

# CONTRIBUTIONS FOR INCREASING THE COMPETITIVENESS OF THE MODERN PRODUCTION SYSTEMS

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## ABSTRACT

There are several research papers in the national and international management literature regarding increasing organizational competitiveness. The competitiveness of the production system represents the ability of the organization to participate successfully to economical competition and to emulative of one advantage position in the competition<sup>1</sup>. Competitiveness represents in the same time a way of pressure and control against the performance parameters of the enterprise, if we perceive the competitive like an attribute which allow a big resistance against the competition.

Therefore, the competitiveness is closing analyzed with the organizational performance. According to Romanian Explicative Dictionary, performance is “an outstanding output realized into a certain field of activity”. The link between performance and an outstanding output it means a net positive output against an old one, an output more important than the competition, an output quite different from the planned objectives<sup>2</sup>. This is the reason why competitiveness, strong linked with performance should be analyzed only taking into consideration environmental competition, which is very challenging in present, because of the globalization, continuous development of the innovation, because of the entering in the new economy based on knowledge.

The newest and important competitive research papers from international management literature came from the biggest consulting organizations. All these studies shows the huge impact of innovation<sup>3</sup>, the way that competitive advantage is created, the importance of using unique business models, using different types of strategies for explore the opportunity bring by the complexity of the environmental competition.

Another approach is based on the “road” that should be followed in order to increase the competitiveness, from finding the strengths points for employees to durable growth, the only element which can really sustain the real profit increasing<sup>4</sup>

## **Introduction**

This paper examines the impact of knowledge management on company competitiveness taking into consideration as a study case the petroleum industry.

In the present context of globalization of the economic activity and the expansion of knowledge management, the structured information a company owns becomes a vital resource without which the business can't survive.

Today, there is a growing recognition of the importance of the knowledge in generating competitive advantages. This recognition came from the following issues: we are living in an economical environment more than complex, where competition is forcing each organization to find new valuable solutions in terms of products, services and processes. We are living in an economical environment with limited access to limited resources. We are living in an economical environment which provides a lot of new needs and requirements from the sophisticated customers.

Competitive advantage is one of the most fundamental concepts in business because is the main reason which determines a firm success. According to Michael Porter, probably the most widely quoted authors on competitive advantage, the competitiveness and profitability of a firm depends on industry attractiveness and on its relative position in the respective industry. To achieve the desired profitability a company must have a sustainable competitive advantage that results from being able to add value for its customers. This added value can take form of lower prices than competition or to provide unique benefits which are different from competition, and that unique benefit to be included in the premium price paid by the customer.

## **Romanian Petroleum Industry – brief presentation**

The main organizations in the petroleum filed in Romania are represented by Petrom, Rompetrol, Mol, Lukoil and Rafo.

In the following paragraphs we make a short description of the activities provided by these companies:

Petrom SA is the largest company in this sector and it is presence in the next strategically segments: exploration and production, refinery, energy and retail. It holds in concession 19 areas of exploration with more than 300 ground oil deposits, as well as other 3 exploration areas in Kazakhstan. The Refinery division includes two of the biggest refineries in the East European, Petrobrazi and Arpechim. The marketing activities are done in more than 600 filling stations across all over the country and more than 100 filling stations in Moldavia, Hungary, Serbia and Montenegro.

Rompetro Group has an important role in the oil competition especially because of its modern refinery Petromidia which includes also the Petrochemicals Downstream and because of the second refinery, even if this is a small one – Vega Refinery. The all group purchased last year by the KazMunay Gas detain more than 500 filling stations in Romania, France, Bulgaria, Albania and Georgia. The weakest point for Rompetrol is the Exploration and Production division missing.

Mol Romania it is part of the bigger company Mol Hungary. The Romanian division deploys only retail marketing activities along the country, in this respect the company has to manage more than 130 filling stations.

Lukoil Romania is probably the third company as importance in the oil field in the country. The company has the refinery division which is established in the Petrotel – Lukoil. It has also more than 290 filling stations. The main advantage of Lukoil in comparison with Rompetrol is the cheaper price for the oil imported from Russia.

The last major player in Romanian petroleum industry is Rafo which holds one refinery and more than 290 filling stations especially in the West side of the country.

### **The main traits of the knowledge management in oil industry**

#### *The importance of the knowledge in all the divisions*

This trait is a mandatory one in all the division included by the petroleum industry. It is very important to have the best knowledge which drives to the innovation in technological process in exploration and production. But not only the technological innovation should be mentioned, also the business process, rules and a proper culture should be implemented based on the knowledge management in this area. The refinery activities are characterized by the same approach as in exploration and production. The retail activities need appropriate knowledge in order to create that unique value proposition for the customer. If the knowledge has the same pivotal role as the natural resources in the exploration and production activities, the same we can tell about the knowledge in the marketing field, because based on these all decisions are made.

#### *Focus the main activities for knowledge manipulating – transforming the products into a “knowledge product”*

This trait applies especially in the marketing division from an oil company. What creates competitive advantages today in this area represent exactly the way that the knowledge had by the human resources are transferred to the oil products. Definitely, there is a big difference between companies which sale “just diesel” and companies which includes in the diesel product also the technological knowledge and marketing knowledge seen as that value proposition for the client. All these remarks require a strong R&D department for each division.

#### *Knowledge capital is difficult to be maintained by the owner and the organization*

This trait represents a common characteristic for all the economical industries, not only for the oil one. One of the most difficult and important issue that occur in the knowledge management is maintaining in the organization the competitive advantages generated by the employees which integrated the knowledge in the processes, products or services. This implies a lot of measures in order to keep the intangible assets in the company, or to develop continuous for making very hard the imitation process.

#### *Underline the activities based on the knowledge resources*

As we mentioned before, in exploration and production the knowledge resources have the same importance with the natural ones. If you don't poses the natural resources you may have a bundle of knowledge but will have no possibilities to worth them. In the reluctance way the activities in refinery and marketing (retail) must be done based on the knowledge resources had by the employees.

### *Proliferation of the symbolic products and services instead of the physical products*

Consultancy is one of the most known symbolic services provided by the knowledge management. His presence is mandatory in all the activities in all segments of the oil industry. Besides consulting we mention the information technology as being also an important role along the exploration and production, refinery and marketing activities.

### *Intellectual character of the working processes*

Taking into consideration the automation of the processes and the growing importance of the knowledge in all the industry we would say that R&D and other activities that generates unique value proposition for the customer should be the only activities performed in a company, even if we are talking about an industry in which low cost unskilled employees still work. This means that an oil company has the social responsibility to develop the unskilled employees, to integrate them in a learning organization structure, to help them to integrate themselves in the new economy based on knowledge. Understanding the importance of learning organization means a development for our societies and encouragement for more democratic, organizational structures and processes.

### *Generating, exploration and technological improvements*

Technological improvements like knowledge improvements are elements hard to copy by the competition. We already talk about the technological impact on the company, but let's reconsider one essential trait developed by the generation, exploration of one new or advanced technology: growing the productivity which leads to a better competitiveness.

### *Growing the importance of the services in economy*

In the oil industry the importance of services becomes more important. When a client is going to the filling stations he buys not only the oil product, but also he buys a lot of other associated services like car wash, serving lunch, drinking a coffee etc.

### *Proliferation of the cooperation between organizations*

These associations refer to the strategic alliances, clusters, organizations networks, industrial parks etc. in order to improve the usage of the knowledge for the common goals. There are well know some associations between petroleum companies around the world, including in Romania a collaboration between Rompetrol and Petrom for transporting the oil in the south – east side of the country.

## **Conclusions**

The oil industry is divided into a certain strategically segments like exploration and production, refinery, energy and marketing (commercial and retail). The evolution to the economy and management based on knowledge has several impact for each strategically segment mentioned before. Manipulating knowledge and the usage of the knowledge management brings added value to each activity like following: in exploration and production the knowledge should be used in order to discover new ground oil deposits utilizing advanced technology in field researching, as well as discover new producing processes for the development of new oil products, more sophisticated but with less pollution. The refinery uses knowledge management in order to improve the refinery processes, to improve the quality of the oil products, and to discover a new possible

mix between all the natural resources refined. Probably the great impact that knowledge management it has in this industry is represented by the marketing division of each oil company. Basically, in this place the oil product (the physical one) is transformed into a knowledge product, which offers lot of other services and creates that unique value proposition for the final customer. The filling process will be probably just one reason for going to the filling stations. All these requirements should be done only with appropriate human resources, with experts and people who take into consideration the growing and the crucial role of the knowledge resources during these periods. Another influence that should be taken into consideration it refers to the management tools and models that must be implemented in order to ensure a proper knowledge management. Taking into consideration all these aspects mentioned during this paper, we can conclude that knowledge management will have a very important role in the oil industry, and will drive to a growing competitiveness of this area.

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