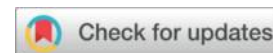




Integrating Business Intelligence and Knowledge Management as a Pathway to Strategic Intelligence for Sustainable Competitive Advantage: A Comparative Study of Telecommunications Companies in Algeria



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Abstract:

This study examines the role of strategic intelligence in achieving and strengthening sustainable competitive advantage in Algeria's telecommunications sector. It compares Mobilis and Ooredoo. The sector faces intense competition at both national and international levels. It is highly sensitive to changes in its operating environment. Moreover, developments in information and communication technology are a major driver of change within the sector. These developments also influence strategic intelligence and sustainable competitive advantage.

The findings show that both Mobilis and Ooredoo have adopted strategic intelligence systems at a good level. Ooredoo, however, records stronger results. Strategic intelligence also plays a substantial role in achieving and strengthening sustainable competitive advantage. Again, Ooredoo performs better than Mobilis.

Keywords: Knowledge management; economic intelligence; strategic intelligence; sustainable competitive advantage.

JEL classification: D83; L96; M15; O32

1. Introduction

Competition has intensified, and firms have adjusted their priorities. In the past, many sought to increase and maximize profits. Today, they often aim to maintain an acceptable level of profitability. One notable development is the growing importance of scientific research. Organizations increasingly seek to use its findings and integrate knowledge into their activities. This applies to industrial, commercial, and service organizations alike. Research is also gaining importance in management systems and practices. Its results can improve economic efficiency in both the internal and external environments of the firm.

In this unstable environment, firms invest considerable effort in finding new management approaches. They seek practices that distinguish them from competitors and help them survive while earning acceptable profits. Approaches based on information and knowledge are especially important. These include strategic scanning, economic intelligence, knowledge management, and strategic

intelligence. Firms are integrating such systems into their management processes. These tools help them remain alert to change, improve their competitive position, and develop a sustainable competitive advantage.

This study examines how strategic intelligence and its components help firms gain and maintain sustainable competitive advantage. It explores this role in Algerian organizations by using two telecommunications operators as illustrative cases.

Research Problem

The study explores the role of strategic intelligence in achieving and strengthening sustainable competitive advantage in Algeria's telecommunications sector. It compares Mobilis, which represents the public sector, with Ooredoo, which represents the private sector. The central research question is: What role does strategic intelligence play in achieving and strengthening sustainable competitive advantage at Mobilis and Ooredoo in Algeria?

Three subsidiary questions guide the comparison between the two telecommunications companies:

- 1- Do Mobilis and Ooredoo differ in their adoption of a strategic intelligence system?
- 2- Do Mobilis and Ooredoo differ in their achievement of sustainable competitive advantage?
- 3- Do the companies differ in the contribution of strategic intelligence to achieving and strengthening sustainable competitive advantage?

Research Hypotheses

The research problem gives rise to three hypotheses. The study tests these hypotheses and uses the findings to develop its conclusions and recommendations.

Hypothesis 1: Mobilis and Ooredoo differ in their adoption of a strategic intelligence system.

Hypothesis 2: Mobilis and Ooredoo differ in their achievement of sustainable competitive advantage.

Hypothesis 3: Strategic intelligence plays a positive role in achieving and strengthening sustainable competitive advantage at Mobilis and Ooredoo.

Significance of the Study

The study examines economic intelligence, knowledge management, and the relationship between them. Their integration is treated as a foundation for a strategic intelligence system. The analysis concerns two major operators in Algeria's telecommunications sector. This sector experiences stronger competition than many other sectors of the national economy. Nevertheless, it operates within a regulated oligopoly. Three companies dominate the market: Mobilis, a national operator; Djazzy, a joint venture; and Ooredoo, a foreign operator.

The comparison is also significant because the two firms differ in ownership and strategic management. Mobilis is a national company managed by Algerian executives. Its strategic plans are developed by Algerian managers. Studying Mobilis therefore helps assess how a major Algerian firm responds to rapid global technological change. It also reveals the extent to which the company adapts to developments in the sector. Ooredoo, by contrast, is a foreign company that is partly managed by

foreign executives. Its strategic plans are drawn up entirely by foreign decision-makers. In this process, it relies on managers at its parent company outside Algeria.

Research Method

The study uses a descriptive approach alongside analytical field research. The descriptive component involved a review of relevant literature and previous studies. This review helped identify the components of strategic intelligence and sustainable competitive advantage. For the field component, the researcher conducted a comprehensive survey and analyzed the data collected through a questionnaire. Statistical analysis was performed using SPSS. The study population consisted of senior executives at Mobilis and Ooredoo. Questionnaires were distributed between August and December 2018. The telecommunications sector was selected because competition is intense at both national and international levels.

The questionnaire had two parts. The first measured strategic intelligence through its two components: knowledge management and economic intelligence. Knowledge management was assessed through knowledge management processes. Economic intelligence was measured through three components: strategic scanning, influence, and protection and security. The second part of the questionnaire assessed sustainable competitive advantage.

Previous Studies

Al-Azzawi (2008), "The Effect of the Relationship Between Strategic Intelligence and Service Operations Decisions on Strategic Success: An Analytical Empirical Study of the Views of Council Chairs and Members in Selected Colleges at the University of Baghdad."

This study investigated the relationship between strategic intelligence, service operations decisions, and strategic success at the University of Baghdad. It covered nine colleges, representing 38% of the university's colleges. Data were collected from 80 college council chairs and members. The researchers used questionnaires and personal interviews.

Al-Adwan (2013), "The Role of Strategic Intelligence and Information Quality in Information Quality at Kuwaiti Commercial Banks."

The study examined the effects of strategic intelligence and information quality on decision quality in Kuwaiti commercial banks. Its population included 371 senior and middle managers working in these banks.

Abadie et al. (2010) conducted a study entitled:

Strategic Intelligence Monitor on Personal Health Systems Market Structure and Innovation Dynamics.

The study explored the importance of strategic intelligence for innovation and sales performance in the European healthcare market. It also considered competition with major pharmaceutical companies. The sample comprised 50 international pharmaceutical companies. Questionnaires and interviews were used to collect data. The findings suggested that strategic intelligence gives managers a clearer vision. It also helps prepare them to lead organizations operating in the pharmaceutical market.

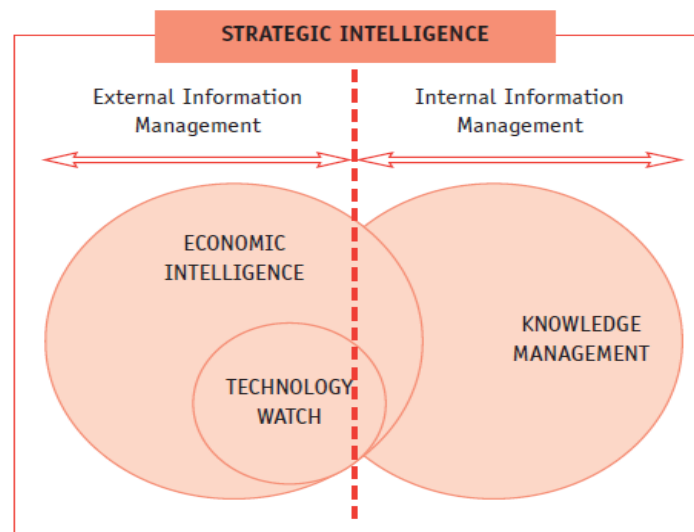
2. Strategic Intelligence

Arbelo defines strategic intelligence as a method of searching for and interpreting publicly available information. This process helps organizations identify opportunities and respond to threats (Fawaz, 2012, p. 10).

Mark Xu defines strategic intelligence as a set of processes that supply an organization with information about its business environment. This helps it anticipate change and formulate strategic choices. Such choices can create customer value and support future growth and profitability in new markets (Xu, 2007, p. 41).

According to the European Commission's model of strategic intelligence, the system has two main components. Knowledge management addresses information management within the organization. Economic intelligence concerns information management in the external environment. Figure 1 illustrates this model.

FIGURE 1. EUROPEAN COMMISSION MODEL OF A STRATEGIC INTELLIGENCE SYSTEM



Source: CETISME Partnership (2002, p. 19).

3. Sustainable Competitive Advantage

The term sustainable competitive advantage also appears as continuing or enduring competitive advantage. These expressions have essentially the same meaning. The concept builds on the broader notion of competitive advantage. Scholars differ in their definitions of sustainability. Porter, for example, used long-term profitability to explain the concept (Al-Maadhidi, 2007, p. 15). A review of management literature traces the foundations of competitive advantage to Chamberlin and then to Selznick, who linked advantage to organizational capabilities. Schendel and Hofer later described competitive advantage as a distinctive position developed through resource allocation relative to competitors. Porter and Day subsequently refined the concept. They treated competitive advantage as an outcome of strategy and linked it to superior performance. Developing such an advantage is therefore a strategic goal. It is especially important in a knowledge-based economy shaped by strong competitive pressures and human expertise (Semlali & Bilali, 2005, p. 9).

Richard Hall argues that firms achieve sustainable competitive advantage by consistently supplying appropriate products or services. These offerings must meet the main purchasing criteria of most customers in the target market (Hall, 1993, p. 12). Another definition emphasizes the use of resources through rapid strategies and rapid learning. This approach enables firms to respond to recurrent environmental changes (Liu, 2013, p. 45).

Sustainable competitive advantage may be defined as superior performance achieved through the use of organizational resources, particularly intangible resources. Such resources must be deployed in ways that competitors find difficult to imitate. The organization must also be able to sustain or reproduce this advantage over time.

4. The Role of Strategic Intelligence in Achieving Sustainable Competitive Advantage

As discussed above, strategic intelligence comprises economic intelligence and knowledge management. The following sections explain how each component contributes to achieving and strengthening sustainable competitive advantage.

4.1 Economic Intelligence and Sustainable Competitive Advantage

Competitive scanning and protection are among the most important components of economic intelligence. Both help organizations strengthen and sustain their competitive advantages.

4.1.1 The Role of Strategic Scanning in Achieving Sustainable Competitive Advantage

Organizations face rapid environmental change, accelerating technological development, and a constant search for activities with high added value. Markets are increasingly global, and information comes from many sources. These conditions have intensified competition, sometimes to the point of hidden economic conflict. Protecting and sustaining competitive advantage has therefore become more difficult. Firms must collect, produce, distribute, and safeguard information. They must also protect it from economic espionage. Strategic scanning, especially competitive scanning, supports these tasks. Its principal contributions include:

- A detailed understanding of markets and competition.
- A stronger position from which to introduce innovative goods and services.
- Greater synergy and cooperation within the organization.
- More effective responses to customer needs.
- Continuous improvement in the products and services offered.
- Protection and long-term maintenance of competitive advantage.

Effective competitive scanning also benefits organizational activity. It supports research and development as well as managerial decision-making. By analyzing information, organizations can draw conclusions that match their needs. This process increases the value of the information collected (Thompson, 2006, p. 53).

4.1.2 Strategies for Protecting and Sustaining Competitive Advantage

Firms in competitive markets are often exposed to challenges and attacks from competitors. Such attacks may come from new entrants or from established firms seeking to improve their market positions. Defensive strategies aim to reduce the risk of attack and limit its effects. They may also encourage competitors to direct their efforts elsewhere. Defensive strategies do not always enhance competitive advantage directly. However, they can strengthen the firm's competitive position. They

also help protect valuable resources and capabilities from imitation and reinforce its existing advantages (Thompson, 2006, p. 55).

4.2 Knowledge Management and Sustainable Competitive Advantage

Knowledge is increasingly viewed as an important source of wealth creation. This has led to growing interest in knowledge processes and their management within organizations. Knowledge is also regarded as a source of sustainable competitive advantage. It can influence employees, organizational processes, technology, and other factors that help a firm establish such an advantage (Carrion, 2006, p. 26).

5. Results and Analysis

Testing the First Hypothesis

The first hypothesis states that Mobilis and Ooredoo differ in their adoption of a strategic intelligence system.

The first part of the questionnaire addressed the principal and subsidiary components of strategic intelligence. Table 1 summarizes the differences between Mobilis and Ooredoo in their adoption of this system.

Table 1. Differences between Mobilis and Ooredoo in the adoption of strategic intelligence

Dimension	Firm	Mean	SD	t	p	Decision
Economic intelligence	Mobilis	3.8553	0.41967	-	0.00	Significant; Ooredoo higher
	Ooredoo	4.8482	0.17102	13.031		
Knowledge management	Mobilis	3.7193	0.45322	-	0.00	Significant; Ooredoo higher
	Ooredoo	4.7605	0.28653	11.617		
Strategic intelligence	Mobilis	3.7781	0.39167	-	0.00	Significant; Ooredoo higher
	Ooredoo	4.7985	0.20398	13.782		

* Results were evaluated at 71 degrees of freedom and a significance threshold of 0.05.

Source: Prepared by the author using SPSS output.

Table 1 shows that Ooredoo had an overall strategic intelligence mean of 4.79 (SD = 0.200). This exceeds the Mobilis mean of 3.77 (SD = 0.39). The difference is statistically significant and favors Ooredoo.

The calculated t value was -13.78. It was significant at 71 degrees of freedom and a 0.05 error level, with a reported significance value of 0.00.

The same pattern appeared in both components of strategic intelligence. Ooredoo obtained higher means than Mobilis for each component. The reported t values ranged from -13.782 to -11.617. All were significant at 71 degrees of freedom and an error level of 0.05, with reported significance values of 0.00.

These results indicate differences in the adoption of strategic intelligence systems at the two companies, in favor of Ooredoo.

The first hypothesis, which proposes differences between Mobilis and Ooredoo in their adoption of strategic intelligence, is therefore accepted.

Testing the Second Hypothesis

The second main hypothesis states that Mobilis and Ooredoo differ in their achievement of sustainable competitive advantage.

The second part of the questionnaire addressed the main approaches to sustainable competitive advantage. Table 2 presents the differences between the two companies.

Table 2. Differences between Mobilis and Ooredoo in sustainable competitive advantage

Dimension	Firm	Mean	SD	t	p	Decision
Sustained low costs	Mobilis	3.7368	0.45118	-12.754	0.00	Significant; Ooredoo higher
	Ooredoo	4.8571	0.26838			
Sustained distinctive customer value	Mobilis	3.7368	0.54830	-10.049	0.00	Significant; Ooredoo higher
	Ooredoo	4.7837	0.29271			
Sustainable competitive advantage	Mobilis	3.7368	0.43626	-13.198	0.00	Significant; Ooredoo higher
	Ooredoo	4.8204	0.22211			

* Results were evaluated at 71 degrees of freedom and a significance threshold of 0.05.

Source: Prepared by the author using SPSS output.

Table 2 shows that Ooredoo achieved an overall sustainable competitive advantage mean of 4.82 (SD = 0.220). This is higher than the Mobilis mean of 3.73 (SD = 0.530). The difference is statistically significant and favors Ooredoo.

The calculated t value was -13.198. It was significant at 71 degrees of freedom and an error level of 0.05, with a reported significance value of 0.00.

The same result was observed for both approaches to sustainable competitive advantage. These were sustaining low costs for customers and sustaining the creation of distinctive customer value. Ooredoo recorded higher means than Mobilis for both dimensions. The calculated t values ranged from -12.754 to -10.049. Both were significant at 71 degrees of freedom and an error level of 0.05, with reported significance values of 0.00.

The findings therefore indicate that the sustainable competitive advantage achieved by Ooredoo is higher than that achieved by Mobilis.

Table 2 indicates that Ooredoo performs better on both dimensions: sustained low costs and the creation of distinctive customer value. This difference is attributed to Ooredoo's extensive use of technology in service delivery. The company relies heavily on information and knowledge to achieve differentiation and reduce costs. This strategy appears to be more widely adopted by Ooredoo than by Mobilis.

The second main hypothesis, which proposes differences between the two companies in sustainable competitive advantage, is therefore accepted.

Testing the Third Hypothesis

The second main hypothesis states that strategic intelligence has a positive role in achieving and strengthening sustainable competitive advantage at Mobilis and Ooredoo in Algeria.

Table 3. Simple linear regression of sustainable competitive advantage on strategic intelligence

Term	Regression		F test		t test		R ²	Decision
	B	SE	F	p	t	p		
Constant	0.175	0.251	269.852	0.000	0.6978	0.488	0.792	Significant; very strong positive effect
Strategic intelligence	0.956	0.058			16.427	0.000		

Source: Prepared by the author using SPSS output.

Table 3 indicates that the regression results are statistically significant. The calculated F value was 269.85. The source reports significance at 72 degrees of freedom and an error level of 0.05, with a significance value of 0.00. These results indicate a very strong positive effect of strategic intelligence on sustainable competitive advantage.

The calculated t value for strategic intelligence was 16.42, with a reported significance value of 0.00. The regression coefficient (B) indicates that a one-unit increase in strategic intelligence corresponds to a 0.950-unit increase in sustainable competitive advantage.

Greater reliance on strategic intelligence is therefore associated with greater sustainable competitive advantage in the companies studied. The reported coefficient of determination ($R^2 = 0.79$) indicates that strategic intelligence accounts for 79% of the variation in the dependent variable. In the original analysis, this variation is attributed to changes in strategic intelligence.

Strategic intelligence thus plays a strongly positive role in achieving and strengthening sustainable competitive advantage at Mobilis and Ooredoo in Algeria.

The third main hypothesis, which proposes an effective role for strategic intelligence in achieving and strengthening sustainable competitive advantage, is therefore accepted.

6. Conclusion

This study highlights the importance of developing sustainable competitive advantage and the contribution of strategic intelligence to that goal. Strategic intelligence provides an integrated framework for strategic management. It helps firms operate in highly competitive environments by identifying strengths and weaknesses in their internal environment, as well as opportunities and threats in their broader environment. It also supports decisions that serve the firm's interests. Economic intelligence, the first major component, helps firms manage their external environment. Knowledge management, the second component, concerns their internal environment. The field study found that strategic intelligence plays a major role in achieving sustainable competitive advantage at both companies. Ooredoo performed better than Mobilis in this respect. The study attributes Ooredoo's stronger advantage to a long-term strategy that uses knowledge as a source of competitiveness. Ooredoo entered the Algerian market after Mobilis and had a smaller market share. Nevertheless, the author argues that Ooredoo's service quality and its emphasis on internet connectivity will enable it to become the leading wireless telecommunications operator in Algeria. Mobilis, meanwhile, needs to improve its services, particularly mobile internet services. The study

concludes that competition in the very near future will depend on the quality of mobile internet services.

7. References

- Carrion, G. C. (2006). Competitive advantage of knowledge management, Encyclopedia of Knowledge Management. Spain: Idea Group Reference.
- Gabriel Cepeda-Carrion. (2006). Competitive advantage of knowledge management, Encyclopedia of Knowledge Management. Spain: dea group reference.
- Hall, R. (1993). A framework linking intangible resources and capabilities to sustainable competitive advantage. Strategic Management Journal.
- Liu, Y. (2013). Sustainable competitive advantage in turbulent business environments. International Journal of Production Research.
- Xu, M. (2007). Managing strategic intelligence: Techniques and technologies. New York: Information Science Reference.
- Al-Maadhidi, M. W. A. (2007). Sustaining competitive advantage in the internet age. Paper presented at the Second International Conference on Knowledge and Its Contribution to Competitive Advantage in Arab Countries, University of Chlef, Algeria, pp. 6–7.
- Fawaz, W. (2012). Strategic intelligence and the competitive strategy of the economic enterprise: The case of Hodna Dairy. Paper presented at the Sixth International Conference on Economic Intelligence and Sustainable Competitiveness, University of Chlef, Algeria, 6–7 November 2012.
- Semlali, Y., & Bilali, A. (2005). Competitive advantage and the effectiveness of strategic management. Paper presented at the International Conference on Effective Management in Economic Enterprises, University of M'Sila, Algeria, 3–4 May 2005.
- Thompson, A. A., & Strickland, A. J. (2006). Strategic management: Concepts and cases (1st ed.). Beirut: Librairie du Liban and McGraw-Hill, pp. 204–205.