mutual respect, which can lead to a competitive advantage [40].

## **2.2 Strategic management accounting practices (SMAP)**

According to (Chartered Institute of Management Accountants, 2015), "SMA provides and interprets MA information connecting with business strategy, especially examining actual costs and prices, quantities, market share, liquid resources, and the demands on the business's total resources." Therefore, some MA researchers [42]; [43] utilized SMA techniques as a "Toolbox". Recently, [44] defined SMAP are the set of approaches for defining, acquiring, evaluating, and communicating information and the use of the information required for various areas of strategic management. Managers may make appropriate decisions on time since it prepares fast and convenient information for proper action. The legitimate aggregated management control systems demonstrate strong coordination across organizational segments and sub-units [45]. In the modern economy, different scholars have shown the significance of SMA techniques such as enterprise resource planning, balanced scorecard, lean accounting, activity-based costing system, kaizen costing [45] performance measurement systems [46]. [49] Simons levers of control, performance management and balanced scorecard [47]. Among them, performance measurement systems [48] and style of use of the information [49] supplied by SMA systems are significant components for IC research in evaluating or measuring the organizational outcome. Henceforth, performance measurement systems generally indicate the balanced scorecard approach which translates the company's objectives, goals, and direction into targets

and key performance indicators based on the four perspectives such as financial, customer, internal business process, and innovation and learning [48]. As one of the primary components of management control systems, the performance measurement system is regarded as a gear that aids in implementing organizational resources [9]. The fifth dimension of the balanced scorecard framework has been included as social and environmental measures which provide more comprehensive and diversified information [50]; [51] in the knowledge-based era. Another one, the style of use information provided by SMA has been significantly discussed in the bunch of research [52]; [53]; [54]; [55] . The meaning of the use of information is interactive and diagnostic use of information separated by (Simons, 1995). Diagnostic control systems are used with formal methods that managers employ to monitor and fix violations from previously established performance criteria [49]. These systems feature the ability to correctly measure outputs, use standards to which accomplishments may be compared, and correct departures from standards [12]. On the contrary, interactive control systems encourage innovative ideas and learning, enabling the emergence of new strategies as people interact, debate, and converse in reaction to perceived threats and opportunities [12]; [56].

## **2.3 Relationship between IC and SMAP**

Global business markets have moved from capital-intensive to knowledge-based businesses with a more significant propensity for intangible resources. The emphasis has shifted from 'what we own' and toward 'what we know' and efforts to quantify intangible assets. It is more critical in modern businesses to incorporate appropriate handling of IC within the MA function [57] . Previous researchers have grabbed considerable attention regarding IC and SMAP in numerous fields such as management control systems, accounting, technology, corporate social responsibility, etc. One of the seminal works delineated by [57] mentioned that IC influences its advanced MA systems. Recently, [13] proposed a conceptual framework between IC and MA practices aiming that whether a higher level of IC places more importance on SMA or not in the context of Iran. With the same context, [9] have emphasized IC (HC, SC, RC, SOIC) and balanced scorecard framework (financial, customer, internal business processes, and learning and innovation) [48] by adding the fifth perspective "social and environmental perspective" [50] while the study has demonstrated a positive relationship between IC and its dimensions and diversity of measurement. Later, [8] ) have examined the relationship between IC and performance measurement systems indicating diagnostic and interactive systems in 128 Iranian public listed companies. The study's outcome has shown that, except for SOIC, all the dimensions of IC (HC, SC, RC) have positively influenced diagnostic and interactive systems. The study contended that firms with more significant IC practices construct a harmonized performance measurement system through diagnostic and interactive

terms. The positive findings of IC and performance measurement systems have also been observed in different research [46]; [58]. For example, [46] have scrutinized IC (HC, SC, RC, SOIC) and performance measurement systems in the aviation sector of Pakistan. The study has shown high IC levels are significantly connected with performance measurement systems. In another study, [58] has also investigated the connection between IC (HC, SC, RC, SOIC) and a balanced scorecard while the study revealed that knowledge-based firms are more concerned regarding the measurement of IC. In another study, [37] have provided numerous components of IC (human capital, customer capital, structural capital, social capital, technological capital, and spiritual capital) for implementing organizational performance (balanced scorecard perspective) in the Malaysian context. This study has utilized an integrated intellectual capital model [58]. The outcome has shown that customer capital and social capital are considered insignificant in the Malaysian context, but others are significant for organizational performance (Balanced scorecard approach). Henceforth, IC and its components can eventually integrate and interact to facilitate wealth in the organization. Again, [60] have used this similar model following a different methodology while the study has shown that IC and its components have positively linked with organizational performance. Hereafter, some researchers have critically shown the negative outcome in different context. For instance, [10] has investigated the relationship between IC and MA systems, where the outcome was insignificant in the Irish information and communications technology sector. Besides, [11] has also examined the connection between IC and MA practices taking 135 Agro-based industries in east java, Indonesia. This study has also revealed an insignificant relationship between the selected variables. However, [61] emphasized the third stage of IC research showing the connection between IC and strategic influence. The findings revealed that the firm should concentrate on product and service diversification linked with MA practices.

Henceforth, triggering all these issues has created an argument about the influence of IC on SMAP. Despite the significance of IC in organizational sustainability, SMAP conceivable contribution has yet to be settled in this regard while organizations need to improve their business strategies to be competitive in the global market.

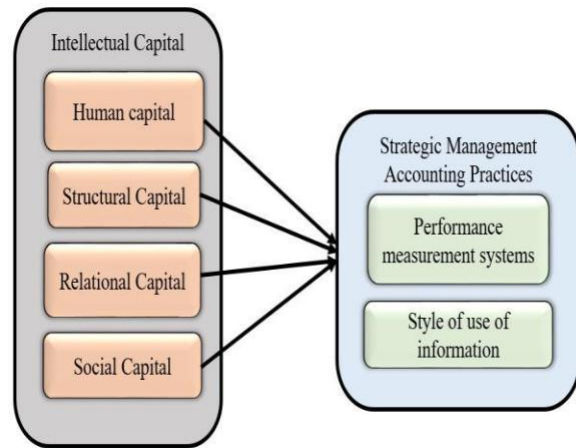
### **3. PROPOSED CONCEPTUAL MODEL AND HYPOTHESES DEVELOPMENT**

Primarily, [33] suggested that knowledge management requires the measurement process of knowledge where knowledge-intensive organizations can be benefited from creativity and knowledge-related practices. Performance metrics and resource allocation for shareholders are significant in management control systems where managers should define and measure the values drivers [62]. Strategically, contingency theory

recommends that intellectual-based resources articulate specific mechanisms (e.g., MA practices) to improve information processing [63] and develop performance. Recently, [8] have emphasized the significance of the contingency view taken from the seminal work [64] focusing that knowledge-based components can determine and structure the organizational control systems. This theory also suggests intangible value-related

information that reduces transaction cost and uncertainty in the business and mitigates potential investors' adverse problems where situational approach will assume which management control systems are appropriate varies from one organizational setting to another [13]. Based on previous arguments, Figure 1 indicated the conceptual framework and the following hypotheses are suggested:

**Figure-1** Conceptual Framework



**H1:** There is a significant relationship between **intellectual capital and strategic management accounting practices**

**H1a:** There is a significant relationship between **human capital and strategic management accounting practices;**

**H1b:** There is a significant relationship between **structural capital and strategic management accounting practices;**

**H1c:** There is a significant relationship between **relational capital and strategic management accounting practices;**

**H1d:** There is a significant relationship between **social capital and strategic management accounting practices**

#### 4. METHODOLOGICAL PROCEDURES

The relationship between IC and the emergence of SMAP is not a novel trend; indeed, academics have focused on a variety of factors over the last few years, including multiple industries [9]; ; [6]. In this phase, this study established a conceptual framework to gain a better understanding of the dynamics behind IC and SMAP. With this intention, the study analyzed the critical existing studies to ascertain the roots and brain of the system to extract a novel conclusion. For instance, a systematic literature review has been conducted to detect the fundamental linkage between the IC and SMAP which can be implied in any industry. Secondly, the study high lightened on addressing all of the critical issues and components that have been debated over the last few years stored in different databases e.g. Web of Science, Scopus, Emerald, Science Direct, and Academic Search, Wiley etc. More specifically, this proposed study structured and classified the significant concerns from an IC standpoint in a second stage based on title, abstract and key issues. In other words, the major purpose is to structure a paradigm that elucidates the role of IC components in the knowledge-based era for enhancing the importance of SMAP.

#### 5. IMPLICATIONS IN RESEARCH AND PRACTICE

Since significant ambiguity remains about the literature addressing the link between IC and SMAP, this research provides a conceptual model to exemplify the process of utilizing knowledge-based resources and SMA links. To clearly define the study's suggested framework, the contribution of the study is twofold.

Theoretically, the assumptions of contingency theory are employed to investigate the possible relationship between the level of IC and the usage of particular SMA viewpoints for performance evaluation and style of use of information strategies. This theory has positive implications since it shows that knowledge in and of itself may not always be relevant unless it is recorded, measured and managed successfully using proper management control systems [64]. The paper's general assertions show that implementing overarching SMAP has the potential to transfer knowledge-related elements turn into performance while most studies considered this theory as contingent factors; it is more practical than detailing in-depth relationships [65]. Furthermore, the integration of social and environmental factors to the Kaplan and Norton balanced scorecard framework provides further insights into performance evaluation systems [8].

Practically, the study can provide a standard procedure that how knowledge-based resources are utilized and adopted in organizational control systems for fostering organizational performance. In this respect, organizations need to emphasize on proper utilization of

management control systems to retrieve the maximum conveniences of IC. Besides, SMAP will assist the stakeholders to accumulate and collect more suitable information by utilizing intellectual based resources for implementing organizational sustainability. At the same time, managers might be capable of tapping the guidelines on developing and measuring IC significantly through internal reporting systems. Thus, the model may serve as a springboard that how intellectual based resources are managed and monitored in organizations and how they are correctly matched with certain managerial processes to produce practical value.

#### 6. CONCLUSION AND FUTURE DIRECTIONS OF THE STUDY

Briefly, the proposed conceptual model shed light on how various variables of knowledge-related resources could contribute to the advancement of SMAP. In this respect, the framework would add to the existing body of knowledge regarding the role of information control and its implications for the design and implementation of management accounting control systems. However, this framework can only provide suggestions based on cross-sectional empirical evidence which can be employed in any industry to ensure the generalizability of the study. While this is not the only channel through which IC impacts SMAP, it can provide additional insight into the mechanism required to help firms maximize the benefits of linking the IC and management control systems. Although the empirical findings can be implied in all organizations however different types of organizations could explain versatile findings of the current study. Future research may include a series of in-depth case studies examining how IC can be used as a strategic resource in managerial practices to gain a competitive advantage at the firm level. Furthermore, the quantitative approach searching for "Quantifiable" answers in the investigation focuses on "what" rather than "how" and "why" questions thus future studies can also proceed qualitative based approach to comprehend the significance of the relationship between IC and SMAP. Furthermore, prior literature repeatedly focused on external reporting [66]; [67], while there is an opportunity to investigate other constructs of measuring IC to obtain more depth of knowledge with a view to grasping long term financial performance in the organizations.

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