

## Effect of Transportation Lines in Urban Development: Elazığ – Harput

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### Abstract

Transportation lines have decisive role in foundation and development processes of cities since the historical period. Transportation connections are one of the main factor on selection of the site where the settlement will be established. As one of the factor that directly affect foundation of the settlements, transportation lines also indicate the development direction of the urban fabric. In this context, Harput and Elazığ settlements were handled as the main material of the study. The foundation and development of the city in the 19<sup>th</sup> and 20<sup>th</sup> centuries were researched throughout the effect of transportation lines. As a result of the findings, the urban fabric of Harput was shifted to south due to the railway line that passing on plain where south side of Harput. Thus, it caused to create a new urban settlement on plain. After railway, in the 20<sup>th</sup> century, city growth though the west and south directions because of the highway connections. In future projection, according to developing transportation connections city's development will be estimated on southwest side of the city.

**Key Words:** urban growth, transportation planning, Elazığ, Harput

**DOI:** 10.7176/JSTR/5-4-22

## Kentsel Büyümede Ulaşım Akslarının Etkisi: Elazığ - Harput

### Özet

Tarihsel süreçten itibaren kentlerin oluşum ve gelişim süreçlerinde ulaşım akslarının belirleyici rol oynadığı görülmektedir. Yerleşimin kurulacağı alanın seçiminde ulaşım bağlantıları temel alınan etkenlerden biridir. Yerleşimlerin yalnızca kurulumunda değil, kentsel büyüme yönünü de doğrudan etkileyen faktörlerden biri olan ulaşım aksları, kent dokusunun gelişim yönünü de göstermektedir. Bu kapsamda çalışmada, Harput ve Elazığ yerleşimleri çalışmanın ana materyali olarak ele alınmış, 19. ve 20. yüzyıllardaki kentin oluşumu ve büyüme yönleri ulaşım akslarının etkisi üzerinden incelenmiştir. Elde edilen bulgular neticesinde, demiryolu ulaşımını sağlayan aksın bugünkü kent çeperinden geçmesiyle Harput'taki kentsel dokunun güneye kaydığı ve yeni bir kent dokusu ürettiği görülmüştür. Bu kentin 20. yüzyıldaki kentsel büyüme sürecinde ise karayolu bağlantılarının batı ve güney yönlerinden geçmesiyle, büyümenin ağırlıklı olarak batı koridorunda geliştiği, gelecek süreçte ise güney çevre yolu nedeniyle güneybatı yönünde süreceği sonucu çıkartılmıştır.

**Anahtar kelimeler:** kentsel büyüme, ulaşım planlama, Elazığ, Harput

### 1. Introduction

Since the foundation of permanent settlements, transportation routes have distinctive role on settlements' locations. Principally, settlements develop along the transportation routes. In other word, transportation routes form the settlements and they develop throughout those transportation lines. In this context, Elazığ is an instance that develops according to transportation lines. Elazığ's foundation and growing processes indicate that the influences of transportation lines on settlements' planning. As a modern city, Elazığ was founded by influence of railway and it continue to grow according to highways. Therefore, the main aim of this study is observing the influences of transportation routes on settlements' development. For observing it, Harput and Elazığ was chosen as main materials of study and effects of transportation routes

was examined on Elazığ city. While research of Elazığ's development throughout the transportation routes, maps, literatures and photos were used as auxiliary materials.

Firstly, the role of transportation lines on foundation of cities in historical period is mentioned. Then, role of transportation lines on Elazığ's growing was studied into two sub-titles. First, city's foundation and growing due to railway on 19<sup>th</sup> and early 20<sup>th</sup> centuries is researched. Second, development directions of city according to transportation tendencies on latest 20<sup>th</sup> century was handled. Lastly, according to present conditions and planning, future projections about city's growing direction is predicted.

## 2. Role of Transportation Lines on Cities' Development in Historical Period

Cities are permanent settlements that product of developing collective life, communication, agriculture and trade. Cities are defined as versatile organisms and they are formed by combination of different parameters. In this approach Schwab (1992) described cities according to different disciplines or concepts and his one of definition about city is related to transportation. Schwab (1992) defines the city as a mobile and dynamic formation that is a system where people reach from one point to another uninterruptedly. Add to Schwab, Ardiçoğlu (2014) indicates that settlements are generally formed by the framework of transportation facilities. In this context, cities were established for provide trade opportunities and get easy communication. Hence, for providing these issues, settlements establish according to trade and transportation routes since historical period to present. Historical cities that were established on the transportation routes show the effects of transportation lines on cities' developing process.

Lines can be accepted as a cause to establish new settlements on transportation routes. In different view, also it causes decreasing or increasing of a city. While cities that locate on significant transportation routes developed gradually in history, cities that were remote to transportation facilities dwindled.

As Silk Road cities like Istanbul, Bursa, Ankara, Sivas, Kayseri, Erzurum, Baghdad, Marv, Bukhara, Samarkand were developing cities in history due to their locations on significant transportation road. Not only on land but also water roads and ports have distinctive impact on developing of settlements. Most of settlements of history were coastal town or port city. Hence, it indicates that providing transportation facilities is essential criteria on settlements.

Apart from land and water transportation types, since 19<sup>th</sup> century railway lines became deterministic parameter for developing settlements. After 19<sup>th</sup> century, settlements' growth rate depended on railway lines. By virtue of railways most of town became a city or new settlements were established near the railway stations. Therefore, as land and water transportation lines, railways support trade, education and cultural facilities in a settlement. For this reason, after 19<sup>th</sup> century railways, transportation lines and accessibility became significant parameters for growth rate of a settlement. Those parameters designate directly cities' growth, form and density. Especially, since 20<sup>th</sup> century, settlements that have not accessibility adequately could not reach high growth rate. In spite of this, on railway routes new cities and towns started to established like Elazığ city.

## 3. Effects of Transportation Lines on Elazığ's Development

### 3.1 History of Harput as old center

As a junction of transportation routes, foundation of Harput goes on 2000 B.C. Hittite and Urartu civilizations reigned on Harput in B.C. Since that period Harput has significant location for not only transportation and trade routes but also it had strategical importance in terms of military. In related with transportation facilities, Harput was one of settlement that connected to capital of Urartu. Hence, it located on Urartu's transportation and trade route that connected to the capital.

Furthermore, by virtue of its strategical location, Harput became an important settlement as a defensible military zone. For this reason, the settlement was called as '*Harput*' that mean's '*stone castle*' or '*castle town*' (Ardiçoğlu, 1997).

Harput worked as a center of that region in the period of Rome and Byzantine. After Hittite and Urartu civilizations, until 1071 Roman Empire and Byzantine reigned on Harput. As in Hittite and Urartu time, it continued worked as a significant junction of transportation and trade route and also Roman Empire's military garrison in east border.

After 1071, Harput became significant Turkish garrison and transportation junction. Between 1058 – 1113, *Çubukogulları* and then between 1113 – 1234 *Artuklu* governed Harput city. In 1234 Seljuks subdued Harput since Mongol invasion. After Mongol invasion, Harput was captured by *Dulkadirogulları* and then *Akkoyunlu* took its control until the Ottoman era. In 16<sup>th</sup> century, its control passed to Ottoman's (Ardiçoğlu, 1977). Until 19<sup>th</sup> century, Harput continued to develop in terms of, trade, education, cultural and military facilities. It worked as a junction and center of transportation routes, educational and cultural center and strategical garrison on east border as in previous eras.

However, since 19<sup>th</sup> century, Harput started to lose its strategical location and it became inadequate place for urban developments.

Since 19<sup>th</sup> century, Harput started to unable to respond for growing urban pattern and developing transportation facilities. Therefore, it became improper for growing urban fabric and developing transportation lines. For this cause, in 1833 settlement started to shift to plain that is on Harput's south side. That area was called as 'mezra' and its topographical features was proper to both growing urban fabric and transportation facilities. Hereby, the main core of new city was shaped in which provide easy access and proper for urban growth.

According to KTİM (1995), the city started to shift to 'mezra' and some public services built on there. Hospital, military barracks and government office were built on new settlement. However, still that new settlement worked as a part of Harput. Just public buildings were shifted to 'mezra', residential districts were still located on Harput. For this reason, Demirel (2007) indicates that Harput still worked as a city center. Therefore, it shows that although some public services shifted from Harput, new settlement developed with integrated with Harput and it was growth as a district of it.

That new settlement on 'mezra' was called 'Mamuratul aziz' that was transformed to 'Elazığ' in public. According to Bican (2007), there were three significant zones on Harput and its surrounding in that time. Those were Harput, as main zone of city, second is Huseynik that was a district in which developed with trade and last one was developing new layout on 'mezra'.

### 3.2 The Effect of Railway on Urbanization

Before the arrival of railway, in the beginning of 20<sup>th</sup> century, new transportation lines defined the borders of city and urban fabric reshaped according to those lines. In 1900, Diyarbakır – Harput line was the first road that formed Elazığ's boundaries. Also that line was the first road that formed urban pattern in concern with transportation lines. After that line, in 1909 Erzincan – Egin – Arapgir – Harput and in 1913 Diyarbakır – Harput - Kigi lines connected Harput and its suburb (Elazığ) with surrounding cities. Those lines provided transportation links for both urban and intercity connections (Yılmazçelik, 2013).

Because of those transportation routes, both the main city Harput's and its suburb's urban pattern redefined and the settlement was divided as two different zones. After developing of those transportation lines, Harput and its suburb started to separate to each other. Those lines caused creating two distinct zone because those lines divided into two directions; to upper main city Harput and to down city (Elazığ). However, despite the division, until the railway Harput was still accepted the center and it sustained its centrality (Akdemir, 2013).

The dramatical development was occurred by constructing railway. In the Republican period, rail transport was given priority in order to increase the economic investments in the country. For this purpose, railway projects that link the whole country had come to the agenda. In this context, Elazığ is one of the strategically important location on the railway route that connects Central Anatolia to Eastern Anatolia. On the railway route which connected Central Anatolia to east, Elazığ is a significant central location that works as an entrance gate to the east. In addition, due to its strategically important location, Elazığ is also located on a route that contributing to the economic development targets of the railway line. Elazığ region has the potential of having investments in agriculture, mining and industry in the long term. Hence, those advantages caused to born a new settlement on close to the railway.

Haykır (2016) indicates the importance of linking regions of country with railways for economic, social and cultural development. For that purpose, firstly, Ankara - Sivas - Erzurum railway lines and Fevzipasa -Diyarbakır lines were made to provide connection between the east and west of country. Haykır (2016) added, also for providing connection between country's coastal regions and interior parts interconnected railway system was intended. An integrated domestic market was generated with these main lines and Afyon - Karakuyu, Malatya - Cetinkaya, Bozonü - Isparta and Yolcatı- Elazığ lines were added to the system (Figure 1).

Due to its topographical features, substructures that will contribute to economic development of country and its being a node between central and eastern Anatolia, the railway route was passed on Elazığ's plain. In 1934, three station were passed on Elazığ. Those are Fırat, Yolcatı and Elazığ stations.

The new settlement (Elazığ) was founded near the railway independently from old urban pattern, Harput. Even though Harput's growing urban fabric had shifted to the south and spread to the 'mezra', that settlement still worked as a district of Harput. However, the area which constitutes the first core of Elazığ, has emerged as a completely independent settlement from the old urban fabric. This means railways in republic era generates new cities and towns.

The Figure 2 is the first urban fabric of the newborn city. It shows city's first boulevard and square that were called 'Station Boulevard / Square' (Istasyon St.) in 1935. The central core of the city was founded

around the station and station was accepted the center of the city. Therefore, the influence of railway on urban growth can be seen on city's main core in Figure 3 in next title.

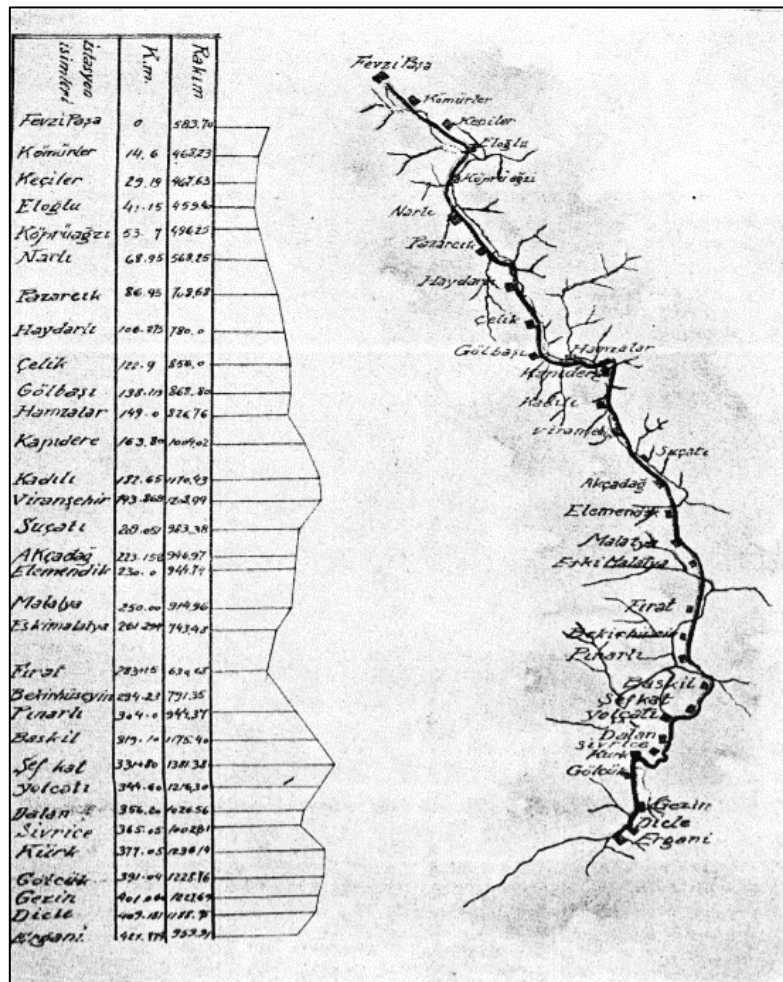


Figure 1. Interconnected Railway Line 1930's (Haykır, 2016)



Figure 2. Station Square and Statue in Elazığ, 1935 (Anonymous, 2019)

By virtue of foundation of a new city next to the railway, civilian population started to move on plain that close to railway. Hence, new residential districts started to be formed around new center. Most of residential districts in Harput shifted to plain. While the formation of residential areas in Elazığ, Harput lost its identity of city. In spite of shifting residential districts, Harput started to work just a district of Elazığ and it gained a historical identity as old city/center.

### 3.3 Urban Growth in 20<sup>th</sup> century by Motorway Lines

Transportation lines have distinctive role not only for establishment of cities but also it has significant influence on their growth and development. Urban development is formed according to different parameters, such as; topographical character, land use, climate and etc. Transportation planning is one of distinctive parameter of development of urban fabric. In other word, transportation lines are one of parameter that designates the urban growing way. Therefore, the growth and development of the city is shaped according to the transportation arteries. For the regions where the city will be developed must first provide infrastructure for transportation.

Akyıldız (2018) indicates, arterial roads of the city generate transportation network in both urban pattern and also between intercity. For this reason, Akyıldız (2018) defines arterial roads as vessels of a body that sustain city and remarks that weak transportation networks cause undeveloped urban zones.

In other words, the urban zones in which close to the main arteries have more chance to develop compared to other zones. Hence, in terms of urban growing, regions where have strong transportation connections are the priority areas for urban development.

In this context, developing process of Elazığ is researched in the framework of transportation arteries. Akdemir (2013) shows the growing stages of the city in Figure 3. According to the map, until 1960's city grew slowly and developments were occurred around the city core and railway station.

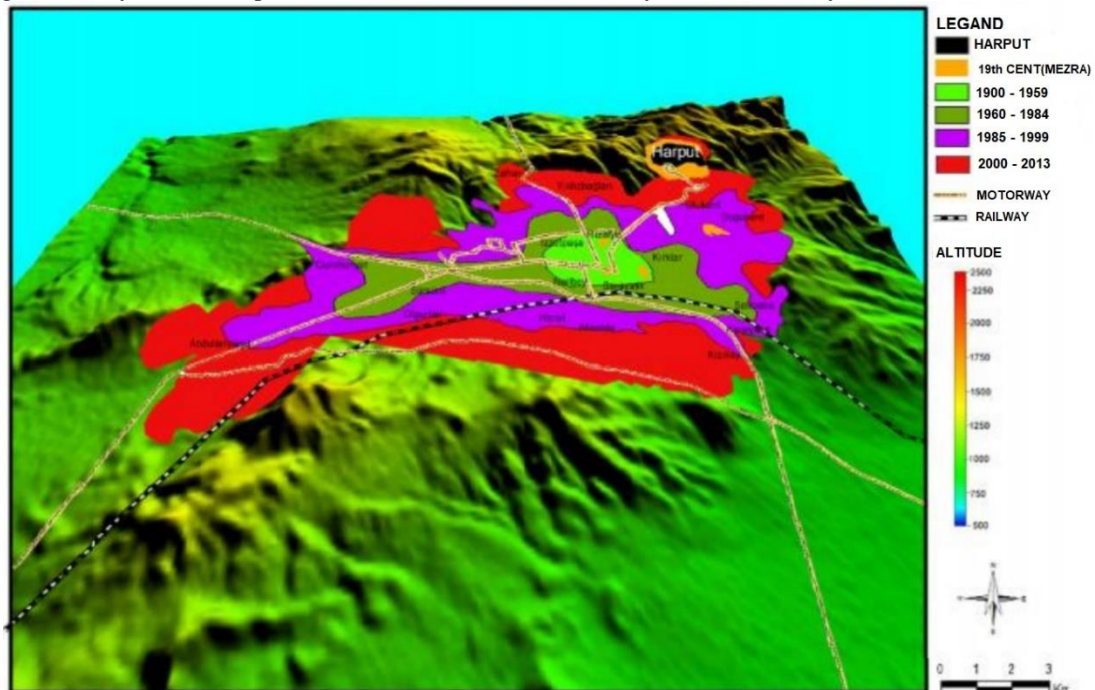


Figure 3. Urban Sprawl in Elazığ (Akdemir, 2013)

However, after 1960's, growing rate started to increase rapidly because of the urbanization and industrialization movements. In that period, industrialization approaches started to change in countrywide and it caused increasing urbanization rate.

Due to the developing industrialization movement, immigration rate to Elazığ started to rise. The rising population caused unplanned urban development of city in that period. While before industrialization movement city grew along the trail of railway, after 1960's it grew unplanned to periphery of the city. New population settled on urban fringes around the city core.

Nonetheless, even though urban fabric spread on urban fringes, the main developments are seen on east – west axle of the city. The development of east was a result of following railway trails. The eastern development was occurred next to the city core and it followed the railway line. Against to eastern growing, west side of the city developed because of other transportation lines. The main transportation

lines that supports city pass on west side of the city. Malatya line that is the intercity road influenced the development way. It induced growing direction to west.

According to city layout that was planned in 1968, north and west sides were designated as the main growing directions of city. North, northwest, west and southwest were defined as the main developing zones of the city in 1968. Related to that plan, even though new urban pattern started to generate on south side of the city, between 1960 – 1984 the city grew to west predominantly.

Add to 1968 plan, in 1980's Metropolitan City Plan was done for Elazığ. As in previous plan, also metropolitan plan indicated west and north zones of the city for urban development. Akdemir (2013)'s map also shows the developing zones of the city in that period. Also from that map, it can be realized city grew into the west corridor predominantly again. Although there was urban development that sprawled to city, the major urbanization was seen on west zones.

Especially, since 2000's the city urbanized rapidly and sprawling continued to west and south zones. In terms of influence of transportation lines, Malatya and Keban Roads induced the development on west. Those lines are major intercity transportation arteries. For this reason, the main urbanization was generated on west of the city. In addition to west lines, south beltway that passes on south of railway line caused to new urbanization on south parts of the city. In Figure 4, present layout is shown and the main transportation lines that influence the urbanization is marked.

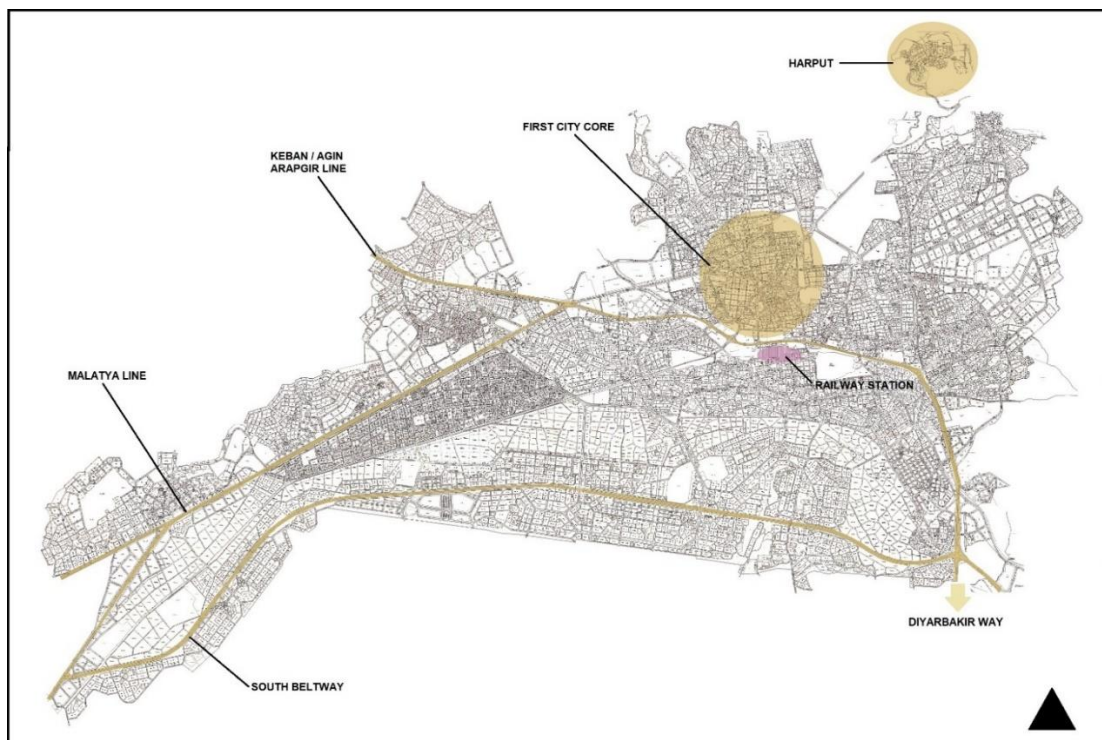


Figure 4. Elazığ City Layout

Apart from west lines (Malatya and Keban Roads), south beltway connects the city both Diyarbakır and Malatya lines. Thereby, urban development starts to shift to south parts of the city because of new transportation line. In other word, by south beltway urban fringes starts to urbanize. Even though the planned growing zones are not only west and south parts, the influence of transportation lines those zones urbanize rapidly than north zones.

While evaluating urbanization on east side of the city, there is no potential for urban development on east side. Its geographical features cannot allow to spread around the south zones. In addition to limited geographical character, also east side is far away from major transportation lines. For those reasons, urban development cannot be continued to east zones in future projection.

#### 4. Conclusion

Transportation routes pass on places that convenient for urbanization in terms of both topographical and accessibility. For this cause, settlements develop by the reference of those routes. Especially, railway routes constituted new settlements and most of city was formed according to railway line between 19<sup>th</sup> and early 20<sup>th</sup> century. Hence, both railway line and also motorways define the borders of cities. Most of

cities' urban fabric grow around the transportation lines and those lines indicate the growing direction of the city.

In this context, according to developing process of Elazığ, both Harput and Elazığ were founded around the transportation routes and in both foundation transportation tendencies were distinctive parameter for urban development. The findings indicate, the major change was occurred after railway line in the beginning of 20<sup>th</sup> century. Railway line caused to shift the city center to plain and it created a new settlement throughout the railway line. The modern city of Elazığ was a result of developing railway system and it induced urbanization on plain. By the influence of railway was not only born a new city that was developed independently from Harput, also it caused to change the identity of old center (Harput).

Also in 20<sup>th</sup> century the city continued to grow by following the railway line. The main urbanization was seen around the line until the middle of 20<sup>th</sup> century.

In both 1968 plan and Metropolitan City Plan, the growing zones are marked as not only west. However, the major urban growing was seen on west zones of the city. Even though in city plans north and northwest are marked as other potential growing zones of the city, because of main transportation lines west became as the main direction of city growth. Therefore, those urban growth data shows, urban zones that are close to transportation arteries developed preferential compared to other zones.

Especially, after south beltway urban fringes on southwest side of the city are marked as the potential developing zones. According to those data, southwest zones will be estimated as the potential developing zones of the city in future projection.

#### References

- Akdemir, İ.O. (2013). "Elazığ'ın Kentleşme Sürecinin Coğrafi Analizi." Fırat Üniversitesi Harput Uygulama ve Araştırma Merkezi Geçmişten Geleceğe Harput Sempozyumu
- Akyıldız, N. (2018). Doğu ve Batı Mekânsal Tasarım Sürecinin Aktif Yaşlanma Açısından Ele Alınışı, Grafiker Yayınları, Ankara.
- Anonymous. (2019). Web Site: <http://www.mared.org>. 20.08.2019
- Ardıçoğlu, N. (1997). Harput Tarihi. Elazığ Eğitim, Sanat, Kültür, Araştırma Tanıtma ve Hizmet Vakfı Yayınları, Ankara
- Ardıçoğlu, R. (2014). Kent İçindeki Tarihi Alanların İyileştirilmesi ve Kentle Bütünleştirilmesi. Yüksek Lisans Tezi. Ankara Üniversitesi Fen Bilimleri Enstitüsü
- Bican, Z. (2007). Sekizinci Şehir Elazığ'a, Harput'tan İnciler, Ertem Yayıncılık, Ankara.
- Demirel Y. (2007). Tarık Tahiroğlu'nun Hatıralarıyla Elazığ'den Elazığ'a. Manas Yayıncılık
- Haykır, Y. (2016). Demiryolunun Elazığ'a Gelişi. Journal of History School (JOHS) September 2016 ss. 241-307. Year 9, Issue XXVII, pp. 241-307
- KTİM. (1995). Kültür ve Turizm İl Müdürlüğü, Elazığ İl Turizm Envanteri.
- Schwab, W. (1992). The Sociology of Cities. Prentice Hall Collage Div.
- Yılmazçelik İ. (2013). "XIX. Yüzyılın Sonlarında Harput'tan Geçen Karayolu Güzergâhları Ve Harput'taki Köprüler." Geçmişten Geleceğe Harput Sempozyumu Elazığ 23-25 Mayıs 2013 Bildiriler Kitabı Cilt: 2, Syf:643-666, Elazığ.