The Management of the Competitive Differentiation of Companies that Supply Electromechanical Equipments for the Oil Industry

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Abstract — Let us assume that the supplier of electromechanical devices for the oil industry has already selected its target market. When it is the only supplier for that market, it will be able to sell at a price that would bring it considerable profit. If the price is too high and there are no entering barriers for competitors, the latter will penetrate the market and cause a lowering of the prices for the electromechanical devices. When the same market is provided by companies that produce non-differentiated devices, buyers will choose the company that sells at the lowest price. Consequently, the other companies will have to lower the price as well. The only alternative for the supplier oil electromechanical devices is to differentiate its offer. If this action is successful, it will be able to practice a higher price, due to the superior quality that is being offered. There are four ways of defining an offer: the agent that sells oil products can create value by offering products that are [1]:

- ***Better - the offer can better satisfy the needs of customers than that of competitors, which usually involves at least a minimum improvement of the electromechanical device:***
- ***Newer – providing a solution that does not exist so far, which implies a higher risk than in the situation mentioned above, but can bring a higher profit***
- ***Faster - the delivery time for an electromechanical device is reduced***
- ***Cheaper – the product is identical with that offered by competitors, but the price is lower***

I. INTRODUCTION

OIL is found in subterranean, permeable strata, alongside natural gases. In order to extract it, an oil well is needed, which helps to bring the oil to the surface. The digging of wells is achieved with the help of forage installations.

If the pressure of the gas that is found above the oil level is high enough, the oil is pushed up by this pressure through the lead tube of the well. If the natural pressure is not sufficient, the oil is extracted using plungers or by injecting pressured gas into the oil in the well.

From the wells, the oil is transported through pipes to the collecting stations that are equipped with oil holders of high capacity wherefrom, with the help of the pumps, the oil is introduced into the oil trunks that take it to oil refineries or the places wherefrom it is charged into different means of transport.

The technology that was used in the past, and especially the type of the equipment, limited the soil drilling possibilities of wells. Normally, until the 1950, the wells could drill as much as 4000 m. In the last decade, wells managed to drill to a depth of 7000 m, and currently it is possible to drill as deep as 10 000 – 15 000 m.

The deep well/drilling has helped discover new sources of oil or gases. Given the expenses for forage, these resources prove to be profitable, due to the high compaction pressure, which can reach 600-700 atm. However, the deeper the drilling, the harder the rocks become, and for this reason the equipments that are behind used need to be stronger.

II. INSTRUMENTS FOR THE COMPETITIVE DIFFERENTIATION OF SUPPLIERS OF ELECTROMECHANICAL EQUIPMENTS FOR THE OIL INDUSTRY

When the market strategy is being elaborated, the supplier of electromechanical equipments for the oil industry should know how a competitive advantage can be obtained.

Not all the firms that compete with one another benefit from the same possibilities of reducing costs and consequently create an advantageous market offer. Some of these companies will identify more possibilities to obtain certain advantages, which will prove to be minor and therefore have a temporary character. In such a situation, the solution would be to find new potential advantages and apply them gradually, with the aim of stopping competitors and re-establish the balance. The innovation should become a routine for these companies, not for obtaining a major advantage that should be preserved, but in order to get a market quota through the continuous bringing of small changes, or differentiations of the offer for electromechanical equipments.

It has also been observed that companies differ in terms of their "manoeuvrability". This depends upon five elements: 1. Changing the target market for the electromechanical equipment. 2.Changing the distribution channels; 3. Changing the advertising means; 4. Changing the price; 5. The company's freedom to move, which is influenced by the structure of

the market to which the company belongs and the position of the company within this market. For each possible manoeuvre, the supplier of electromechanical equipments should estimate the potential revenue that corresponds to this and practice those manoeuvres that bring him the highest potential revenue, by defining its strategic mechanism. The „inert" market for electromechanical devices is made up of companies that have a limited manoeuvrability and a strategic mechanism with a reduced capacity, while the specialized market for electromechanical devices is characterized by the presence of companies with good manoeuvring possibilities and an opportunity to obtain strategic advantages.

The means whereby the supplier of electromechanical devices can differentiate its offer in relation to that of its competitors can be achieved in relation with four basic elements of its activity: the electromechanical equipment, the services, the personnel and its image [2]; [3]; [4]

TABLE 1

Specific differentiating elements (The differentiation variables)			
ELECTROMECHANIC EQUIPMENTS	**SERVICII**	**PERSONNEL**	**IMAGE**
- characteristics	- delivery	- competence	- symbol
- performances	- installation	- amiability	- means of mass communication
- quality conformity	- instruction	- credibility	
- durability	- consulting	- safety	- the buyers' „background"
- reliability	- mending	- expedience	- events
- maintenance (mentioning the performance level of the product)	- diverse	- communication	

III. DIFFERENTIATING THE ELECTROMECHANICAL EQUIPMENT FOR THE OIL INDUSTRY

The supplier of electromechanical equipments for the oil industry will identify the criteria on which the differentiation of each device is going to be based. The electromechanical equipments in the oil industry are produced in accordance with certain criteria:

- the electromechanical equipments are standardized in terms of the forage operations of wells: 1) the forage of the wells in itself; 2) consolidating the walls of the well with steel tubes; 3) cementation of the pumps;
- foraging installations with a rotary table is made up of the digging tool, that digs while being fixed at the end of the drill pipe, activated by the movement of rotation by the rotating mass that, in its turn, is activated by motors.
- while drilling with the help of a turbine, the drill bit is activated by a free-jet turbine, which eliminates the problems created by the rotative forage;
- overcoming the forage installations problems, created by the main activating devices: 1) the manoeuvring winch, extracting and introducing foraging tubes and seals, as well as for other auxiliary operations; 2) the rotating mass for the forage in itself; 3) slide pumps for the washing of the pump and the evacuation of the broken rock;

Taking into account the fact that the absence of materials hinders the even generalization of the technical progress introduction, we observe obvious laggings in endowing the wells: some wells benefit from the latest equipments, while others have only common equipments.

For these reasons, the positioning scheme will be the following:

1) Endowing a common well, for functioning in eruption

2) Permanent wells

3) Endowing the wells with multiple installations, for the simultaneous and the separate exploitation of the productive stays crossed by wells.

Generally speaking, the installation that is necessary for a well that produces in natural controlled eruptions is made up of:

- the extracting installation for the fluids in the well in itself, in conditions of full functioning safety
- the removal plant, for the stages that make up the mix of fluids produced by the well

The main components of an extracting installation are the following:

- liner end
- eruption swivel flow head
- column with extraction tubes
- connecting tubes with installations for the separation of fluids (separators for gases and oil)

There are differences among these equipments and installations. These differentiations allow for the recognition of each electromechanical equipment.

At the other pole, there are the different characteristics of these easily differentiated installations.

In all these situations we should take into account the main elements that differentiate electromechanical equipments: characteristics, performances, the quality conformity, durability, feasibility and maintenance.

A. Characteristics:

These are the attributes that supplement the basic function of the electromechanical equipment. Most equipments present different characteristics. The starting point for their acquisition for usage is represented by the "simple" form of the equipment, to which the provider of electromechanical equipments for the oil industry can add some extra-functions, creating new versions of the

initial product. The supplier can decide upon the standard and the functional characteristics of equipments, each one of these being able to correspond to the preferences of new categories of users.

At the same time, the characteristics represent a competitive instrument for the differentiation of electromechanical equipments. The launching of the first equipment with new characteristics, which are desired and appreciated by customers, represents one of the most efficient methods of dealing with competitors.

The supplier of electromechanical equipments for the oil industry can identify and chose new characteristics for equipments, by getting in touch with the users and asking them to answer several questions:

- What do you think about the equipment?
- Which are the attributes that you do not like and the ones that you appreciate?
- Do you think that the equipment should be improved, so that it can better satisfy you? Which would these characteristics be?
- How much would you pay for each new attribute?
- What do you think about the following attributes, mentioned by other users?

In this way, the supplier can obtain a long list of potential attributes for the equipment.

During the next stage, the supplier will choose the characteristics that are worth being added to the equipment and send these to the producer. For each one of these, the supplier needs to determine the relation between the value perceived by users and the costs supported by the company.

At the same time, the sets or the packages of characteristics should be taken into account.

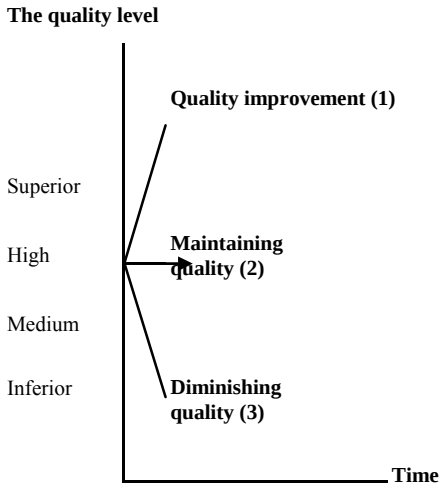
The supplier of electromechanical devices for the oil industry should decide if it can offer customers equipments that are adapted to the demands of each customer in particular, at a higher price, or simply standardised equipments, at a lower price.

1) The performance

These refer to the level at which the initial characteristics of a device operate. The users of expensive equipments generally buy the performance characteristics of the equipments that can be found on the market, the latter accepting the higher price for higher performances, as long as these do not pass beyond the value they perceive.

The question that appears is whether the higher performances of a device correspond to a higher profitableness. According to the latest studies, the companies that supply devices of a higher quality obtain profits that are better with 60% than those that supply lower-quality devices. This means that the company should supply not only products of the higher qualitative level, since the very high performances trigger a reduction of the revenues, since fewer and fewer users are ready to pay for the high quality of products. The company should provide equipments with corresponding levels of performance, both for the target market and in relation to its competitors. At the same time, it should decide upon the way in which it will administrate in time the quality of all equipments.

The following figure presents three stages:



The three stages of controlling the quality of products in time

The first strategy indicates the fact that the supplier of electromechanical equipments for the oil industry provides the maintenance and the checking of these devices, thus obtaining an increase of revenues and market quota.

The second strategy is that of maintaining the quality of electromechanical equipments. The supplier does not change the quality of equipments if there are no major deficiencies or new possibilities to improve them.

The third stage is represented by the diminution of equipments quality. This can be achieved in two ways: the producer can reduce the quality of products in order to compensate for the increase of prices, hoping that the supplier will not notice the difference; or, the supplier will deliberately reduce the quality, in order to increase its profits, although this fact diminishes its long/term efficiency.

Quality conformity:

It represents the action through which the characteristics of equipments are in accordance with the standard and reflect the fact that different equipments are bought in the same way and correspond to specifications. When the quality of equipments does not correspond to standards, even though their performance cannot be checked practically, these equipments can disappoint users. The renown of the supplier of electromechanical devices for the oil industry is

acquired when some equipment is permanently supplied at the quality stipulated among its standards.

TABLE 2

Method of choosing						
DIFFERENTIATING ELEMENTS	**THE SUPPLIER'S SCORE** [1 – 10]	**SCORUL CO THE COMPETITORS'SCORE** [1 – 10]	**THE IMPORTANCE OF SCOERE IMPROVEMENT** [H – M – L]	**IF IT CAN AFFORD THE IMPROVEMENT OF THE SCORE, AND HOW FAST IT CAN BE ACHIEVED** [H – M – L]	**CAPACTATEA THE CAPACITY OF THE COMPETITIVE COMPANY TO IMPROVE ITS SCORE** [H – M – L]	**RECOMMENDED ACTIONS**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
TE TECHNOLOGY E	8	8	L	L	M	Maintenance
COST	6	8	H	M	M	Pursuance
QUALITY	8	6	L	L	H	Pursuance
SERVICES	4	3	H	H	L	Investment

= *high; M = medium; L = low*

1) Durability

It indicates the operation time of the equipment. The users will pay more for this type of equipment than for one with a lower-level of resistance.

3) Safety

It represents the characteristic of some electromechanical equipment that ensures the safety of use in certain given conditions and during a certain period of time. The users will be ready to pay a higher price for some equipment that ensures an optimal functioning or which helps them avoid the more important expenses for its reparation.

4) Maintenance

It reflects the possibility to easily maintain and repair electromechanical equipments.

IV. CONCLUSION

Let us suppose that the supplier of electromechanical device for the oil industry has identified four differentiating elements for its offer: the marketing technology, the cost, the quality and the services.

The supplier has a single important competitor. With regards to the „selling technology", both have obtained eight points; the supplier will not be able to obtain a higher score, due to the costs involved in the improvement of the equipment. As far as the cost is concerned, the competitors obtain a better score, which can influence the supplier when the market becomes interested in prices. As far as "quality" is concerned, the equipments of the supplier are superior to those of competitors. In terms of "services", both companies are under the medium level.

From the data presented above we can conclude that the supplier should change the price of its equipments or the services it provides, so that the offer can become more attractive than the one of its competitor. Column 4 indicates the fact that the improvement in terms of "costs" and "services" are important for customers. The question that appears is whether the company can afford to make these improvements and how much it will take it to achieve them. Column 5 indicates the fact that the supplier has resources for the rapid improvement of services and their promotion, while its competitor seems to be unable to do this. In order to achieve its goal, he supplier should hire extra serving personnel that is well instructed and has good training. At this stage, the company can present itself as "leader" in the field of supplying electromechanical equipments for the oil industry. This way of thinking will help the supplier to add some extra advantages to its offer. The supplier should not only elaborate a very clear positioning strategy, but also communicate it efficiently. When he chooses the strategy of the "superior quality", this is communicated through signs and common indications for appreciating this quality.

The quality of equipments or services is communicated with the help of other elements as well: the price indicates the quality of the device or the service, the means of distribution, the packing, promotion or advertising means.

The presentation of quality, packaging, distribution, promotion, etc. should form a complete process that improves the image of the supplier of electromechanical equipments for the oil industry.

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