

Summary

Supply chain security, which is the subject of this study, is most often defined as procedures and measures to protect the elements of the supply chain and its environment from a criminal and terrorist activity. The concept emerged in scientific literature and economic practice in the aftermath of the terrorist attacks carried out in New York and Washington in September 2001. Numerous people were killed in the attacks, and direct and indirect losses incurred by public institutions and enterprises reached billions of dollars. These events have changed the traditional perception of threats related to transport or international supply chains. Previous international efforts to remove trade barriers and harmonize legislation were replaced by the need to ensure security of supply chains and protection against terrorism. As a result, a number of regulations and initiatives as well as control and security measures for supply chains have been introduced.

The main aim of the thesis is a multidimensional assessment of the impact of aforementioned security threats and regulations on the functioning of international supply chains and their environment. The main hypothesis is: Due to the fact that security threats and regulations have a negative impact on the functioning of international supply chains and their environment, companies are forced to take specific actions to protect their supply chains and eliminate the weakest links.

The paper presents a detailed analysis of selected threats to international supply chains, such as terrorism, piracy, theft, illegal border crossing, counterfeiting, and cybercrime. It can be observed that in several areas, criminal activity significantly increased after 2001. Analysis of the cost of disruptions related to these threats indicates their significant impact on the functioning of international supply chains.

The thesis characterizes also the security policy conducted by the United States, the European Union and the United Nations. It also analyses the most important security regulations and initiatives, such as the ISPS Code in maritime transport, Annex 17. to the Chicago Convention in air transport, 24 hours rule, WCO SAFE Framework of Standards developed by the World Customs Organization and the AEO and C-TPAT programs. Due to the significant role of the United States in the field of supply chain security, the security programs related to transport of cargo in containers implemented by the administration of this country are also discussed in detail. It can be noticed that the

security regulations are inadequate to actually occurring threats, which can be regarded as a source of imperfections. Exporters and importers have to bear significant costs resulting from existing regulations, however, they do not receive in return a significantly higher level of protection which would be adequate to the reported needs.

The paper also presents theoretical and practical considerations on the economic aspects of supply chain security, such as the weakest link public goods, costs and benefits of security, as well as risk analysis. It would be rational to take joint action by companies and governments to eliminate the weakest links. However, the divergence of their goals is the main obstacle to the joint undertaking of such initiatives. The companies rely primarily on the economic calculation, while the priority for governments is to protect the society and critical infrastructure facilities.

Supply chain participants can, however, take certain measures to increase the level of supply chain security, while at the same time improving the efficiency of operations. Supply chain security management is one of the basic activities that would enable the possibility to achieve these goals. It was also emphasized that special attention should be paid to the weakest link in the supply chain, i.e. to human factor.

In addition to the analysis of literature and the statistical data from international reports, the paper also uses the results of an empirical study conducted among 600 Polish and 600 German exporters and importers in 2013 and 600 Polish exporters and importers in 2016. As a result, it was possible to identify the attitudes of enterprises regarding threats and regulations, recognize weaknesses and strengths of enterprises' activities for supply chain security, as well as define the roles of individual entities and develop recommendations for participants in the supply chain.