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**Water Management within the Historical Context:**  
**Water Foundations**

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**Abstract**

*Foundations are public institutions that have contributed to providing public goods throughout history. They have also fulfilled crucial educational roles that have sustained social cohesion for centuries. One of their foundational services is providing healthy water. However, even though water foundations have a long history, the organisational structure of water foundations has not been deeply researched, including water management. The unparalleled structure and functions of water foundations have been overlooked for a long period. Water foundations that have been established to meet a fundamental need of society have fulfilled many other functions. Water foundations have detected water supplies, brought water into metropolitan areas and provided water supplies to city centres and water consuming establishments free of charge. Water foundations have an exemplary organisational structure. The organisational structure and managerial rules have been explained in detail. Water foundations have met the needs of large areas over centuries until municipalities or water companies took over these tasks. Water foundations have met this need free of charge as successful as today's municipalities.*

**Keywords:** water management, water foundations, historical organisations.

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## **1. Introduction**

Water is a substance that is needed in every stage of human life. Even in mythology, one of the most basic elements of life is water. According to thinkers since the beginning, water is one of the first four substances in the creation of the universe – the others are air, fire and earth – (Sağır, 2016). Water is used at all times in a wide range from nutrition to cleaning. On the other hand, water is one of the basic elements in the formation of a living environment and at the same time it is a living environment itself (Akin & Akin, 2007). Although  $\frac{3}{4}$  of the world is covered with water, the water resources that humanity can use are limited. It is important to protect the quality of water, which is so important, and to transport people to their settlements and living spaces. Water has not become less important today than it was in the past. Increasing technology has not been able to make the water system more effective and efficient than in the past. No matter how fast technology changes, the conditions it creates make water management more difficult. The inevitable change that countries will experience in their water cultures with global warming will negatively affect people (Doğan, 2007).

The increasing importance of water makes it more valuable. Water is a strategic material (İleri et al., 1997). Increasing population and polluted resources have made water management much more important than in the past. The importance of water management is increasing in order to meet the increasing needs and limited resources.

The importance of water is not only valid for today. In the historical process, comprehensive organisational structures have been established for water and water management. The historical comprehensive organisational structure that meets the water needs of society is foundations. Apart from great statesmen and their families, many people from the smallest settlements to the largest in the countryside have built countless water structures (Sağır, 2016). With water foundations, water resources have been brought to settlements free of charge and made available for the use of the public. Water foundations have also undergone organisational transformations over the centuries. Especially after the spread of the municipality management system in the world, the water needs of the society began to be met by private and public organisations. This article analyses the organisational structure of water foundations that has met the water and water-related needs of the society for 8 centuries. Despite their significance, these institutions are understudied in the literature. Thus, our aim is to fill the gap and offer a new perspective on their historical organisational structures. The primary data are collected from first-hand historical documents such as foundation charters in the archives.

## **2. Literature Review**

### **2.1 Foundation Organisation**

One of the organisations that have been active throughout history for centuries is the foundation. The foundation system has enabled personal assets to come together with society. In order to fully understand the foundation system, it is necessary to know the definition of foundation first. The literal meaning of the foundation is “to hold, to stop (Yediyıldız, 2003), to stand, not to move, to give completely, to give completely, to donate” (Ballar, 2008). A foundation is “the allocation of a person’s movable and immovable property or assets to a social purpose” (Kütükoğlu, 2018). There is no material expectation in the foundation system. A foundation is defined as the act of individuals taking a movable or immovable asset out of their private property, without any external influence, obligation or judgment, solely at their own will, and allocating it in perpetuity for the purpose of doing good, and for the fulfilment of charitable conditions and services determined by them (Güneri, 1984). A foundation is “the donation of a good or property to a charitable cause in a way that cannot be purchased, thus abandoning the right of private property” (Aydın, 2003), in other words, the depersonalisation of assets and their allocation to public services and social needs. Different civilisations have established foundation organisations throughout history. Many civilisations have established original foundation organisations. When investigating the history of foundations, when and how they began, it is necessary to extend our gaze into the depths of the past (Berki, 1965). It has been stated that foundation deeds were encountered in the written tablets belonging to the Hittites, which were found in Boğazköy as a result of excavations in Anatolia and are currently preserved in a museum and can be classified as foundations (Kayaoğlu, 1984). Foundation organisations have also been encountered in other geography in recent times. According to a religious foundation established in the Sumu-la-ilu period in Babylon, a religious man who wanted to ensure the salvation of his soul had a temple built for the god Shaarum and the god Shallat and donated a property for a priest he appointed to live in (Kayaoğlu, 1984). Later, the "foundation documents" of the Uyghurs, who were influenced by Buddhism, were identified (Kan, 2014). Similarly, the organisational structures called "typica" of the Eastern Roman Empire were in the nature of foundations (Köprülü, 1942).

Studies have identified different foundation purposes. In the literature, the purposes of establishing foundations are to prevent the wealth of the person establishing the foundation from being spent on unnecessary and individual purposes, to provide financial assistance to those in need, including their social needs, to build facilities to meet the social needs of the society, to prevent the state's assets from remaining idle by operating them (Berki, 1965), and to help meet the state's infrastructure needs (Berki, 1962).

People who establish foundations can be economically powerful people or lower-level economic people. People with a certain economic power have mostly established regional foundations. Foundations established by economically powerful state administrators have established more comprehensive organisational structures. They have large lands and commercial enterprises. Economically powerful administrators or prominent members of society have established foundations and spent their personal assets for social purposes.

Foundations were established to meet the vital needs and infrastructure requirements of the society they live in. One of the best examples of this is water foundations. Water foundations provided many infrastructure services such as water supply to settlements, construction of fountains, wells, roads and bridges for the benefit of the society (Aydemir, 2019).

## ***2.2 Water Foundations***

In the historical process, water services are perhaps the most effective type of urban service. For centuries, water foundations have been the most important organisational structures that meet the water needs of people and settlements. Work to provide water for cities has been one of the main areas of activity that foundations are interested in (Öztürk, 2019). Bringing water from water resources to cities, maintenance and repair of the established water system, and cleaning it at regular intervals were carried out by foundations (Yıldız & Özbay, 2012). In the historical process, water services were organised as foundations. In contrast, the state also controlled the administrative functioning of the foundations. For this purpose, a water services management system was established. The water services management system is a new system and, although the organisation and operation were organised under the foundation structure, it operated under the close supervision of the political authority but within the private foundation law (Yıldız & Özbay, 2012). While the management of a vital commodity such as water is carried out by foundations without compensation, especially in large cities, state officials have also been included in the system. The administrative structure of water foundations is similar to the management of other foundations. When water was in the form of a foundation and until 1826, when the Ministry of Evkaf was established, it was managed by the trustee of the foundation to which it belonged (Tabakoğlu, 2019). In addition to the trustee, the waterway manager and maintenance personnel responsible for daily water management tasks also served. In addition to the construction of extremely expensive water facilities, the maintenance of the facilities was also covered by the foundation budget. Therefore, the expenses of the necessary personnel were also covered by the foundation budget. In addition, the foundation paid for the work to provide the water source. A foundation can extract water from land owned by the state or a private person. After the person extracting the water paid the “land usage fee” to the landowner, he would receive a document from the judicial authorities

stating that the land where the water was extracted belonged to him. In other words, the former landowner had no authority to block the extraction of water (Sağır, 2016).

### **3. Methodology**

The basic methodology to be followed in this study is Lazonick's (2003) "Historical Transformation Methodology". In the historical transformation methodology, the emergence of organisations and the reasons for the transformations they experience are investigated. In the historical transformation process, the sources of transformation are investigated. Are transformations the result of entrepreneurial individuals, innovative businesses, non-profit organisations or the efforts of the state itself? The answer to the question is found through social analyses.

The historical transformation method put forward by Lazonick (2003) is a methodological approach that tries to integrate theory and history in a way. The conditions in the historical transformation process and the transformations that emerge because of these conditions are examined as social analyses. The nature of the innovation process indicates that the social conditions that restrict or encourage innovation change over time and differ in various production activities (Lazonick, 2003).

The Historical Transformation Methodology put forward by Lazonick (2003) emphasises that the innovative business is of fundamental importance in the process of change resulting in economic development and that, since it is a social organisation, the organisational structure and managerial capabilities of this business reflect the institutional environment in which it operates to some extent. In this context, the historical analysis to be made requires a broad assessment rather than remaining within a narrow framework. Historical analysis reveals the benefits of including not only the internal organisational structures and strategies of the companies, but also the legal and political environments in which they operate, as well as the national cultures in which they operate (Amatori & Jones, 2003). The mutual interaction of structure, strategy and conditions and the periods of change in which they are experienced are examined with the Historical Transformation Methodology. The methodology also reveals the interactions of different social units in addition to the structure.

### **4. Analysis/Results Interpretation**

Water foundations have provided water for centuries, brought it to settlements and made it available for public use. However, changing conditions have caused changes in water management. Initially, water services, which were completely provided by foundations, have gradually begun to be provided under state control, especially in large cities.

Initially, water resources located in remote areas were brought to settlements by foundations. In this phase, water management was completely provided by foundations. Foundations were managed by a board of trustees during this period. During this period, the only control the state had over foundations was the supervision of accounts and operations by lawyers.

In the second phase, as settlements grew and water demand increased, the state administration underwent a new restructuring. According to the organisational transformation methodology, changes in the corporate environment led to the emergence of new organisational structures during this phase. During this phase, a small control unit emerged alongside foundations in some large cities. The supervision and control of foundations in water management was carried out by the water supervision organisation. The water supervision organisation, which was established in Istanbul in the 16<sup>th</sup> century, is the best example of this. In the Ottoman Empire, the highest institution in the administrative structure of water management was the Water Ministry (Yıldız & Özbay, 2012). Initially a very small organisation, the Water Supervision Organisation grew administratively over time. However, during this period, the water needs of the society continued to be met by foundations. While the foundations met the water needs of the society, the coordination and control of their activities were carried out by the Water Supervision Organisation. One of the reasons for the establishment of the Water Supervision Organisation was to meet the water needs of the palace, that is, the top administrators. During this period, the maintenance and control of waterways in particular gradually began to be carried out by state officials.

The transition to municipal administration that began to emerge in the 18<sup>th</sup> century was also reflected in water management. In this phase, which we can call the third phase in water management, foundations began to operate under a new organisational structure. Waterway foundations operated under a single organisational structure. In 1826, the “Ministry of Foundations” was established in Istanbul. In this phase, the activities of foundations established for other public services as well as water services were also connected to this organisation. Today, foundations that provide services provided by municipalities have continued their activities under this organisational structure. Foundations, on the other hand, have largely continued to perform the urban services they undertook, but have undergone administrative changes. As voluntary organisations, foundations were connected to government administration under the Ministry of Evkaf in 1826. With the establishment of the Evkaf Nezareti, the administrative powers of the Foundations increased even more and the foundation waters gained a central management (Yıldız & Özbay, 2012).

The Evkaf Nezareti assumed significant responsibility in the repair and financing of foundation structures in the 19<sup>th</sup> century. It was necessary to obtain permission from the Evkaf Nezareti for the repair of foundation structures whose repair costs exceeded a certain amount. In this context, the Ministry also stepped in for the repair of waterways and water structures (Öztürk, 2019).

The fourth stage was the establishment of the actual municipality and the involvement of the private sector in water management. The Istanbul Municipality was established in this stage. During this period, the management of water belonged to the municipality established in 1855, and the repairs and so on belonged to the Evkaf Nezareti (Tabakoğlu, 2019). A new organizational structure emerged in this stage. “Dersaadet Anonim Su Şirketi/Terkos Su Şirketi” was established by a French company in 1868 (Sağır, 2016). During this period, the privilege of using some water resources was given to this company. The inclusion of private enterprise in the water service system reduced the importance of foundations. In particular, the fact that municipalities became more active in water management reduced the activities of foundations. In the final stage, water management was also centralised within the scope of strengthening the central administration in 1912. The functions of the foundations remained extremely limited during this stage. During this period, the foundations offered the resources they had to the public for a fee.

## **5. Conclusions**

Water is one of the most important needs of human life. The healthy transportation and distribution of water from its sources to the centre of life has been one of the important issues in human history. Different organisations were established within this scope. In this context, the water service of the society has been provided by foundations for centuries. Water foundations collected water from its sources and carried it to settlements through water channels. Foundations provided this service free of charge. The water service provided by foundations at the beginning and for centuries has undergone organisational changes over time. After the growth of settlements and the strengthening of state administration, a water supervision organisation was established. There was no significant change in the function of foundations during this phase. In the following centuries, in 1826, the “Ministry of Foundations” was established in Istanbul. This new organisational structure brought the functions of foundations together under a single organisational structure. Later, in parallel with the emergence of municipalities in the world, service units and water service were united under the supervision of foundations. In the last phase, a significant portion of public services were provided by municipalities. The function of foundations remained extremely limited at this stage.

Although the structure of water foundations did not change depending on the changing conditions throughout the centuries, they operated under the control and supervision of different organisational structures. New organisations established alongside foundations have also undergone changes and transformations over time.

Today, the control and ownership of a portion of the increasingly diminishing natural resources are in the foundations. In the future, foundations will begin to work together with municipalities and public organisations in protecting and meeting social needs, just as they did in history. Therefore, historical water foundations should be examined more in future studies.

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