

Chapter 6

Intellectual Capital Versus Competitive Advantages: Together Which Underlines Some Relevant Literature?



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Abstract The goal of this paper is to present the essential features of the literature review that relates the intellectual capital and the competitive advantages. On the other hand, it is still an idea, to know if there something that can be interpreted as being particularly noteworthy. In a synthetic way, this idea is that, only one, human capital, of the 3 components of intellectual capital, creates competitive advantages, playing an essential role, training and qualification, together with the innovation and entrepreneurial capacity of the same. If there is more qualification, better management of human capital, more and better competitive advantages will be obtained. The biggest gap in this research is related to the geographic contexts it covers (countries with a lower level of development) and the fact that it concerns with activity sectors of lesser relevance in terms of competitive advantages. Innovation needs further conceptual specification and its relationship with intellectual capital and competitive advantages.

6.1 Introduction

It has been generally recognized by several authors such as [10, 11] and [12], that one of the virtues of intellectual capital is to provide companies, in particular, with better performance and, above all, better competitive advantages. These can value the same companies, market shares and the position of nations in the international theater, with regard to international trade, both in products and services. If we add innovation to this, then this effect, which also stems from the intellectual capital, is even more pronounced.

Being of superior importance, the possession of competitive advantages, its improvement and increase, in any activity sector, of a country, it is necessary to know, what relationship exists, in the literature related to this topic, conjugated with the intellectual capital, among these pillars of knowledge, technological evolution, innovation, among others, namely.

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It is observed that knowledge of this relationship, initially unknown, can often be seen as having associated other topics: see the case of [13–16] and [17]. In these cases, there is an association with the car production sector, with brands, with start-ups, in particular, which goes far beyond an approach limited only to the intellectual capital with the creation of competitive advantages.

This variety of topics, makes clarity and transparency less than would be desirable, the contribution to scientific knowledge, also less than would be expected in terms of its associated broadening, to its knowledge that allows application in the real world.

Furthermore, the 3 notions associated with the intellectual capital, definition-measurement-value and the notion of competitive advantages, are not always clarified in their semantic sense, so the scientific basis is not always the same: for some authors the definition, although having the same components, has different semantic meanings or has different components and also different semantic meanings, [18] and [19].

Thus, there is an obvious difficulty in applying the intellectual capital, combined with competitive advantages, so that it can be applied in practice and have a value of intellectual capital and competitive advantages as if it were a price of any product.

The *research question* that arises is: *what does the literature review that relate intellectual capital to competitive advantages say? Do you evidence any particular idea?*

About this pair, the essential idea is to know, at the heart of the brief literature review, what it underlines in particular, with the 2 concepts, simultaneously.

This research is divided into 3 Sections: in the first, an Introduction to the theme of intellectual capital and competitive advantages is carried out, framing these 2 topics with essential aspects associated with it; in the second, a Literature Review is carried out, in which 6 authors present their research on this pair, emphasizing the fact that this is not a mere collection of papers, but rather papers selected from the few existing ones center of the nucleus intended by the research; in the third, the Conclusions are presented, the essential points to be taken from the previous section are presented; also refer to the References, which served as the basis for the preparation of the paper.

6.2 Literature Review

Mubarik et al. [1] these authors address the relationship between the intellectual capital from the perspective of the relationship with competitive advantages. In fact, say the authors, nowadays, given the uncertainty and ambiguity of business activity, most companies strive to improve their degree of competitiveness. To achieve this, for these authors, they must develop capacities to be innovative, while exploring other capacities in such a way as to make companies ambidexterity. This research seeks to know the role that ambidextrous companies play in the relationship between these 2 aspects.

With regard to the methodology adopted, all medium-and-large-size companies in the Pakistani textile industry were considered. Companies with a workforce of between 100 and 250 workers are in medium size, while those with more than 250 workers are in large size. According to the sources consulted for this purpose by the authors, around 390 companies are included in this sample and are located in the cities of: Karachi, Lahore, Faisalabad and Gujranwala. A close-ended questionnaire was designed to collect data that allowed for constructs adopted by the previous literature consulted by the authors. The items had to do with the intellectual capital and its dimensions such as human capital, relational capital, structural capital, with competitive advantages and with ambidexterity in companies. A number of 580 questionnaires were distributed by 290 companies (2 questionnaires per company) selected at random. Regarding the respondents, directors, generic managers, human resources managers and managers with the tasks of planning activities or business tasks stand out.

Regarding the general conclusions, the authors emphasize that business ambidexterity is instrumental in channeling the effects of intellectual capital toward competitive advantages. The results also reveal that significant effects of human development capital and relational capital on competitive advantages were obtained. However, they observed a non-significant effect of the relational capital, per se. In general, the results were in line with previous literature. Even so, some results were divergent. It is a case of suggesting that the intellectual capital and business ambidexterity are important requirements to achieve competitive advantages. The human development capital, revealed itself as the biggest contributor, directly and indirectly. Which calls for companies to rethink their strategies in relation to intellectual capital.

As main implications, we highlight the fact that the factors of intellectual capital that lead to ambidexterity have been identified, as an instrumental capacity that allows achieving sustainable competitive advantages, which means that each component of intellectual capital needs to be systematically built within of business strategies.

Bakshi [2] this is an author who introduces research on the relationship between the intellectual capital and competitive advantages regarding the role of innovation and learning within organizations, in general, and companies, in particular.

In summary, research is based on the following 2 goals: to prove the level of intellectual capital in developing contexts and not in developed contexts, as is the case in most studies; on the other hand, knowing the impact of intellectual capital on competitive advantages being mediated by the role of innovation and moderated by the role of learning in organizations, which contributes to and strengthens the concept of intellectual capital in business literature.

With regard to methodology, the author constructed 4 constructs with items related to intellectual capital, innovation, organizational learning and competitive advantages, based on different studies, especially with regard to qualitative interviews, in which the respondents were the managers of 5 banks as well as 4 specialists. Items relating to intellectual capital cover human capital, relational capital and structural capital. Those of innovation, relating to radical innovation and incremental innovation. Self-development items were also included to measure bank workers' propensity for innovation. In order to measure organizational learning, a scale was used,

having finished the items, with 64 on the intellectual capital, 10 on innovation, 16 on learning in organizations and 38 on competitive advantages. In terms of the sample used, it should be noted that it consisted of 144 branches of 21 public banks, 7 private banks operating in India, in the city of Jammu. From each branch, 3 executives (one manager and 2 senior workers), with more experience and knowledge, were contacted for the purpose of the study. A total of 5 questionnaires were distributed to respondents to answer, of which 339 questionnaires were answered, which corresponded to a response rate of 62.08%. As auxiliary analysis techniques, the author used Exploratory Factor Analysis (EFA) for data reduction, Confirmatory Factor Analysis (CFA), to confirm the measurement of the constructs.

In terms of more relevant conclusions, the author found that the intellectual capital affects competitive advantages and this relationship is moderate but significant. The results are consistent with other previous studies: This research established that human capital consisted of an important item such as worker creativity, staff commitment, training and education, experience, attitude and innovation of workers. The structural capital revealed to be composed of several items, such as the systems structure, information technologies, capabilities and culture, improvements and quality of service. It also concluded that at an organizational level of learning, it moderates the relationship between the intellectual capital and competitive advantages and that, seen individually, it improves human capital. The organizational culture proved to be innovative and strong, whereby the development of intellectual capital increases and is simultaneously influenced by learning in organizations and knowledge productivity. These are consistent practices across cities, regions and the culture in question, from all banks, can be considered similar.

Indiyati [3] in this research, its author analyzes the role of organizational culture, intellectual capital, competitive advantages in supporting government policies in education. Thus, the purpose is to examine and analyze the effects of organizational culture on the intellectual capital and its influence on competitive advantages in private universities in Indonesia, to support educational public policies.

With regard to the adopted methodology, it was the study of an explanatory survey, in which the type of research in question is the causal relationships. It focused on 157 private universities.

The sampling technique is that of sampling in probabilities in which the number of samples is decided by using the power of the power-analysis test, which resulted in 157 PTS in Region IV of Kopertis. The respondents were the heads of departments, or the deputy directors, or the deans or the students. Data collection was conducted using the technique of observation, interview and questionnaire. The analytical test used was the Structural Equation Model (SEM)-LISREL 8.3., via a second order approach.

In the main conclusions, the author concluded that organizational culture has a relevant influence on intellectual capital in private universities. This indicates that this improvement is strengthened if it is strengthened by the organizational culture via integration, direction, risk tolerance, individual initiative, control, identity, management support, reward system, communication patterns and tolerance of conflicts. The intellectual capital has a significant influence on the competitive advantages

of private universities. This suggests that the production of innovation, innovation processes, innovation management and the quality of services provided improve and the cost is more efficient if the intellectual capital (human structure and customer) gives more value to consumers. Finally, the synergy between organizational culture and the intellectual capital can have a significant effect on improving the competitive advantages of private universities that are able to support government policies and have significant contributions to education in Indonesia. Relations with other universities and non-universities institutions are shown to be worthy of improving the reputation and motivation of its members.

Liu [4] this is an author who carried out research on the creation of competitive advantages and the perspectives of linking the learning of organizations, innovative behaviors and the intellectual capital, within the context of the hospitality industry in China. In the background, the author discusses the benefits of looking for market opportunities and maintaining competitive advantages in dynamic environments. The previous literature consulted to explain organizational performance and survival focused mainly on what organizations do but failed on how and what they should do.

From a methodological point of view, the hospitality of hotels in China provides a good example, insofar as this research requires open mindsets to absorb internal and external resources and even broaden their knowledge capabilities and increase innovation. Both this and the competitive advantages help to maintain the competitiveness that results from explorative and exploitative learning. Thus, hotel managers' perspectives were collected and the processes of how they use explorative and exploitative learning to influence workers' innovations and behavior and accumulate human capital in order to generate competitive advantages were examined. These traits proved to be critical for the hospitality industry in China. The research collects data from hotels with stars, suggesting that these provide insights to study the management of hotel human resources, and reflect the phenomenon of the development of hospitality sector in China. From a sampling point of view, data collection took place between July and August 2015 and involved 595 respondents (272 males and 323 females).

As main conclusions drawn by the author, we highlight the fact that this research of the literature on hospitality in the theorizing of learning in organizations, constitutes a fundamental attribute, in the transfer of innovative behaviors and in human capital, which makes the focus in hotel approaches can maintain competitive advantages. The research examines learning mechanisms as constituting a door that hotels can open to acquire information and knowledge that lead to positive results for the organization, in terms of their role as a buffer, social and organizational capital in the processes of performance creation. In the sample, research suggested that exploratory and exploitative learning can generate desirable results, such as the encouragement of creative and innovative behavior of workers, increasing the accumulation of human capital in organizations. The results also suggest that organizational learning can simultaneously increase opportunities to identify opportunities and competitive advantages through the behavior of innovation and human capital. On the other hand, the results also underline that the social capital of hotels and the capital of organizations play an important role in moderating these processes of

creating complex competitive advantages. Social and organizational capital enhance the effects of innovative behaviors by external and internal linking resources in such a way that innovative behavior is related to increasing human capital only when there are high levels of social and organizational capital.

Dahash and Al-Dirawi [5] carry out research related to investment in the intellectual capital and the achievement of competitive advantages in the hotel sector in Iraq. The goal is to assess the role of intellectual capital in achieving competitive advantages, exploring the contributions of each component of intellectual capital that, in the end, improve business performance.

With regard to methodology and data analysis, the components of intellectual capital, human capital, relational capital and structural capital were considered and with the help of Partial Least Squares Method, the authors analyzed the contribution of each of these to the creation of advantages competitive. In terms of the sample, 4 and 5 stars hotels, were selected and data were collected through questionnaires based on past literature. In human capital (20 items), in relational capital (25) and in structural capital (16). Competitive advantages were obtained by developing a scale by Chahal and Bakshi [9]. The answers were rated on a Likert scale (5 points) with the hotels chosen in Iraq being the Basrah Hotel, Basrah International Hotel, Ishtar Sheratob Hotel Baghdad, Erbil International Hotel, Babylon Warwick Hotel Baghdad, Al Mansour Melea Hotel, Royal Tulip Al Rasheed Hotel Baghdad and the International Palestine Hotel Baghdad. The data was based on the responses of top and mid-level managers as well as self-administrators. In total, 118 managers were chosen and 93 questionnaires were used.

In terms of conclusions, the authors emphasize that there was a lack of evidence in the hotel sector. Therefore, it was not obtained as a result that the intellectual capital had positive effects on competitive advantages. The human capital component revealed to have the greatest influence on competitive advantages and the structural capital the smallest. As Iraq is a developing country, the results obtained need further verification due to this. In different work contexts and socio-economic environments different results can be expected.

Jardon [6] is an author who has focused on obtaining and using the intellectual capital, by entrepreneurs, to obtain competitive advantages in regional small and medium-sized enterprises (SMEs), in the region of Galicia, in Spain.

From a methodological point of view, the author sought to isolate the effect of context dependence, reducing the geographic area of the sample. In fact, this area experienced a great development, especially from the 60's when the establishment of a multinational related to the manufacture of cars, increased the activities associated with fishing, food and transport of equipment. Thus, the author understood, as the best scientific approach, the comparison of theories of the development of comparative advantages. The economic structure of an area shows some characteristics, so the sample, in its design, should be conceived with this structure in mind. With different possibilities, the author chose the approach of business clusters, that is, the analysis of all activities associated with the same value chain of a product or service. Thus, the author categorized companies into 11 clusters in this geographic area. The target

population included companies that had the particularity of having more than 9 and less than 250 workers.

A survey was carried out using a stratified random sample to obtain empirical data. The sample had the size of 400 companies, selected with a maximum error of 5%. In each cluster, the author selected 20 companies at random. The interviewers collected the questionnaires 2 weeks after they were sent to the companies. A total of 360 responses were valid, which corresponded to a response rate of 90%. The author found that the sample structure was consistent with the population study corroborated by the homogeneity test.

The core competencies were built using items on a likert scale from 1 to 5 (where 1 corresponds to not important as a competitive advantage and 5 as very important as a competitive advantage). SPSS Software (version 15) was used.

In the main conclusions, the author underlines that it is important to explain the processes through which entrepreneurs organize their intellectual capital within the scope of their core competencies in order to obtain benefits. It is important to explain these processes because they allow entrepreneurs to structure and organize the constituent elements to generate better performance. The effects of intellectual capital on performance did not occur directly but via core competencies generated by the entrepreneur. These, not grouped all the elements of intellectual capital in a single way, but rather, in combination with other resources and business capabilities.

The intellectual capital was used to build 2 core competencies: relationship management (RM), internal knowledge management (IKM) and innovativeness (INNO). It is the RM and IKM that improve INNO and, through it, the performance of companies. The effect of intellectual capital on INNO proved to be significant in this geographic area. The effect on RM was greater than the effect on IKM. Clusters proved to be important for the creation of regional innovation systems that are the basis of many innovation policies proposed in the same area. If these resources are scarce in companies, they limit their innovation potential. Financial and natural resources proved necessary for future investments in innovation. Thus, cooperation between them emerges as an adequate strategy to build networks for the development and improvement of products, processes and services.

The management of human and technological resources proved essential to promote INNO. This confirms that training, culture and technological processes are necessary to improve business innovation.

However, the effects of intellectual capital do not occur individually. It is necessary to combine with other elements of the companies, in order to specify the core competence. Business success is associated with know-how and the ability to combine, in a balanced way, elements, according to specific needs.

6.3 Conclusions

The literature, selected and relevant, from the few existing ones, involving these 2 interconnected concepts, states that the intellectual capital is composed of different

components and each one also has different effects on the (creation) of competitive advantages of companies.

In addition to competitive advantages, innovation, translated essentially into the skills of employees, also makes a contribution. In particular, learning plays a more concrete role in moderating the relationships between the intellectual capitals versus competitive advantages.

Concretely, in the university context, the creation of competitive advantages through the intellectual capital involves the establishment of institutional relationships, especially by instilling motivation.

In the hotel sector in China, the role of learning is to be highlighted, in identifying and increasing opportunities, in the context of innovative behaviors and the component of intellectual capital that is human capital. This component moderates the processes that create advantages. It should be noted that in the case of the Iraqi hotel sector, the dominant note is the absence of empirical evidence that enables results in line with what is desired. Finally, it should be underlined, in another way, that the question of learning is present again, but from a collective point of view, that is, from the point of view of the management of human resources combined with technological ones. Thus, training, culture and technological processes prove to be crucial in business innovation. The effects of intellectual capital in obtaining competitive advantages are affected not directly, but via entrepreneurial action.

One of the limitations of this research is related to the fact that it focuses on countries that are not included in the most developed, except Spain. Thus, it would be very useful to cover countries such as Germany, France, United Kingdom, United States, among others. The notions of intellectual capital and innovation, perhaps, should be adjusted according to the activity sectors considered: more or less intensive in labor (or in capital).

With regard to the implications, they allude to the fact that they do not allow the extraction of great generalizations, since they are limited to countries that have poorly developed statistical information, which is the basis of results that are not very credible and very limited in their scientific scope.

As future avenues of research, it is worth mentioning, in addition to referring to countries, generally, developed, especially with regard to the European Union and the United States and, especially, to activity sectors where the aforementioned competitive advantages are more constituted as determining factors in the variation of market shares, in the leadership of the sectors, which involves considering sectors where each country has a stronger weight in the domestic market and in its relations with abroad (foreign trade).

Regarding the research question, the only evidence, which appears to be more notorious, in general terms and the idea to underline, is the fact that the intellectual capital creates competitive advantages not in its 3 components but rather via human capital and how much the more qualified it is, the greater the competitive advantages, with the contribution of innovation.

References

1. Mubarik, M., Naghavi, N., Mahmood, R.: Intellectual capital, competitive advantage and the ambidexterity liasion. *Hum. Syst. Manag.* **38**, 267–277 (2019)
2. Bakshi H (2015) Examining intellectual capital and competitive advantage relationship: role of innovation and organizational learning. *Int. J. Bank Market.*, 1–35
3. Indiyati, D.: The role of organizational culture, intellectual capital and competitive advantage in supporting the government policies in education. *Int J Econ Policy Emerg Econ* **11**(1/2), 68–82 (2018)
4. Liu, C.: Creating competitive advantage: linking perspectives of organizational learning, innovation behavior and intellectual capital. *Int J Hospital Manage* **66**, 13–23 (2017)
5. Dahash, Q., Al-Dirawi, A.: Investment in intellectual capital and achievement of the competitive advantage in hotel sector. *Manage. Sci. Let.* **8**, 795–804 (2018)
6. Jardon, C.: The use of intellectual capital to obtain competitive advantages in regional small and medium enterprises. *Knowl. Manage. Res. Pract.* **13**, 486–496 (2015)
7. Todericiu, R., Stanit, A.: Intellectual capital—the key for sustainable competitive advantage for the SME's sector. *Proc. Econ. Financ.* **27**, 676–681 (2015)
8. Vatamanescu, E., Gorgos, E., Ghigiu, A., Patrut, M.: Bridging intellectual capital and SME's internationalization through the lens of sustainable competitive advantages: a systematic literature review. *Sustainability* **11**, 1–22 (2019)
9. Chahal, H., Bakshi, P.: Examining intellectual capital and competitive advantage relationship. *Int. J. Bank Market.* **33**(3), 376–399 (2015)
10. Gouveia L, Couto P (2017) A Importância Crescente do Capital Humano, Intelectual, Social e Territorial e a sua Associação ao Conhecimento. *Atlântico Bus. J.*, 1, Número 0, outubro, 28–34
11. Chen, Y., Lin, M., Chang, C.: The positive effect of relationship learning and absorptive capacity on innovation performance and competitive advantage in industrial markets. *Indus. Market. Manage.* **38**(2), 152–158 (2009)
12. Pourmozafari, A., Heyrani, F., Moeinadin, M.: The examination of relationship between intellectual capital and financial performance according to the modulating role of competitive advantage. *Int. J. Acad. Res. Account., Finance Manage. Sci.* **4**(1), 188–200 (2014)
13. Subramaniam, M., Youndt, M.: The influence of intellectual capital on the types of innovative capabilities. *Acad. Manage. J.* **48**(3), 450–463 (2005)
14. Gupta, M., Bhasin, J.: The relationship between intellectual capital and brand equity. *Manage. Labour Stud.* **39**(3), 329–339 (2014)
15. Pang, L., Li, X.: Empirical analysis on Chinese self-brand automobile enterprises' competitive advantage. *Int. J. Learn. Intell. Capital* **7**(3/4), 374–393 (2010)
16. Matricano, D. (2019). Higher education and start-up's intentions: the role of intellectual capital in entrepreneurship processes. *Indus. Higher Educ.*, 1–9
17. Khan, A., Arafat, M., Raushan, M., Khan, M., Dwivedi, A., Khan, M.: Role of intellectual capital in augmenting the start-up intentions of Indians—an analysis using GEM data. *J. Glob. Entrepreneurship Res.* **9**(25), 1–15 (2019)
18. Berzkalne, I., Zeligalve, E.: Intellectual capital and company value. *Proc.—Soc Behav. Sci* **110**, 887–896 (2014)
19. Gogan, L., Draghici, A.: A model to evaluate the intellectual capital. *Proc. Technol.* **9**, 867–875 (2013)