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## IMPORTANCE OF PROFESSIONAL COMPETENCE IN TRANSPORTATION OF DANGEROUS GOODS ON THE HIGHWAYS IN TURKEY

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**Abstract:** Road transport activities are among the most preferred reasons because they deliver services wherever they are located and are compatible with other modes of transport. In addition, Turkey's geopolitical structure, young population and having a large fleet of road transport is done by road cause of domestic transportation. It should not be forgotten the importance of international trade with the effect of globalization.

It is obvious that the safety of people who are involved in the stages such as storage, handling and transportation of the dangerous substance, as well as those living on the environment lasts for many years and every event can lead to loss of life or diseases during the transportation of dangerous goods. Chemicals can spread and accumulate very far. The presence of hazardous substances carries risks and requires the parties to be more careful in the procedures to be followed during the transportation of these substances.

In this study, the concept of adequacy of professional competence activities in road transport was studied by revealing the importance of education competence activities in road transport and also studied contribution to the transport sector of professional qualifications and training policies applied in the road transportation in Turkey.

### 1. INTRODUCTION

As the process of moving commodity from the raw material stage to the final destination where it is presented to the end consumer; logistics means the total services of providing commodity considering the right amount of time, place and appropriate costs (Orhan, 2003:46).

While logistics was limited to supporting activities used for supplying the needs of military units in the war zone, starting from the middle of 20th century, it made a great progress and became integrated to business and social life transforming into a multifunctional discipline aiming to meet human needs.

### 2. ROAD TRANSPORT

Transportation is the movement of all living and inanimate creatures from one point to another. Human beings, animals, plants, raw materials, finished and semi-finished products

are all subject to movement in the scope of transport/logistics. The transfer of all the above elements is called transportation. Therefore, the movement of living and inanimate creatures between two points can be defined as transportation.

The active presence of transportation in one country brings many benefits for the consumers such as:

- a) Increase competition
- b) Catch scale economy
- c) Reduce prices

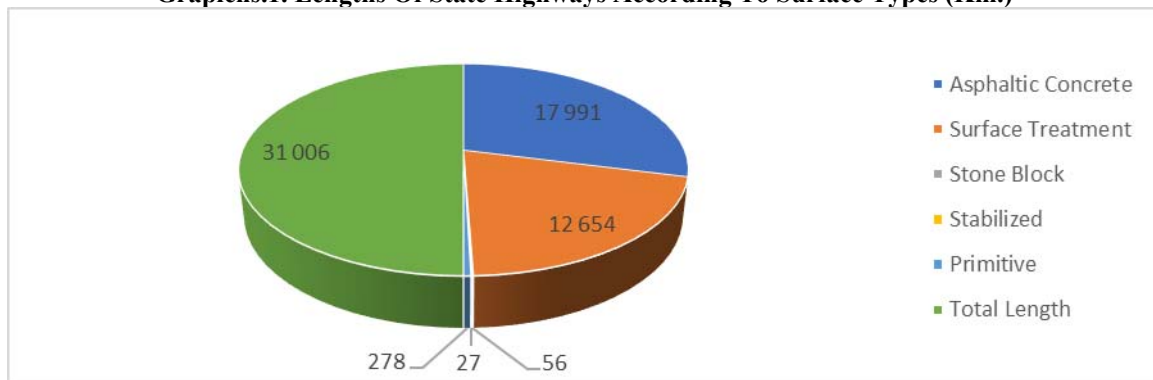
The presence of effective transportation primarily increases competition among companies. Competition brings quality and variety in services. Secondly, higher capacity of transportation will reduce costs and therefore help to catch scale economy.

Transportation is generally classified according to the medium where it is present. These media, being defined as transportation types or modes, consist of five groups: road, sea, air, rail and iron pipe.

Road transport is a flexible system of transport and often used to move finished and semi-finished products. Road transport is generally used for high value products and considered to be effective in certain distances. Road partial transport is advantageous within 1100 km and with full loads up to 500 km. The main advantage of road transport is its ability to reach the furthest points of the land and without any re-loading and unloading (Kaynak. 2017:5).

Road transport has three main elements in the flow of physical commodity. These are, drivers, vehicles and loads.

**Graphs.1. Lengths Of State Highways According To Surface Types (Km.)**



<https://www.kgm.gov.tr/SiteCollectionDocuments/KGMdocuments/Istatistikler/DevletYolEnvanter/YillaraGoreDevletYollari.pdf>

According to data gathered from the General Directorate of Highways, more than half of roads in Turkey are asphalt roads.

## **2.1. LEGISLATION**

Legal arrangements related to road transport in Turkey are based on Road Transport Law, dated 10 July, 2003, with number 4925. In order to be considered as activities under the Road Transport Law, all related activities must have four basic elements.

These are:

1. Transportation type must be defined as road transport,
2. To have real commodity to carry,
3. Officially undertaking the transportation activity
4. Performing the transportation for a predefined cost

Regulations for activities related to professional competency/v in road transport are under governance of General Directorate of Highways (KGM). Enterprises in the sector are registered under the aforementioned law, dated 10 July, 2003 with number 4925, in accordance with related legislations and directives.

Procedures related to professional competency and training are carried out in accordance with Road Transport Law, dated 10 July, 2003 with number 4925, and Road Transport Activities Professional Competence Training Regulation. All the above activities are regulated and supervised by the Ministry of Transportation, Maritime Affairs and Communication (UDHB).

### **3. TRANSPORTATION OF DANGEROUS COMMODITY**

The European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) was done in Geneva on 30 September, 1957, aiming to increase safety in international road transport. The convention, having been signed by 15 members initially, has entered into force starting from 1968. According to ADR convention, the definition of dangerous commodity is “materials (by their nature, qualities and conditions) subject to transport, that can pose a threat to general safety, social order, general society, sources of life, animals and plants” (United Nations European Economic Commission, 2007, *The European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR)*, Geneva).

Any failure, problems, cost concerns during the transportation of dangerous commodity might cause no recoverable results. Therefore, transportation of dangerous commodity is of greater importance and needs special attention. Because of this, transportation is a process which needs care and responsibility.

Training and technology are other important factors in transportation of dangerous commodity. There are many important concepts from potential problems that can be caused by the nature of transported materials to the training of drivers. In addition to the training activities, technological devices used to track the vehicle during the transportation and additional technologies for managing other processes also need attention.

Basic ADR training involves 18 hours theoretical and 1 hour practical training. Dangerous Commodity Safety Counseling trainings can only be given by institutions authorized by Ministry of Transportation, Maritime Affairs and Communication, General Directorate for Regulation of Combined Transportation and Moving of Dangerous Commodity.

Ministry of Transportation, Maritime Affairs and Communication’s Regulation for Transportation of Dangerous Commodity by Road has been published in official gazette on 24 October, 2013, number 28801 and entered into force on 01 January, 2014. This regulation has been prepared in accordance with The European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) accepted by the law dated 30 November, 2005, with number 5434.

According to article 33 of the Regulation for Transportation of Dangerous Commodity by Road, as of 30 June, 2015, companies that process, fill, pack, load, send, receive and/or unload excess amount of 50 tons of dangerous commodity per year and perform any of the above activities with tankers/portable tanks have to outsource dangerous commodity safety counsellors.

### **CONCLUSION**

In Turkey, 90% of 22 million tonnes of annual transportation of dangerous commodity is performed on roads.

With the effect of changing and improving information technologies, road transport continues to develop and serves to increase trading activities, starting from the very first step of supplying and marketing raw materials, considering cost effectiveness and finally distributing finished products to the end consumer (Akın, 1999:38).

Majority of activities carried out by drivers who attend professional competency / vocational competency trainings are commercial load vehicles. The reason for this is the accumulation of national and international (export) transportation activities in Istanbul and the intensive inspection on drivers. It can be of a great use if the inspections are carried out on all drivers and participation in the professional competence/vocational competence training is increased.

Professional competency documents should be introduced to managerial staff so as to emphasize their use for career development. As for the drivers, professional competency must be introduced in a way that it would serve them to improve their working conditions and contribute to their income. Thus, participation in the trainings may increase and it will promote drivers' competencies.

The repetitive application of training programmes and supporting those with distant education may increase their productivity. Carrying out research and applying findings in this field will also contribute to competency training.

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