

DATA REPORTING IN THE ENERGY SYSTEM OF ROMANIA. BUILDING COMPETITIVE ADVANTAGES IN A GLOBAL ENVIRONMENT

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Abstract

In an ever-expanding world, the development of an organization depends on its ability to innovate and modernize. Companies gain competitive advantages over the world's best competitors thanks to pressures and challenges from the external environment. For example, the unpredictability and vagueness of the legislation that forces them to identify the necessary measures to overcome critical moments in order to reduce as much as possible the material damage, represents the ability of each organization to develop continuously, even if forced by circumstances.

In a labor market dominated by globalization and dynamism, competition has become fierce. Thus, organizations must identify the necessary tools to be competitive. Data analysis has become an indispensable tool for the organization that aims to achieve a competitive advantage in today's business environment.

So, effective data reporting is essential to maintain and improve a company's competitive position in the market. It provides the information needed to make strategic decisions, optimize operations, understand customers, and drive innovation.

Keywords: globalization, organization, analysis, digitization, reporting, energy, strategy

JEL Classification: K32, L10, M38

Introduction

Michael Porter who proposed the theory of competitive advantage in 1985 suggests that states and businesses should pursue policies that create high quality goods to sell at high prices in the market. Porter emphasizes productivity growth as the focus of national strategies.

He states that the industry is like a competition in arena for which the result is the advantage of won or lost. Firms, through competitive strategy, define and establish an approach to competition in their industry that is both profitable and sustainable. There is no one-size-

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fits-all competitive strategy, only strategies are tailored to a particular industry and to a particular firm's skills and assets.

Porter claims that there are two central concerns underlying the choice of a competitive strategy. The first is the structure of the industry in which the firm competes. Industries differ greatly in the nature of competition, thus not all industries can offer equal opportunities for sustained profitability.

The second central concern in strategy is the position in an industry. Some positions are more sustainable than others, regardless of the industry average return.

The attractiveness of the industry and the competitive position represent elements that can be shaped by a company. Successful businesses not only respond to their environment, but also try to influence it in their favor. Indeed, changes in the structure of the industry, or the emergence of new elements for competitive advantage, this is the basis for substantial changes in the competitive position [1].

Competitive analysis involves identifying direct and indirect competitors using research to reveal their strengths and weaknesses relative to those of the organization under analysis.

Competitive analysis has multiple advantages because it helps the organization to develop its long and medium-term strategies, to determine its position in the sector in which it operates, but also to identify weak points to be able to determine the necessary measures that must be taken and implemented to evolve as business.

In order to carry out a correct market research, it is necessary to collect the information that is being pursued. Thus, the data collected must be real, subjective, but also objective.

All this collected information will be found in the activity report, which is a structured and analytical document that respects precise rules.

It is a reference document that provides a broad and complete view of all the actions carried out within an institution or company during a certain period (often a quarter, a semester, a year) and presents the results obtained in relation to the established objectives in the activity program for the past year. It is the key document for making mature decisions oriented towards the success of the organization. Going beyond simple information, the activity report is, in fact, the main document that supports the quality of the decision-making process.

The activity report is a document that includes the figures and strategies developed during a certain period regarding the expected objectives.

In this sense, the activity report of an organization should be structured in such a way as to present the information as concisely as possible, but without losing its essence [2].

Data reporting in the energy system of Romania

The energy sector has a central role in Romania's economic and security policy. Through its climate and natural resources, Romania benefits from an enormous potential in terms of the development of the energy system. It is one of the most prolific sectors for investigations and the most promising for the Romanian economy [3].

Because they are an important system for the functioning of a country, but also for the good functioning of the economy, it is necessary for this industry to be monitored, to avoid market manipulation, but also unfair competition. This monitoring can be done by drawing up a report containing the information in a concise form, but without losing the essence of the subject.

Writing reports is part of every professional's job, as this process also has a strategic, not just an organizational purpose. For many professions, such as accounting, business or engineering, reporting is a core activity as it drives decision making based on documented information.

There are many different formats and styles of writing reports. Reports can vary from informative or evaluation reports to official reports addressed to the head of public institutions of a state. Each report has a specific goal, to communicate with the target audience. A good report that can be defined as an effective report, is a report that produces the expected results. If the author directly presents the objectives pursued and manages to write a well-structured document, there is a better chance that the documents will catch the attention of the reader, be understood and be successful. A report written afterwards gives the publisher and the organization a good professional image and makes them credible in front of the target audience [4].

Each industry must report on the activities carried out. Teams of professionals working together throughout the life cycle of a project must write reports on decisions, activities or results of studies, visits, discussions, and practical work, thus encouraging the communication and preservation of important information over a long period of time, according to current legislation of each state. A well-written and easy-to-read report provides an overview of the project and credibility for the reviewer.

Data reporting in the energy system of Romania aims to monitor the electricity and natural gas market, in order to evaluate the level of performance, efficiency, competition and transparency on the market, also, in order to prevent anti-competitive practices and those that may harm national security in the supply of electricity.

The objectives are:

- determining the degree of efficiency and competition on the electricity and natural gas market and identifying situations that can lead to a decrease in performance in terms of the activity of supplying electricity and natural gas to final customers;
- increasing the level of transparency, and ensuring a fair competitive environment, in order to protect end customers through correct information;

- identification of anti-competitive behaviors.

The process of evaluating the efficiency of the energy market, its competition and performance and determining the behavior of electricity suppliers on this market, is carried out by the specialized department within Romanian Energy Regulatory Authority – ANRE, through a set of well-defined indicators through a set of laws, which is based, mainly, on the collection of data, specific information that characterizes the activity of supplying electricity on the territory of Romania under a competitive regime to final customers [5].

Good practices for a competitive framework in the energy sector in Romania

Competitiveness, although it is frequently used, is still an ambiguous notion, in the sense that there is no unanimously accepted definition. At the microeconomic level, it refers to a firm's ability to compete, grow and be profitable.

In a broad sense, it is the ability of an organization/ enterprise to develop a competitive advantage over the competition. Thus, this concept remains a relative one, according to the definitions of the specialized literature [6].

Competitive analysis involves identifying direct and indirect competitors using research to reveal their strengths and weaknesses relative to those of the organization under analysis.

Competitive analysis has multiple advantages because it helps the organization to develop its long-term and medium-term strategies, to determine its position in the sector in which it operates, but also to identify weak points in order to be able to determine the necessary measures that must be taken and implemented to evolve as business.

In order to carry out a correct market research, it is necessary to collect the information that is being pursued. Thus, the data collected must be real, subjective, but also objective.

In the energy sector, data collection is done under the careful supervision of Romanian Energy Regulatory Authority – ANRE, respecting a well-defined legislative framework, in order to maintain a transparent and fair environment for all market participants.

The activity of monitoring the energy and natural gas market is carried out based on the provisions of the Electricity and Natural Gas Law no. 123/2012 with subsequent amendments and additions, as well as by the Commission Implementing Regulation (EU) no. 1348/2014 of 17 December 2014 on data reporting in order to maintain the integrity and transparency of the wholesale energy market.

All the regulations in force both at the national and international level are aimed at discouraging market abuse, encouraging a transparent framework that seeks to determine a set of indicators that are clear and well defined for all participants in the energy market.

Thus, the entire activity carried out on the territory of a state must be reported, and this process is carried out through the platforms provided by the European stock exchanges that hold an „Organised Market Places” license [7].

The transactions are reported at the level of Romania both to the Agency for the Cooperation of Energy Regulators – ACER, but also to the Romanian Energy Regulatory Authority – ANRE and are based on a set of international and national regulations. The obligation to submit these reports belongs with the REMIT department (the acronym comes from the "Regulation on Wholesale Energy Market Integrity and Transparency) within each organization that provides energy services, which must ensure that the reports have been submitted correctly and without errors [8].

On the territory of Romania, each stock market product traded on the basis of the standard contract established by the Romanian Commodities Exchange – BRM and by Romanian gas and electricity market operator – OPCOM, the European stock exchanges that hold an "Organized Market Places" license, according to the regulations in force, has a name and a specific coding that will be mentioned in the trading report. All these codifications have the role of preventing unfair competition and the development of the energy market at the national and international level, so that there are as many participants as possible in the energy market, and that demand and supply are as diversified as possible.

Example of transaction code for natural gas and electricity:

Transaction code for natural gas	Description
BRMM_month- aaaa_xxxx (the name of that month)	BRM – Romanian Commodities Exchange MM – month Month – the name of the month (January, February, and so on) aaaa – the year (example: 2025, 2025, and so on) xxxx – the identification number assigned to company "Z", being the verification key

Table 1 Transaction code for natural gas²

Transaction code for electricity	Description
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² Appendix 1, Procedure for the organization and functioning of the market for medium and long-term products administered by the company Romanian Commodities Exchange, pp. 21

Monthly Delivery: PCSU_B_L PCSU_V1_L PCSU_V2_L	PCSU – the centralized market for universal service B – energy consumption in the band V – peak energy consumption L – month
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Table 2. Transaction code for electricity³

These codifications are based on clear procedures, prepared under the careful supervision of ANRE - the National Energy Regulatory Authority, as follows:

Procedure for the organization and functioning of the market for medium - term and long - term products administered by the company Romanian Commodities (for Natural Gas) [9].

The operational procedure for conducting auctions on the centralized market for the universal service administered by Romanian gas and electricity market operator (for electricity [10].

These operational procedures, aim is to ensure a high degree of competitiveness, greater customer orientation, flexibility and non-discrimination on the European electricity market, with supply prices based on demand and supply.

In this sense, they strengthen and expand the rights of customers and energy communities, contribute to the fight against energy poverty, clarify the roles and responsibilities of market participants and regulatory authorities, and address the issue of security of supply of electricity, gas and oil, as well as the development of trans -European networks for the transport of electricity and gas.

Also, the Operators on the centralized markets are obliged at the end of the trading day to send a report in electronic format to Romanian Energy Regulatory Authority – ANRE. This report will be according to the table below, in editable format (excel), and will be sent no later than the 20th of the current month "L" for the previous month "L-1". As can be seen below, the form of an electronic report contains the following information:

- Auction session date
- The name of the standard product offered
- The name of the holder of the tender obligation
- The quantity offered (MWh)
- Offered price (MWh)
- The quantity traded (MWh)
- Traded price (MWh)

³ The operational procedure for conducting auctions on the centralized market for the universal service administered by Romanian gas and electricity market operator, pp. 8

Although it could be stated that this information is minimal, for the organizations responsible for monitoring the activity, the information is sufficient to identify if there are attempts to manipulate the energy market.

Auction session date	The name of the standard product offered	The name of the holder of the tender obligation	The quantity offered (MWh)	Offered price (MWh)	The quantity traded (MWh)	Traded price (MWh)
Total/Product						

Table 3. Offer obligation report

It can be stated that in order to be able to monitor the reporting process of the activities carried out in each field of activity, the structure of the reports must be similar for each industry, so that the centralization and analysis of the data to be an easier process. The creation of layouts/ models, which could be made available to each institution that is obliged to report information about the activity it has, would contribute to a well-defined and organized framework. Therefore, both parties involved in the reporting process would save time, a valuable asset these days [11].

Improving the reporting process to the competent authorities

The purpose of the research was to identify the opinion of adults from various sectors of activity regarding the efficiency of the reporting process, but also to identify solutions for a functional system at a high level, according to European requirements. In order for the activities carried out on the territory of a state to be successful in such a changing environment, it is necessary to implement some quality services and, at the same time, to hire a competent staff, who can cope with all the changes and meet the demands of the customers.

Also, in order to be able to determine the necessary measures to improve the reporting process, we must first draw the objectives and establish the assumptions of the problem.

The objectives of the research are:

Objective 1: Determining the problems encountered by staff from various fields of activity in the relationship with the state when certain reports are requested regarding the activity carried out within the company in which they work;

Objective 2: Determining the methods/ measures needed to improve the reporting process;

Objective 3: Determining the impact of periodic reporting to the competent institutions, for the implementation of regulations to protect small entrepreneurs.

The research hypotheses are:

Hypothesis 1: We assume that the level of staff satisfaction increases when the statute offers quality services and well-trained staff to be in the reporting process, thus reducing the problems they still face;

Hypothesis 2: We assume that the implementation of a professional training program could lead to the improvement of the reporting process. Also, simplifying the reporting process and eliminating red tape can be big steps towards evolution;

Hypothesis 3: We assume that the digitization of the reporting process could lead to periodic regulations, so that there is a legal framework that offers equal opportunities to all entrepreneurs.

The research was carried out to see what the problems people are face most often when they have to make periodic reports to the competent authorities, in order to find the best measures to improve the reporting process. Thus, for this research, the analysis method was "Survey based on questionnaire", through which the hypotheses established at the beginning of the study could be confirmed or denied.

Analysis method: Survey based on questionnaire.

Target group: 80 people from all fields of activity.

Statistical survey results:

Gender: 66.25% women, 33.75% men

Age: 60% of people who took part in this survey are over 30 years old, 15% are between 31 and 40 years old, 14% between 31 and 40 years old and only 8.8% over 51 years old.

Professional category: medical (15%), economic (27.5%), technical (20%), IT (10%), administrative (13.8%), and other professional categories (13.7%).

Education: high school (3.75%), university (61.25%), postgraduate (35%).

Starting from hypothesis 1, in which we assume that the level of staff satisfaction increases when the state offers them quality services and well-trained staff to support them in the reporting process, thus reducing the problems they face, we can state that this hypothesis it is confirmed given the answers received from the interviewed persons. They stated that the lack of communication is the biggest problem in the relationship with state organizations. In addition to the previously mentioned major problem, others such as:

- The bureaucratic system;
- Lack of digitization;
- Lack of transparency and cooperation.

To eliminate these problems that we all find ourselves in every day, there would be solutions, but the costs are high and the implementation time is long.

The next hypothesis assumed the implementation of a professional training program that could lead to the improvement of the reporting process. Just like the previous hypothesis, this one was confirmed by the answers sent by the people participating in the investigation.

The solutions identified to improve the reporting process were the following:

- Digitization and regulation of some situations by means of clear laws that leave no room for interpretation;
- Hiring young and well-trained staff;
- Trainings for employees;
- The existence of online platforms for data processing;
- Clear presentation of the requirements for the content of the report;
- Drafting of clear procedures;
- Using applications to fill in the information required in reports and create a general report template, respectively
- Elimination of bureaucracy.

As we can see, in order to develop a system of maximum efficiency and sustainability, innovation must be supported by a well-trained staff, the digitization of reporting activities, but also the existence of well-defined procedures.

In addition to the two hypotheses, followed the hypothesis that concerned the digitization process through which we assumed that the digitization of the reporting process could lead to periodic regulations, so that there is a legal framework that offers equal opportunities to all entrepreneurs.

So, statistically, according to the results, 83.75% agree that the periodic reporting of data to state institutions helps to implement some regulations, so that the state also protects small entrepreneurs, and 16.25% disagree, being divided into categories: 5% consider that reporting does not help to implement some regulations, and 8.75% do not think that it helps and only 2% consider this aspect irrelevant.

This statistical survey sought to determine the best measures to improve the reporting process.

Through this research, it was possible to identify the situations faced by the employees in the relationship with the state, but also the necessary measures that could lead to better collaboration.

The first objective was to determine the problems faced by staff from various fields of activity in the relationship with the state when certain reports are requested regarding the activity carried out within the company where they work.

It could be observed from the statistical survey that the lack of communication is the biggest problem faced by the staff involved in the reporting activities. This lack of communication

also occurs because of poor professional training, an outdated system, but also because of bureaucracy.

Thus, we can say that the level of satisfaction of the staff responsible for reporting increases when the state offers them quality services and well-trained staff to support them in the reporting process, thus reducing the problems they still face.

The second objective aimed to determine the methods/measures needed to improve the reporting process. The answers received from the respondents were mostly related to the implementation of training programs, but also to the simplification of the reporting process and elimination of bureaucracy.

The last objective was related to determining the impact of periodic reporting to the competent institutions, for the implementation of regulations to protect small entrepreneurs.

Thus, it can be concluded from the answers collected that the digitization of the reporting process could lead to periodic regulations, so that there is a legal framework that offers equal opportunities to all entrepreneurs.

Conclusions

Competitiveness is a broad concept, which cannot be concretely defined, but which requires companies to continuously innovate, adapt and differentiate themselves in order to be successful.

In a constantly expanding world, the development of an organization depends on its ability to innovate and modernize, to surpass itself. Companies gain competitive advantages over the world's best competitors due to pressures and challenges from the external environment.

Thus, we can conclude the following: the concept of competitiveness associated with an organization must suggest efficiency, adaptability, productivity, trust and safety, but also transparency.

Transparency strengthens ethical conduct and integrity by promoting openness, honesty and accountability in organizational practices and decision-making. By establishing a culture of monitoring and transparency, organizations can increase their resilience, sustainability and long-term success.

By reporting the data, the efficiency of the activities is achieved. Thus, data collection, grouping, monitoring enable analytical processes of abstraction, calculation, modeling and classification of information and knowledge. At the same time, the collected data also ensures a fair competition of activities not only in the energy system, but in all fields of activity, thanks to the monitoring process that ensures transparency and integrity at the level of each state.

It is important to know what the problems are in the process of reporting information, because reporting is the activity by which both participants and consumers of products and services are assured that they can trust the integrity of the markets, thus there is a balanced and competitive interaction between demand and supply, not being able to make profits through market abuse.

Considering the results from the statistical survey, it can be stated that a real problem is the lack of communication which significantly affects the reporting process, as much as bureaucracy.

This lack of communication comes from a lack of professional training, so the first step to improve the reporting process must be the implementation of training, because people are the most important asset in a company.

Another problem identified in this research was related to the lack of digitization of the system.

Access to and use of cutting-edge digital technologies can drive efficiency in any field of activity, but progress in integrating technology into daily activities is slow, partly because of very high costs.

In today's society, information is an important asset that gives "power" to its owner, whether we are talking about written or oral information. Therefore, more and more organizations have been looking for alternatives to protect their information. Although the information itself may not be very informative, it forms the basis of all reporting and is a key element of the business environment.

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