



Strategy and Solution Suggestions in the Investment Process in Establishing a Logistics Center

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Keywords

Logistics, Logistics Center, Management and Organization.

Abstract

The continuous expansion of globalization, the rapid advancement of science and technology, the acceleration of the industrial transfer rate, the expansion of domestic sales, and the growth of production and customer services provide signs of the need for logistics systems. At this point, it is possible to say that the demand for logistics centers has increased by thousands of states and companies. Logistics investments Due to the current demand for modern commercial enterprises, the construction of logistics centers has also become very popular. There are currently 23 logistics centers in Turkey and the number of logistics centers under construction is increasing. Logistics centers built since the early 2000s are constantly being patched (added) to bring life to the installation centers. Especially the advancement of technology and lack of foresight when investing are the main reasons for this. The process of building a logistics center should be feasible in advance and construction investment should begin this way. This article focuses on the process from the preparation of a logistics center feasibility to the commissioning of the investment and tries to support it with relevant literature.

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1. Introduction

As we reach the 100th anniversary of the Republic of Turkey, investments in the field of logistics are increasing. Especially logistics center investments are expanding rapidly. However, logistics centers go through a series of processes until the investment construction is insufficient and the existing logistics centers are no longer sufficient for the region. It is noteworthy that there are some deficiencies in investment construction, science and technology of the period and investments in human resources. The requirements of technological progress, It expresses the need for the construction of a high-tech modern logistics industry. At this point, pre-investment information, environmental protection and digitalization are important. The main goal of putting the logistics center into operation is to establish a logistics center that meets the need. One of the main problem questions regarding this study is: What should be done today if the investment made today is not enough in the future? Quality and quantity requirements regarding investment construction must be made in consultation with the expertise of technical

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personnel. However, by using today's technology, technical personnel can deliver the desired investment to the requesting person/institution after cost-benefit analysis. The second and critical main problem question here is: How does Turkey provide the necessary foresight and due diligence regarding the logistics center installation location and investment quality regarding logistics investments? In this process, the answer to the question of whether horizontal or vertical growth should be achieved is also important. Today, the demand made by those who prepare the logistics center feasibility report for a logistics center in a province or district of Turkey leads to investment decisions after estimation. However, this demand is supported by development agencies or other agencies and turns into projects commissioned with the main purpose of increasing labor force opportunities and adding regional attraction power to the province or district. Determining the minimum criteria for the establishment of a logistics center by the state, measuring the size of investments through this policy and making appropriate decisions will be beneficial in terms of contributing to the country's economy and the region. This study also supported the study by obtaining the opinions of logistics managers through in-depth interview method.

2. Logistics and Logistics Center Establishment

Basically, the word Logistics is derived from the Greek word "Logiticos", which means skilled in calculation and arithmetic and able to make statistical correlations of any subject. While the word "Logiticos" derives from our language as logistics, it is translated into European languages as "logisticus" in Latin (Dinçel, 2019). Logistics is a discipline that mediates living things to reach their needs or aims to directly meet the needs of living things. Transporting, storing, packaging, order planning, performing customer services, implementing inventory systems and so on in order to transport a person from one point to another, to transmit physicalized information from one point to another, or to transport a physical item from one point to another. It describes the carrying out of all operational activity transactions, equivalent to activities such as, as a whole (Dinçel, 2014). Logistics carries out these activities through some transportation modes. These; They can be listed as air, road, sea, railway, pipeline and river transport modes. These transportation modes are indispensable corridors and keys to global trade that play a role in the economic development and development of all countries in the world. Logistics is a production stakeholder. As long as the supply process exists, logistics, which is a supporting force, will always be a force that will continue its existence. The economic value of countries relative to GDP is between 10-20%. This shows that 10% to 20% of the cost of each product service will be logistics. Considering the technological developments, it is expected that the transaction volume of logistics will increase. Transportation, storage, insurance, collection, consultancy, customs clearance, handling, customer service, etc. It is possible that there will be a transformation in the transactions. It is thought that this transformation will benefit the development and growth of the sector and the country (Dinçel, 2019). It should also be added that logistics should have some principles in general. These principles are: flexibility, economy, standardization, adequacy, traceability and coordination. (Johannessen & Solem, 2002)

Increasing global competition and globalization after the 1980s have forced companies to develop different options in sourcing, manufacturing, distribution and selling their products. Nowadays, companies face fierce competition both at home and abroad and have to offer superior services to customers. Logistics is an important company strategy for companies that want to gain competitive advantage and deliver quality and value to customers. At this point, the operational purpose of the logistics system is needed.

Logistics network design requires the coordination of many activities that control and encompass information flow, stock and warehouse management and transportation. The 7 operational objectives of the logistics system are as follows (Tanyaş, 2008):

- Quick answer
- Low cost
- Consistency/scheduled service
- Minimum stock
- Combining loads (consolidation)
- High quality
- Life cycle support

The concept of logistics center is also used to describe service centers where additional values such as labeling, assembly, semi-production and adaptation are offered in addition to warehousing services, which are expressed as traditional activities. Logistics centers can be expressed as efforts to reveal the best solutions for a structure that includes the activities of businesses providing logistics and transportation services as a whole, including urban conditions, traffic and environmental effects, and energy use. (Yücel et al., 2019: 73). Logistic villages are structures that reveal the synergy between manufacturing enterprises and logistics companies and aim to optimize mutual relations in terms of performance and cost items in a well-designed logistics process (Winkler and Seebacher; 2011: 282).

Logistics Center/Freight Village: Organized for logistics purposes so that all activities related to international and/or national transportation, logistics and distribution of products can be clustered and carried out by different businesses using self-owned/rented buildings, land or vehicles, and has different transportation types. It is a private area with active links. Logistics centers are classified as A, B and C types in TLMP. These; (UTİKAD, 2018).

Type A International Logistics Center: *It has an area of at least 2,000 decares, has a cargo handling capacity of at least 25 million tons per year, can send and receive cargo directly to all countries in its region, is on at least one global and one national transportation corridor, and provides all logistics and customs services. It is a logistics center that provides transportation services, has at least three modes of transportation or effective highway and/or railway connections of these types, has a minimum road distance of 200 km between it and another international logistics center, and has at least two intermodal terminals.*

B Type Regional Logistics Center: It has an area of at least 1,000 decares, has a load handling capacity of at least 15 million tons per year, can send and receive loads directly to all provinces in its region, is on at least one global and/or one national transportation corridor, has storage, packaging It is a logistics center where customs and customs services are provided, has at least three types of transportation or effective highway and/or railway connections to these types, has a minimum road distance of 100 km between it and another regional logistics center, and has at least one intermodal terminal.

C Type Local Logistics Center: It has an area of at least 500 decares, has a load handling capacity of at least 7.5 million tons per year, can send and receive loads directly to the city center and districts where it is located, and provides storage and packaging services, and at least two transportation types or these. It is a logistics center that has effective highway and/or railway connections to different species and is at least 50 km away from another local logistics center.

At this point, before determining the type of logistics center, a preliminary survey should be conducted and the need and details of the logistics center in the region should be determined.

Accordingly, the preliminary survey study is as follows;

- Status of businesses
- Field of activity of businesses
- Number of current employees in businesses
- Load entry amount to businesses
- Load output from businesses
- Current warehouse area of the businesses
- Waiting time of loads in the warehouse
- Annual average logistics expenditure of companies
- Daily/Annual number of road vehicles entering and exiting the Organized Industrial Zone for logistics purposes
- Number of companies that will operate in the logistics center
- Estimated duration of operation in the logistics center
- General services required to be available in the logistics center
- Special services desired to be available in the logistics center

should be prepared and evaluated under headings.

Based on these objectives, it is necessary to design the basis on which investments in the process will be made. These investments may be important in answering the question of whether they are a micro-level logistics service or a macro-level logistics service. In order to provide a competitive advantage in the globalization process, airline and sea ports and railway transfer stations are designated as centers of logistics areas that serve large-capacity vehicles at high speed, safely and in the most efficient way, and where private logistics companies and public

institutions such as customs can operate. regulation is important. The design features of the logistics center facility to be established should be science and technology oriented, capable of providing human resources processes, open to digitalization and meeting the security process. Innovation and foresight ensure continuous improvement in this direction, and a small number of new technological logistics centers It will provide a great increase in the potential of the province or district with its investment. From the beginning of the logistics center project, the original concept, design and construction process must be in an infrastructure that is suitable for recycling and protects the environment. Again, in terms of time, it should exist in a type that knows the personal rights of employees and meets their health and psychological needs. logistics industry The direction of development has increased and expectations regarding the need are rising. At this point, some features to consider in the logistics center installation are stated below.

- Being sure about the region selection regarding the investment decision
- Be proactive
- Good construction quality
- Determination of human resources potential
- Creating a management level that knows the logistics sector and its needs
- Being foresighted about technological developments before investing and investing in them
- To produce interconnecting policies for the railway, sea, road and airline networks in the region.
- Organizing workshops with production centers or OSB's in the region to collect demands and include them in the process
- Focusing on solving economic modeling of investment with multi-partner investors
- Not to make the project by copying different logistics centers regarding the logistics center project.
- Convenience regarding customs procedures

Accordingly, management functions upon establishing a logistics center should be examined in depth and studies on logistics center examples should be included in the literature.

As it is known, logistics centers are transportation, storage, handling, distribution, customs clearance, sorting, import, export and transit operations, insurance and banking, infrastructure services, consultancy and production, etc. in a region. While it is expressed as special areas where activities are carried out by using a combination of possible transportation methods in harmony with each other (Keskin & Özcan, 2023:82), the 11 items given above fully support the efficiency of this definition and the 7 correctly expressed mix.

In particular, logistics centers, which are one of the criteria that will increase Turkey's logistics performance index (Pelit, 2023), should be supported if appropriate conditions are met.

3. Opinions of Logistics Center Managers

Following the opinions obtained in the light of the questions asked and the answers received during the in-depth interview conducted with the managers of the logistics companies operating in Istanbul in order to determine what kind of competitive vision they have created or their plans in this regard in order to ensure national and international competitiveness in the logistics sectors. is in the title.

At this point, 9 hours of interviews were held with 7 company managers and the opinions of the company managers are detailed below.

According to the managers who expressed their opinions, they are trying to determine the appropriate positions and strategies for their companies in the light of the developments expected to occur below.

- In an ideal logistics center, the focus should not be on receiving goods, recording and archiving. The logistics center starts with the vehicle entering the field, not with the vehicles being loaded onto the scale.
- The documentation process has been digitalized in the last 10 years and continues in this way. However, there are opinions that carrying out this documentation process, with service distribution and visibility details, transparently integrated in the entire software environment with digital technologies and barcode systems, will facilitate the controls at both the inventory control and most of all the taxation stage.
- The recycling process is especially important in the separation unit. But logistics center managers are not aware of this. Tons of recyclable goods or packages are used without separation every year. Policies regarding this issue are still not implemented. For example, policies can be implemented to prevent packages received from being recycled into the logistics center.
- Designing the shelf units in the warehouse process on the axis of minimum space and maximum benefit. There is a lot of patching process in this regard. It is still common to see goods piled up on top of each other in warehouses that are not properly designed. The hoarding process needs to end.
- There are also some innovative ideas in handling units. A space design where warehouses related to handling units can work integrated in the organization will positively affect work efficiency and the quality of the handling process. We heard that innovative, digitalization investments were made especially in this process in Italy and Germany.
- As it is known, different materials require different types of packaging systems. For example, the packaging of paper products and construction products requires the provision of different packaging materials. For this reason, it is important to plan the investment in the handling unit in a way

that foresees different packaging systems. It can be said that paper products and construction products are still handled with uniform handling methods in logistics centers today.

- In order to reduce the negative effects of climatic conditions (snow, rain, etc.), it is necessary to design the truck and truck park with a semi-closed cover system. It is also important for workers and employees.
- It is possible to talk about the existence of logistics centers where personnel still come and go in work clothes, threatening the hygiene and health of the personnel. This is actually partly due to the lack of architecturally satisfactory spaces. However, the personnel entrance of a logistics center should directly start with the design of dressing, shower and toilet areas, as well as waiting and rest areas. Some issues that may seem simple are important issues that increase the productivity of employees as well as their hygiene needs.
- If there is a railway in a region where a logistics center connected to organized industrial zones is desired to be established, an integrated system must be created. It is seen that integration is not carried out in some logistics centers.
- The certifications included in the highway transportation regulations create some bureaucratic obstacles. This issue must be included in the ministry policy.
- There is data showing that there are many products that are not insured. Companies resort to unregistered transactions in case of loss, damage or other events. These processes require an internal state policy.
- The multitude of procedures in customs procedures creates time loss and cost disadvantages. State policy needs to be expanded in this regard.
- It is necessary to establish a ground where logistics centers will produce their own energy. Investment should be made with this foresight.

4. Conclusion and Comment

Turkey, which has one of the most important transportation locations in the world, has a physical transportation network connecting Asia and Europe and East and West. At this point, it is possible to say that Turkey is an important regional actor in global trade, with its workforce resources, geographical area and logistics infrastructure. The fact that the country is surrounded by the sea on three sides and uses its port power, that its geopolitical position has gained value due to the investments made in the transportation and infrastructure network in the last 20 years, and that the transportation network has spread to large areas and has had a logistics culture that is based on the military system for a very long time, makes Turkey's logistics It provided the basis for it to become an important stakeholder in its field. One of the investment parameters of this process is logistics centers.

The logistics center can currently be noted as an important logistics circulation center and a special investment center for actual use. Usability, streamlined design and construction intent must be sufficient for future production potential.

Innovative logistics centers are important as the current business development rate increases and the industrial structure improves, from the first establishment of logistics centers to 2023. Especially It is a predictable reality that the construction style is constantly changing in technical terms and therefore the design process is changing frequently. On the basis of this issue, logistics centers can be described as going far beyond just being a place where products are handled and sorted from the warehouse. The ideal design concept is very important. Logistics centers serve a number of sectors, from the food sector to the health sector, from the construction sector to the chemical sector, and investments should be made in this regard.

With the increase in demand for logistics services, some problems have arisen in logistics centers. While lower-level personnel providing logistics services were intermediating with consumers with a focus on customer satisfaction, they experienced two-way disruptions due to reasons such as delays in orders, damage to products, problems arising from out-of-inventory orders, vehicle malfunctions and accidents, and incomplete document delivery, and these problems affected the logistics sector in a wave. It is reflected in the service quality of its stakeholders. It would be beneficial for logistics centers to have the foresight to solve such customer satisfaction problems arising from the first manufacturer.

Based on the opinions of the managers; A series of suggestions such as making investments with foresight, being forward-thinking about architectural design, stretching state policies, creating recycling opportunities, switching truck parks to a semi-closed system, innovation and development in the documentation process, innovation in handling, and preventing unregistered insurance businesses. can be specified.

References

- Dinçel, S. (2019). Girişimcilik. İstanbul: Togan Yayınevi.
- Dinçel, S. (2019). İşletme Yönetimi ve Lojistik. İstanbul: Togan Yayınevi.
- Dinçel, S., Lojistik Sektöründe Girişimcilik: Örnek Bir Firma İncelemesi, Yüksek Lisans Tezi, İstanbul Aydın Üniversitesi Sosyal Bilimler Enstitüsü, 2014, İstanbul
- Johannessen, S., & Solem, O. (2002). Logistics organizations: ideologies, principles and practice. *The International Journal of Logistics Management*, 13(1), 31-42.
- Keskin, B., & Özcan, E. (2023). En Kısa Yol Optimizasyonlarında Floyd-Warshall Algoritması: Lojistik Merkezler Örneği. *Demiryolu Mühendisliği*, (17), 82-92.
- Pelit, İ. (2023). Türkiye'nin Lojistik Performans Endeksinin İncelenmesi. *Uluslararası Ekonomi ve Yenilik Dergisi*, 9(1), 37-49.

- Tanyaş, M. (2006). Türkiye lojistik sektörü için strateji ve çözüm önerileri. *Ankara: Atılım Üniversitesi*.
- UTİKAD, (2018). TLMP Raporu. https://www.utikad.org.tr/Images/Duyuru/19082019turkiye_lojistik_master_plani_yonetici_ozeti489684.pdf
- Winkler, Herwig, Gottfried Seebacher (2011), Management Of Freight Villages: Findings From An Exploratory Study In Germany, *International Journal of Logistics: Research and Applications*, Vol. 14, No. 4, 271–283.
- Yücel, M., Yılmaz Koltan, Ş.(2019), Türkiye’deki Lojistik Köyler ve Seçimine Etki Eden Unsurlar, *Akademik Yaklaşımlar Dergisi*, Cilt:10, Sayı:1

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