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EVALUATION OF CONTEMPORARY MANAGEMENT CONCEPTS FOCUSED ON SUSTAINABLE DEVELOPMENT

OCENA WSPÓŁCZESNYCH KONCEPCJI ZARZĄDZANIA UKIERUNKOWANYCH NA ZRÓWNOWAŻONY ROZWÓJ

Abstract: The development of the technical and technological environment in which modern production companies operate requires managers responsible for production processes to introduce management concepts that will correlate with the company's environment. From among the many concepts of managing production activities, one should choose one that will have a positive impact on the natural environment, while ensuring the achievement

of the company's economic goals. The article characterises the main management functions that are the basis for the implementation of all production processes. In the further part of the study, research methods are described and the results of own research are included. The study evaluates and comparatively analyses contemporary management concepts in terms of sustainable development. The article also includes the purpose of the study and research hypothesis. Conclusions that result from the conducted research are at the end of article.

Keywords: management concepts, sustainable management functions, manufacturing company, sustainable development

Streszczenie: Rozwój otoczenia techniczno-technologicznego, w którym funkcjonują współczesne przedsiębiorstwa produkcyjne, wymaga od menedżerów odpowiedzialnych za procesy produkcyjne wprowadzenia takich koncepcji zarządzania, które będą korelowały z otoczeniem środowiskowym firmy. Spośród wielu koncepcji zarządzania działalnością produkcyjną należy wybrać taką, która w korzystny sposób będzie oddziaływać na środowisko naturalne, zapewniając przy tym osiągnięcie celów ekonomicznych przedsiębiorstwa. W artykule scharakteryzowano główne funkcje zarządzania stanowiące podstawę realizowania wszelkich procesów produkcyjnych. Opisano również metody badawcze i zamieszczono rezultaty przeprowadzonych badań własnych. W badaniu dokonano oceny oraz analizy porównawczej współczesnych koncepcji zarządzania pod kątem zrównoważonego rozwoju. W artykule zawarto także cel opracowania i hipotezę badawczą. Na końcu zamieszczono konkluzje, jakie wynikają z przeprowadzonych badań.

Słowa kluczowe: koncepcje zarządzania, zrównoważone funkcje zarządzania, przedsiębiorstwo produkcyjne, zrównoważony rozwój

Introduction

Traditional approach to managing production activities has significantly changed. Along with the changes taking place in the economic environment of manufacturing enterprises, changes in the basic management functions are increasingly observed. Planning the production process, organising material, financial and human resources, as well as motivating staff and controlling the performed work are subject to change under the influence of the concept of sustainable development¹.

The economic and social development of the modern world is inevitable. Consumers are becoming more and more demanding. Demand for various goods is also increasing. For this reason, manufacturing companies must take up the challenge of transforming production into sustainable production that takes into account the environmental, social and economic

¹ J. Pfeffer, Building Sustainable Organizations: The Human Factor, "Academy of Management Perspectives" 2017, vol. 24, no 1, pp. 34–45.

aspects of the organisation. High-level employee staff making strategic decisions in an enterprise should be aware of the importance of matching management functions to the requirements of sustainable development ideas². Otherwise, rapid and irreversible destruction of the Earth's ecosystems will occur, and thus the existence of man will be threatened. It should be remembered that some natural resources are non-renewable, and their resources are estimated at several dozen years³. The attitude of consumers themselves also has a big impact on production. Excessive consumerism is currently observed. Societies are becoming more consumer, which translates into the volume of production in order to meet the increasing demand.⁴ For this reason, responsibility for the fate of societies and the state of the environment lies not only on sustainable production management, but also on consumers.

1. Theoretical background

Managing production activities is based mainly on four management functions such as: planning, organising, leading and motivating staff as well as controlling the performed work. The management functions commonly known in business operations should be subordinated to the principles of sustainable development. For the purposes of this sphere, they can be defined as follows⁵:

- planning sustainable production activities by setting its objectives and developing the most,
 - effective ways to achieve them,
- organizing sustainable production activities by providing resources necessary for itsimplementation,
- directing and motivating staff, that is, causing staff acted in a way that contributes to achieving the sustainable production goals set,
- control, i.e. defining best practices and actually confronting the preformed work in the field of sustainable production and possible adjustments.

Planning is one of the basic management functions and occurs at all levels. Planning is carried out at the higher levels of organization. The planning function is closely related to the decision making process of a specific set of available solutions. Understanding the

² T. Trojanowski, *Sustainable Management of Production Activities in Polish Enterprises of the Food Industry,* "Management Theory and Studies for Rural Business and Infrastructure Development" 2020, vol. 42. no. 1, p. 81.

³ J. Hall, M. Wagner, *Integrating Sustainability into Firms Processes: Performance Effects and the Moderating, Role of Business Models and Innovation*, "Business Strategy and the Environment" 2012, vol. 21, pp. 183–196.

⁴ K. Govindan, *Sustainable consumption and production in the food supply chain: A conceptual framework*, "International Journal of Production Economics" 2018, vol. 195, pp. 419–431.

⁵ A. Pabian, Zrównoważony marketing nowym wyzwaniem dla personelu kierowniczego polskich przedsiębiorstw, (in:) A. Pabian (ed.), Zarządzanie działalnością marketingową w skali krajowej, międzynarodowej i globalnej, Wydawnictwo Wydziału Zarządzania Politechniki Częstochowskiej, Częstochowa 2011, pp. 249-261.

environment in which the company operates allows to effectively define an action plan. In addition, taking into account the established mission of the company, managers define a whole branch of goals, which then become the basis for adopting appropriate action strategies at all levels. Sustainable production planning is a process in which information is processed in stages from the most general to the detailed ones. In the developed system, it consists of forecasting, programming and planning, which as a whole form a forecasting and planning system. Each of its components differs from the other in terms of scope, detail and time horizon. Planning involves specifying the main (primary) and auxiliary goals, determining the resources necessary to achieve them, establishing the order and deciding how to use these resources. Planning is setting out your organisation's goals and determining how you can achieve them. A properly developed sustainable production plan answers the following questions: what needs to be done in this sphere? Who should do this? How should it be done? When to do it? Where to do it? What will be needed for proper implementation?

The second important step in managing sustainable manufacturing activities is organising production activities. This function applies primarily to staff involved in production processes. Through the organisation of work, the obligations, rights and responsibilities of individuals are defined. Organising contributes to the creation of an employee structure in the enterprise by defining the hierarchy of employment. Such assignment shows who performs managerial functions in the company and who is subject to them, and who constitutes the executive personnel. The essence of organising is also to provide the resources necessary to start production activities. Preparation of the organisation for the effective implementation of plans takes place at all levels: organisational, human resources, technology, tools, materials, financial, information, investment and others. The factor connecting the above planes of preparation within organisation is the formal organisational structure of the sphere of executive activities¹⁰.

The previously presented sustainable production management functions cannot be effectively implemented without properly motivated staff. In determining the meaning of motivation, it is useful to explain the concept according to experts in this area of knowledge. Authors of literature publications related to organisation management define motivation in various ways. According to H. Bieniok, "motivating consists in influencing human attitudes and behaviour through specific stimuli that transform into motives for actions that trigger his activity." Another author, W. Bańka, defines motivation as: "motivation in the systemic meaning is the internal state of the body

⁶ R.W. Griffin, *Podstawy zarządzania organizacjami*, PWN, Warszawa 2002, p. 8.

⁷ T. Pszczółowski, *Organizacja od dołu i od góry*, PWE, Warszawa 1996, pp. 321-325.

⁸ R.W. Griffin, *Podstawy zarządzania...*, p. 8.

⁹ A. Pabian, Zrównoważony marketing..., pp. 249- 261.

¹⁰ A. Hamrol, W., Mantura, Zarządzanie jakością. Teoria i Praktyka, PWN, Warszawa 2002, p. 74.

H. Bieniok, Metody sprawnego zarządzania, Wydawnictwo "Placet", Warszawa 2001, p. 247.

conditioning behaviour or action"¹². However, according to K. Piotrowski, motivation is "a set of factors that cause, direct and support people's behaviour"¹³.

Motivation is associated with the internal emotional state of a person, helps in making decisions that relate to the performance of activities aimed at achieving specific goals. This is a factor on which depends the efficiency of work. Need becomes a source of motivation. Therefore, for an incentive system to be effective, it should meet the needs of employees. Needs can be divided into two groups: common and individualised. The first concern employees who, when being employed in a company, expect to comply with the content of the employment contract, in particular regarding remuneration and working time. The individual needs relate to promotion, raising qualifications, etc.¹⁴

Staff motivation largely depends on the size of the company. A large, thriving company, being, for example, a market leader in the sale of specific products, means that people employed in this organisation are satisfied with their work bearing in mind that they are part of the organisation and contribute to the company's success with their work. Working in the structures of a market leader gives a sense of pride and superiority over others. The company's strong position on the market is the result of well-done work of the entire team, in particular high-level staff - managers, directors, and board¹⁵.

The last function of consistent management of sustainable production activities is control. It consists in establishing best practices in the field of production and confronting the actually performed work. In the event of irregularities in the results of work performed, corrective and non-compliant actions should be taken. The audit aims to improve production activities. Sustainable production control is an integral part of managing production activities in a sustainable enterprise. Properly carried out, it not only indicates irregularities and negative trends in the production area, but is also an incentive for management and executive staff to continuously improve production processes oriented on sustainable development ¹⁶.

2. The aim and research methods

The aim of the study is to draw attention to the need to adapt the production activities of enterprises to the principles of sustainable development in the face of the progressive degradation of natural environment and growing social problems.

 $^{^{\}rm 12}~$ W. Bańka, Zarządzanie personelem: teoria i praktyka, Wydawnictwo Adam Marszałek, Toruń 2000, p. 190.

¹³ K. Piotrowski, *Organizacja i zarządzanie*, Wydawnictwo Wyższej Szkoły Ekonomicznej w Warszawie, Warszawa 2001, p. 138.

¹⁴ S. Borkowska, *Motywować skutecznie*, IPiSS, Warszawa, pp. 47-48.

¹⁵ T. Trojanowski, *Motivating sustainable marketing staff members*, "Zeszyty Naukowe Wyższej Szkoły Humanitas" 2013, vol. 2., p. 43.

¹⁶ M.S. Ghazvini, V. Ghezavati, S. Raissi, A. Makui, An Integrated Efficiency – Risk Approach in Sustainable Project Control, "Sustainability" 2017, vol. 9. no 9, p. 1575.

As part of the considerations, a research hypothesis was put forward: contemporary management concepts to a small extent take into account the ideas of sustainable development. The research method used to help achieve this goal is the study of literature on the subject based, inter alia, on the use of secondary sources such as: domestic and foreign compact scientific publications, scientific articles, scientific magazines, conference materials, online information services in the field of subject. Qualitative research allows to deepen the knowledge about a given phenomenon, and thus provides new quality of information. In the absence of a quantitative approach, they do not use statistical inference.

The nature of the research issues condensed in the aim of the study obliges to analyse it in the theoretical layer. There is a need in the theoretical layer to present the theoretical foundations relating to modern concepts of sustainable production management. Achieving this goal ensures the conduct of extensive literature studies covering foreign and domestic source materials, as a result of which the existing state of knowledge is confronted with the determination of further directions of empirical research. The theoretical analysis provided the basis for an attempt to assess contemporary management concepts in terms of sustainable development.

3. Research results

The aim of the research is to analyse contemporary management concepts characterised by pro-environmental and prosocial features in relation to the production activities of enterprises. The purpose of the analysis is to identify a management concept that is as close as possible to the principles of sustainable development. To achieve this, the following management concepts were analysed: Benchmarking, Reengineering, Total Quality Management (TQM), Lean Management, Outsourcing and Knowledge Management. To assess the presented management methods, the following issues were taken into account: description of the method, disadvantages of the method, advantages of the method, and general assessment of the examined concept. The assessed methods were assigned a negative - disadvantages (-) and positive - advantages (+) scale.

Table 1. Comparative assessment of the concept of management for sustainable development Tabela 1. Ocena porównawcza koncepcji zarządzania pod kątem zrównoważonego rozwoju

	I. Benchmarking	5	
Description of management concept	Disadvantages	Advantages	Overall assess- ment -/+
The use of benchmarking requires courage in identifying own weaknesses and wisdom to try to learn from the best. It is therefore a universal method of improvement through the use of the best knowledge and experience in a given field	- possible problem with finding the right benchmark that, in ad- dition, will want to share knowledge, - a variety of indicators, which constitute a com- parative parameters, - using indicators not always gives a clear picture of the partner and enables understanding, - high costs of operation, which doesn't always end with success	- the need for continuous learning and improvement, - increased innovation of products and processes, - appointing ambitious goals that contribute to desired growth of efficiency	/+ ++
	II. Reengineerin	g	<u> </u>
Description of management concept	Disadvantages	Advantages	Overall assess- ment
Reengineering means radical, process-oriented changes in the organisation. The authors of the concept recommend disposing old habits and building the entire organisation from scratch. This radical treatment of the company associated with the transformation of processes entails changes in the organisational structure and management style	- social consequences in form of dismissals of employees - authoritarian leader- ship style when intro- ducing concepts	- cost reduction, - improvement of quality, - shortening cycles of production, - increase in profitability of company, - customer satisfaction	/++ +++

III. Total Quality Management (TQM)			
Description of management concept	Disadvantages	Advantages	Overall assess- ment
TQM is a management system based on human resources oriented to the process of continuous improvement of products or services, maintaining the principle of bearing the lowest possible cost. The synonyms of quality in this method are therefore excellence and results	- different course in different enterprises, - time consuming, long-term development planning process of the whole company, - requires regularity and firmness	- elimination of errors in proceedings, - control at all levels of implementation process, - evaluate business partners based on both, the delivery price and the quality, - eliminating goals contrary to the quality rules, - creating the atmosphere of support and commitment of managers in employees affairs, - introduction of training system for employees - TQM meaningfully affects corporate sustainability and develops a TQM-Knowledge management proposal - TQM has a significant and positive impact on corporate green performance	/++ ++++ ++

IV. Lean Management			
Description of manage- ment concept	Disadvantages	Advantages	Overall assess- ment
Lean Management means "slimmed" management. The pedigree of the concept has its roots in the Lean Production method. The involvement of human resources in the transformation process is the basis for improving the quality of products, processes and work. At the same time, this concept assumes a reduction of the company's operating costs and an increase in customer satisfaction	- replacement of the concept with rationalisation with a threat of reduction of fluency and quality, - exposure of workers to stress, - visual reduction of personnel, - lack of trust - complexity of strategic-operational performance alignment, this task could take significant time, and the estimation of improvements of tangible performance indicators	- reduction of waste and competitive capacity enhancement, - increased work performance, shortening the official channels and time of taking decisions, - customers satisfaction, - satisfaction of employees through reducing barriers in communication, - increasing motivation for work and loyalty of employees - identifying problems in operational systems and in production based on accurate and reliable real-time data, - prioritizing wastes to eliminate, - classifying different improvement/modification alternatives, - forecasting the impact of different proposed improvements on the future system's performance	/+ ++++ +++

V. Outsourcing			
Description of management concept	Disadvantages	Advantages	Overall assess- ment
The concept of out- sourcing consists of two English words: outside - external and resource - inventory, possibilities. The use of this manage- ment concept means that the organisation focuses on its key areas of operation, and in the matters of support activ- ities, uses the company's external resources. This is dictated by economic factors	- social costs associated with employment reduction, - loss of image uniqueness in the eyes of customers, - less impact on quality of products, - dependence on external partners, - possibility of higher cost of products and services offered by external companies - risk of leakage of confidential company data	- reduction of permanent costs related to secondary company operations, - rationalisation of employments, - control of costs by comparing them before and after the introduction of external supplier services, - possibility of focusing resources for implementation of key goals, - improvement of quality, performance and work efficiency, - increase of profitability, - acquiring expert knowledge from external partners, - possibility of using the latest technology, - access to the top level services, - flattening the structure of organisation, simplification of management	/ ++++ ++++ ++

VI. Knowledge Management			
Description of manage- ment concept	Disadvantages	Advantages	Overall assess- ment
Knowledge Management is a method of enterprise reorganisation that is increasingly appreciated by managers and scientists. The concept of an enterprise as a learning organisation was formed in the 1990s, however, it was only the beginning of the 21st century that it became the most fashionable concept of <i>modern</i> management. The development and effectiveness of modern organisations is determined by two key elements: knowledge and intellectual potential hidden in the individual.	- lack of trust and team work, - lack of common vision, mission and goals, - no technical facilities, - organisational barriers	- possibility of cooperation and sharing knowledge, - managing, sharing and securing knowledge information, - a company that appreciates intellectual capital, owns greater capacity for solving issues and making effective decisions, - customer relationship management	/+ +++

Source: own study based on T. Krasicka, Benchmarking, [in:] J. Bernais (ed.), ABC współczesnych koncepcji i metod zarządzania, Wydawnictwo Akademii Ekonomicznej w Katowicach, Katowice 2010, p. 120-137; K. Zimniewicz, Współczesne koncepcje i metody zarządzania, PWE, Warszawa 2009, p. 20-42; J. Ingram, Kompleksowe zarządzanie jakością (TQM), [in:] J. Bernais (ed.), ABC współczesnych koncepcji i metod zarządzania, Wydawnictwo Akademii Ekonomicznej w Katowicach, Katowice 2010, pp. 84-85, 144-146; J. Abbas, Impact of TQM on corporate sustainability through the mediating effect of knowledge management, "Journal Cleaner Production" 2020, Vol. 20, 118806; C.A. Arteaga, R. Rodríguez-Rodríguez, J.J. Alfaro-Saiz, M.J. Verdecho, An ANP-Balanced Scorecard Methodology to Quantify the Impact of TQM Elements on Organisational Strategic Sustainable Development: Application to an Oil Firm, "Sustainability" 2020, Vol. 12(15), 6207; A. Cherrafi, S. Elfezazi, A. Chiarini, A. Mokhlis, K. Benhida, The integration of lean manufacturing, Six Sigma and sustainability: A literature review and future research directions for developing a specific model, "Journal of Cleaner Production" 2016, Vol. 139, pp. 828-846; H. Cortes, J. Daaboul, J. Le Duigou, B. Eynard, Strategic Lean Management: Integration of operational performance indicators for strategic lean management, IFAC-Papers Online, 2016, 49, pp. 65-70; J. Brilman, Nowoczesne koncepcje i metody zarządzania, PWE, Warszawa 2002, p. 230-238, 420-422; M. Kłak, Zarządzanie wiedzą we współczesnym przedsiębiorstwie, Wydawnictwo Wyższej Szkoły Ekonomii i Prawa, Kielce 2010, p. 165-186; A.A. Mohamad, T. Ramayah, M. Chiun Lo, Sustainable Knowledge Management and Firm Innovativeness: The Contingent Role of Innovative Culture, "Sustainability" 2020, 12 (17), 6910.

Conclusions

The presented management concepts differ from each other in many factors. Considering the evaluation of the presented management concepts, the Outsourcing method has the most advantages (10 + at 6 -). The Lean Management (9 +, 4 -) and TQM method (8 +, 3 -) also obtained a good result. Benchmarking looks the least favourable (4 - at only 3 +). The concept of Knowledge Management looks quite unfavourable, achieving a rating (4 - and 4 +). Reengineering, received (5 +, 2 -). However, assessing the presented methods in terms of pro-environmental and prosocial features, it can be concluded that Reengineering and Lean Management present themselves the most advantageously. Such features of the Reengineering concept as shortening production cycles, improving product quality and customer satisfaction are part of the idea of sustainable development. An important disadvantage of this method is the social consequences in the form of dismissals of employees.

The second management method mentioned above, also to some extent takes into account the principles of sustainable development, which include reducing waste and increasing competitive ability, customer satisfaction, employee satisfaction by reducing communication barriers and increasing motivation to work and employee loyalty. The Lean Management concept also has social flaws, which include exposing employees to stress and reducing employment.

The conducted analysis confirmed the research hypothesis. As a result of the conducted research, it can be concluded that there is no ideal concept for managing production activities that would take into account the ideas of sustainable development in the most beneficial way by combining the triad of economic, environmental and social goals of the company.

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