

BUSINESS PROCESS MANAGEMENT IN SUPPLY CHAIN

Asper School of Business, University of Manitoba (Canada)

Abstract. The scientific research highlights the peculiarities of business process management in terms of modern concepts. A comparative characterization of business process management carried out taking into account modern concepts, which made it possible to draw a conclusion about the similarity between the three concepts of "environmental economy" and "sharing", which are consistent with each other and foresee sustainable development as their ultimate goal. Their main difference, which consists in the levels of implementation, singled out: "environmental economy" includes strategic, aimed at systemic challenges - the highest level, and sharing involves digitalization of business processes, services, technologies in the context of the development of enterprises - the lower level. It is advisable to implement the presented developments in the work of enterprises, namely when implementing sharing projects, taking into account the specifics of modern BPM-concepts.

Key words: supply chain, business process management, "sharing", "environmental economy", sustainable development, methodology, functions.

Successful business process management (BPM) requires the involvement of a toolkit of modern concepts that regulate this or that area of process management implementation. The existing state of the problem indicates that the management of business processes and the supply chain needs further scientific research and practical approbation. We propose to conduct research on the implementation of business process management in the supply chain, taking into account the peculiarities of the development of modern concepts.

A brief summary of the preconditions and the history of the Environmental Economics development are set out in the work [1], and partly in [2]. With the production of the Rio de Janeiro Declaration on environment and development in 1992, this integration has gained the cooperation of economists, environmentalists and public figures to achieve sustainable development goals. A new methodological platform was created for the scientists from various fields, where representatives of ecological and environmental economic schools work. Theoretical foundations and practical approaches of this platform require further development.

It was H. Daly [1] who fundamentally studied the economic and environmental integration. After this research area had emerged, some difficulties arose due to the interdisciplinary nature of research and its versatile practical orientation, and a certain scientific discussion regarding the place that the economic subsystem occupies in research has unfolded.

In particular, the scientists noted in their work that the introduction of digital technologies of Industry 4.0 could radically optimize business processes, improve the implementation of measures, increase the effectiveness of communications, and facilitate the collection and exchange of data [4].

Supply chain management (SCM) is the management of the flow of goods and services. Supply chain (SC) includes the movement and storage of raw materials, work-in-process inventory, and the transportation of goods from point of origin to point of consumption. Optimization of supply chain may result in significant energy saving and related carbon emissions reduction [10].

The world leading countries demonstrates success in creating and developing complexes that produce digital equipment and provide a wide range of information services, directly and indirectly influencing the development of the real economy, fundamental and applied science, education and society as a whole. These prerequisites allow us to talk about the activation of the digitalization process, one of the elements of which is the economy of the collaborative consumption (sharing economy, collaborative economy, peer economy, collaborative consumption).

The term «collaborative consumption» is used to describe an economic model based on the collective use of goods and services, barter and rental instead of ownership, which is based on the idea that sometimes it is more convenient to pay for temporary access to a product than to own it [5].

The term «collaborative consumption» was first used in 1978 by Marcus Felson & Joe L. Spaeth in the article «Community Structure and Collaborative Consumption: a routine activity approach» [5].

The concept of collaborative consumption was formulated in 2010 by Rachel Botsman and Roo Rogers, co-authors of « What's Mine Is Yours: The Rise of Collaborative Consumption» [6], who have presented a new socio-economic model capable of revolutionizing the consumption of goods and services.

Some researchers of the sharing economy consider this model as one of the significant trends in the modern world economy and a phenomenon that can lead to a change in the economic paradigm [9].

The Davos Forum founder and ideologist Klaus Schwab, in his book «The Fourth Industrial Revolution» identifies the economy of collaborative consumption as a fundamentally new model that will change modern society [9]. The growing practice of spreading «Sharing» is a new stage of modification of private property within the economic system levels to the conditions of modern society, relying increasingly on NBICS technologies, that is, the combination in one chain of Nano and bioengineering i.e. genetic technologies, information and computer technologies and cognitive resources aimed at artificial intelligence and a new digital reality.

According to PricewaterhouseCoopers (PwC) research, the size of the sharing economy in Europe will exceed billions of dollars and its revenues will grow to \$335 billion by 2025 [8]. At the same time, the UK's share in 2025 will make up \$15 billion. In Europe, revenues from sharing platforms will continue to grow, and the exchange of economic transactions will increase by more than 60 % [8]. In addition to European countries, the U.S. also is a leading center of collaborative consumption platforms. According to a Pew Research Center report, 72 % of the population use sharing and online services [8].

The main subjects of the «sharing economy» are Internet platforms - online platforms for the exchange of various consumer goods. Such platforms form the sharing market as well. Now their list includes hundreds, if not thousands of projects all over the world. However, the main share of such projects is represented in Europe. The largest number of European sharing platforms are in the UK, France, Spain, Germany, the Netherlands, as well as in Sweden, Poland, Italy and Belgium. Thus, the defining trend of consumer behavior, which reflects the transformation of values, based on technological changes, is the collaborate consumption («sharing»).

«Sharing» as one of the features of consumer behavior in the digital economy, provides an opportunity to build synergies for all stakeholders in the process of collaborate consumption. An important feature of «sharing» in the context of modern digital platforms is the ability to generate reputation and is an important intangible capital that allows reducing transaction costs. The table presents the impact of these concepts on the management of business processes on the main four characteristics of the implementation of process management: economic, social, environmental, innovative.

Table 1

Comparative characteristics of business process management concepts

Direction	Concept			
	Supply Chain Management	Environmental Economy	Sharing economy	Sustainable Development
economical	Provides competitive advantages due to demand management. The increase in the organization's income is due to the maximization of the contribution to the profit, and not due to the reduction of costs.	Provides economic growth, increase in income and employment, attraction of public and private investments, formation of a flexible economy, and creation of new economic activity.	Ensures sustainable economic progress in the context of the state of the environment, more elastic, stable, managed quality economic growth using digitalization.	Support for a sustainable scale of the economy, development and implementation of new technologies, reduction of investments in industries that exploit resources.
Social	It provides a social effect by creating jobs, providing social guarantees.	Achieving well-being, social justice, better quality of life, social development, reduction of social inequality	It provides a social effect by creating jobs, providing social guarantees.	Preservation of human capital and reduction of destructive conflicts, fair distribution of resources.

Ecological	reduction of the destructive impact on the environment and, at the same time, contributes to the minimization of costs, the rationalization of all decisions made, not only from an environmental, but also an economic point of	Reduction of environmental risks, reduction of carbon dioxide emissions into the atmosphere and environmental pollution.	Protection, support and preservation of natural assets, creation of low-carbon production.	Support for the use of secondary raw materials, minimization of the amount of waste, the spread of renewable energy sources.
Innovative	Gradual integration of information and material flows along the entire supply chain as an effective tool for competition.	The development of energy-efficient technologies, the creation of eco-innovations will allow to improve business processes and the commercialization and implementation of clean technologies.	It is the driver of innovation of new methods of production of environmentally friendly products.	The policy of innovative development should be carried out according to the principle: analysis and selection of those goods and market segments where enterprises can take a competitive position.

Developed by the author

The study of the main concepts of business process management made it possible to conclude that the evolution of management thought developed in the direction of complicating theoretical concepts of management with a parallel tendency to specify practical ways of their implementation.

Therefore, a comparative characterization of business process management was carried out taking into account modern concepts, which made it possible to draw a conclusion about the similarity of "environmental economy", "sharing", "supply chain", which are consistent with each other and envisage sustainable development as their ultimate goal.

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Maryna Klymchuk, Doctor of Economics, Professor. Department of Supply Chain Management, Asper School of Business, University of Manitoba, Canada, e-mail: klimarinchuk@gmail.com