

# DEMAND OF LOGISTICS SPECIALISTS IN THE LABOR MARKET

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#### **Abstract**

The article analyses the demand for logistics specialists in the labor market in Lithuania. Detailed analysis of the logistics term was performed, the main and auxiliary logistics activities were distinguished, and a generalized term of the logistics specialist was formulated. Possible classification of logistics professionals was provided, indicating the boundaries of operations and responsibilities in the supply chain. Quantitative study of the need for logistics specialists in the labor market was performed. Noted that there is scientifically and practically incorrect grouping of professions, without taking into account the specifics of logistic activity. Noted, that profession of logistics specialist is in high demand in the labor market. The geographical location of the Lithuania, investments in transport infrastructure, positive transport and tax policy, globalization processes will increase the demand for logistics specialists in the labor market in the future. Qualitative research method was used to analyze the main requirements for logistics professionals by systematizing the content of job advertisements for logistics specialists and conducting an oral survey of logistics professionals. The main requirements for logistics specialists in the labor market were observed. Specified high education in logistics, management or transport engineering, computer software skills, verbal and written foreign language skills (mainly English and Russian, third language proficiency is considered as advantage) communication / communication culture, analytical thinking, quick decision making (quick orientation), goal seeking, teamwork skills, ability to solve complex problems, excellent negotiation skills, organizational skills, autonomy skills, ability to prioritize, result orientation, activeness, initiative, motivation, conflict management experience / knowledge, flexibility, positive attitude. Requirements for special knowledge and skills are directly dependent on the particularities of the logistics specialist's wo

# Introduction

It can be stated that the term logistics is often misunderstood and used not correctly in modern society. Logistics often involves only the transport process from point A to point B, often mentioning only road transport. A driver who carries out road transport within the European Union is called a logistic specialist or freight forwarder. It is sometimes occurred that the warehousing process and the related functions are noted as an element of logistic operations. This is already the right direction for understanding the concept of logistics, but there are only two types of logistic activity. Sufficiently logistics concept is used without appreciating the complexity of the whole logistic process, a misunderstood definition of logistics, without knowing the basic and auxiliary logistic activities, flows that explore logistics.

After initial preparation for the study of the demand for logistics specialists in the labor market, it was noticed that there is no clear term for logistics specialists, definition of functions, attributes of grouping, place in logistics supply chain. Some of the most popular job search portals in Lithuania and the official website of the Employment Service were selected for the survey.

The object of the research is logistics specialists and their demand in the labor market. The aim of the research is to find out the need of logistics specialists in the labor market, to determine the main requirements for the candidates.

Research tasks:

- 1. To carry out a theoretical analysis of the terms "logistics activities" and "logistics specialist".
- 2. Carry out research on the demand for logistics specialists in the labor market.

3. Perform an analysis of the basic requirements for logistics specialists.

The following research methods were used: overview of scientific sources is used to reveal the meaning of logistics terms, to formulate the concept of logistics specialist and to provide a possible classification model for logistics specialists. A quantitative research method is used to identify the needs of logistics professionals by systematizing statistical information on official and popular job search portals. A qualitative research method is used to analyze the main requirements for logistics professionals by systematizing the content of job advertisements for logistics specialists and conducting an oral survey of logistics professionals.

### Concept of logistic activity

When looking at the demand for logistics professionals in the labor market, one should start with the evolution of the concept of logistics, the identification of core and ancillary logistics activities, the formulation of a broad definition of logistics specialist and further grouping by area and function.

Logistics is a young science in general, began to develop rapidly during World War II, when it was used to address the defense industry, supplying the military with food, ammunition and weapons on time. Later, the concept and methods of logistics were transferred to the business - movement of material flows from source to production, from production to end user. According D. Bazaras (2005, p. 5). The word "logistics" comes from the Greek, where "logos" is the mind, "logismos" is the calculation, "logistica" is the art of calculation. According to J. A. Urbonas (2014, p. 11), "from the Greeks to

Rome, logistics was understood as the "distribution of food". The development of logistics was inspired by fundamental works by military theorist Baron A. A. Zhomini (1799-1869), who described logistics as a practical art of military control, including locating troops and transporting troops (Levkiv, 2009, p. 9). The concept and methods of logistics in business have recently been introduced. Thus, until the early 1960s, material flow optimization issues did not receive much attention. "In the 1960s, business logistics was understood as the coordination of the company's supply of raw materials and their inventory, processing of raw materials, packaging of finished products, warehousing and delivery to the customer. These are issues of physical distribution of material resources and finished goods" (Urbonas, 2014, p. 11). In the 1990s the logistics "revolution" took place. Logistics and the transportation process have undergone significant changes: from a microeconomic point of view, logistics and transportation from auxiliary functions related to material management have become an independent factor in production that is compatible with the global supply chain (Vahrenkamp, 2012, p. 255). Currently, scientists agree that the main object of logistics is the flow of materials throughout their journey, from the primary source of raw materials to their final consumer, and the main task is to optimize costs throughout the transportation journey.

The purpose and essence of logistics is well illustrated by the so-called "7R Rule" (R from the English word "Right"), in which the seven variables are interrelated: the right product, of right quality, in the right amount, at a right price, for the right user, in the right place, at the right time. The Logistic Purpose Based on Rule 7R: (1) the right product should be delivered (2) on time (3) to the right place, (4) at the lowest cost, (5) right quality, (6) right quantity, and (7) right customer. If these rules are followed, the goal of the logistics activity is considered to have been achieved (Левкин  $\Gamma$ . $\Gamma$ ., 2009).

These 7R rules of logistics are variable, compiled with each other or all together very often used to formulate the definition of logistics.

According Lithuanian authors, such as A. Garalis, R. Minalga, I. Meidute, R. Palšatis, D. Bazaras, J. A. Urbonas, Ž. Židonis, logistics is commonly understood and described as:

- a set of activities: getting the right amount at the right place at the right time at the lowest cost;
- integration of transport and production processes;
- the process of planning the cost of moving goods from the production site to the consumer's movement and storage;
- physical distribution management form;
- efficient movement of finished goods from production to the place of consumption;
- new scientific direction related to rational selection of material and information flow management methods;
- the science of rational organization of production and distribution.

According Minalga R. (2009) Logistics is the management (coordination) of material, information and financial flows in order to create a product that best meets

the needs of the consumer, while reducing its production costs and increasing the profit of the company.

Logistics involves all physical operations that are repeated many times before the raw material is transformed into a product that is delivered to the consumer. Logistics - efficient transfer of goods from the supply point to the production point and from the production point to the final consumption point in the least costly manner while maintaining an acceptable (customer-agreed) level of quality.

The following logistic definitions also applied:

- managing all processes that facilitate the flow of material flow and the matching of supply and demand, generating space and time benefits;
- art and science to manage and control production, information, energy and other resources;
- delivering resources at the right time, at the right price and quality;
- all transportation, storage and related activities (these activities may include customer service, demand forecasting, inventory control, product storage, order management, after-sales service, site selection, stowage, waste collection and reuse, transportation organization) between production and consumption management.

A universal definition of logistics that emphasizes the flows in question is: Logistics is a practical activity and science that explores the processes of planning, organizing, managing and controlling material, financial and information flows in space and time from their original source to their end user.

Similarly, R. Palšaitis puts forward the concept of logistics: "Logistics is the interaction of two or more activities aimed at ensuring the planning, production, control and efficient movement of raw materials, material resources and production from the point of production to the point of consumption" (Palšaitis, 2007, p. 13).

V. Zinkevičiūtė and A. Vasilis Vasiliauskas also give their opinion on the concept of logistics: "Logistics - efficient transfer of goods from the place of supply to the place of production and from the place of production to the place of final consumption in the least costly manner, while maintaining an acceptable (customer-agreed) quality level" (Zinkevičiūtė, Vasiliauskas, 2013, p. 11).

According to V. Zinkevičiūtė and A. Vasilis Vasiliauskas, I. Meidutė understands logistics as service-oriented: "Logistics is a wide range of services, satisfying the needs of the client at the lowest possible cost" (Meidutė, 2012, p. 8).

Foreign author sees logistics as the totality of all logistics services oriented to profitability: "Logistics is the strategic management of purchases, the storage and movement of materials, parts and finished items, along with the flow of relevant information within an organization and its marketing channels, cost-efficiently executing orders and maintaining maximum current and future profitability" (Christopher, 2007, p. 12).

Russian author Gadzinskiy AM (A.M. Гаджинский, 2012, p. 11) understands logistics as the science of planning, control and packaging, transportation, warehousing and management, production, processing in the factory, delivery of finished products to the consumer, as well as related information transmission, storage and processing. Logistics is a practical activity and science

that explores the processes of planning, organizing, managing, and controlling material, financial, and information flows in space and time from their prime source to their end-user through production, where prime source, factories and end users can be on different continents.

# Main and supporting logistics activities

In general, in theory, all logistic activities are divided into main and supporting functions. Main activities of logistics are: user support policies and standards; order processing; inventory management; transportation; warehousing and storage. Supporting logistics activities: information processing; demand forecasting; production and warehouse location selection; material handling; acquisition; supply of spare parts and customer after-sales service; packing; production waste management; handling of returned products.

According to Ž. Židonis (2002, p. 12-13) main activities of logistics in:

- 1) user Service Policies and Standards. Not only the customer is serviced, and the goods are offered according to his wishes, but the logistics area is based on the same principle, to provide the buyer with the best service conditions in order to buy the service from this particular seller. Even the main activities have to be adjusted from time to time for the exchange to take place.
- 2) order processing. The components of order management can be divided into 3 groups: operational order acceptance, inclusion in the production cycle, preparation for order delivery, issue of required documents; communicative receiving order information, providing additional information, correcting errors, completing additional requests; financial and accounting invoicing and rendering them to the customer, payment of additional services purchased, invoice detailing, activity reports.
- 3) inventory management. Proper stock management not only enables the company to save money, but also to ensure that the right products and quantities are supplied according to customer needs. Raw materials, manufactured goods, equipment and its parts require space and capital to maintain, so the funds invested in inventories cannot be used in other stages of the operation.
- 4) transportation. One of the most responsible and important components of logistics activities. Its main task is to deliver products safely and on time from producer to consumer. Transportation product movement control, the components of which are related to transport mode selection, vehicle selection, routing, carrier selection.
- 5) warehousing and storage. Finished products must be stored and stored on-site or off-site as required. This is needed for later sale to the buyer, but longer storage or storage increases the amount of stock. Warehousing and storage activities related to space management.

Palšaitis (2010, p. 15) presents supporting logistic activities:

1) information processing. In order to make the process run smoothly, all logistics activities should be integrated: production, sales, logistics, finance and accounting. Customers and suppliers should also be included in a database. It can be information management system used by all employees of the company directly involved in logistics activities.

- 2) demand forecasting. Accurate and timely demand forecasting will allow the company to prepare in advance for the production of the required products and to prioritize transportation. Demand forecasting will allow the company to produce the right amount of production.
- 3) selection of production and warehouse locations. In addition to the production site (factory, factory), the strategic development plan should include storage and warehousing locations that are economically viable for the company.
- 4) material handling. Quality materials management, while not adding value to the product, can lead to production disruption, poor quality production, customer dissatisfaction, production downtime, or even loss or damage to the materials.
- 5) sourcing (acquisition). Providing the company with the right materials, parts or parts in a timely manner will guarantee the company continuous operation, because the production process will not stop due to material defects, but it is very important to monitor and coordinate the supply of these materials with suppliers in advance.
- 6) provision of spare parts and customer after-sales service. The logistics process does not end with the delivery of the products. In most cases, manufacturers continue to work with customers as a result of post-sales support. This may include replacement of new parts, ordering or even production, after-sales service, etc.
- 7) packing. Packaging has two main functions: trading function and logistic function.
- 8) management of production waste. Production waste accumulates during production and must be either transported to recycling facilities or destroyed or reused in production. In any case, they must be repaired, stacked and transported.
- 9) handling of returned products. Often referred to as reverse logistics because in this case the output travels not from manufacturer to consumer but vice versa. These are usually aftermarket repairs, remanufactured products, replacement products, etc.

As can be seen, the core activities take place in every segment of the logistics process, while the ancillary activities are already organized according to the needs of the company and only some of the mentioned activities can be carried out. After analysis of the concept of logistics and its activities, it is worthwhile to pay attention to the functional areas of logistics as well. There are 3 functional areas of logistics: supply logistics (from source to production), production logistics, distribution logistics (from production to end-user).

In summary, it can be stated that by function the logistic activities are divided into main and supporting, which are repeated in supply and distribution: main - user service policy and standards; order processing; inventory management; transportation; warehousing and storage; supporting - information processing and management, demand forecasting, manufacturing and warehouse location selection, material handling, sourcing, supply of spare parts and customer after-sales service, packaging, production waste management, returned product management.

# Logistics specialist term and classification features

A comprehensive overview of the theoretical aspects of logistics activities, main and supporting activities can be used to formulate the definition of a logistics specialist.

Logistics specialist is a professional who coordinates the efficient movement of material flows from raw material sources to production and / or production sites to end-users, managing accompanying information and financial flows in the lowest cost while maintaining acceptable (customer-aligned) quality level (time, cost, etc.).

Thus, we cannot call vehicle drivers / operators (road, rail, air, sea transport), warehouse and terminal workers, as logistics specialists. Yes, they perform certain functions in the supply chain (transhipment, marking, packing, physical transportation, loading, reloading, etc.), they are executors, without them the movement of material flow would be impossible, but logistics specialists are managers and coordinators of the logistic process, material, information and financial flows.

Once the logistics specialist term is formulated, it would be appropriate to provide a possible classification of logistics specialists. First of all it is necessary to find out the limits of the logistics specialist's activity in the supply chain.

It is recommended to have exclusive supply and distribution logistics specialists. This will make it clear to the labor market participants the limits of possible responsibilities and the specifics of the logistics activity, as there is a significant difference between the supply and distribution of logistics. The object of supply logistics material flows of raw materials directed to processing, industrial consumers, characterized by extremely large volumes of transported products, stability of qualitative characteristics, sufficiently narrow nomenclature of goods. Distribution logistics is a field of research that explores the systematic distribution of functions performed by material and accompanying (information, financial, post-transaction) flows between different users, i.e. integration of goods in the sales process. Distribution by a particularly large characterized nomenclature at end users. It should be noted, that in both supply and distribution, the same basic and supporting logistic activities are most often distinguished and carried out. It is recommended that the functional areas also distinguish between supply and distribution:

- •Transport logistics specialists (coordinating transport logistics): Road transport logistics specialist; Air transport logistics specialist; Maritime transport logistics specialist; Rail transport logistics specialist; Multimodal / Intermodal / Combined transport logistics specialist; Transport coordinator (only working with transport operators carrier representatives).
- Forwarder
- Warehouse logistics specialists
- Inventory management logistics specialists
- Order management specialists
- Customs logistics specialists (customs clearance)
- Import managers (purchasing functions combined with logistic functions)

• Export managers (sales Functions combined with Logistic Functions)

It is also important to mention that in practice there are five major logistics service providers (organizations) [Erkan, 2014, p. 9-10]:

- 1PL (First party logistics) first-tier logistics. Shipments by consignor or consignee where the process does not involve third party operators. The shipper or the consignee shall agree on the delivery and shall transport the goods by their own means of transport. This is the internal logistic process of the company.
- 2PL (Second Party Logistics) tier 2 logistics involving third party carriers (carriers) can be a shipping company, rail operator, freight company hired to transport cargo from the production site to the destination.
- 3PL (Third party logistics). Some freight forwarders with value and physical assets (transport, warehouses) in a particular transportation segment while offering additional services in the logistics process. Additional services are related to warehousing, transhipment, branding. These service providers are directly involved in distribution logistics.
- 4PL (Fourth Party Logistics). Freight forwarders, who do not have any physical assets but operate under lease and service contracts. 4PL mostly purchases services from 3PL companies throughout the supply chain. They only have a few managers coordinating the process, IT professionals and intellectual property. Their main task is to meet customer needs by offering the most optimal service in the chain. 4PL customers usually do not know the names of the carrier, warehousing company, brokerage firm, and only the manager of this chain cares.
- 5PL (Fifth party logistics). It connects 3PL and 4PL supply chain players. 5PL is an innovative way in the supply chain, with IT technology as a key asset. This logistics process is not yet widely used as it is all about connecting all possible shippers, carriers, receivers, services into one single system where evaluation and comparison can be done and the most appropriate carrier or service provider selected.

The above model can also be used for the classification of logistics professionals, where the provider of logistics services is the employer organization.

In conclusion, a logistics specialist is a professional who coordinates the efficient movement of material flows from raw material sources to production and / or production to end-users, managing accompanying information and financial flows in a cost-effective conception while maintaining reasonable (customerlevel) quality level (time, cost, etc.). Logistics professionals can be categorized by operational boundaries in the supply chain (supply logistics and distribution logistics), by main and supporting logistics activities, by the range of logistics services (1PL, 2PL, 3PL, 4PL 5PL) in supply and distribution logistics.

# Quantitative research of the demand for logistics specialists in the labor market

It should be noted that the labor market is a very dynamic, characterized by both seasonal supply and

demand for jobs. For the purpose of the research, only actual day-to-day figures were fixed on different popular vacancies search portals and on the official Employment Service website. Repeated analysis of the data at specific time intervals, such as monthly, is required for more detailed investigations to identify changes in the demand for logistics specialists.

During the analysis of the statistical data incorrect and inflexible merging of professions and grouping without taking into account the specifics of logistic activity was observed, therefore, the actual labor market indicators differ from the published statistical overview.

For example, warehousing specialists are grouped together into a separate subgroup, without distinguishing between specialist and workers, and the subgroup "Logistics and Transport" is left out, emphasizing that warehousing is not a logistic, it is not a correct grouping, not based on scientific sources.

There is also situation, where supply specialists are not added to logistics specialists, although supply and distribution are the two main functional areas of logistics.

The official website of the Employment Service also does not distinguish a subset of separate group - "logistics specialist". The subgroup "Transport and Communications" includes professions such as driver, road repair worker or postman. The logistics specialist does not have the ability to collect data promptly to search for a job.

It can be concluded that the term logistics specialist is not clearly understood in society and in the labor market.

Following a statistical review of popular job portals, the highlighted trends are described below.

Distribution of job vacancies by groups on 10<sup>th</sup> of September 2019, from "CV Online" data shows that transport and logistics are separated but combined into one subgroup with 325 vacancies and have 8th position by group. Expected that the subgroups Customer Service, Manufacturing, Organization and Management, Sales, Purchasing, Supply also include logistics specialists. Thus, the eighth place is a good enough indicator of the possibilities of logistics specialists in the labor market.

Distribution of job vacancies by groups on 10<sup>th</sup> of September 2019, in the official statistics of the "Employment Service" show that the activity "Transport and Communications" is merged into one subgroup with 104 vacancies and 6th position according to the occupation groups sought. However, the subgroup brings together professions such as drivers, vehicle repair workers, road workers, postal workers and others. Information is not objective enough to assess the specific need for logistics specialist in the labor market. Expected that subgroups sales, purchasing, services, management and organization include logistics specialists.

Distribution of job vacancies by groups on 10<sup>th</sup> of September 2019, of data from "CV Market" shows that Transport, Logistics and Warehousing are separated into one subgroup with 382 vacancies and have 4th position by occupation. The subgroup includes transport and warehouse workers. Statistics on the need for logistics specialist are inaccurate. Expected that the subgroup "Purchases and sales" also refers to logistics specialists.

Distribution of job vacancies by groups on 10<sup>th</sup> of September 2019, from "CV.lt" data shows that storage

(warehousing) is a separate subgroup, has 458 vacancies and ranks fourth in the most popular vacancy groups. Finally, transport drivers is subdivided into a separate subgroup and statistics rightly reflect the current demand for logistics specialist in the labor market. Logistics, transport management also divided into a separate subgroup, has 92 vacancies. Sales and Export Management is also divided into a separate subgroup and has 231 vacancies. Expected that the subgroup also refers to logistics specialists.

In summary, when research of the statistics, provided by official and most popular job search portals, was completed, it showed that there is incorrect classification of professions by scientific and practical point of view, grouping without taking into account the specifics of logistics business, therefore the actual indicators in the labor market differ from the published statistical overview. Profession grouping is not fair, is not based on scientific sources in the field of logistics. There is no distinction between qualified and not qualified transportation and storage infrastructure workers. Assuming, the subgroups of activities Customer Service, Organization and Management, Trade, Purchase, Supply, Import, Export also refer to logistics specialists, it can be said that the profession of logistics specialist is sufficiently in demand in the labor market.

The geographical location of the Republic of Lithuania, investments in transport infrastructure, positive transport and tax policy, globalization processes will only increase the demand for logistics specialists in the labor market in the future.

# Basic requirements for logistics specialists

As mentioned above, the range of logistic services is extensive enough to cover the main and ancillary logistics activities, as well as relevant at any stage of the supply chain for logistics services, whether in supply or distribution. In addition, logistic service providers are grouped according to the range of services (1PL, 2PL, 3PL, 4PL 5PL) in supply and distribution logistics. This model can also be used to classify logistics specialist. In any case, whatever the classification used, the professional requirements for logistics specialists are quite probable and universal.

A qualitative research method is used to analyze the basic requirements for logistics specialist by systematizing the content of job advertisements for logistics specialist on popular vacancy portals and by oral survey of logistics professionals. During the informal interview, five different logistic business practitioners with more than ten years of experience in the logistics business were interviewed individually. Fifty logistics specialist job vacancies were randomly selected on the recruitment portals and systematized data showing job candidates requirements.

An analysis of the basic requirements for logistics professionals has highlighted such trends. Foremost, employers requires high education in logistics, management, transport, excellent computer skills, spoken and written foreign language skills (mainly English and Russian, third language proficiency is seen as an advantage, languages, German, Norwegian, French,

Italian, Spanish, Polish), correct Lithuanian written and spoken, culture of electronic correspondence / communication.

The personal qualities required by the logistics specialist most often referred to by employers include analytical thinking, communication skills, initiative, ability to make quick decisions (quick orientation), goal achievement, ability to work in a team, resistance to stressful situations, resilience to complex problems, negotiation skills, excellent planning, work organization skills, autonomy, ability to prioritize, result orientation skills, proactivity, motivation, conflict management experience / knowledge, flexibility, positive attitude.

Requirements for special knowledge and skills are directly dependent on the particularities of the logistics specialist's work. This may include knowledge of logistic processes for a particular mode of transport and international legislation, specialized computer software for warehouse, for material flow or vehicles, transportation units (wagon, container, semi-trailer), documentation (transport, commercial, customs, etc.), other specific knowledge.

### Conclusions and results

The article analyzes the demand for logistics specialists in the labor market in Lithuania. The analysis of logistics term was performed, the main and auxiliary logistics activities were highlighted, the spheres of logistics activities were emphasized, and the generalized term of the logistics specialist was formulated. A possible classification of logistics specialist was provided, indicating the boundaries of operations and responsibilities in the supply chain. A quantitative research of the need for logistics specialists in the labor market was carried out.

Analyzing statistical data provided by official and most popular job search portals, noted, that there is scientifically and practically incorrect combination of professions, grouping without taking into account the specifics of logistics business. It can be said that the profession of logistics specialist is in demand in the labor market. The geographical location of the Lithuania, investments in transport infrastructure, positive transport and tax policy, globalization processes will only increase the demand for logistics specialists in the labor market in the future. The main requirements for logistics specialists in the labor market are explained. Employers specify basic requirements, such as higher education in logistics, management, transport, perfect computer software skills, verbal and written foreign language skills (mainly English and Russian, third language proficiency is considered communication advantage) communication culture, analytical thinking, communicative, proactive, quick decision making (quick orientation), goal seeking, teamwork ability, ability to solve complex problems, excellent negotiation skills, organizational skills, autonomy skills, ability to prioritize, result orientation, activeness, initiative, motivation, conflict management experience / knowledge, flexibility, positive attitude. Requirements for special knowledge and skills are directly dependent on the particularities of the logistics specialist's work.

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