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Logistics Projects in the Czech Republic

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Abstract

Logistics is becoming a fast-growing industry with an endless amount of logistics projects. We find such a definition just with Polish authors. Domestic and other authors do not use the concept of logistics projects, but we find in the specific literature terms such as city logistics project, urban logistics project, or reverse logistics project. These concepts are about projects which focus on logistics in the cities than in the total concept of logistics projects. The paper will deal with the idea of logistics projects regarding business firms in the Czech Republic. The main objective of the paper is defining logistics projects.

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1. Introduction

Nowadays, the enterprises are constantly forced to adapt their products to changing needs and requirements of the customer. They have to fulfill high requirements of delivery time their products, but also requirements of the reliability, quality, and costs. They have to also adapt to technological development, at best, faster than competitors. That the enterprises could react flexibly on the new incentives and needs of the market, they should have a functioning logistics. Logistics as the field includes planning, implementation, and control of movement and deployment of the people or goods and support activities which are connected with the movement and deployment in the system which is organized to the achieving goals (European Committee for Standardization, 2018), permeates of all areas of enterprises and whose business plan is composed from different projects. But, the logistics project as an extraordinary set of the tasks, is different from other projects by time and costs whose purpose is done individual measures. These

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measures will affect the change of the logistics system of an enterprise or the supply chain (Pisz, 2011a), (Pisz, 2011b), (Pisz, 2013).

2. Methodology

For the purposes of this article, the Web of Science and Scopus databases were used, where definitions of the concept of a logistic project were searched by keywords like logistics projects, logistics, risk management in the logistics projects etc. The following table summarizes the number of publications looking for a logistic project in the above-mentioned portals, broken down by publication year.

Table 1. Number of publications focused on the logistics project

Year	Web of Science	Scopus
2019	25	43
2018	798	1024
2017	880	1170
2016	904	1066
2015	770	1002
Total	3377	4305

The table shows the data only from 2015 to 2019, to show how many articles are published on the topic of the logistics project. After a literary research, the properties of the logistics project were summarized. According to the frequency of occurrence of properties of the logistic project and the significance of these properties, a definition of a logistic project has been created that it defines as a set of activities that are limited in costs, time and scope and its purpose is to help logistics management in the enterprise or supply chain to prevent problems of flow of costs and people.

3. Logistics projects

The projects are involving a lesser extent one of the areas of logistics are called logistics projects. These projects are used to solve the problem in the area of logistics management, eg implementation of Just-in-time or the reorganization of the distribution network. A well-managed logistics system can provide the enterprise with a sustainable competitive advantage because effective logistics management helps increasing the satisfaction of customers while the quality of delivery and decreasing costs will remain the same (Kasperek, 2006), (Celebi, Bayraktar and Bingöl, 2010). The logistics project is the important part of modern logistics. According to Xin (2007) and Wang (2012), it discusses a specific logistics activity that has the main effect that the product achieves the complete goal.

We can find a lot of logistics projects in the practice and each logistics project is different. Projects differ in its scope and its realization requires to use of different resources such as physical resources, human resources, and financial resources and these resources are required in a different scale (Pisz, 2011a). Each author perceives the logistics project in a different way, and therefore each author characterizes it by the different characteristics. The authors Kisperska-Morón, Krzyzaniak (2009), Kasperek (2006) and Pisz (2009) describe the logistics project as a complex, strange and unique set of activities that can be described of technical and economic parameters and which are determined by the costs, the time and the range in order help to the logistics management in the enterprise's or supply chain's. On the contrary, the authors Xin, Cui, Zhao (2007), and Wang (2012) characterize the logistics project as a one-off, indefinite process characterized by complicated technologies and high risk. Other authors whose are dealing with projects in the area of the logistics, they do not define them as logistics projects. In the literature, we can learn about concepts such as the city logistics project, the urban logistics project or the reverse logistics project. However, these concepts are more characteristic for projects focusing on urban logistics than on the overall concept of logistics projects. It is important to focus more on logistics projects because by understanding the characteristics of

the logistics project we can separate the logistics project from other projects. This separation from other projects is important especially for the correct identification of the risks found in these projects and the subsequent implementation of the correctly chosen method to eliminate the risk.

The following features are not typical only for logistics project:

- Unique,
- Temporary,
- Multidisciplinary,
- Organized effort,
- Directed to implement specified outputs (IPMA, 2015).

Characteristics which are described above, cannot be typical only for the logistics project. There are basic characteristics which are typical for the logistics project. These properties do logistics project different from the other projects.

- the need to take into account logistical conflicts (cost trade-offs),
- a decision-making criterion during analyses should be to use the total cost of logistics,
- the need for adaptive management,
- the need to develop the methodology for the implementation of a given project,
- the need to determine the level of the offered services to customers as a result of implementing the project and within the project itself,
- determine the role and place of a logistics project in the organizational structure of an enterprise (Kasperek, 2006).

Different types of projects represent the practical dimension of the solution that needs to be done to increase the efficiency and effectiveness of material flows in enterprises and supply chains and these projects can serve as examples of how to realize the assumptions and guidelines for logistics. Enterprises and supply chains deal with the realization of specific logistics projects that will prevent or mitigate problems with the flow of costs (product or goods) and people (Pisz and Łapuńska, 2015). The logistics project is mainly related to the transport, loading, and unloading of transport items, packaging, and storage, which is a relatively independent and it has to close relationship to the complete logistics process (Guo and Chen, 2008). Today's logistics project managers work in a rapidly changing environment. Their competencies are one of the key critical factors for the success of the logistics project. For successful completion of logistics projects, efficient managers of logistics projects are needed (Kisperska-Moroń and Krzyżaniak, 2009). According to Witkowski a Rodawski (2008), the logistics projects are one-time commitments with limited duration and financing and its implementation serves to improve the efficiency and effectiveness of product flows and accompanying information flows in enterprises, supply chains or spatial systems. Such projects include those related to transport, storage, deployment of production and warehouse facilities, development or upgrading of linear elements of logistics infrastructure, inventory management or customer service. Logistics projects are therefore aimed at increasing the efficiency and effectiveness of activities that have been undertaken to address a particular economic, social, environmental or legal problem (Żuryński, 2015).

The risk of logistical conflicts should be analyzed when planning and implementing the logistics project, and appropriate remedies should be used to optimize the above costs. Implementation of a project, including a logistics project, requires an answer to the question of how to achieve the project's success. In practice, this means defining the actions that need to be taken to achieve the project at a given time with the budget and maintaining the required quality. Research by Pisz and Lapunka (2017) shows that most businesses do not plan properly of the process their logistics projects. The overwhelming majority of respondents declare that they do not create the necessary calculations, leading to non-compliance with deadlines and budget overruns, and confirms the low efficiency and effectiveness of logistics projects.

The following table summarizes the logistics project properties defined by the authors in the article. The first column contains the properties of the logistics project, and the first line contains the authors. The x character indicates the author and the logistic project properties associated with the author.

Table 2. Summary of logistics project properties

	Kisperska – Moron, Krzyzanik	Kasperek	Pisz	Lapunka	Xin, Cui a Zao	Wang	Witkovski, Rodavski
1. Complex	x	x	x				
2. Strange	x	x	x				
3. Unique file activities	x	x	x				
4. Described by technical and economic parameters	x	x	x				
5. The determined costs, time and range	x	x	x				x
6. Helps logistics management in the enterprise / supply chain	x	x	x				
7. Prevents or mitigates problems with flow of costs and people			x	x			
8. Disposable					x	x	x
9. Indefinite					x	x	
10. It is characterized by complex technologies					x	x	
11. High risk					x	x	
12. It serves to improve the efficiency and effectiveness of product flows and information flows							x

There are 12 properties in the table, each of which is different and all characterize the logistics project. The most important feature of a logistics project is that this project is defined by costs, time and scope. This characteristic appears in four definitions from six different authors. According to the frequency of occurrence of properties of the logistic project and the significance of these properties, we can define a logistics project as a set of activities that are limited in costs, time and scope and its purpose is to help logistics management in the enterprise or supply chain to prevent problems of flow of costs and people.

4. Risk Management in the Logistics Projects

A significant difference was found in the level of use of risk management methods between successful and unsuccessful projects, indicating the importance of the risk management process in projects. The authors further point out that the greater the range of risk management, the better the results of the project (Papke-Shields, Beise and Quan, 2010). There is hence no doubt that risk management in logistics and supply chain systems is a timely and important topic nowadays (Choi, Chiu and Chan, 2016). Risk management influences logistic project management at all stages. The variety and specialization of logistic processes as well as the changes that constantly appear in the economic, geographical, and political surroundings and the limited availability of the necessary resources to the realization the logistics project are the reasons why logistics is one of the most risk-prone activities. The more complicated the logistic chain, the more risk factors there are. The nature of risk factors that occur in the logistic chain may vary due to the scope of the logistic chain (global, national, regional, local), the number and characteristics of the enterprises involved,

and also the modes of transport and types of vehicles and machines used. (Smith and Fischbacher, 2009) The ability to plan projects and proper implementation of logistics in scheduling specific activities are required to achieving success in logistics project management (Pisz, 2011a). The reason why planning and implementation of projects, including logistics projects, always includes a certain degree of uncertainty is the fact that these projects are often innovative and unique and it is difficult to predict the direction of implementation in uncertain situations. This uncertainty is the consequence that it is not always possible to have the access to the information about the project. The uncertainty can be defined as the probability that the goal will not reach the planned target value (Jaafari, 2001).

The risk of the Logistics Project is usually presented by the following characteristics: (Zeng, Xiao, and Zhang, 2015)

- Objective of risk,
- The dynamic variety of the risk,
- Importance of the risk,
- The diversity of the risk.

As the project logistics is disposable, complex and unconventional, so the whole logistics process is more or less uncertainty. Due to the chaining of time, space, internal and external conditions, the range of risk and loss of project logistics have surely dynamic characteristics. Influence of the risk is not only a local. Risk likely affect the whole process and it is a global risk of logistics operations (Zeng, Xiao, and Zhang, 2015).

5. Conclusion

The article is based on literary research its goal has defined the concept of logistics project. The article points to a different perception of this concept and is based primarily on research by Polish authors. The conclusions of Polish authors as well as other authors, written above in the article, will serve as the basis for future research that will examine the logistics projects of enterprises doing business in the Czech Republic. Defining and understanding the concept of a logistics project is important for the future implementation of the risk management process because by understanding the characteristics of this concept, we can separate the logistics project from other projects and implement an appropriate risk elimination method. According to the frequency of occurrence of properties of the logistic project and the significance of these properties, we can define a logistics project as a set of activities that are limited in costs, time and scope and its purpose is to help logistics management in the enterprise or supply chain to prevent problems of flow of costs and people. This definition of the logistic project and other characteristics of the logistics project will be further explored in the territory of the Czech Republic because the concept of logistics project is not defined in the conditions of the Czech Republic and therefore, we consider it important to solve this issue.

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