

TO THE QUESTION OF CREATION OF ENERGY CONSUMER FIRM THEORY

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ABSTRACT

Purpose

The work is devoted to the consideration of various theories of firms in the context of their use of problems of energy consumption and increasing the energy efficiency of production.

Methods

The methods used in the study are based on the use of general philosophical and applied methods of analysis, in particular content analysis, as well as maximum consideration of theoretical and empirical data.

Results

The author analyzes the state of research within the framework of the company's theory in the sphere of energy saving and energy efficiency. According to the author, the potential of the company's theories in considering energy consumption and energy efficiency is not disclosed. It is also determined that the solution of these problems is of a systemic nature and should be implemented at the junction of the institutional, technological, financial and economic capabilities of the firm. The conclusion of the paper is the proposal to create a so-called energy theory of the firm.

Keywords: Firm Theory, Energy Saving, Energy Consumption, Energy Theory of The Firm.

INTRODUCTION

In the modern world, the struggle for energy resources is becoming a driving factor in the development of entrepreneurship. Energy saving at the firm level is included in the planning and forecasting of the firm's activities. However, there is still no comprehensive theoretical and methodological base for studying problems in the field of energy consumption.

METHODOLOGY

To form the energy-consuming theory of the firm, an evaluation analysis of the existing theories of the firm is necessary to study the energy consumption of the firm's activities.

The state of research on the selected topic can be carried out in the following areas:

1. Based on the identification of foreign studies that substantiate the creation of different theories of firms (the founders of the theories of A. Marshall, J. Hicks, etc., and their developing demsetz H. (Demsetz H.1997), Jensen MC (Jensen M.C 2001), Foss NJ (Foss N.J. 1996), Cohendet P. (Cohendet P., Llerena P. 1998).

2. Based on the evaluation of the studies, considering the applied aspects of energy consumption and energy conservation without establishing a direct link with the fundamental provisions of economic theory and its methodology. Among foreign scientists dealing with energy saving and energy efficiency of the activities, it can be noted the significant contribution of such scientists as Chen S. (Chen, S., M. Ravallion, 2008), Kilian L. (Kilian, L., 2008).
3. Based on the analysis of existing theories of the company, focusing on the study of energy consumption and energy efficiency. And here it should be noted that at present in the scientific literature the study of the features of the company's theories that consider the use of energy resources is almost non-existent.
4. In general, the review of scientific literature indicates the absence of a special theory of the firm devoted to a deep examination of the problems of using energy resources. A systematic approach will be used to further study the topic.

ANALYSIS RESULT

The revision of traditional and modern theories of firms is based on the content analysis of the use of the terms "energy market", "energy consumption", "energy efficiency", "elasticity of energy services", etc., which allow to determine the level of orientation of the company's theories on the explanation of their approaches to solving problems in energy consumption and energy saving.

The review of the scientific literature for the last 100 years makes it possible to single out only 2 theories of the firm.

1. In Marshall's work it is noted that "the improvement of the electric lighting system should lead to a reduction in the demand for gas; Similarly, a reduction in the price of some sort of tea can cause it to replace with a worse but cheaper variety, "it is quite possible that new methods of transferring the energy of gas, oil and electricity can have the same effect on many other industries (Marshall 1972). In general, this theory emphasizes substitutes and elasticity of demand, the influence of the electric power industry on labor productivity, the role of the electric power industry in the development of industries, the competitiveness of energy resources, and the competitive advantage in the disposal of capital.

2. In the entrepreneurial (Schumpeterian) theory, there are separate arguments about the consumption of energy resources. It is written that "some" forces of nature "in the physical sense will also have the character of products for us - for example, electric current produced for industrial use, on the one hand, they are material, and on the other - intangible objects (Shumpeter, 1982) . Further it is noted that when an electric company employee comes to an apartment in order to eliminate malfunctions in the lighting system, he has to make his own decision to some extent, even about what and how to do. That is, Schumpeter's theory emphasizes that the electric current has characteristic features of the product, the requirements for the behavior of the electrician are specified, it is specified that the energy saving function is mainly based on the human subconscious.

In the remaining discussed theories of the firm, the potential for use in the research process is identified (Table 1).

Table 1
POTENTIAL FOR USING THE COMPANY'S THEORIES IN THE FIELD OF ENERGY EFFICIENCY STUDIES

| No | Characteristics of the theory of the firm | Potential for using the theory of the firm |
|----|---|---|
| 1 | In the contract theory, the main activity of an enterprise is the conclusion and execution of contracts between the enterprise and its internal and external counterparties, as well as monitoring and monitoring the implementation of these contracts (Coarse, 1937) | Investigation of the impact of the conclusion of energy contracts on the activities of the firm. Analysis of the company's profitability in the context of concluded contractual agreements, as well as in the cost of the procedure for concluding and maintaining energy contracts. |
| 2 | In theory, the maximization of revenue, the enterprise produces and sells products, attracting resources in an amount that maximizes the proceeds from its sale (Baumol, 1958). | Valuable is the impact of energy consumption on maximizing total revenue. |
| 3 | In the theory of maximizing the value of a firm, the enterprise conducts economic activities, focusing on increasing the market value of the enterprise (Modigliani, Miller, 1958). | The cost of capital, corporate finance and the value of any firm is determined solely by its future revenues and therefore, does not depend on the structure of its capital. Influence of the energy infrastructure of the enterprise on its market value. |
| 4 | In the theory of a self-managed firm, an enterprise conducts economic activity, realizing a trade-off between maximizing the total remuneration of each employee and retaining employment (Ward, 1958). | The stability of production in existence of special conditions for paying employees of the electric power industry, which ensure the stability of production in any industry. To solve the issues of retaining qualified personnel by regulating the level of wages |
| 5 | In cognitive theory, an enterprise conducts economic and cognitive activities, using knowledge and skills (including collective, personal, explicit and implicit) as one of the resources. (Polanyi, 1962) | Possibilities of using theory to solve problems in the use of intellectual potential of workers in the electricity sector. |
| 6 | In the theory of maximizing the rate of growth of a firm, an enterprise produces and sells products, attracting resources in an amount that maximizes the long-term growth rates of the assets and resources of the enterprise (Marris, 1963). | Value for determining the strategic development of the enterprise. Without attracting energy resources, it is impossible to maximize the growth rate of an enterprise. |
| 7 | In the behavioral theory, the enterprise conducts economic activity and in each period implements the goals of a specific member of the governing coalition, focusing on an acceptable level of achievement of goals and applying routine or subjective search procedures to solve the arising problems (Cyert, March, 1963). | It is possible to analyze the cooperation of various participants of the energy market in order to achieve certain results that are in line with the mission and the interests of the firm. |
| 8 | In the theory of X-efficiency, an enterprise produces and sells products, attracts resources available to it, organizes the functioning of the employee's internal motivation system (Leibenstein, 1966). | Interesting are the attraction of additional energy resources and the increased motivation of workers in energy saving production and sales |
| 9 | In theory, maximizing the utility of a manager, an enterprise produces and sells products, attracting resources in an amount that maximizes the total income of the manager, and the relative and absolute scope of his authority (Williamson, 1996). | Valuable are the opportunities to consider the relationship between the increase in revenue of the management of the energy company and the increase in the number of resources attracted. |
| 10 | In the evolutionary theory, an enterprise reacts to changes in the external environment in accordance with the selected set of inherited and complex rules (routines) that play the role of a genotype. At the same time, the enterprise is a member of the population of agents engaged in competition for the consumer or other sources of income, which leads to the selection and consolidation of appropriate routines (Nelson, Winter, 1973). | This theory has a great potential for researching the problems of energy saving and energy consumption. In particular, the impact of routines on the activities of energy companies. |

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|----|---|---|
| 11 | In the management theory of the conduct of the performer (the "principal agent"), the enterprise conducts economic activities under the direction of the manager whose interests and risk appetite are different from the corresponding characteristics of shareholders, and awareness of the conditions and nature of this activity is higher than that of shareholders (Jensen, Meckling, 1976) | To consider the relationship between managers and owners of energy companies. |
| 12 | In the theory of positioning (in the industry, in the territory, in the administrative space), the performance of the enterprise is determined by the position it occupies in the industry; in the city; in relation to local or federal administration The results of the enterprise's activities are determined by the position it occupies in the industry; in the city; in relation to local or federal administration. (Porter, 2001). | A perspective for studying the relationship between energy companies and state and municipal government and government. |
| 13 | In information theory of firms, the main activity of an enterprise is the receipt and processing of information, as well as its use in the production process. The enterprise organizes its activities in such a way as to minimize (including by specialization) the cost of processing new information and internal dissemination of this information (Aoki, 1986). | Valuable for the study of the electric power industry are the provisions on the special use of different information in order to reduce energy dependence and strengthen the energy security of the firm. |

In general, in the theory of the firm there is a gap on the scientific justification of the place and the value of energy consumption and energy efficiency in the firm's activities from the standpoint of the provisions of economic theory and its methodology. Existing variants of the theory of the firm do not sufficiently take into account the complex processes of energy consumption and energy saving, did not provide recommendations for the management of the firm to achieve certain success in the field of energy efficiency. To justify the creation of an energy-consuming theory, one can orient the main lines of the theory of economic theory

In the neoclassical theory of the firm, energy resources as a factor in the production function occupy a significant place. Firms sometimes abandon profitable opportunities for energy conservation and thus violate basic microeconomic principles. Free resources to focus on improving energy efficiency or profit in any other form is a matter of strategic planning.

In the institutional theory of the firm, energy consumption and energy conservation find their application in the study of relations within the contract system, property rights, "principal agent" (Burganov, R.A., 2016). So, the contract system of the firm, created on the basis of the conclusion with other contractors of energy contracts in the provision of energy services, can be further developed. Energy consumption and energy efficiency of production are related to social, cultural and legal institutions, in particular, to the institution of energy saving (Burganov R.A., 2014).

In the firm's managerial theory, energy consumption and energy efficiency are in the field of the manager's activity and are an integral part of the process of planning and forecasting activities.

In conclusion, we note that in modern conditions for the development of entrepreneurship it is necessary to create a special theory of the firm, which considers the features of its

functioning with the growth of energy resources shortage. The cost and price of energy resources as a product and phenomenon of the firm can become the leitmotif of creating such a theory..

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