



ASSESSMENT OF THE PETROLEUM INDUSTRY COMPETITIVE ENVIRONMENT INFLUENCING A SYSTEM OF ECOLOGICAL MANAGEMENT OF A COMPANY TRADING CRUDE OIL PRODUCTS

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Abstract. The purpose of the study is to develop an indicator of competitive advantage retailers have in the market of oil products when managing environmental development of gas stations. The essence hidden in the concept of a competitive market environment regarding oil products traders is revealed. The competitive environment for the gasoline services market in the L'viv region is estimated. The economic core substance of the "environmental management" of a gas station was explored, as well as the level of competitiveness, which any oil products trader meets, is offered to estimate according to the integrated ecological status of an object. During the study, methods of observation, comparison, abstraction, PEST- analysis, SWOT- analysis, induction and formalization were employed. Improved environmental management providing a competitive advantage to gas stations at the regional marketplace allows achieving the highest standards of quality and increasing the effectiveness of regional environmental control.

Introduction

Ukraine continues active forming the market infrastructure for the oil industry that is facing permanent demand. Given the geopolitical position of Ukraine, as a transport crossroads of Europe, operations of gas stations need to be in the alignment with the international standards regulating the quality of services provided by gas stations. At the same time, the safeness of exchanging oil products ensures sustainable development of the national economic system, since it is as a structural element of economic security. Further process of building the oil market infrastructure requires the assessment of the retailers, which market fuel and belong to this segment of the market embracing gasoline services, as if they defined the situation in the social, economic and political system in the region and regulated the relationship between market participants. To improve the efficiency of gas stations activity, the study of the specifics of gas stations environment acquires a topical relevance, because it allows outlining the structure, process, methods and techniques of management acceptable for gas stations, as well as finding competitive advantages in cutting harmful influence on the natural environment.

According to the research made by Zlamanyuk (2011) assessing the impact of the external environment allows diagnosing the extent of a company's competitive stability and evaluating its ability to be changed. However, it is useful to clarify the role of the assessments in the achievement of the needed effectiveness while managing a trading business. Vysochin (2012) in his works states that the concept of how to manage a turnover of goods within a retailing company determines its place in the general system of management of that company. However, that concept does not explain the environmental element in a gas station activity. Such researchers as Guculjak and Klymenko (2010), Malychkyj (2010) proved that resource management concept helps to ensure a competitive advantage for an oil products trader due to evaluation of the environment but it is advisable to apply it in practice while assessing the effectiveness of a gas station, as an object of environmental management and control. The analysis of the legal framework ensuring the environmental safety of this class of objects in Ukraine showed the lack of environmental regulations upon gas stations given the continued expansion of the sector. Thus, the means of achieving environmental sustainability while managing gas stations allow shaping the competitive advantage oil products traders at the regional market on the basis of assessing its competitive environment in the environmental management system. Given all said above, the purpose of the research is to develop theoretical propositions for improving

environmental management through analytical assessing the ecological status of oil products trader in the competitive environment of the regional market, as a competitive advantage.

The purpose of the research can be reduced to the following tasks: to reveal the characteristics of the competitive environment in the oil industry market within the environmental management system; to identify methodological approaches to assessing the competitive environment of oil products trader in the market of services provided by gas stations; to explore the essence of the “environmental management” concept acceptable for a gas station; to identify an indicator of competitiveness of petroleum products trader in the system of environmental management.

Method.

The research is based on the following approaches and methods: observation, comparison, abstraction, PEST-analysis, SWOT-analysis, induction and formalization. Theoretical and methodological framework of the research is formed due to fundamental works of leading domestic and foreign scholars who study the problems of a company’s competitive environment in the regional market, as an element of the environmental management system.

Results

The key role in operations management of oil products traders is given to a set of strategic and tactic marketing tools applied for natural resources market which includes the oil products market. The oil products market is considered unique since its being a product market and financial market at the same time. It determines the level of business activity of consumers of fuel, but, sometimes, forces gas stations to trade low quality products.

Management tools, in the process of achieving competitive advantages of gas stations and taking into account the social and economic aspects of the industry and the region, require environmental orientation of the oil products trade, as part of regional environmental management. In this case, it is necessary to evaluate competitive environment of gas stations that trade oil products through their special networks to final consumers.

The author explores the L’viv regional market of oil products with 386 gas stations. The decline in sales of motor gasoline vs. increase in sales of diesel fuel indicates the need for seeking a competitive advantage of stations that are highly hazardous to the environment. It can be reached by reducing the anthropogenic load in the region and narrowing the range of negative impacts on the environment. Thus, increased effectiveness of the environmental management of the whole area is expected. To select a tactical plan of actions, assess the competitive environment for gas stations in the oil market according to the level of industrial concentration, indicator of market structures and competition intensity.

Evaluation of participants of the oil products market in the L’viv region allowed determining the following. The first place is occupied by the Galnaftogaz Co. with the network of 60 gas stations OKKO (there are 310 units of that company’s stations in Ukraine); the second place is belonged to the West Oil Group with 45 gas stations WOG (this company owns 360 stations in Ukraine); the third place is occupied by the LUKOIL-Ukraine with 19 gas stations in the region and 280 stations in Ukraine; the fourth place – Shell with 9 gas stations in the region and 169 stations in Ukraine; the TNK-Ukraine is on the fifth place with 5 gas station in the region and 150 in Ukraine. To calculate the concentration ratio and Herfindahl-Hirschman Index, use data reflecting market shares of 5 biggest companies in the oil products market of L’viv region – that is, WOG (32,61%); TNK-Ukraine (3,62%); Shell – Ukraine (6,52%); LUKOIL - Ukraine (13, 77%); OKKO (43,48%).

The concentration ratio for the oil products market in the L’viv region (CR - 3) was 89.86, Herfindahl-Hirschman Index respectively is 3199.14. Therefore the oil market in the L’viv region is sufficiently concentrated and dominated by three companies with a total market share about 90 %. In general, the oil products market in the L’viv region is mature and has a sustainable growth potential and a high degree of globalization. It is distinguished with a significant level of capital intensity and significant barriers to market entry, since under conditions of oligopoly, three companies of high concentration dominate in the market. Due to the PEST- analysis and “5 factors” industry analysis, factors of price structure (profit of marketing companies and distributors, costs of transportation and storage of petroleum products, trade allowances of gas stations (margin)) and production capacity (fuel storage tanks, fuel and flush columns, fuel trucks, sewage disposal systems and linear communication) were determined according to competitive advantages of gas

stations that are, towards the integration of Ukraine into European economic structures, largely dependent on the environmental safety of these stations. So, competitive advantages of gas stations depend on implementation of the resource management concepts into the territorial environmental management.

Environmentally focused management of oil products retailers is forced with the existing contradictions between economic processes and environmental impacts, which can be overcome through evaluation of the external environment of gas stations in the regional market within the system of territorial environmental management (Fig. 1).

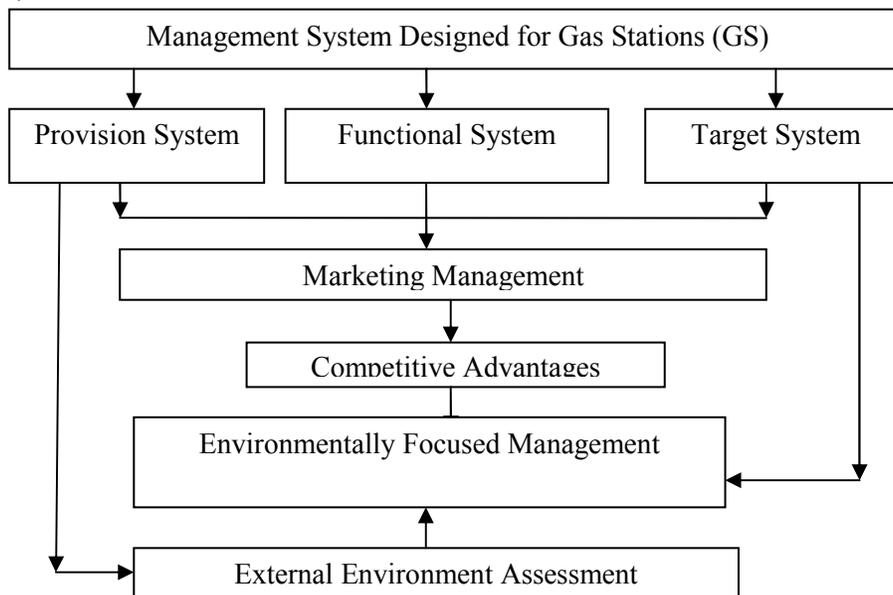


Fig.1 Place of external environment assessment in the system of management designed for gas stations

Environmental management allows for regulations of the local government and gas stations' activity. Therefore, it is aimed at following the regulations in the field of environmental management, developing and introducing appropriate programs and projects, as well as facilitating a trade-off between different participants undertaking environmental management in the regional market. Environmentally focused management limits negative impacts on the environment of a region, improves gas stations' image especially if they are hazardous, and provides additional profit through cuts in ecological penalties (reduced losses of petroleum products, the volume of runoff, spills, leaks and fumes from oil).

Environmental management acceptable for gas stations includes assessment of environmental impacts, gas station's environmental policy, assessment of environmental management efficiency, integration of environmental management and product quality control system. One of the alternatives for assessing the level of efficiency of environmental management implemented into oil products retailing system is a calculation of the complex environmental assessment of a gas station. The complex indicator of the environmental status of a gas station or any other trading unit can be calculated as in:

$$\dot{O} = (\dot{O}_1 + \dot{O}_2 + \dot{O}_3) / 3 ,$$

where V – a complex indicator of the environment around a gas station; V_1 – a complex indicator of water conditions (surface runoff, spills, leaks); V_2 – a complex indicator of air conditions (evaporation); V_3 – a complex indicator of soil conditions (solid, liquid and oil polluted waste).

The level of the complex indicator of the environment around gas stations describes a result of the environmental management. It should be encouraged by stations and local, state, and national authorities. Environmental status of gas stations should be considered when expanding the network of gas stations through issuing special permits, as since 2014 fuel marketed in Ukraine should contain 5-10% of ethanol. To saturate fuel with the alcohol and storage it, it is needed special equipment and consequently reconstructed stations subject to the requirements of environmental legislation.

Thus, the use of integrated indicators of environmental quality influenced by gas stations will ensure the regulation of the environment and ecological safety of the territory according to the legislation. In turn, it will

allow improving a region's position in rankings of competitiveness regarding environmental element. It is important for the L'viv region, as a touristic cluster, for activation of investment flows and regional development in compliance with needs of market and society.

Discussion

The system of management in the process of shaping competitive advantages of gas stations given social and economic aspects of the industry and region activity requires environmental focus during oil products trading. It can be achieved due to research of oil products market in L'viv region. Being a tool for assessing the ecological potential of economic agents, effective environmental management of gas stations provides credibility in dealing with all parties interested in its activities. The purpose of the environmental management of traders is to find solutions to ensure the most competitiveness while managing legal entities with high hazardous potential. Environmental focus of oil products traders is to improve the trading process by determining the volume of procurement, storage and distribution of petroleum products by means of the integral indicator of the ecological status of petroleum products trader.

The result of an environmental management of gas stations is a proposed criterion that takes into account the risks of negative environmental change under the influence of gas stations. It will provide a competitive advantage of gas stations in the regional oil products market, minimization of environmental hazardous impact and improvement of environmental safety around gas station. Also, it will activate the investment processes and ensure the implementation of programs of regional development according to the needs of the market and society to maintain competitiveness of a region and local gas stations.

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