

O 144. AN ANALYSIS OF LOGISTICS VILLAGES IN TURKEY BY USING GEOGRAPHIC INFORMATION SYSTEMS (GIS): KONYA SAMPLE

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ABSTRACT: In the world of evolution and speed, the logistics services considered the essential necessity for all sectors. Also, the fundamental factor affected the firm's performance. Then, the logistic villages are the most important elements of the logistics and it contributes to the Turkish economy significantly. In this study, the definition, characteristics and advantages of the logistics villages were mentioned. Thematic map created with GIS, the qualifications and quantities of the logistic villages in it was specified. Then, the logistic village (kayacık) in Konya was analyzed. weaknesses and strengths points were discussed.

Keywords: Geographic Information Systems (GIS), Logistics Villages.

1. INTRO

Logistics is the art and science of the managing the flow of goods, energy, information and other resources such as: products and services and even though the people, from the production area to market. It's totally hard or impossible to accomplish any global trade or the movement of export and import process . Or the transportation of raw materials or products and manufacturers without the support of the professional logistics.

2. LOGISTIC VILLAGE AND LOGISTIC VILLAGES IN TURKEY

Many definitions have been put to the logistic village. For example, logistical village: modes of transport for short and far distance (air, railways and Sea). The Services which are provided in the logistics villages are: (transport, distribution ,classification and compilation of goods and storage). Then, The logistics villages achieved environmental benefits in terms of : (cost, speed, efficiency, improvement and sustainability through all the logistics activities).

Moreover, The logistics villages are built in large and important production centres (industrial areas, business centres, towns, railways, road lines). As if it's possible in the ports, but in such points isn't affected directly at the traffic of the city.

Some of the main features that should be: an area of at least 250 hectares.

Although the creation of a logistic village , it's an attractive logistical activity because of these advantages, choosing an unsuccessful site can eliminate all these benefits. The selection of the site is the most strategic step to start up the logistic village. On the other hand , the Choice of the wrong location reduces the efficiency and efficiency of the logistics village.

Turkey distinguished by the geographical advantages such as : being surrounded by seas and the combination of the continents. Also, in China and the development of the East Asian market, today increases the strategic importance of Turkey as a transit country.

The logistics village started work in 2006, Also 21 logistics village projects have been included in the agenda eight of them (Balıkesir, Denizli, Eskişehir, İstanbul/Halkalı, İzmit, Samsun, Uşak, Türkoğlu/Kahramanmaraş) started working and Six other logistic villages are expected to be operational (Bilecik, Erzurum, Mardin, Kahramanmaraş, Mersin, İzmir/Kemalpaşa).

Moreover, The process of expropriation is carried out in 7 centers (Konya, İstanbul/Yeşilbayır, Kars, Kayseri, Sivas, Bitlis/Tatvan, Habur)

In addition, The aim of the centres is for Turkey to become a regional logistic base as it's coordinating with many institutions and organizations. With the introduction of planned logistics villages, it planned

to provide 40 billion dolar in contribution to the logistics sector, 27 million tons of additional transportation and 9 million square metres of container holdings.

Logistics centers spread across Turkey and also provide more jobs for more than 10,000 people.

Finally, the logistic villages were added that Turkey according to the vision of 2023 aims to export 500 billion dolar in order to become the largest logistic force in Asia, Europe and Africa.

The village of Izmir (Kemalpaşa) is the largest logistic village under construction, while the smallest logistic village is Denizli (Kaklık) is a Logistics village.

See Appendix, the thematic map for logistics villages in Turkey and the areas covered.



Figure 1. Logistic Villages in Turkey, Source: <http://www.tcdd.gov.tr/lojistik-merkezler+m129>

3. KONYA LOGISTICS VILLAGE PROJECT

3.1. The spatial and qualitative description

Konya is the largest province in Turkey, with an area of 41.001 km². It has the sixth in terms of population density of 2.205.609 according to data for the year 2018 and it has located in Central Anatolia in the international transport corridors. Also, Konya is a vibrant business centre and it has many huge investments, it is an important city for logistics and global trade.

Konya Province is highly efficient in industrial and agricultural terms. There are many advanced business and financial institutions, and they have experience in foreign trade, relations and railway connection to ports. Then, it contains a large and organized industrial city. For those reasons Konya contributes significantly to the Turkish economy.

The logistic village in Konya is the one of 6 logistic villages which is still under construction with regard to the construction of the logistics village.

In addition, the work is carried out in the coordination between the State Railways and the municipality of Konya. When the logistic village is activated, which is planned to be built on an area of 300,000 square meters, the cargo will be transported 1, 679, 000 T/Y.

Moreover, Logistics services, coal, cement, marble, various foods, fertilizers, sugar, agricultural machinery, agricultural products, containers and military materials will be transported.

As a result, one of the most important services that will be offered in Konya Logistics Village is the transit traffic between transport modes, providing loading, storage and unloading services, as well as Terminal Services such as: (security, maintenance, showrooms, meeting conference rooms, catering facilities, banks, post office etc.).

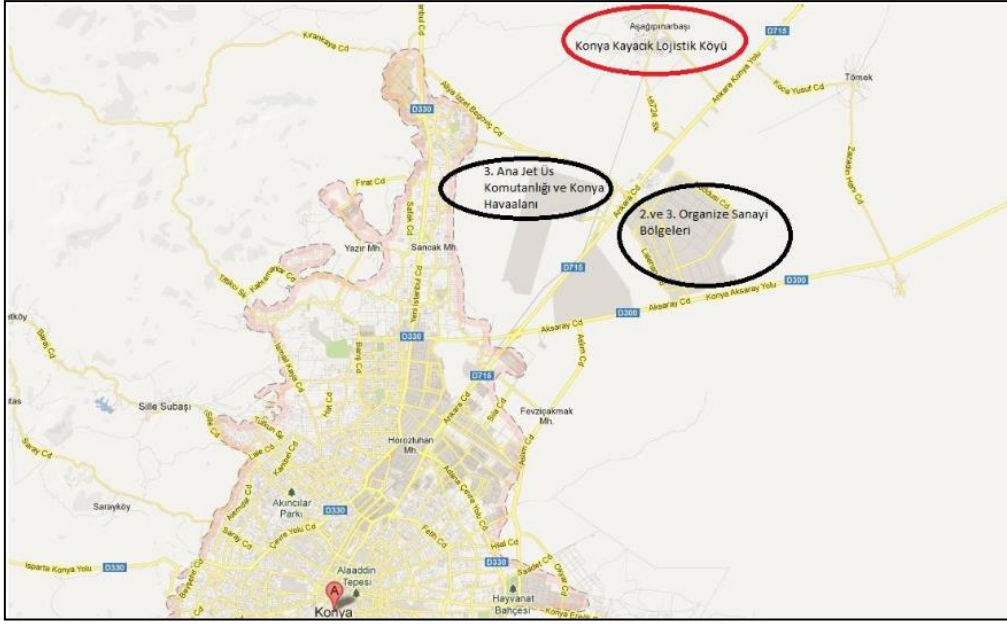


Figure 2. Konya Kayacık Logistics Village, Source: google.maps

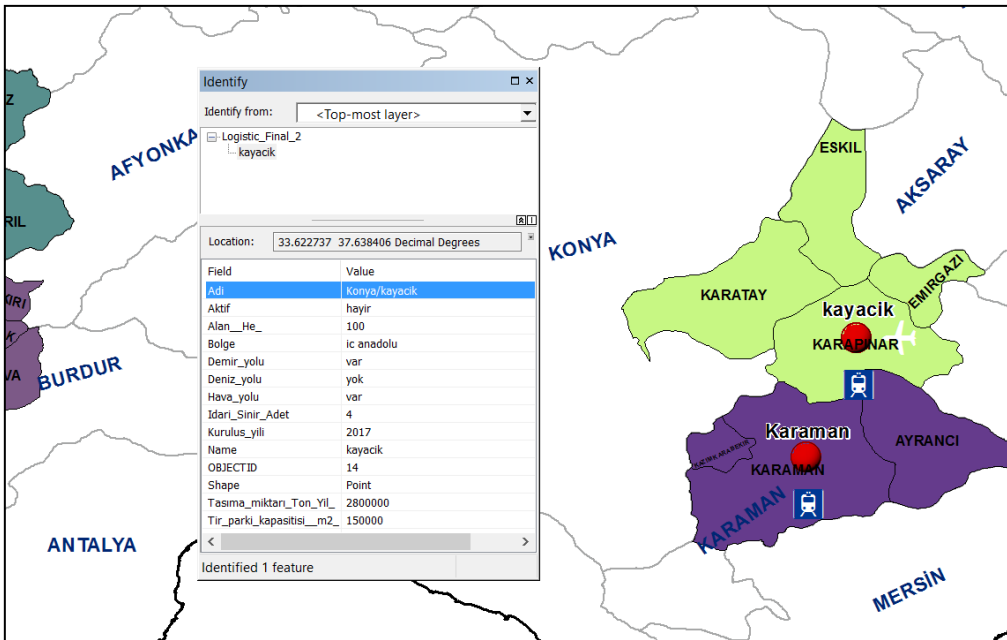


Figure 3. Konya Kayacık Logistics Village by GIS (Self-source).

3.1.1. Rapid transport

The columns of the trucks which are passed through Konya that occupies the most important place in Turkey. The total length of transport corridors in Turkey is 19.066 Km, while the length of the 869 km is according to General Directorate of Highways.



Figure 4. Konya Province Highway Infrastructure, Source: KGM.

3.1.2. Rail transport

There's a rail line from Istanbul to Konya across to Adana. there are train lines between Konya and Kerman. The journeys by a high speed rail available for (Konya - Istanbul, Konya - Ankara and Konya - Eskişehir). It also provides a line linked with Konya to Afyoun, and another line connected between Konya and Tasucu and the last one between Konya to Mersin.



Figure 5. Turkey Railway Infrastructure, Source: TCDD

3.1.3 Air transport

Konya airport is located in a distance of 18 kilometres from the central city. The building was completed in 2014 . Also, the totals are 23.640 square kilometres. so, It's one of the most important shipping airports.

3.2. The Strengths of the logistics village (Kayacık) in Konya

Geographical location: it's near of centre of city and airport also it leads to the lower cost. Multiple Transport: where it passes many rail lines. The number of vehicles, awards and and it's attachment to technology and high rate of daily transport. The growth of the national economy in accordance to the goals of the state of 2023. The Low labour costs and the large number of employees, ongoing contacts with clients, effective management processes and the use of the newest techniques.

3.3. The Weaknesses of the logistics village (Kayacık) in Konya

Wars in the Middle East, global economic crises, Lack of current infrastructure, Lack of publicity, Inappropriate for shipping, Insufficient the use of information technology in the village.

4. RESULTS AND RECOMMENDATIONS

Logistical villages : it's used roads, airways, railways and sea transport as multimedia transport facilities integrated with advanced facilities. with these areas all activities logistics are conducted at low, interest and high speed cost. As a result of that Turkey became one of the 20 largest economies in the world. Also, it'll be increase in logistical activities, there is a need for further investment, and should be increase the logistical villages of Turkey with the participation of the private sector in the meantime. When establishing logistical village unnecessary investments must be avoided. It should be managed by the logistics villages in Turkey by one authority.

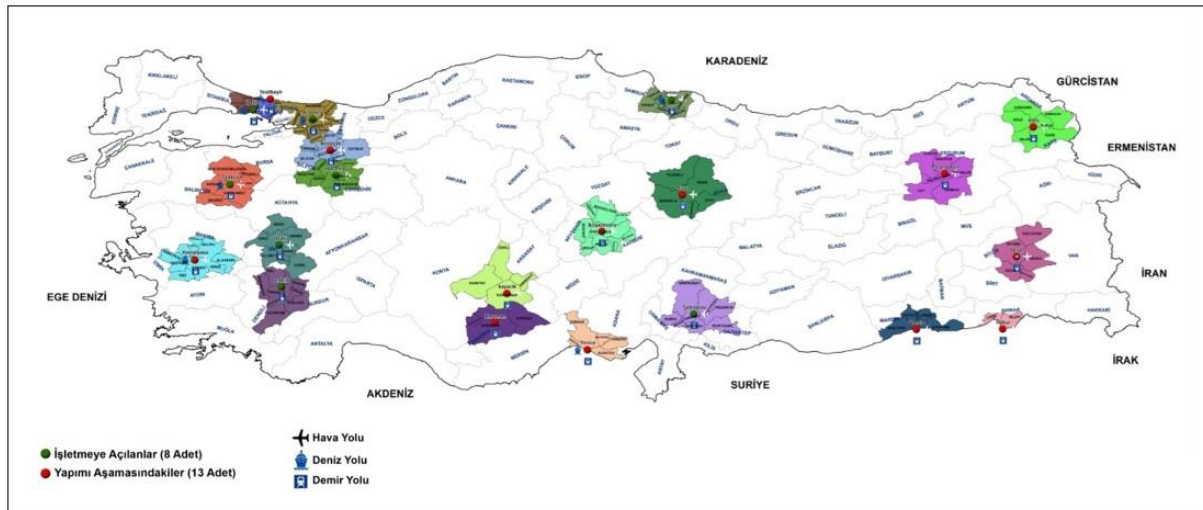
Finally, the operating of the logistical villages and the establishment of the logistics villages are also important. then, it'll contribute to the proper management of logistics services in the national economy and the logistics services sector.

The high potential for the return of the logistics and logistics sector in Turkey and expansion of the logistical villages will be beneficial for both the logistics and economy sectors.

In recent years, Konya has become one of the most important industrial centres in Turkey. The movement of exports to 189 countries have become in many different sectors.

Moreover, The number of factories was 105 in two years, and the number of companies in the industrial area in conjunction was 600. So, with other investments in the city, Konya will get a new production step. In addition, now we've subsidiary structure of industry preferred by international investors. Then we expect the volume of international investment in the city, which contains more than 300 euro million of international investment in the last three years, to 700 million euro.

APPENDIX



App 1. Logistic Villages in Turkey by GIS (Self-source)

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