

About the network topic

Summary

Supply chain management is a fact of business, with logistics as a most powerful tool for achieving ultimate strategic advantage. Today's business is constantly changing and evolving in response to change in technology, social and economic environments, and climate. Changes in business models drive a "new" supply chains. That novelty could be described through several major characteristics: (1) supply chain role has moved from being tactical to being strategic; (2) supply chain complexity and dynamics are constantly growing; (3) supply chain completely focuses on value from customers' point of view. Hence, new paradigms in business evolve new logistics and supply chain management strategies. To understand and apply those new logistics thinking, appropriate way of dissemination of logistics knowledge to future and current employees should be created. Hence, the overall objective of this project is to promote the innovation and implementation of sustainable knowledge transfer between academia and industry, with the final aim to improve regional logistics competence through better applicability of logistics thinking.

Long program description

Dynamics of market changes dictated by globalization, liberalization and constant technological development places the effectiveness of logistics and supply chain in the centre of economic success and competitiveness of a country or region. Logistics effectiveness is based on the appropriate level of excellence regarding logistics infrastructure, applied logistics practices and technologies, logistics culture and logistics competence. Logistics competence implies understanding of new strategic role of logistics activities in contemporary strategies for supply chains management. Understanding and application of the principle of contemporary logistics management requires creation of appropriate dissemination of new logistics knowledge among future and at the moment employed logisticians (creation of logistics human capital). Human capital, in general, represents a deficient resource in modern society based on knowledge. It has been estimated that 5 million skilled staff shall be needed in the EU countries in the following decade. Creation of competent workforce represents, in fact, the only sustainable competitive advantage in contemporary business conditions. According to the theory of economic growth, economic growth can only arise from technological development. Technological development has distinguishingly dynamic trait which, besides technical-technological innovations, also requires constant training of workforce. Unlike in some other economic fields, in the field of logistics and supply chain management there are great potentials which can be activated by minor investments which is not the case with other engineering-business disciplines. Activation of the mentioned potential requires the appropriate level of quality knowledge which has been permanently innovating.

With regard to the stated the basic topic of the proposed network shall be investigation and adjustment of conditions and possibilities for the application of an **integrated approach to the development of educational programs** in the field of logistics and supply chain management which shall be based exclusively on the needs of contemporary logistics economy (the „new“ supply chains). Those new supply chain management strategies involve

shift from the more concentrated, own-company centered, individual-task-based thinking into considering the bigger entities and networks of the whole supply chain which has led to changes in skills, competences, and knowledge needed in different logistics functions both within the individual companies and in the whole supply chain. **Integrated approach is defined as the presence of coordinated planning and execution between universities, public bodies and business sector in creating logistics thinking-based study programs.** Such integration requires coordinated criteria for the efficient and sustainable knowledge transfer between academia and industry and active governmental contributions through creating and adoption of appropriate policies. Hence, integration involves a union of university, industry and government, coming together to form a whole. Apart the questions **who is integrated** (university, industry and government); integrated approach concerns two areas more, which are defined by the following questions: **what is integrated** and **how are they integrated?** Proposed integrated approach assumes design, execution and supervision of logistics thinking-based study program as those what is integrated. Three main stakeholders will be integrated though defined standards with support from technological and regulatory tools.

The problem of efficient and sustainable relationship between those three stakeholders (or parts of **triple helix: university-industry-government**) has more international dimension with establishing framework of joint study programs across EU and further internationalization of higher education. The mobility of people, programmes and institutions has been increasing constantly. The internationalization has been gradually becoming a very important factor in the activities of universities and also in the countries of Central and Southeast Europe as it represents those activities that lead to the development of new policies, programmes and practices on institutional, national and international level. Although, logistics is viewed as a tool for getting competitive advantage for the companies, countries and the whole region, up to now there has not been widespread cooperation among universities that have curricula for logistics and supply chain management. **The proposed network is the first CEEPUS network which will connect those universities with the ultimate goal to achieve competitive logistics advantage of the whole region.** According to this, countries in Danube regions, especially in Balkan regions, need the new paradigm in the area of sustainable partnerships between academia and industry which will lead to creating new joint curricula in the area of supply chain management. Thus, the main content of the proposed logistics and supply chain management-based network will cover not just development of contact between the participating universities, but also creation of contacts among companies and universities, both within one country and companies and universities from other countries. Different countries are characterized by different logistics profiles and planning structures, but often with similar problems and opportunities for similar problem-solving. The proposed network shall make this different logistics profiles visible and the different planning structures comparable. A central theme is to identify common critical issues locally and regionally and then to compare or suggest solutions and approaches that could facilitate the development of joint study programs which will promote efficient knowledge transfer between academia and industry. Those joint study programs should lead to better applicability of logistics thinking that can better foster logistics sector development.

A company is nothing without its personnel. Looking from a broad and management level perspective we can distinguish the skill requirements of logistics managers using the framework composed of business, logistics and management parts. Number of studies show that the five highest ranked business skills are supply chain management, transportation and logistics, business ethics, production management, and business writing. Respectively, the most important logistics skills are customer service, inventory management, transportation and traffic management, logistics information management and warehousing management. The most important management skills include issues such as the ability to motivate others, personal integrity, decision making ability, ability to persuade, and oral communication. It could be concluded that the effective logistician should be more supply chain oriented and should possess a more specialized set of management skills. Also, it must be kept in mind that it is not enough to know which skills and competences would be needed of personnel but also to assess the actual level of those skills and competences. By knowing both which skills and competences are needed, in addition to knowing the actual knowledge level, the capabilities of the personnel can be improved.

The biggest potential for logistics staff development lay in practical operations. To solve problem with level of practical logistics know-how and to use potential a clear and organized initiative of educational institutions is required which shall be followed by practical support from business sector. The mentioned initiative is to denote the need for the change in structure of educational programs in the direction of their practical applicability. **Special attention is to be paid to the promotion of the new way of communication among faculties on the one hand and future and existing workforce and business sector on the other hand.** Just within the proposed network opportunities and conditions for development of study and training programs in the field of logistics and supply chain management should be checked up. Among other things, research within the proposed network shall include the following:

- (1) Analysis of logistics profile of the network country members;
- (2) Analysis of the labour market structure in the field of logistics in the network country members;
- (3) Analysis of the condition and structure of educational programs in the field of logistics and supply chain management in the network country members;
- (4) Identification of need for changes in the structure of educational programs on the basis of needs of business sector for staff of appropriate profiles in the field of logistics and supply chain management;
- (5) Finding possibilities for making joint study programs in the territory of the network countries members;
- (6) Evaluation of the level of technical equipment of educational institutions and skilfulness of teaching personnel for the realization of potential study programs;
- (7) Finding opportunities for further internationalization of potential study programs.

Cooperation of member universities of the proposed network in the realization of these activities shall reflect, first of all, in **mutual visits as basic aspects of joint activities and cooperation of institutions from different countries.** Therefore, proposed CEEPUS network will facilitate a productive relationship between partners through various types of mobility as a different structure of partner knowledge and experience exchange. **Student's and teacher's mobility, various forums and meetings with participation of people from**

business and government, symposiums, and workshops will make proposed CEEPUS network as a common platform where all participants will share information, experiences, perspectives, and opinions in a collaborative and collegial setting. On that way, all network participants will realize the benefits, such as:

1. Interaction with researchers from different countries on issues specific to sustainable partnerships between academia and industry;
2. Meeting and networking with representatives of some of the leading companies within logistics industry;
3. Privileged access to network partner's previous research work, literature, project, and internal standard in creating new curricula (insights beyond the published results of research).

Basic result of this research is in fact a specific study of feasibility of an integrated development and joint organization of a new product in the market of logistics education which is fully compatible with the needs of industry. Expected results are as follows:

- (1) Specification of conditions and needs for organizing study programs from the aspect of potential attendants (students);
- (2) Specification of conditions and needs for organizing study programs from the aspect of industry;
- (3) Specification of possibilities for organizing study programs from the aspect of skilfulness of the teaching staff and technical equipment of university institutions;
- (4) Specification and development of modalities for sustainable cooperation among universities, industry and government;
- (5) Specification of structure and modality for carrying out curricula ;
- (6) Specification and development of quality control and monitoring.

Basic idea of the project is strengthening bonds between academia and industry both within one country and on the international level with the final aim to form adequate study programs which would be in compliance with the principals of contemporary tripe helix cooperation. As we said before, logistics has become a key competitive advantage. Therefore, it is necessary to set and offer theoretically well-grounded and practically relevant study programs for the successful planning, implementation and management of supply chains. In this context, in line with the basic pillars of the Danube Region strategy (*Connecting the Danube Region- through improving mobility and multimodality*, which are logistics activities; and *Building Prosperity in the Danube Region-* through development of the knowledge society and investing in people and skills), **this network has intent to offer a detailed structure of new joint study program.** The goal of such program will not be only to provide students with the knowledge, but to enable them to sustainably comprehend the use as well as the interrelation of differing concepts and levers relevant in a supply chain context. **Taking into account all the above mentioned aspects of logistics and supply chain management; characteristics and relationships inside triple helix structure; and necessity of working on applied logistics study programs, the following network within the framework of the CEEPUS program has been proposed:**

Fostering sustainable partnership between academia and industry in improving applicability of logistics thinking (FINALIST)