



## REVIEW ARTICLE

# Evolution of Corporate Logistic Systems Can Ensure the Sustainable Economic Development

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## ABSTRACT

Sustainable development has become a serious concern during the past decades due to the rising economic, environmental and social problems because of rapidly growing human population. The world population is expected to reach 9.5 billion by 2050 which will also increase in consumer demand leading to the increased production of goods, which comes down to an increase in production and business development. Sustainable development is aimed to aims to solve environmental, cultural and socio-economic problems in the long term and considering the increased demand and supply issues, corporate logistic system encompassing the comprehensive planning, management, execution and controlling the physical flow of goods and the associated flow of information. The current article discusses in details how the concept of corporate logistics is being evolved over the time and how it could be useful for supporting the sustainable development goals defined by the UNO.

**Keywords:** Corporate logistic, sustainable economic development, demand and supply, socio-economic problems, flow of goods

**T**he modern world is facing development problems in three aspects, such as economic, environmental and social. Unfortunately, more than a billion people face acute poverty while income inequality rises. The growth of this problem is mainly due to unsustainable consumption and production, which leads to serious socio-economic crises and poses a threat to life on this planet. The world population is expected to reach 9.5 billion by 2050 (Meyers and Kalaitzandonakes, 2012). The increase in consumer demand is expressed in an increase in the production of goods, which comes down to an increase in production and business development.

This system can cause serious damage to the environment, mainly due to the use of non-renewable resources; except in addition, they are consumed at a faster rate, and emissions from the production process and unsustainable practices are also increasing recycling of products. The only way to eradicate these problems is to adopt the path of sustainable development (Henderson, 1994).

Thus, changing consumption and production patterns can help protect natural resources and the environment, as well as solve a number of social problems. Sustainable development aims to solve environmental, cultural and socio-economic problems in the long term. In recent times, sustainable practices have dominated the world and have become an element of success both at the organizational level

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and in society at large (Jeronen, 2020). Gradually, sustainable development issues are beginning to attract special attention management and owners of the corporation to develop plans and strategies. In this regard, the implementation of an approach to sustainable development requires the adoption of a corporate governance system in accordance with the dissemination of the values and principles of sustainability.

### ***Sustainable Development by United Nations Organization (UNO)***

According to the collective opinion of the General Assembly of the Organization United Nations (1987), there is no generally accepted official term "sustainability" due to different approaches to achieving results. The original sustainability concept was developed based on views on sustainable development at the 1992 World Commission on Environment and Development Summit in Rio, which described development, meeting the needs of the present time without compromising the ability future generations to meet their own needs and a "triple bottom line" approach became more systematic after that (Declaration, 1992). At the United Nations World Summit on Sustainable Development, held in Johannesburg in 2002, which is another one milestone in the evolution of the concept of sustainable development, special attention focused on three aspects of sustainability: economics, environment and to society (Scherr and Gregg, 2005). These aspects were conveyed to the business community with the concept triple bottom line, which implies that enterprises must simultaneously achieve the best financial performance, goals in the field environmental protection and justice for society. These three aspects should be considered equivalent and equal to ensure sustainable development. However, the concrete implementation of sustainable development is considered difficult due to the high degree of complexity in relation to the breadth and depth of areas of activity, as well as due to the large number of interdependencies and conflicts of goals within and between individual areas of activity (Stock et al., 2018). Being the main stakeholders

parties to global sustainable development, corporate structures must move to a new production paradigm that emphasizes on sustainable value creation. The 2030 Agenda proposes 169 targets to help countries monitor their contribution to the 17 UN SDGs. These The SDGs and targets have been introduced into the corporate supply chain through international institutions (Colglazier, 2015). In particular, some SDGs are linked to different stages of the supply chain. For example, so that suppliers can achieve clean water and sanitation goals, included logistics flows and distribution should support sustainable development of cities and communities, the use of products to address the impacts of climate change and the end-of-life phase of products should support sustainable production and consumption (Agrawal et al., 2022).

### ***Triple-bottom Line: Measuring the Success of a Business***

Many corporations are currently trying to achieve triple bottom line, the so-called "triple bottom line" in terms of economic, environmental and social indicators. However, successful strategies to achieve such efficiencies typically require new relationships between multiple players in multiple sectors of the economy across the entire supply chain of the company's products and capabilities (Kaplan and McMillan, 2020). Accordingly, the system of indicators originally developed to describe and implement strategy of one corporation, in conditions of scaling activities, and also, with the development of the ecosystem approach, it should be adapted to reflect such multi-stakeholder strategies to achieve the "triple bottom line". The World Economic Forum 2020 in Davos was dedicated to the theme of stakeholder capitalism, creating a cohesive and sustainable world. Dozens of leading multinational companies have joined OECD Business for Inclusive Growth (B4IG) Coalition, which creates economic opportunity and equality for all stakeholders to achieve economic growth (Hay et al., 2022, Oblaković et al., 2023). One of the significant places in logistics is modern domestic scientists are given to the question of clarifying the essence, scale and hierarchical boundaries of logistics systems and subsystems. Indeed, to carry out almost any logistics

research it is necessary to understand what the level of the hierarchy of logistics systems should clearly include the object being studied, and what are the features of this level.

Today, there are several conceptual approaches to solving this issue. At the end of the twentieth century, scientists adhered to the traditional “two-level” classification, dividing systems into macro and micrologistic (Faccio et al., 2018). We cannot unequivocally agree with such an approach, since here two extreme and, in essence, polar options are given and no intermediate states of the logistics system are provided. Other scientists adhere to a three-level classification, implying the existence of macro-, meso- and micrologistics systems (Nesiolovskaya and Markin, 2022). Such ranking is actively used since the beginning of the 2000s, however, in this matter the author adheres to the point from the point of view of Myasnikova L.A. (Myasnikova and Lobanova, 2019) who proposes the division of logistics systems into four levels: mega-, macro-, meso- and micrologistics systems. Based on this classification, it is proposed to distinguish depending on scale of action of the 4th level of logistics.

### ***Corporate Logistic: Next Generation of Logistic System***

Despite the fairly frequent use of the phrase “corporate logistics” in the scientific literature, there is still no clear definition this term. So, based on the fact that an integrated economic flow as an object of corporate management can be called a corporate flow, formulated equivalent definitions for corporate logistics (Anisiforov et al., 2021a). From a management research perspective, there is a need for reliable a conceptual model of how corporate structure works in modern economies: a model that researchers and managers can rely on navigate now, taking into account all the features and trends of economic development of the next decade (Williamson, 1981). Thus, corporate logistics is nothing more than a form functional (logistics) management, which on the one hand allows you to ensure the efficiency of current economic activities, that is, it is a means of achieving operational efficiency of a business, on

the other hand, this is the area of mesology that manages logistics flows of corporations, taking into account the intensity and complexity of logistics flows and market transactions of corporate structures, and designed solve problems of forming strategic competitive advantages. Corporate logistics allows you to organize a logistics system corporation, regardless of the geographical location of the enterprises (Pfohl, 2010).

Search for innovative ways to manage logistics in corporate forms of business organization creates new combinations of logistics operations, suggesting, first of all, meaningful options for the integration/disintegration of management operations determined by the economic expediency (Makarova et al., 2020). These combinations, according to experts, depend on the actions of many factors: organizational, economic, technical, technological and social. Large forms of entrepreneurship, such as corporations, are characterized by the complication of material, information and financial flows flowing within and beyond their boundaries, the introduction of several levels of management (hierarchical structure), as well as a complex form: corporations often exist as an entity consisting of several companies, for example, holding (Covin and Kuratko, 2010).

In view of the specific features of managing complex logistics flows, as well as in view of the trend of digital transformation of the corporation’s logistics processes, it is advisable to study the specifics management of corporate structures, as well as study in detail the factors discussed above in the context of a corporation (Anisiforov et al., 2021b). When managing logistics flows of a corporation, it is necessary take into account such a property of large systems as emergence.

According to general systems theory, emergence is characterized by the ability to generate new properties that are different from the properties of each system that is part of this large system. Emergence in corporate governance transforms into a synergistic effect, i.e. efficiency increases management of each entity of this corporation (Bainbridge, 2008). In other words, a corporation as a large system is something larger and qualitatively different than the simple sum of its enterprises and firms.

### ***Inter-organizational Business Process (IOBP): A Step Towards Sustainability***

It is undeniable that every commercial corporation, despite its participation state-owned property will ultimately have to move towards sustainable development in order to achieve competitiveness, or qualitative expansion of the country's territory and beyond. Achieving a sustainable competitive position and superior performance is becoming a top priority for business organizations today (Haseeb et al., 2019). However, some organizations, due to a number of reasons: lack of resources, financial capabilities and lack of management skills often fail to achieve success in their environmental and social sustainability missions. To achieve economic sustainability, it is very important to simultaneously optimize all its dimensions, both material flow and financial and information (Seelos and Mair, 2005). There are many definitions of economic sustainability and sustainable management, but in the context of a state-owned corporation and corporate logistics, it can be defined as "strategic, transparent management from the point of view of achieving the economic, social and environmental goals of the corporation in the systematic coordination of key interorganizational business processes to improve long-term economic performance of the corporate logistics system (based on UN Sustainable Development Goals until 2030) (Pfohl and Buse, 2000, De Martino et al., 2013).

Although there are many models that take into account a combination of economic, environmental and social aspects of sustainability, only a few of them are about current public policy instruments for achieving a global goal through influencing corporations in the era of Industry 4.0 (Adamik and Sikora-Fernandez, 2021). From point of view efficient use of resources, which implies sustainable development and scientific and technological development involves the search for methods of qualitative transformation, integration and end-to-end effect on the economy and social development of the country. Study of the relationship between parent and subsidiary enterprises, or how corporations carry out logistics coordination and controls its geographically

dispersed value-adding divisions, is central to the areas of management, supply chain management and corporate logistics in particular (Farah et al., 2022). To form a complete picture of the interaction between divisions and subsidiaries, it is advisable to concentrate on one transport and logistics corporation, and to begin with, analyze scientific works on the issue of intra-company interaction. In a growing market, corporations are taking advantage of improved information and communications technology, lower barriers to trade and investment, increased organizational expertise in international operations, and increasingly educated and experienced management and line personnel to relax formal internal controls to improve organizational effectiveness, motivation and innovation (Nwabueze and Mileski, 2018).

### **Conclusion**

Results of the research performed the last decade, characterized by the digital economy, has fundamentally changed the competitive dynamics of corporations. Leading positions began to be occupied by corporate structures investing in technologies that support logistics systems - digital platforms that allow automating logistics processes to ensure a customer-oriented approach. Due to increased attention to logistics integration processes in general and in the context of the digital transformation of logistics systems in particular, the question of finding organizational mechanisms for intra-company interaction is especially acute. Corporate logistics research draw attention to the potential of subsidiaries and their inter-relationships to implement the holding's strategic initiatives. Such relationships are typical within the functioning of territorial divisions. Today, every business corporation must ultimately move towards sustainable development in order to achieve competitiveness. To achieve economic sustainability, it is very important to simultaneously optimize all its dimensions, both material flow and financial and information. Research and formation of the scientific base of modern corporate logistics, as well as analysis of the current state of corporations, their industry composition and trends in the adoption of modern logistics and economic concepts allowed us to conceptualize and define the scope of the

process digital transformation, which provides the rationale for the transformation of corporate logistics as a science, based on updating the organization's business models. Directions for further research may include: become: development of a comprehensive system of positive and negative influence Industry 4.0 technologies for the purpose of sustainable development of corporate logistics based on the parameters for assessing logistics proposed by the author threads and processes; development of a practical method for assessing the level of sustainability of a business ecosystem based on the developed integrated multi-level model of sustainable development of a transport and logistics holding in the digital economy.

#### **Conflict of Interest:**

I, author of this paper declare that there is no conflict of interest with anyone or any organization regarding this paper.

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