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# The Impact of the Turkish Waqf System on International Trade and Logistics: A Network Theory Perspective

## *Türk Vakıf Sisteminin Uluslararası Ticaret ve Lojistik Üzerindeki Etkisi: Bir Ağ Teorisi Perspektifi*

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### ABSTRACT

As impact investing and social benefit creation grow in popularity around the world, this trend is attributed to the importance that sociocultural structures place on long-term effects, as impact investments prioritise social returns that are critical to the continuity of their activities over financial returns. The fundamental difference between impact investing and modern waqf lies in their ability to measure outcomes. Traditional Turkish waqf, which possess this measurement capability, offer a structure similar to impact investing due to their ability to generate both sustainable income and social returns. In particular, the caravanserai foundations that are the subject of our study, despite being owned by different individuals, have demonstrated a holistic approach due to their systematic planning and have ensured the safety of merchants and their goods by being located at daily distances along international trade routes. Although each waqf had different ownership, it was determined that caravanserais were strategically placed at distances of 25-30 km in accordance with network theory, with nodes planned near the capitals of the principalities. The waqf's free services make it a hub for traders, while its trading exchange activities generate income. It has been observed that caravanserai waqfs, operating within a systematic framework, provided their own operational capital, thereby not imposing a financial burden on the state while contributing to regional development and international trade. Similar activities aimed at fostering international trade are currently being implemented under the 'One Belt, One Road' initiative. In our study, content analysis was conducted using a systematic literature review method. Our study, which draws attention to the fact that the impact investment model, the new name of the traditional Turkish waqf model, has existed in Turkish waqf civilization for centuries, emphasises that this value model still retains its importance.

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## ÖZ

Dünyada etki yatırımcılığının, sosyal fayda oluşturmaının popülaritesi her geçen gün artarken, bunun nedeni olarak sosyokültürel yapının uzun vadeli etkilere verdiği önem açıklanmaktadır çünkü etki yatırımları sadece finansal getiri yerine faaliyetlerinin devamlılığı için kritik öneme sahip sosyal getiriyi de önemsemektedir. Etki yatırımları ve günümüz vakıfları arasındaki temel fark ise ölçümleme kabiliyetidir. Ölçümleme kabiliyetine sahip eski Türk vakıfları ise hem faaliyetlerinin devamlılığını sağlayan gelirleri hem de sosyal getirileri nedeniyle etki yatırımlarına benzer bir yapı sunmaktadır. Özellikle çalışmamıza konu edilen kervansaray vakıfları, farklı bireylerin sahipliğinde olmasına rağmen sistematik olarak planlanması nedeniyle bütüncüllük arz etmiş, uluslararası ticaret yolları üzerinde günlük mesafelere konumlandırılmış bu sayede tüccarların can ve mal güvenliğini temin etmiştir. Her bir vakıf sahipliği farklı olsa da kervansarayların, ağ teorisine uygun 25-30 km mesafelerle yerleştirildiği ve düğümlerin beylik başkentlerine yakın planlandığı belirlenmiştir. Vakfın ücretsiz hizmetleri, kervansarayı tüccarlar için bir cazibe merkezi haline getirirken, ticaret borsası faaliyetleriyle gelir kaynağı oluşturmaktadır. Kervansaray vakıflarının, sistematik bir bütünlük içinde kendi işletme sermayesini sağlayarak hem devlete maddi yük oluşturmadağı hem de bölgenin gelişimine ve uluslararası ticarete katkı sağladığı görülmüştür. Günümüzde uluslararası ticaretin gelişimi amacıyla benzer faaliyetler tek kuşak tek yol projesinde görülmektedir. Çalışmamızda sistematik literatür taraması yöntemiyle içerik analizi gerçekleştirilmiştir. Bağışa dayalı faaliyetlerini devam ettiren günümüz vakıfları yerine geleneksel Türk vakıf modelinin yeni adı ile etki yatırım modelinin, Türk vakıf medeniyetinde yüzyıllardır var olduğuna dikkat çeken çalışmamız, bu değer modelinin halen önemini koruduğunu vurgulamaktadır.

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## 1. INTRODUCTION

The sociocultural structure attributes value to focusing on long-term permanent results rather than short-term results in societies. From a financial benefit perspective, instead of investments that provide financial return to the investor, impact investments also emphasise the social return of the investment. From a social benefit perspective, the main difference between impact investments and donor-oriented civil society organisations is measurement. Measurement applies not only to financial benefits but also to social benefits and is called impact analysis. Just like impact investing, the working model of traditional Turkish waqf is a transitional form between financial investments that ensure their own sustainability and civil society organisations that aim at social development. This situation has been analysed through the caravanserai foundations established by the traditional Turkish waqfs by conducting impact assessments, which are based on a systematic plan rather than a random order in their activity planning studies. The founders of Turkish waqfs, who are impact investors, have not only commercial activities but also activities in various fields. Today, the models proposed by the UK-based Impact Investing Institute started hundreds of years

ago with the first Turkish waqf established by Abdülkerim Satuk Buğra Khan in the 930s, and continued with the first waqf established in Anatolia to manage the food supply chain in 1048, 23 years before 1071, on the instructions of Tuğrul Bey, the uncle of Sultan Muhammad Alp Arslan. The aim of this foundation was both to control the supply chain before the war and to provide social benefit to the region. In addition, the first private foundation university established in Baghdad, Amul, Basra, Balkh, Herat, Isfahan, Mosul, Nishapur in 1091 by the Seljuk vizier Nizamül Mülk, who is known for his social engineering works, was established without state support and provided full scholarships to students with foundation revenues and published the works of its professors (Asmadili & Eser, 2020; Kamsi, 2022).

Despite the existence of such activities in traditional Turkish waqf sytem, many definitions are being recalled as if they were new definitions due to the neglect of socio-cultural prejudices as the world rapidly globalises. The most important of these is impact investing, which is a type of investment that creates impact in society with a business model designed according to the needs of the society, where not only the financial return but also the social return of the investment is prioritised (Barber et al, 2021). The motivation for our study is that although these concepts were

used in the Turkish waqf civilisation thousands of years ago, they are not used today and for this reason, they are presented to us again as models developed by foreigners. Turkish foundations are called waqf. In the Seljuk, Mamluk and Ottoman periods, traditional Turkish waqfs were one of the cornerstones of the social and economic structure. These waqfs stood out not only for their charitable works but also for their infrastructure projects that contributed to the development of trade and economic growth (Güler & Ayata, 2023). The caravanserai foundations that contributed to international trade, which are the subject of our study, were established on important trade routes in Anatolia and played an important role in the development of their regions through nodes. The business model of caravanserai waqfs is commission in case of wholesale purchases and sales before arriving at the market as it is a transit point for the commercial networks in the region, trade in food from the waqf lands, and the accommodation fee charged to travellers over three days. Food and accommodation for traders is free of charge for up to 3 days (Sürmen & Abdioğlu, 2020). Similar structures close to this value model have been established in the north of Germany to safeguard the mutual interests between city residents and visiting German communities. What distinguishes them from Turkish caravanserai waqfs is that, as private enterprises, they prioritised profit, only accepted German guests and, but their revenue model is based on nightly charges. Likewise, caravanserai systems have been found in other parts of the world, such as caravanserai systems in Central Asia and trading colonies in China (Gomes, 2003). The aim of our study is to reveal the ecosystem created by the internal resources of caravanserai waqfs, one of the traditional Turkish types of waqfs and their effects on international trade. This article analyses how the logistics network established by Turkish caravanserai waqfs to promote international trade affects international trade.

## 2. THEORETICAL FRAMEWORK

### 2.1. Turkish Waqf System

Contrary to popular belief, the concept of traditional waqf is not an institution sustained by donations (Babazadeh, 2022). The foundation is an institution that creates a sustainable income model by operating the assets allocated or donated during the establishment phase and ensuring an increase in value by ensuring an increase in capital and disseminating the products and services needed by the society by prioritising social return. Although its priority is not financial income, it measures it as well as social return in order to expand its sphere of influence. Thus, the charity of the waqf will continue. The first known Turkish waqf is the waqf of the Karahan ruler called Abdülkerim Satuk Buğra Khan, which includes a soup kitchen, mosque and madrasah in the province called Kashgar in the Xinjiang Uyghur region. Today, only the cemetery section has

survived from this waqf in the Xinjiang Uyghur region. One of the most important people who evaluated Turkish foundations as long-term impact investments guiding the society is Sultan Muhammad Alp Arslan. Sultan Muhammad Alp Arslan, the conqueror of Anatolia, still has foundations in Khorasan and Merv (Asmadili & Eser, 2020). The fact that value models are taken into account when calculating the business models of Turkish foundations is expressed by the first foundation established in Anatolia in 1048. This foundation was established 23 years before 1071 by Yağan Pasha from Khorasan with the blessings of Tugrul Bey. In the first establishment phase, firstly, it was travelled to spread Islam by following the trade caravans, and then it was aimed to show the beauties of Islam to the Georgian people with their individual and social lives. It is known that the foundation managed the food supply chain, marriage procedures and tax collection processes. This situation shows that the Seljuks, who were preparing to conquer Anatolia, defined the foundation as a localised administration by meeting the needs of the society. Another important foundation founder was the Seljuk vizier Nizamül Mülk, who established the largest foundation university of the period in 1091. These madrasas, where Abu Ishaq al-Shirazi and al-Ghazali taught, were located in Baghdad, Amul, Basra, Balkh, Herat, Isfahan, Mosul and Nishapur (Kamsi, 2022). When the type of foundation investments is analysed, business models prepared in line with social needs subject to long-term investment are observed. There are various examples such as the Mamluk Sultan Baybars, whose tomb is located in the library of the Zahiriyeh madrasah in Damascus, invited the scholars of the period to make Damascus the centre of education and gave them a forgivable loan, in the words of Oxford University, and if they provided education for a period of 5 years, the debt that helped to buy real estate was cancelled. The forgivable loan given to the Zahiriyeh madrasah of Sultan Baybars' foundation, which was given to gather good human capital, which we now call brain drain, is still used in the world's top 100 universities (Ağır, 2021). Apart from the salary, this debt helps the muderris to buy real estate and is a type of debt that is cancelled after the 5th year of the teacher's university. In the Ottoman period, the most well-known foundation trustee other than the sultans was Bezmi Alem Valide Sultan, the wife of Mahmud II, known as the innovative sultan. Bezmi Alem Valide Sultan hospital, foundation gureba hospitals, schools, mosques and galata bridge are some of the many works she brought to the Ottoman Empire, and some of her foundations centred in Mecca, Istanbul and Izmir are still in operation (Aksoy, 1997). After the Republic of Türkiye, 52,000 Seljuk and Ottoman foundations were transferred to the General Directorate of Foundations, which contributes to the continuation of the activities of foundations and the restoration of foundation assets with the logic of clustering.

## 2.2. Impact Investment

It is a type of investment in which the investor consciously determines and follows the social return expectation as well as the financial return expectation from the investment. In today's world, the biggest impact investors are the public sector, such as ministries, but they are excluded from the scope because they do not expect financial returns from these investments, but it is recommended to see how efficiently public resources are used by conducting impact analysis. In impact investments, impact analysis reports are as important as financial modelling. The current market value of non-public impact investments in 2024 is \$1.2 trillion. The market value is increasing day by day with the developing global awareness, especially climate law and ESG (environmental, social, governance) awareness (Berk & Binsberger, 2025).

Measurement is directly related to the sustainable development goals of the United Nations. While the measurement methodology is generally included in the Turkish Sustainability Reporting Standards in Turkey, it is also included in the International Sustainability Reporting Standards globally. The most frequently used method in impact investing is the social return on investment (SROI) method. This method is used to measure the benefit of an investment to society in monetary value. The relevant value is analysed by taking into account effects such as deadweight (impacts that will already be realised), attribution (how much of the impact can be attributed to the investment) and drop-off (the level of decrease in impact over time). The determined social value is calculated by dividing the total investment amount. From a commercial perspective, it is observed that business models developed for society contribute to corporate sustainability through the rate of community ownership. This trend has become more evident especially among Generation Y and Z consumers and investors (Pathak & Dattani, 2014).

Institutions such as the Impact Finance Research Center (IFRC), which was established in collaboration with Harvard Business School, Wharton School and Chicago Booth School of Business in the United States, as well as Oxford University and similar academic institutions, especially the Impact Investing Institute in the UK, are researching the concept of impact investing (Kaiser & Menkhoff, 2017). The Turkish waqf system has been using impact investment instruments such as forgivable loans for educational institutions, recovery grants for value chain models, and mezzanine for centuries (Ağır, 2021). It is not being found that makes it possible for the concept to be popularised, but by whom it is shared.

## 2.3. International Trade

International trade is a set of economic activities involving the exchange of goods and services between countries. From this perspective, international trade constitutes the cornerstone of global economic integration. The exchange of goods and services between countries stimulates economic growth, increases productivity and helps to utilise

resources more efficiently. On the other hand, in addition to the benefits of trade, there are also challenges such as trade barriers, economic imbalances and political risks. The increasing complexity of international trade in a globalised world requires each country to strategically reconsider its foreign trade policies. Krugman and Obstfeld view international trade as a discipline that analyses flows by considering the interaction between factors of production and factors of consumption in the world economy (Krugman & Obstfeld, 2009). In one of the most cited works, Vernon's International Trade and International Investment in the Product Life Cycle, it is stated that trade changes hands in the product life cycle (Vernon, 2015). International trade, logistics, warehousing, inventory management provide development with infrastructure elements.

In the globalising world, competition is increasing rapidly as well as products and this situation affects international trade (Zahra, 1999).

## 2.4. Logistic

Logistics is the backbone of international trade. Commercial logistics, which starts with product exchange, covers a large number of sequential activities such as transport, storage, customs clearance, inventory management during the transport of goods and services from production to consumption. Efficiency and speed in logistics process management are indicators of well-structured logistics systems and ensure that the products reach the target markets safely. This makes it possible for logistics companies to provide a competitive advantage for the caravan drivers, as they were called in that period. Reducing logistics costs without sacrificing speed and efficiency contributes to the competitiveness of product prices (Çemberci et al, 2015). Systematic risks caused by disruptions in global logistics networks are minimised by efficient logistics management. Although it was not included in the period we analysed, in today's logistics networks, the logistics process is managed autonomously with inter-object interaction to eliminate the inefficiency of irrational people.

## 2.5. International Trade Hubs

In our study, the model of the inn suitable for urban use and the caravanserai model suitable for intercity use in international trade, which are often confused with each other, are expressed. In our study, the Seljuk period network structure is analysed through the caravanserai.

### 2.5.1. Han

The concept of han is a commercial accommodation concept that is often confused with the concept of caravanserai. Since caravanserai foundations are discussed in this study, it is useful to explain the concepts in detail. Hansas are accommodation areas used in urban trade since the beginning of trade. They are structures developed due to the need for accommodation in the city for merchants coming from outside

the city with the intention of selling or buying goods. For this reason, inns are generally located close to the bazaars in cities where trade routes pass through. It is an important advantage for merchants to both stay and store their goods in inns. For this reason, logistic advantages are at the forefront. In addition to their economic benefits, inns are also institutions with social benefits because they are also frequented by merchants coming for similar purposes for communication and information exchange (Akar, 2009).

Architecturally, inns were designed in this respect. The hans, which have a courtyard in the centre as a gathering area, are generally two-storey and multi-roomed. While there are shops, warehouses and animal stables on the ground floor, there are eating and accommodation areas on the upper floor. The main purpose of the floor plan is to solve the heating problem of the inns, which are generally planned as stone structures. While the heated air goes up from below, the warm air created by the animals and shops rises towards the accommodation area of the inn. Due to its proximity to the bazaar, additional structures such as masjids, baths and similar additional structures are added to the inns according to the availability of the land (Koç & Asar, 2017). As in the examples of caravanserais, inns, information exchange of merchants coming from different cities or countries and conversations that are subject to international trade perform interaction. Non-commercial conversations have also been instrumental in cultural interaction.

### 2.5.2. Caravanseraı

Caravanserais are complex structures built on important trade routes such as the Silk Road since the beginning of international trade. Caravanserais and inns are often confused with each other and their main differences are stated below. Due to the fact that international trade takes long distances and long periods of time, the security of the transported values is important. The values subject to international trade are transported by land vehicles such as camels, horses, donkeys, buffaloes and elephants. The length of the distances and the load-carrying capacity of the vehicles emphasise the concept of time and security in international trade. In this direction, caravanserais, which have been used since the Great Seljuk period, have been developed according to the needs of the society with the principle of social innovation. In addition to meeting the needs, it creates a safe commercial attraction environment for foreign merchants. This is actually just one of the well-designed commercial incentive policies of the Seljuks (Sürmen & Abdioğlu, 2020).

Architecturally, caravanserais are usually positioned outside the city, usually paying attention to the 1-day distance within the country. This brings the security of the building to the fore. Caravanserais generally consist of stone structures and give the appearance of a castle with high walls surrounding it. In fact, it is planned with a single entrance to constitute defence in case of possible attacks. Thanks to its large area,

it contains many structures such as courtyards, accommodation areas, eating areas, masjids, baths and so on. Some caravanserais even have a healing centre to help the sick and wounded. Today, one can imagine a doctor being employed in a hotel. Most caravanserais provide services through caravanserai foundations in order to maintain an institutional rather than individual culture and to preserve their strategic importance. The scope of these services varied according to the strategic importance of the goods carried by the incoming traveller and the duration of his/her stay. Learning the type of goods contributed to the formulation of policies according to the values entering and leaving the country in economic terms (Bırol, 2007).

In the light of all this information, while the inn was located within the city, the caravanserai was located on the roads between cities. While the purpose of those staying in inns was urban trade and accommodation, the purpose of caravanserais was accommodation, protection and vehicle maintenance. While inns are generally used by individual merchants, caravanserais are used by caravans, which are collective merchant groups. While inns are architecturally small, caravanserais are fortress-like and large for security reasons. While accommodation in inns is in line with individual needs, it is between 1-3 days in caravanserais. The first known Turkish caravanserai is Ribat-ı Mahi, built by Mahmud of Ghazni. The first caravanserai in Anatolia is Alahan in Aksaray (Cezar, 1977). In our study, the network structure is analysed through caravanserais.

### 2.6. Network Theory

Network theory is a theory built on mathematical foundations, examining the connections between nodes, arguing that it creates opportunities through networks and relationships in the internationalisation process. It is a field developed not by a single person, but with the contribution of scientists in different periods. The first contribution to this field is Leonard Euler, who started the modern network theory. Euler worked on the problem of the Königsberg bridge, formerly known as Kaliningrad, and developed graph theory. This approach laid the mathematical foundations of network theory (Bellew, 2017). The probabilistic structures of networks were presented mathematically and called the theory of random networks. According to the study, nodes generally have an equal number of connections, but real-world networks are generally not random (Castells, 2011). They have short path lengths and high clustering compared to small world networks. Scale-independent networks, such as the Internet and flight networks, indicate that a small number of nodes have many connections and a large number have few connections in accordance with the power law (Bell & Dean, 1972). Clustering coefficient, average path length, degree distribution and centrality measures describe the foundation caravanserais required for the establishment of high performance logistics networks.

### 3. MATERIALS AND METHODS

The theoretical framework of this study is the contribution of caravanserai waqfs in the Turkish foundation system to logistics and international trade through a network approach. In this study, the relationships between caravanserai foundations, international trade, and logistics have been examined through a systematic literature review. The data sources consist of articles and book chapters focusing on impact investments and the strategic functions of foundations. Peer-reviewed publications retrieved from the Web of Science, Scopus, ProQuest and Digital Library of Türkiye Manuscripts Institution databases were evaluated for methodological compatibility and coded using qualitative content analysis methods. The keywords ‘Seljuk foundations,’ ‘Mamluk foundations,’ ‘Ottoman foundations,’ ‘impact investment,’ ‘international trade’ and ‘logistics’ were used during the search process. Since our study focuses on Turkish waqf civilisation, foundation deeds from the Seljuk, Ottoman and Mamluk periods were researched but many manuscripts were excluded because they were originally written in Arabic, Persian and Ottoman. For this reason, the works of researchers who researched waqf founders and waqf deeds and prepared publications in Turkish or English were taken into consideration. In the preliminary review, 82 manuscripts were excluded from the 108 studies due to the lack of methodologically inappropriate Arabic and Persian translations. 26 studies were analysed in detail. This study analyses the contribution of caravanserai waqfs planned according to network theory to logistics nodes and then to national and international trade. It is emphasised that today's Turkish waqfs should give importance to impact analysis and provide social benefit with their own internal resources.

### 4. RESULTS AND DISCUSSION

This article analyses how the logistics network established by caravanserai foundations, one of the Turkish foundations, which are impact investment instruments, affects international trade. The literature review shows that the development of trade is directly related to infrastructure investments and security systems. Even today, geographically based trade theories emphasise the impact of trade routes on economic growth. Daron Acemoglu and James Robinson's ‘Narrow Corridor’ theory emphasises the importance of sound legal and institutional infrastructure for trade development (Acemoğlu & Robinson, 2019). From a sphere of influence perspective, North's institutional economics approaches support the contribution of infrastructure investments provided by caravanserai foundations to trade expansion (North, 1990). Foundations are the balance between the private and public sectors in the country. Foundation systems are considered as a component of financial mechanisms between the public and private sectors. Although there are no caravanserai foundations built with

logistics networks today, today's logistics centres are exemplified by free trade zones and public-private partnerships supporting commercial infrastructure. China's modern silk road project, the ‘one belt, one road’ initiative is evaluated with technological infrastructure projects in the railway sector. In my opinion, Singapore's free trade zones and Dubai's logistics centres mimic the Turkish caravanserai foundation model. In our study period, caravanserais were structures that provided accommodation, security and logistical support to traders on trade routes. These structures were financed and operated by caravanserai foundations or the state. For up to 3 days, the caravanserai was a meeting point for merchants due to the opportunity to eat and drink free of charge, thus it is seen that in addition to exchanging information, wholesale trade was carried out and the caravanserai foundations earned income from this trade just like trade exchanges. This situation is actually the most important example for social return. When viewed from the network theory, it is seen from the distance between the caravanserais that the waqfs belonging to different people are integrated without interfering with each other. Caravanserais, which were built during the Seljuk and Ottoman periods in accordance with the need to stake out Anatolia as of the period, are located in strategic locations to ensure the continuity and security of trade. It would be appropriate to call them nodes as in the network theory. They made valuable contributions to the formation of trade centres such as Aksaray, Kayseri, Sivas and Konya in Anatolia. It met the accommodation and goods storage needs of merchants and increased the fluidity of international trade. Caravanserais, as stated in the network theory, were established with the node method at short distances that can be travelled by horses. It is not a type of construction that is not planned randomly.

There is a distance of 25 to 40 kilometres between the caravanserais that enable international trade to come to Türkiye as shown in Figure 1. This is arranged according to the distance that the transport vehicles of that period could cover in a day. Table 1 shows the sample route (Özergin, 1965).

These routes, which are integrated into the Silk Road, are divided into several sections. There are 5 main routes as Konya-Aksaray route, Aksaray-Kayseri-Sivas-Iğdır route, Erzincan-Sivas-Tokat-Amasya route, Konya-Antalya-Denizli route, Konya-Kütahya-Bursa route. The names of 65 caravanserais and the provinces where they are located are given in Table 2.

**Table 1.** Sample route

Caravanserai	Location	Next Caravanserai	Distance
Sultan	Aksaray	Ağızkara	30 km
Ağızkara	Aksaray	Alay	35 km
Alay	Aksaray	Obruk	40 km
Obruk	Konya	Zazadin	25 km
Zazadin	Konya	Horozlu	30 km



Table 2. Nodes Planning

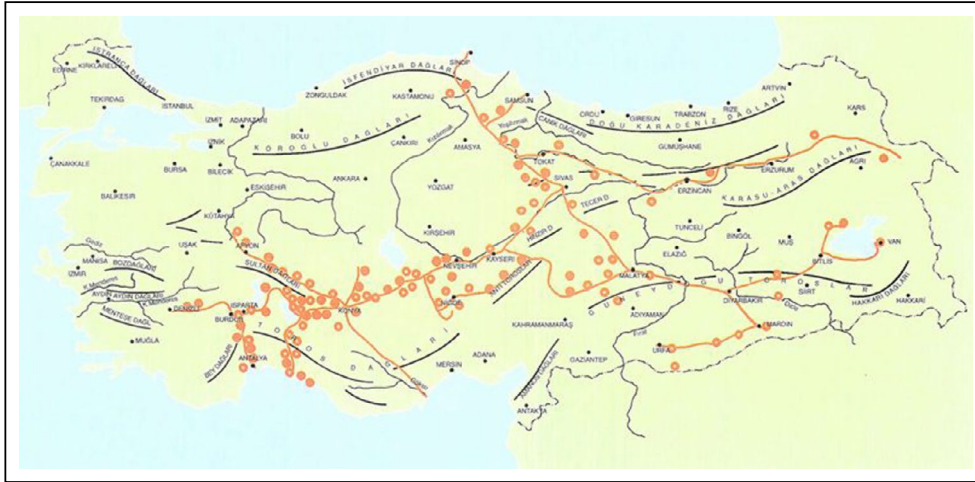
Region	City	Caravanserai	Region	City	Caravanserai
Central Anatolia	Aksaray	Sultan	Eastern Anatolia	Burdur	Susuz
	Aksaray	Ağzıkara (Kara Mesut)		Burdur	İncir
	Aksaray	Alay		Burdur	Ağlasun
	Aksaray	Tepesi Delik		Isparta	Eğirdir
	Aksaray	Keçikalesi		Isparta	Gelendost
	Aksaray	Kılıçarslan		Mersin	Sultan
	Konya	Zazadin		Adana	Kurtkulağı
	Konya	Kadınhanı		Hatay	Payas
	Konya	Obruk		Malatya	Hekimhan
	Konya	Horozlu		Malatya	Taşhan
	Konya	Kızılören	Southeastern Anatolia	Kars	Ani
	Konya	Altunapa		Erzurum	Hacıbekir
	Konya	Sahip Ata		Erzincan	Han Bağları
	Konya	Köle Hasan		Erzincan	Mama hatun
	Niğde	Ulukışla		Mardin	Mor
	Niğde	Çifte		Şanlıurfa	Çar Melik
	Niğde	Gümüşler		Şanlıurfa	Han El Bağrur
	Kayseri	Karatay	Marmara	Bursa	Koza
	Kayseri	İncesu Sultan		Bursa	Ortaköy
	Kayseri	Sarı		Düzce	Akçakoca
	Kayseri	Tuzhisar	Aegean	Denizli	Akhan
	Kırşehir	Karakurt		Denizli	Çardak
	Kırşehir	Cacabey		Denizli	Pazar
	Nevşehir	Doğala	Blacksea	Afyon	Sahip Ata
	Yozgat	Sultan		Sinop	Durak
	Sivas	Menalhanı		Kastamonu	Gökçe ağaç
	Sivas	Çubuk		Samsun	Cakallı
	Sivas	Lala		Gümüşhane	Sadak
Mediterranean	Antalya	Alara		Gümüşhane	Zigana
	Antalya	Evdır		Tokat	Şahrüh
	Antalya	Kırkgöz		Tokat	Muhlisettin
	Antalya	Şarapsa		Tokat	Çamlıbel

Source: Özergin (1965, p. 160).

## 5. CONCLUSION

Caravanserais have emerged as multifunctional structures that not only provided accommodation and security throughout history but also served as centres of commercial and cultural interaction. As places where both goods and information were exchanged among merchants, these structures contributed not only to economic development but also to the growth of social and cultural capital. The income model of caravanserai foundations was built upon this characteristic. This multi-dimensional interaction area is fully compatible with the concept of impact investment. Caravanserais, where merchants could find free food and accommodation for up to three days and where the safety of goods and lives was guaranteed, became attractive

areas for merchants and functioned as trade exchanges by enabling wholesale trade. With the establishment of this secure environment, internal resources were increased by collecting commissions from wholesale trade, enabling the foundation's activities to continue. From a network theory perspective, caravanserais functioned as secure nodes due to their strategic locations along trade routes. It has been observed that these foundations, belonging to different individuals, were not randomly placed but strategically located in accordance with network theory, adhering to distance rules. The proximity of these nodes to the capitals of the principalities also indicates the priority given to their development. From a commercial diplomacy perspective, these nodes not only facilitated the circulation of goods but also contributed to the formation and development of social



**Figure 1.** Anatolian Seljuk Period Caravanserai Waqf Map.

Source: Günel (2010, p. 140).

networks. Konya, Aksaray, Malatya, Sivas, Erzurum, and Erzurum are the main nodes. These capitals were not only centres of administrative authority but also densely populated areas where trade, production, and cultural interaction flourished. Therefore, the trade routes that formed around these centres were strategically planned and made functional within a network structure. As shown in Figure 1, the distances between the roads connecting these hubs were arranged between 25 and 40 kilometres, which was considered the average daily distance for a merchant caravan. This arrangement was not only designed to facilitate logistics but also to optimise security, rest, and trade processes. In this context, it is understood that national trade routes integrated into international trade routes such as the Silk Road were not established randomly but through conscious, systematic, and functional planning.

In conclusion, it has been determined that, unlike today's foundations, traditional Turkish waqfs were not waqfs that depended on donations to survive, but rather prioritised social impact while creating a sustainable income model with internal resources. In terms of financial continuity, it is predicted that today's foundation activities will be interrupted if they continue to depend on donations without impact analysis. Many financial instruments developed under the definition of impact investment in the last decade, such as forgivable loans and converted grants, which expect social returns in addition to financial returns, are seen in the 1,000-year-old Turkish foundation civilisation. When comparing the Hansa trade union in Northern Germany with the caravanserai foundations along the Silk Road, the pioneering role of the caravanserai foundation model, developed through a network structure, in regional and international trade becomes more evident. Our study highlights that Turkish foundations should not only provide charitable services based on donations but also take on responsibilities in regional development. It has been em-

phasised that creating an ecosystem for international trade is not solely a public responsibility. Although the historical sources of the traditional waqfs that are the subject of our study are kept by the presidency of Türkiye manuscripts institution, the fact that these waqf deeds were written in Arabic, Persian and Ottoman Turkish is a major constraint on our work. It is believed that translating these works into modern Turkish will provide researchers with new perspectives. By highlighting the importance of creating ecosystems through manageable internal resources rather than external sources such as donations with uncertain continuity, it is recommended that municipalities and development foundations aiming for sustainable development increase their impact investments to enrich international trade.

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## REFERENCES

- Acemoglu, D., & Robinson, J. A. (2019). *The narrow corridor: States, societies, and the fate of liberty*. Penguin UK.
- Ağır, A. M. (2021). Chicago Üniversitesi Orta Doğu Dokümantasyon Merkezi Memlûk araştırmaları hakkında bir değerlendirme. *Türk İslâm Medeniyeti Akademik Araştırmalar Dergisi*, 16(31), 19–30.
- Akar, T. (2009). Osmanlı kentinde ticari mekânlar: Be-desten-han-arasta-çarşı mekânları literatür değerlendirmesi. *Türkiye Araştırmaları Literatür Dergisi*, (13), 267–292.



- Aksoy, C. (1997). The socio-economic effects of the Valide Sultan Foundations: The Bezmialem Valide Sultan Foundations (Publication No. 317376) [Master's thesis, Marmara University]. YÖKTez.
- Asmadili, V. U., & Eser, E. (2020). Sultan Alparslan'ın Anadolu fetih güzergâhı üzerinden bir kültür rotası önerisi. *Akademik Tarih ve Düşünce Dergisi*, 7(4), 2386–2406. [CrossRef]
- Babazadeh, A. (2022). Toplumdaki vakıf patolojisi. *Current Perspectives in Social Sciences*, 26(1), 47–53. [CrossRef]
- Barber, B. M., Morse, A., & Yasuda, A. (2021). Impact investing. *Journal of Financial Economics*, 139(1), 162–185. [CrossRef]
- Bell, R. J., & Dean, P. (1972). The structure of vitreous silica: Validity of the random network theory. *Philosophical Magazine*, 25(6), 1381–1398. [CrossRef]
- Bellew, A. (2017). Solving the Königsberg bridge problem. *IB Mathematics HL Internal Assessment*.
- Berk, J. B., & Van Binsbergen, J. H. (2025). The impact of impact investing. *Journal of Financial Economics*, 164, 103972. [CrossRef]
- Birol, G. (2007). Bir kentin kimliği ve Kervansaray Oteline üzerine bir değerlendirme. *Arkitekt Dergisi*, 514(1), 46–54.
- Castells, M. (2011). Network theory: A network theory of power. *International Journal of Communication*, 5, 15.
- Cezzar, M. (1997). *Anadolu öncesi Türklerde şehir ve mimarlık*. Türkiye İş Bankası Kültür Yayınları.
- Çemberci, M., Civelek, M. E., & Canbolat, N. (2015). The moderator effect of global competitiveness index on dimensions of logistics performance index. *Procedia - Social and Behavioral Sciences*, 195, 1514–1524. [CrossRef]
- Gomes, L. (2003). *The economics and ideology of free trade: An historical review*. Edward Elgar Publishing. [CrossRef]
- Güler, A., & Ayata, A. (2023). The place of the waqf civilization in the history of Turkish administration in terms of reflecting the welfare state approach to the society. *Hitit Journal of Social Sciences*, 16(2), 426–441. [CrossRef]
- Günel, G. (2010). Anadolu Selçuklu döneminde Anadolu'da ipek yolu-kervansaraylar-köprüler. *Kebikeç*, 29, 133–146.
- Kaiser, T., & Menkhoff, L. (2017). Does financial education impact financial literacy and financial behavior, and if so, when? *The World Bank Economic Review*, 31(3), 611–630. [CrossRef]
- Kamsi, N. L. (2022). Nizamul Mulk Dan Madrasah Nizamiyah: Relasi lembaga pendidikan dan penguasa (Madrasah dan otodoksi pendidikan). *Edification Journal: Pendidikan Agama Islam*, 5(1), 11–24. [CrossRef]
- Koç, İ., & Asar, H. (2017). Tarihi Kastamonu şehiriçi hanlarının ticari ve kültürel fonksiyonlar bağlamında değerlendirilmesi. *Artium*, 5(1), 1–13.
- Krugman, P., & Obstfeld, M. (2009). *International economics: Theory and policy* (8th ed.). Pearson.
- North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge University Press. [CrossRef]
- Özergin, M. (1965). Anadolu'da Selçuklu kervansarayları. *Tarih Dergisi*, 15(20), 141–170.
- Pathak, P., & Dattani, P. (2014). Social return on investment: Three technical challenges. *Social Enterprise Journal*, 10(2), 91–104. [CrossRef]
- Sürmen, Y., & Abdioğlu, H. (2020). Kervansaray ve muhasebe işlemleri. *Muhasebe ve Finans Tarihi Araştırmaları Dergisi*, (19), 25–40.
- Vernon, R. (2015). International investment and international trade in the product cycle. *Journal of International Business Studies*, 1(1), 1–10.
- Zahra, S. A. (1999). The changing rules of global competitiveness in the 21st century. *Academy of Management Perspectives*, 13(1), 36–42. [CrossRef]