

Diagnostic of Operational Systems in the Pharmaceutic Industry in Pandemy

Vasilică Rusu

*Free Internationalal University of Moldova, Doctoral School, Chişinău,
cabinetaesm@yahoo.com*

Abstract

In the framework of the increasing competition and the danger of the pandemic global crises, it becomes necessary to boost the operational systems in the pharmaceutical industry, improve the activity related to resource processing, in order to ensure the stability of the organizations. The operational systems of pharmaceutical companies are changing every decade, together with changes in production management, focusing primarily on productivity and economies of scale, economy quality, production flexibility on the scheduling of production, customer, and then - to the economy of speed, innovation, and knowledge, skills and cooperation.

One of the most important features of the operational systems is the operational strategy and its flexibility and adaptability because in the real business environment there are frequent changes in economic models, financial architecture, and production technologies. Therefore the operational strategy must take into account the current state of productive potential and the level and type of uncertainty, propose changes that will lead to the formation of future productive potential that will maintain or increase the level of competitiveness of the enterprise.

Key words: operational system, operational strategy, enterprise, management, pharmaceutical industry.

J.E.L. classification: I15

1. Introduction

The strengthening of the Romanian economy is based on ensuring the sustainability of industrial development and its primary links. For this reason, it is important to formulate strategic directions to increase the size and ways of using the productive potential of the enterprise. The author agrees with some researchers, who say that increasing the efficiency of using the resource potential of the economy is one of the most important criteria for successful reform in Romania. The main direction in diagnosing the operational system is to take into account the assessment of the productive potential. In the view of recent developments, discussions on the long-awaited EU pharmaceutical strategy are expected to be heated. The priorities, in this period of crisis for Europe, are to ensure the supply of medicines to patients who need them, research and development of new vaccines, diagnostic methods and treatments for use in the fight against COVID-19, make partnerships, and support organizations on the ground in combating COVID-19.

2. Literature review

The main direction of diagnosing the operational system is to consider the evaluation of the productive potential.

During different periods of economic development, the objectives for determining and assessing the productive potential of enterprises were drawn differently. The theory of potential emerged in the 1960s and 1970s when the systematic presentation of the main approaches to the representation of the indicated problem was defined. Studies that have identified the components of productive potential, as well as the defining aspects of this phenomenon, are known from the 1960s to the

1970s. It should be noted that the most widespread peculiarity is the view of resources on productive potential, which appears as a system of interdependent and interrelated production resources. In further research, the resource approach has developed in two directions: 1) the potential is considered as a complex of resources that are not interdependent with one another; 2) the interdependence of resources is accentuated. Gâf-Deac M. (2008) reveals the productive potential as a set of resources, which take the form of factors in the production process. A similar view can be found in Weber L. (2017), who sees the potential as a generalized, collective feature of resources.

Resource interdependence is defined by Goodfellow R. (1993) which characterizes productive potential as a resource complex without taking into account the real relationships that arise in the production process. For its part, Nebl T (2002), stresses out that the resource components of productive potential must be used for creative purposes and also indicates the need to integrate their resources, which reflects the second aspect in the resource approach. The importance of one or another combination of resources, their structural state, can be seen in the researches of Detmer W. & Schragenheim E. (2002), where the productive potential is presented as a complex of resources combined in the production process potent in the production of material goods. A similar situation was exposed by Popa I.&Duta L. (2017), who considers the productive potential of the complex of organically interconnected resources in terms of operational activities, enabling the achievement of an objective level of economic results.

Sharma S. (2014) emphasizes the limiting properties of the concept under investigation, arguing that the productive potential is characterized by quantitative and qualitative parameters of production resources and determines maximum manufacturing opportunities in each time frame.

The development of research has contributed to the division of the concepts of “potentially productive” and “resource potential”, assuming that the latter is an integral part of the former. Development of the 21st-century resource concept, Caracia M.&Dell'Olmo P. (2006), insists that production systems, regardless of their size, must work with limited resources in dynamic environments. Managers are asked to designate production activities over time in parallel activities, respecting operational constraints and deadlines, while keeping resource costs at the lowest level. Thus, we can consider the potential of resources as the material and technical basis of the productive potential. According to other authors, the resources involved in the manufacturing process have already acquired a new quality of inputs, which is reflected in the productive potential at the time of its use, when effective factor interaction is ensured (Hill T, 2014).

However, it may be observed the ambiguity of interpretations of potential possibilities extracted from the resources used. Bosworth B. (1993) insists on the introduction of another concept, namely: “internal productive potential”, which requires understanding the volume of all production resources and their potential opportunities that the economic system has at the production stage. It acts as an organic unit of all the basic elements of the production process that are processed or can be exploited. However, we can conclude that, in modern economic science, the perception of productive potential (manufacturing potential) has expanded, taking into account such characteristics as the integration and mutual substitutability of its potent components. There is an understanding that the balanced relationship between the components of potential leads to an increase in the maximum productivity of the economic system.

It should also be noted that modern definitions of production potential are characterized by a more detailed description of resource components. Besides, the term 'productive potential' is part of the “economic potential of the enterprise”. At the same time, this trend of expanding the limits of productive potential complements the reverse aspiration to deepen the research need of its separate components.

According to some authors, McKinsey & Company's leaders in resource production operations, the company's potential is characterized by production capacities, internal development resources, financial resources, limited resource stocks, which can be used to achieve certain socio-economic objectives in the business environment (Hammer M&Somers K. 2016). It is also stated that the components directly involved in the production process (productive-technological, personal, natural resources, primary, financial, investment, innovation, intellectual) are often included in those that cannot be considered directly involved in the production process. According to this point of view, the productive potential of an enterprise represents the real opportunity, taking into

account the existence and rational use of all interdependent factors of production, in order to achieve strategic objectives in a dynamic external environment and the sustainable development of the enterprise.

According to Anastase I. (2007), the potential of the economic system would, by summary, entail all the possibilities of economic unity as an object of management with the impact of exogenous and endogenous factors of the external environment for a certain period. The above definitions underline the need to achieve corporate objectives by using productive potential. However, there are also opinions mentioning the relationship between the competitiveness of the products and the potential of the undertaking. For example, Moldavian author Belostecinic Gr. (2006), suggests that productivity, is a result of the quality of products and services, because the lack of quality leads to a halt in productivity, due to problems that arise in the marketing of lower quality goods. Thus, as part of the resource-based approach, more opinions have been developed so far.

By generalizing them we can affirm that the productive potential represents the complex of resources used in operational activities to achieve the strategic and tactical objectives of the enterprise. At the same time, the resource-based approach cannot be considered unique. Along with this, there is a market approach or an approach to economic efficiency.

Several definitions of productive potential reflect the results of production, taking into account the operational capacities of the undertaking. For example, this is understood as the actual volume of manufacturing, which can make full use of available resources, as well as the existing productive potential, the availability of inputs, the availability of the complex of defining resources. For an effective approach, in the author's opinion, the following interpretation can be attributed: the productive potential is the systemic unit of fixed assets, production personnel, and production areas. In general, the economic efficiency approach provides a more comprehensive picture of productive potential. On the other hand, it is necessary to recognize the existence of interpretations aimed at the vision of the efficient use of resources to achieve productive potential.

Indeed, in my view, it is difficult to stick to one of the two identified directions, because we cannot deny either the importance of the resources, the optimal combination of which leads to the outcome, or the importance of the result which characterizes the level of efficiency of the productive potential. Therefore, in the thesis, the production potential is seen as the complex of the enterprise resources used for the efficient functioning of the operational process.

It should be understood that the productive potential of industry subjects does not exist in isolation, it regularly interacts with the external environment (suppliers, customers, government, etc.), it is part of the industry and the economic potential of the country. Therefore, as Pinto J. (2017) notes, a modern economy can only function effectively if it makes the best use of existing enterprise capabilities and is oriented towards forecasting future trends.

Referring to the methodological aspects of assessing productive potential, it is interesting to analyze the existing perspectives in science on its components.

The scientist Ionescu V. (2010) points out that the productive potential of the enterprise depends on the quantity and quality of available resources, the number, qualification, and competence of employees, insurance with fixed and current assets, the level of stocks, the importance of non-material resources, the ability of the enterprise to renew manufactured production, the change of management structure and the perception of innovation. Based on these characteristics, the productive potential appears as a combination of the economic opportunities of the enterprise.

3. Research methodology

The research methodology has an analytical character and mainly it is focused on specialized literature research based on the use of theoretical analysis methods: abstract and logical, economic-statistical, structural and functional, constructive. In the process of research, methods of systemic analysis, as well as methods of economic analysis were used.

4. Results

Thus, during the study, we identified some unresolved issues in the field of assessing productive potential. Firstly, the listed components of the potential are not sufficient to characterize it in a situation of uncertainty. Secondly, approaches to financial analysis are not transparent, but productive potential needs to be measured. We can agree with the dominant view of the difference in assessing its real potential and level of use. It is, therefore necessary to propose a methodology for calculating the size and level of use of the productive potential of an industrial undertaking operating under uncertain conditions. In the author's view, the characteristic of productive potential should also be the ability of the undertaking to react to changes in the external environment and the ability to consolidate itself in the outlets in the event of negative results of uncertainty.

The proposed method shall take into account not only the usability of the separate components of the productive potential but also the degree of development of the potential element, which is used in contrast to the cost characteristics as a measure of the potential size. Also, we consider it necessary to distinguish the following components of productive potential:

- investment and innovation, encompassing the company's ability to maintain the current situation and strategic development and includes financial opportunities, the potential of scientific and technological skills, increasing the competitiveness of products;
- the organization of human resources, which includes the existing human resources and the administrative resources of the enterprise, allowing the development of the necessary structure of business relations and processes;
- marketing and sales, which is responsible for adapting the supply of products to market requirements and reducing information uncertainty, and increasing operational efficiency by researching the directions of development of competitive advantages;
- informational and technological, which reinforces the vision of the potential of funds and information potential, as information and communication tools, as the basic equipment can be attributed to the funds of productive potential.

Thus, the logic of the proposed division is based on the ability to see in the productive potential the parties responsible for development, structure, adaptation, and reaction for the content of the funds.

5. Conclusions

In conclusion, as a result of the use of opinion polls carried out in industrial enterprises, it was found that policies must be implemented to help create and support this long-term research ecosystem, as well as ensure access to medicines for patients who sustainable need them in a way for health systems today and tomorrow.

The operational strategy must take into account the current state of productive potential and the level and type of uncertainty, propose changes that will lead to the formation of future productive potential that will maintain or increase the competitiveness of the pharmaceutical industry. In the research, several unresolved issues in the field of productive potential assessment were identified. Firstly, the listed components of the potential are not sufficient to characterize it in a situation of uncertainty. Secondly, the approaches to financial analysis are not transparent, but the productive potential must be measured. We believe that by working together and sitting together around the table, after COVID, Europe can achieve both ambitions.

6. References

- Anastase I., 2007. *Factors impacting the productive potential of the enterprise*. http://www.mi.bxb.ro/Articol/MI_27_1.pdf [Accessed 14 November 2020].
- Belostecinic G., 2006. *Quality, productivity and evaluation of the competitiveness of the enterprise*. [online] https://ibn.idsi.md/sites/default/files/j_nr_file/Economica%202006_3%2855%29.pdf [Accessed 13 November 2020].
- Bosworth B., 1993. *Significant others: Exploring the potential of manufacturing networks*. Oxford: Regional Technology Strategies, Inc

- Caracia M. Dell'Olmo P., 2006. *Effective Resource Management in Manufacturing Systems: Optimization Alogomyths for Production Planning*. London: Springer
- Detmer W., Schragenheim E., 2000. *Manufacturing at Warp Speed: Optimizing Supply Chain Financial Performance*. UK: CRC Press
- Goodfellow R., 1993. *Manufacturing Resource Planning. A pocket guide*. R. Goodellow,
- Gâf-Deac M., 2008. *Managementul productiei: Teoria si practica organizarii*. [Production management. Theory and practice of organization. Bucharest: Romania Foundation of Tomorrow
- Hammer M., Somers K., 2016. *Unlocking Industrial Resource Productivity: 5 Core Beliefs to Increase Profits through Energy, Material, and Water Efficiency*. McKinsey Publishing
- Hill T., 2014. *Manufacturing Strategy: Text and Cases*. London: Palgrave
- Ionescu V., 2010. *Production and service management*. Bucharest: University
- Jeston J., Nelis J., 2014. *Business Process Management*. UK: Routledge
- Jacob A., 2018. *Tax uncertainty in Romania*. Available at: <https://startupcafe.ro/afaceri/ey-afaceri-romanesti-planuri-investitii-incertitudini-fiscale.htm> [Accessed 12 November 2020].
- Nebl T., 2002. *Production Management Produktionswirtschaft*. Germany: Oldenbourg Wissenschaftsverlag
- Popa I., Duta L., 2017. *Flexibilitatea sistemelor de productie [Flexible manufacturing systems*. Bucharest: Agir Publishing House.
- Pinto J., 2017. *Operations Management: Managing Global Supply Chains*. 1st Edition. Boston: SAGE Publications, Inc.
- Sharma S., 2014. *Manufacturing Operations Management*. Florida: CRC Press.
- Weber L., 2017. *Production, Growth, and the Environment*. UK: Taylor & Francis Ltd