ANWESH: International Journal of Management and Information Technology
4 (1), March 2019, 17-22
http://www.publishingindia.com/anwesh

Investment in the Hidden Wealth of Intellectual Capital and Its Effect on Competitive Advantage

Nagwan AlQershi[1*], Zakaria Bin Abas[2] and Sany Sanuri Mohd Mokhtar[3]

[1]Ph.D, College of Business, Universiti Utara, Malaysia. Email: nagwanalqershi@yahoo.com
njwan2200@gmail.com
[2]Professor, College of Business, Universiti Utara, Malaysia. Email: zakaria@uum.edu.my
[3]Professor, College of Business, Universiti Utara, Malaysia. Email: sany@uum.edu.my
*Corresponding Author

Abstract: Intellectual capital is a core issue among decision-makers in organizations. To face the pressures in a competitive marketplace, competitive advantage must be enhanced. Studies which have focused on examining the manufacturing firms' competitive advantage in terms of intellectual capital (IC) processes, particularly in the case of Yemen, are few and far between. This paper examines the scope to which IC dimensions can explain competitive advantage in the manufacturing firms in Yemen. The study reached some conclusions, based on which some recommendations are made for managers and decisions makers in the industries, particularly those concerning the development of strategies to address the challenges in the competitive environment of the global market.

Keywords: Competitive advantage, Intellectual Capital (IC).

I. Introduction

Intellectual capital (IC) refers to the set of intangible assets and social relationships that create and provide value to organizations (Mehralian, Nazari, & Ghasemzadeh, 2018). Past studies have shown that intangible resources and capabilities have a key role in IC management by assisting in the achievement of optimum performance (Asiaei, Jusoh & Bontis, 2018; Lu, Wang & Kweh, 2014; Vishnu & Gupta, 2014; Khan & Terziovzki, 2014). Following the introduction of the knowledge-based economy, with knowledge being the core of generating wealth, the traditional ways of realizing optimum performance began to dissipate. The major factor in creating value and competitive advantage among firms is now IC, as highlighted by prior literature (e.g., Anggraini, Hamid, & Kassim, 2017; Delgad Martin-de Castro & Amores-Salvado, 2016; Chahal & Bakshi, 2015; Wei & Hooi, 2009; Barathi, 2007; Chen, 2005; Ordonez de Pablos, 2004; Roos, Roos, Dragonetti & Edvinsson, 1997; Edvinsson & Sullivan, 1996). Currently, there are several changes in the economy, with the inclusion of business globalization, dynamic competitiveness, increased demand from customers for sophisticated and innovative products / services, technological changes and short product life-cycles.

In the face of the above changes, competitive advantage is being viewed as among the top controversial and challenging topics in strategic management (Barney, 2001). In relation to this, significant efforts have been exerted to shed light on the concept, which is still deemed to be the most controversial concept in management literature, particularly considering its connection to technologically-advanced industries (Powell, 1995). In addition, the dynamic changes in the business environment, combined with the knowledge-based economy, drive enterprises to be more competitive in terms of their pricing, quality, innovation, product knowledge and the length of time for delivery (Wingwon, 2012). Hence, these factors are the drivers for enterprises to review business strategies to survive in the current market.

In the context of Yemen, the rapid influx of foreign products has forced the Yemeni market to imitate the strategies of those firms to achieve enhanced performance and competitive advantage. Domestic manufacturing firms in Yemen are still facing many challenges in their efforts to acquire competitive advantage (Aljazeera, 2012), and these include globalization. Several researchers, including Porter (1998), have conducted analyses of major companies in specific industries.

In addition, in Yemen, according to the Yemeni Ministry of Technical Education and Vocational Training (2016), the rate of survival of Yemeni manufacturing industries is low owing to firms' lack of awareness of their employees' training needs, which are essential to enhance their skills and competencies. There is also a lack of career development plans offered to them. Manufacturing industries generally lack workers who are intellectually skilled (Muhammad, 2014). In this regard, the manufacturing industries in Yemen lack the following requirements for development, as highlighted by the Yemeni

Ministry of Industry and Trade (2017): IC in the form of quality human capital (HC) and knowledge of markets and customers; all these are needed to enhance the competitive advantage of firms. Aljazeera (2012) supported this and reported that Yemeni manufacturing firms' failure to compete with other firms stems from poor management competencies and lack of experience in running businesses. Similar factors have been revealed in studies dedicated to the neighbouring countries of Jordan, Kuwait, Sudan, Iraq and Egypt (e.g., Marwa, 2014; Naseba, 2012; Al Domoor, 2013; Ebtisam, 2013).

According to Kamukama (2013), despite the intensity of the issue, there is a lack of empirical studies that have examined the effects of IC on competitive advantage of manufacturing firms. The few existing studies on the IC-competitive advantage relationship have provided conflicting results (e.g., Tovstiga & Tulugurova, 2006; Barney, 1991). Aside from the contradictory results, no study has tackled the relationship between IC elements, namely, human capital (HC), relation capital (RC) and structure capital (SC) and competitive advantage in the Yemeni manufacturing industry. This reveals the need to examine the level to which IC elements influence the competitive advantage of manufacturing firms. This study attempts to address this knowledge gap in the literature concerning the IC-competitive advantage relationship in Arab countries, particularly in Yemen. Added to this, since the domestic manufacturing firms in Yemen are still faced with issues when it comes to acquiring competitive advantage in the market, this study addresses both theoretical and practical gaps in the topic under examination.

II. Conceptual Framework and Literature Review

A. Intellectual Capital and Competitive Advantage

According to Delgad *et al.,* (2016), there is a significant correlation between IC and competitive advantage. IC refers to the intangible assets of the firm that enable its functioning. In this regard, knowledge assets consist of several intangible asset categories, namely, employee competencies, internal structure and external structure (Vishnu & Kumar Gupta, 2014); knowledge possession, experience, organizational technology and customer relationship and professional skills – all working towards the achievement of competitive advantage in the respective markets (Roos *et al.,* 1997).

Similarly, Youndt (1998) referred to IC as the aggregate stocks and flows of the employees' skills, knowledge and information in the organization. Bontis (2002) described IC as consisting of different capital that stems from employees, routines in the organization, intellectual property and customers, suppliers, distributors and partner relationships. IC is also referred to as the combination of knowledge comprising the intangible resources of the firm, which can be directed towards obtaining competitive advantage (Cohen & Kaimenakis, 2007).

Additionally, based on empirical studies, IC can help determine the profitability of the business (Wei & Hooi, 2009). IC is a crucial element that drives the competitiveness of different enterprises (Wang & Chang, 2005; Bontis, Keow & Richardson, 2000). Some scholars are in agreement regarding the effects of IC on the competitive advantage of companies (e.g., Alserhan, 2017); while others have contended that the effects of IC on firm performance might be specific to certain industries and countries (Firer & Mitchell, 2003). This is supported by F-Jardon and Martos (2009), who evidenced the existence of component differentials in the conditions of organizations and the IC impact on the competitive position of the company. Meanwhile, Chahal and Bakshi (2015) noted that in some businesses, IC assets can help overcome the disadvantages of the firm.

IC has also been described as knowledge, experience, expertise and the relevant soft assets rather than hard physical and financial assets (Cohen & Kaimenakis, 2007). In addition, it refers to hidden assets of the firm that are displayed in the balance sheet (Roos & Roos, 1997); this is the highest source of sustainable competitive advantage for firms, although most are still learning the right way to achieve continuous improvement while leveraging on the knowledge asset (Bontis, 1999). This is why authors like Marr, Schiuma and Neely (2004) and Bukh, Larsen and Mouritsen (2001) explained that the knowledge asset comprises the fundamentals of strategic business management as well as ongoing innovation adoption.

Stated clearly, a firm can achieve its objectives successfully if it is aware of its level of competitiveness and its capability to sustain it (Barney, 2001). A firm's competitive advantage is reflected through the value-added IC elements, which are customer, human and process components. The differences in firm value and its competitiveness lie in its sources of competitive advantage, and as such, firms have to remain attractive and maintain their reputation in the respective industry. This can be done if firms maximize on the leveraging of their resource capabilities. In relation to this, firms have to be knowledgeable in using and developing IC in order to improve their ability to meet market demands and improve competitiveness (Alserhan, 2017).

In the conceptual framework of the current paper there is one independent variable, Intellectual Capital, which has three dimensions; and one dependent variable, the competitive advantage of the firm; see Fig. 1.

B. Intellectual Capital Dimensions

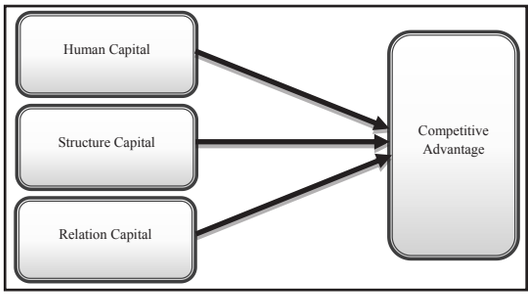

Fig. 1: Research Framework of Intellectual Capital and Competitive Advantage

III. Intellectual Capital Dimensions

A. Human Capital

Amin and Aslam (2017) described HC as the employees' knowledge, skills and abilities; while Jardon and Martos (2009) referred to it as a set of employees' attitudes, values and aptitude that contribute to obtaining organizational value and competitive advantage. In other words, it is the employees' experience, know-how and talent (Roos, 2018). HC is of utmost importance as an IC element as evidenced by Lu, Wang and Kweh (2014).

Added to the above, it is important for firms to interact with employees as an asset rather than a cost for the company, as HC is a valuable element for the performance of the firm. HC in the service economies and its efficiency are the main drivers of a firm's success (Klein, 1998). In fact, both firms and employees' investment in HC could generate important performance outputs as evidenced by Ketchen, Crook, Todd, Combs and Woehr (2015). Other authors, like Vishnu and Kumar Gupta (2014) have claimed that HC may be the most important element of IC as it is primarily responsible for developing both SC and RC.

Moreover, HC represents the skills, combined intelligence and expertise of employees which will disappear once the employees leave the organization – it is HC that creates the distinctive character of the company (Muhammad, 2014). It also drives the value creation and achievement of effective performance and competitiveness of the firm (Chahal & Bakshi, 2015). Along similar lines, Ethiraj and Garg (2012) stated that a company that hires incompetent HC will be powerless in the face of risks, and eventually fail. Thus, firms must invest in HC to improve the knowledge and skills of the workers and, in turn, enhance their performance.

In the field of resource-based studies, HC is viewed as a major strategic asset of firms. According to the Resource-Based View (RBV), HC is the primary resource that brings about competitive advantage and innovation and, ultimately, its positive and optimum performance, particularly if the HC is valuable, rare, non-substitutable and inimitable (Galunic & Anderson, 2000). Additionally, HC has a key role to play in the development of other components of IC, indicating that it is the core of IC.

B. Structure Capital

The second IC dimension is SC comprises processes, procedures and practices that are used by the employees of the firm (Ordonez, 2004). The concept of SC has been used interchangeably with organizational capital (Bontis, 1999), although organizational capital is actually the institutionalized knowledge and documented experiences that are stored in patents, routines, manuals, structures and other databases (Anggraini, Hamid, & Kassim, 2017).

In a related study, Kamukama, Ahiauzu and Ntayi (2010) defined SC as the competitive intelligence, formulae, policies, patents, culture and others produced from the firm's products / systems over time. According to Mehralian, Nazari and Ghasemzadeh (2018), SC is the capabilities of the organization to meet the challenges in the external and internal surroundings. These include foundations, routines, databases, processes, procedures, management philosophy, structure and culture of the organization (Namasivayam & Denizci, 2006).

Despite the influence of HC on SC, SC exists independently from the former (Chen, Zhu & Xie, 2004). In effect, SC is the codified processes, norms, practices and culture of the organization. The IC disclosure framework includes attributes of SC that consist of patents, trademarks, management philosophy, corporate culture, information systems, management processes, networking systems and financial relationships (Ozkan Cakan & Kayacan, 2017), which makes it a part of the IC component that the present study examines to identify its contribution in creating value.

C. Relation Capital

In the field of research dedicated to both IC and marketing, RC is a topic that is being increasingly examined. RC is an important capital form that reinforces competitive advantage (Kohtamaki, Vesalainen, Henneberg, Naude & Ventresca, 2012). Under this type of capital, firms maintain good partner relationships and focus on the activities pertaining to services and product quality (Sambasivan, Siew-Phaik, Mohamed, & Leong, 2013). Most organizations are susceptible to their partners' opportunistic activities and this could result in increased costs of transactions.

Against this background, RC is the organizational value stemming from the external relationships with organizations and individuals that are business partners (Kamukama, 2013). It forms the knowledge integrated in the marketing channels and the relationships with customers that are developed by the firm throughout the business period (Roos, 2018). Similarly, Welbourne (2008) described RC as an intangible asset that is created through the development, nurturing and maintenance of relationships with the organization, individual or group that affects the status of the businesses in their respective markets. Firms generally develop relationships with partners based on

mutual interests and advantages (Bontis, 1999). According to IC researchers, RC is the knowledge that is embedded in the relationships of the firm (Chahal & Bakshi, 2015), including with its customers (Bontis, 1999).

IV. Recommendations and Future Researches

This paper makes some recommendations on how to enhance the strategic organizational vision of manufacturing firms in Yemen. The survival of such firms can be ensured through the use of IC, which can enhance the strategic position using the capabilities of the firm in order to achieve and maintain long-term competitiveness. The strategic use of IC with other firm resources and capabilities can ensure that the competencies of the firm are enriched, thus allowing it to be competitive in the market in the long term. IC generation basically begins with HC; employees and entrepreneurs should receive the right kind of training which, in turn, can work towards enhancing the competitive market position of the firm. Training provides firms with the incentives to make use of policy instruments coupled with professional management and production operations, within suitable environmental situations.

Added to the above, this study recommends future studies to address another IC dimension, namely innovation capital, using the same dependent and independent variables. Performance types, like innovative performance, can also be investigated against this background. Lastly, this study recommends that future studies shed light on the moderating / mediating role of strategic innovation in the IC-competitive advantage relationship.

V. Conclusion

A firm's competitive advantage factors are varied and complex. Despite the lack of studies dedicated to the relationship between IC and competitive advantage, particularly in Middle East countries, and especially in Yemen, the few existing studies have attempted to study merely cross-knowledge areas in order to contribute to the literature.

The few studies that have been conducted have viewed and examined IC as an independent variable in their frameworks (including those conducted in Yemeni manufacturing firms) when examining its effect on competitive advantage, after which a significant relationship between the two is evidenced. This study believes that accumulated experience and abilities, education and training of employees, can play a key role in using, integrating and assembling capital types in the framework for efficient performance. More specifically, the relationship between IC elements (human, structural and relational) and competitive advantage is significant and positive. The study proposes a conceptual model for the analysis of the impact of the dimensions of IC on competitive advantage in the Yemeni manufacturing firms. The inclusion of other IC dimensions or other variables in the framework in future studies can assist in establishing the value and validity of the framework.

References

[1] A. D. M. Ibrahim, "The effect of intellectual capital on competitive advantage," Master Thesis, Moota University, Jordan, 2013.

[2] Aljazeera. Retrieved from http:// www. aljazeera.net/ programs/economy and people/, 2012.

[3] B. Marr, G. Schiuma, and A. Neely, "Intellectual capital – defining key performance indicators for organizational knowledge assets," *Business Process Management Journal*, vol. 10, no. 5, pp. 551-569, October 2004.

[4] B. Wingwon, "Effects of entrepreneurship, organization capability, strategic decision making and innovation toward the competitive advantage of SMEs enterprises," *Journal of Management and Sustainability*, vol. 2, no. 1, February 2012.

[5] C. M. F-Jardon, and M. S. Martos, "Intellectual capital and performance in wood industries of Argentina," *Journal of Intellectual Capital*, vol. 10, no. 4, pp. 600-616, October 2009.

[6] D. Andriessen, *Making Sense of Intellectual Capital*, February 2004.

[7] D. C. Galunic, and E. Anderson, "From security to mobility: Generalized investments in human capital and agent commitment," *Organization Science*, vol. 11, no. 1, pp. 1-20, February 2000.

[8] D. J. Ketchen, T. R. Crook, S. Y. Todd, J. G. Combs, and D. J. Woehr, "Managing Human Capital," Oxford Handbooks Online, April 2015.

[9] D. A. Klein, "The strategic management of intellectual capital: An introduction," *The Strategic Management of Intellectual Capital*, pp. 1-7, 1998.

[10] E. Isa, "Intellectual capital and its impact on performance in the Faculty of Administration of Kuwait University," Master Thesis, Amman University, Jordan, 2013.

[11] G. Barathi Kamath, "The intellectual capital performance of the Indian banking sector," *Journal of Intellectual Capital*, vol. 8, no. 1, pp. 96-123, January 2007.

[12] G. Mehralian, J. A. Nazari, and P. Ghasemzadeh, "The effects of knowledge creation process on organizational performance using the BSC approach: The mediating role of intellectual capital," *Journal of Knowledge Management*, vol. 22, no. 4, pp. 802-823, May 2018.

[13] G. Roos, *Intellectual Capital as a Management Tool*, September 2018.

[14] G. Tovstiga, and E. Tulugurova, "Intellectual capital practices and performance in Russian enterprises," *Journal of Intellectual Capital*, vol. 8, no. 4, pp. 695-707, October 2007.

[15] H. Chahal, and P. Bakshi, "Examining intellectual capital and competitive advantage relationship," *International Journal of Bank Marketing*, vol. 33, no. 3, pp. 376-399, May 2015.

[16] H. F. Alserhan, "The role of intellectual capital in achieving a competitive advantage: A field study on Jordanian private universities in the northern region," *International Journal of Academic Research in Economics and Management Sciences*, vol. 6, no. 2, August 2017.

[17] I. W. K. Ting, and H. H. Lean, "Intellectual capital performance of financial institutions in Malaysia," *Journal of Intellectual Capital*, vol. 10, no. 4, pp. 588-599, October 2009.

[18] J. B. Barney, "Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view," *Journal of Management*, vol. 27, no. 6, pp. 643-650, December 2001.

[19] J. Chen, Z. Zhu, and H. Y. Xie, "Measuring intellectual capital: A new model and empirical study," *Journal of Intellectual Capital*, vol. 5, no. 1, pp. 195-212, March 2004.

[20] J. M. Evans, A. Brown, and G. R. Baker, "Intellectual capital in the healthcare sector: A systematic review and critique of the literature," *BMC Health Services Research*, vol. 15, no. 1, June 2015.

[21] J. Roos, G. Roos, N. C. Dragonetti, and L. Edvinsson, *Intellectual Capital*, 1997.

[22] K. Asiaei, R. Jusoh, and N. Bontis, "Intellectual capital and performance measurement systems in Iran," *Journal of Intellectual Capital*, vol. 19, no. 2, pp. 294-320, March 2018.

[23] L. Edvinsson, and P. Sullivan, "Developing a model for managing intellectual capital," *European Management Journal*, vol. 14, no. 4, pp. 356-364, August 1996.

[24] M. A. Youndt, and S. A. Snell, "Intellectual Capital Measure," PsycTESTS Dataset, 2004.

[25] M. Delgado-Verde, G. Martín-de Castro, and J. Amores-Salvadó, "Intellectual capital and radical innovation: Exploring the quadratic effects in technology-based manufacturing firms," *Technovation*, vol. 54, pp. 35-47, August 2016.

[26] M. E. Porter, "The Competitive Advantage of Firms in Global Industries," The Competitive Advantage of Nations, pp. 33-68, 1998.

[27] M. Kohtamaki, J. Vesalainen, S. Henneberg, P. Naude, and M. J. Ventresca, "Enabling relationship structures and relationship performance improvement: The moderating role of relational capital," *Industrial Marketing Management*, vol. 41, no. 8, pp. 1298-1309, November 2012.

[28] M. Sambasivan, L. Siew-Phaik, Z. A. Mohamed, and Y. C. Leong, "Factors influencing strategic alliance outcomes in a manufacturing supply chain: Role of alliance motives, interdependence, asset specificity and relational capital," *International Journal of Production Economics*, vol. 141, no. 1, pp. 339-351, January 2013.

[29] M. A. Bahrow, "The impact of intellectual capital on achieving strategies of competitive advantage at Kuwaiti Banks," Master Thesis, Aman Arab University, Jordan, 2014.

[30] Ministry of Technical Education and Vocational Training, 2016. Retrieved from http://www.yemen.gov.ye/portal/Default.aspx?alias=www.yemen.gov.ye/portal/move.

[31] Ministry of Yemen. Ministry of Industry and Trade, 2017. Retrieved from http://www.moit.gov.ye/moit/frontpage.

[32] Mohd. A. Noordin, "The relationship between intellectual capital, innovation capability with firm age and firm performance," Doctoral dissertation, Universiti Utara Malaysia, 2014.

[33] N. Bontis, "Managing organisational knowledge by diagnosing intellectual capital: Framing and advancing the state of the field," *International Journal of Technology Management*, vol. 18, no. 5/6/7/8, pp. 433-463, 1999.

[34] N. Bontis, "Managing organizational knowledge by diagnosing intellectual capital: Framing and advancing the state of the field," *World Congress on Intellectual Capital Readings*, pp. 13-56, 2002.

[35] N. Bontis, W. C. C. Keow, and S. Richardson, "Intellectual capital and business performance in Malaysian industries," *Journal of Intellectual Capital*, vol. 1, no. 1, pp. 85-100, March 2000.

[36] N. Kamukama, "Intellectual capital: Firms' hidden source of service quality in the microfinance industry in Uganda," *Journal of African Business*, vol. 14, no. 3, pp. 150-161, Sepember 2013.

[37] N. Kamukama, A. Ahiauzu, and J. M. Ntayi, "Intellectual capital and performance: Testing interaction effects," *Journal of Intellectual Capital*, vol. 11, no. 4, pp. 554-574, October 2010.

[38] N. Ozkan, S. Cakan, and M. Kayacan, "Intellectual capital and financial performance: A study of the Turkish banking sector," *Borsa Istanbul Review*, vol. 17, no. 3, pp. 190-198, September 2017.

[39] Naseba, and Mohd. K. Fadlallah, "The impact of intellectual capital on the strategic direction of the business enterprises," Master Thesis, Om Darman University, Sudan, 2012.

[40] P. C. Goh, "Intellectual capital performance of commercial banks in Malaysia," *Journal of Intellectual Capital*, vol. 6, no. 3, pp. 385-396, September 2005.

[41] P. N. Bukh, H. T. Larsen, and J. Mouritsen, "Constructing intellectual capital statements," *Scandinavian Journal of Management*, vol. 17, no. 1, pp. 87-108, March 2001.

[42] P. O. de Pablos, "Measuring and reporting structural capital," *Journal of Intellectual Capital*, vol. 5, no. 4, pp. 629-647, December 2004.

[43] S. Amin, and S. Aslam, "Intellectual capital, innovation and firm performance of pharmaceuticals: A study of the London Stock Exchange," *Journal of Information & Knowledge Management*, vol. 16, no. 2, June 2017.

[44] S. Cohen, and N. Kaimenakis, "Intellectual capital and corporate performance in knowledge-intensive SMEs," *The Learning Organization*, vol. 14, no. 3, pp. 241-262, April 2007.

[45] S. Firer, and S. M. Williams, "Intellectual capital and traditional measures of corporate performance," *Journal of Intellectual Capital*, vol. 4, no. 3, pp. 348-360, September 2003.

[46] S. K. Ethiraj, and P. Garg, "The division of gains from complementarities in human-capital-intensive activity," *Organization Science*, vol. 23, no. 3, pp. 725-742, June 2012.

[47] S. Kassim, H. Hamiche, S. Djennoune, and M. Bettayeb, "Competitive advantage as mediating role of intellectual capital and university performance: An empirical study in Indonesia," vol. 88, no. 4, pp. 2473-2489, February 2017.

[48] S. Vishnu, and V. K. Gupta, "Intellectual capital and performance of pharmaceutical firms in India," *Journal of Intellectual Capital*, vol. 15, no. 1, pp. 83-99, January 2014.

[49] T. C. Powell, "Total quality management as competitive advantage: A review and empirical study," *Strategic Management Journal*, vol. 16, no. 1, pp. 15-37, 1995.

[50] T. M. Welbourne, and M. Pardo-del-Val, "Relational capital: Strategic advantage for Small and Medium-Size Enterprises (SMEs) through negotiation and collaboration," *Group Decision and Negotiation*, vol. 18, no. 5, pp. 483-497, November 2008.

[51] W.-M. Lu, W.-K. Wang, and Q. L. Kweh, "Intellectual capital and performance in the Chinese life insurance industry," *Omega*, vol. 42, no. 1, pp. 65-74, January 2014.