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AN ANALYSIS OF CASH WAQF INSTITUTIONS AND REAL WAGES IN OTTOMAN RUMELIA, 1500–1914

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ABSTRACT

Purpose — This study employs a substantial number of primary sources of cash waqf contracts (*waqfiyyas*) to conduct a long-term analysis of cash waqf institutions (henceforth abbreviated as cash waqfs) and the real wages of waqf employees in Ottoman Rumelia from the sixteenth century to World War I.

Design/Methodology/Approach — The descriptive analysis includes economic variables recorded in contracts. The analysis focuses on the trend of capital levels, profit shares (*ribh*), and numbers of cash waqfs that prevailed over the 50-year sub-period used in the analysis, and the daily wages of five different groups, including imams, muezzins, scholars, trustees and daily workers.

Findings — The findings of this study indicate that, despite experiencing a decline in capital and income, cash waqfs in Rumelia paid employees wages close to market wages. It has been observed that although the real purchasing power of employees and their living standards have increased when measured in current Turkish lira and US dollar values, this improvement did not occur during the early twentieth century.

Originality/Value — This study conducts a comprehensive and quantitative assessment of the long-term changes in the capital levels and real wages of Rumelia's cash waqfs, providing a valuable contribution to the field of study.

Research Limitations/Implications — The results reveal that the wages of individuals employed in cash waqfs increased from the sixteenth to the late nineteenth century, which may suggest economic growth and rising living standards. These wages were close to market wages paid in Istanbul. During the early twentieth century, real wages decreased, potentially due to a decline in capital levels and external shocks resulting from wars, uprisings and revolutionary movements in Rumelia. Further research that expands the sample size and geographical scope to encompass other regions within the empire would be beneficial. Such an expansion would facilitate the generalisation of the findings obtained in this study.

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Practical Implications — To guarantee the long-term success and achievement of objectives of contemporary financial institutions that draw inspiration from this historical experience, it is crucial to maintain an efficient balance between wages and income from capital.

Keywords — Cash waqf, Cash waqf institutions, Economic history, Islamic finance, Real wages, Rumelia, The Ottoman Empire

Article Classification — Research paper

INTRODUCTION

The literature on the roles and functions of waqf institutions in the Ottoman Empire is extensive, yet quantitative and systematic analyses of these private organisations are progressing at a slow pace (Çizakça, 1995; Bulut *et al.*, 2019; Adıgüzel & Kuran, 2021; Özvar & Yıldırım, 2022). The primary obstacle to conducting an aggregate analysis of waqf institutions is the lack of longitudinal data. Difficulties in establishing longitudinal data have hindered economic historians from conducting long-term analyses of cash waqf institutions (henceforth abbreviated as cash waqfs). This study aims to provide a quantitative and systematic analysis of cash waqfs in the Ottoman Empire, focusing on the provinces of Rumelia from the beginning of the sixteenth century to World War I. Additionally, this study aims to analyse the wages of different socioeconomic groups, including imams, muezzins, scholars (*mudaris*), trustees (*mutawallis*), and daily workers, from cash waqfs established in Ottoman Rumelia.

This study aims to investigate the fluctuations in wages and living standards of individuals employed in cash waqfs over time. The amount of cash waqf wages depends on the income generated by capital. Consequently, higher capital yields higher wages. However, no extensive studies have been conducted on cash waqf wages. The primary objective of this study is to analyse the long-term trends in cash waqf wages and the correlation between these wages and living standards. To achieve this, assessments will be made of daily wages that meet the minimum standard of living as well as real wages. The central question that this study seeks to answer is whether the decline in cash waqf capital over the long term leads to a decrease in wages.

In an attempt to contribute to the existing literature, this study conducts a descriptive analysis of cash waqfs, as outlined in waqf contracts (*waqfiyyas*). Second, this study examines wage levels and utilises data to present long-term trends. This study has two primary objectives. The first objective is to conduct a descriptive analysis of cash waqf organisations established in Ottoman Rumelia, utilising primary sources such as waqf registers and court records from the provinces in Rumelia. These primary sources generate a new dataset of cash waqf institutions. This study categorises each cash waqf organisation based on its capital levels on a scale of four categories. This categorisation is essential for conducting a comparative analysis of cash waqf organisations in the long term. The primary expectation is that cash waqfs with higher capital levels would pay market-level wages to their employees. The second objective is to construct wage levels by focusing on cash waqf contracts and the deeds of these organisations, as determined by the founders. By doing so, this study presents the trend of wages for certain socioeconomic groups over the long term. This analysis uses wage levels in both US dollars and Turkish liras, using 2019 prices. In other words, presenting daily wages by 2019 allows for a comparison of daily wages in the Ottoman Empire across centuries.

This study is significant in that it presents a long-term investigation of the wages paid to employees by cash waqfs, which played a crucial role in the economic structure of the Ottoman Empire. Specifically, the decline in the capital of these organisations over time is of particular importance in terms of both the economic function of cash waqfs and the trajectory of wages. As capital decreases, higher wages reduce the ability of these organisations to finance other social and religious services. In essence, wages consume revenue from capital, thereby diminishing the capacity of these organisations to provide various services. Consequently, the investigation of the

trajectory of cash waqf wages will not only contribute to the literature on the economic role of these organisations, but also to the broader literature from a distinct perspective by offering new insights into the wages and living standards of cash waqf employees.

The findings have two dimensions. First, the capital levels of cash waqf organisations provide information about individual wealth in Ottoman Europe. Changing shares of cash waqfs according to their capital levels reflects long-term economic conditions. The results indicate that the number of cash waqfs with the lowest capital levels increased during the twentieth century, likely due to individuals accumulating savings over time. For other categories, the trend of newly established cash waqfs exhibited an inverted U-shaped pattern between 1550 and 1914. The number of cash waqfs for the first three quartiles in terms of capital levels peaked, particularly during the eighteenth century, likely due to improving economic conditions for individuals. Moreover, this period shows that the daily wages of waqf employees reached their highest levels. Second, this study presents the daily wages of five different socioeconomic groups in terms of US dollars and Turkish liras with 2019 prices. Daily wages in Ottoman currencies increased from the sixteenth to the twentieth century. However, the real values reveal that the trend of daily wages had an inverted U-shape, similar to the trend of cash waqfs by capital level. Thus, there is a positive relationship between the emergence of cash waqfs and the daily wages of waqf employees.

The remainder of this study is structured as follows. The first section provides a comprehensive review of the literature on the role of cash waqfs in the Ottoman economy. The second section analyses the cash waqfs of Ottoman Rumelia, focusing on their functions, profit rates, and capital levels using historical data. This section also presents the cash waqf wages of five distinct groups: imams, muezzins, scholars, trustees, and daily workers. The third section offers assessments of cash waqf wages and standards of living for individuals paid by these organisations. The study concludes by summarising the key findings.

LITERATURE REVIEW

The waqf institution and its subsequent form, cash waqf institutions, played a significant role in the economic and social lives of Muslim societies in the first decades of their emergence. The waqf generated a significant portion of philanthropic organisations established for charitable and religious purposes (Çizakça, 1995; Arjomand, 1998; Shatzmiller, 2001). The capital of these organisations consists of the founders' immovable assets. Cash waqfs established with cash capital emerged as an innovative design for generating and promoting services for the society. The emergence of these institutions was based on zakat (alms), one of the most important obligations in Muslim societies (Koehler, 2014). The last messenger, Prophet Muhammad (SAW), promoted waqf institutions as an innovation in providing alms among Muslims. His companions followed the same way. Consequently, waqf institutions began to dominate the economic and social environments of Muslim societies from the seventh century onwards. In this sense, each waqf emerged as a founder's private organisation.

The Ottoman Empire incorporated waqf institutions into its economic, political and social fabric. Although the initial purpose of these private organisations was to distribute alms during the seventh century, their functions expanded over time. During the Ottoman period, the scope and functions of waqf institutions peaked. The emergence of cash waqf represented the final

stage of the development of the institutional framework. It can be said that the cash waqf organisations are the Ottoman's innovation. These institutions can be accepted as the first type of modern interest-free financial institutions based on the waqf model.

From this perspective, three distinct functions emerged for innovative cash waqf in the Ottoman Empire. First, recent scholarly works concur with the assertion that waqf organisations contribute to the production of public goods on behalf of state finance. Regardless of waqf goals, each founder allocated a certain share of revenue to support religious and social objectives. These shares were mostly for producing public goods, such as mosques, lodges, *zawiyas* (religious-based education facilities), *madrasahs* (schools), *bedestens* (covered bazaars), caravansaries, roads, bridges and waterways, which increased the welfare of city dwellers (Barkan, 1942; Mandeville, 1979; Çizakça, 1995; Arjomand, 1998; Shechter, 2005; Alias, 2012; Wilson, 2015). Overall, these organisations played a crucial role in increasing human capital by providing resources to micro enterprises (Thaker, 2018; Thaker *et al.*, 2021). Furthermore, these organisations had the capacity to provide employment for individuals, as examined below.

Two examples are sufficient to demonstrate the functions previously described. The waqf of Grand Vizier Süleyman Pasha was one of the most comprehensive cash waqfs, providing financial resources for commercial organisations (such as caravansaries, shops, and covered bazaars), education (including *madrasahs* and smaller schools), and infrastructure (such as stone bridges, pavements, fountains, and roads). In 1677, Süleyman Pasha established this cash waqf by endowing 4,000 *kuruş* (Ottoman currency; see **Table 5**) and various real estates in the town of Milşuva. The revenues generated from the corpus capital, with a profit rate of 15 per cent, financed both commercial and infrastructure projects in the town (VGMA, 744/155/39). Yahya Pasha, another titled military official, established a cash waqf in 1506 by dedicating 38,500 *akçe* (Ottoman currency, a smaller unit than a *kuruş*; see **Table 5**) and various real estate properties in the town of Üsküp (Skopje) in Macedonia, with a profit rate of 10 per cent to finance commercial structures, education and soup kitchens (VGMA, 629/422–29/33).

These organisations provided resources for the relief of the poor by financing soup kitchens, shelters and clothing (Peri, 1992; Shatzmiller, 2001; Khan, 2015; Kachkar, 2017). Two cases are sufficient to present these functions of cash waqfs in the Ottoman Empire. Hatice Hatun established a cash waqf in Çorlu Town of Tekirdağ in 1739 by devoting 750 *kuruş* with 15 per cent profit rate to provide food, shelter, and clothing for the poor (VGMA, 626–2/437/529). Sheikh Mustafa Effendi, a member of the ulema, established a cash waqf in Timurinçe Village of Albania in 1896 by devoting 4,000 *kuruş* with 15 per cent profit rate to finance the relief of the poor (VGMA, 988/97/33).

Second, the literature suggests that cash waqfs were established because of the inheritance law of Islam, which was based on egalitarian principles (Kuran, 2008). These laws require the distribution of estates among all successors according to the specific rates determined in the Qur'ān. Founders established cash waqfs to prevent capital partitioning among successors (Barkan, 1940; Layish, 1997; Singer, 2013). Cash waqf organisations helped protect the capital from fragmentation while enabling founders to provide financial resources on a larger scale for borrowers. To manage waqf, founders typically assigned relatives, kin or children as trustees or managers (*mutawalli*) who earned a fixed income specified in contracts as long as the waqf existed (Layish, 1997; Arjomand, 1998). The prevailing belief was that family members would

devote themselves to maintaining the perpetuity of waqf to preserve their gains (Barkan, 1942). In conclusion, the second function of waqf institutions in the Ottoman Empire was to preserve wealth.

The third function of waqf institutions encompasses both the microeconomic and macroeconomic aspects and stability. With regard to macroeconomics, waqf institutions diminished government expenditure, leading to reduced budget deficits, a phenomenon that was favourable to the state. The demand for financial resources diminished, causing a decline in the demand for government borrowing. Consequently, interest rates remained low within the economic framework (Çizakça, 2000; Wilson, 2015). Lower interest rates also stimulated investment and productive and profit-seeking activities in the economy. According to Barkan (1942), cash waqfs represented the most efficient and cost-effective means of creating public goods and reducing government expenditures across the extensive territories of the Ottoman Empire. From a microeconomic perspective, the cash waqf institution emerged as a financial organisation that facilitated credit relations in the market. These private institutions provided financial resources to merchants, producers and consumers since their establishment, with varying interest rates across different regions of the Ottoman Empire (Çizakça, 1995; Bulut & Korkut, 2016; see also **Figure 1**). Therefore, they played a key role in the stability and sustainability of the Ottoman economy and society in the long run.

This study investigates the economic factors associated with cash waqf institutions. As previously noted, recent scholarship has primarily focused on the practices of private organisations. However, cash waqfs are not limited to providing public goods, maintaining wealth distribution, or offering credit. The contracts indicate that cash waqfs employed individuals from diverse socioeconomic backgrounds for purposes specified by their founders. Thus, this study not only offers a descriptive analysis of the cash waqfs in Ottoman Rumelia but also provides insight into the long-term wage levels of their employees, making a distinctive contribution to the field. Two questions generate the main purpose of the analysis conducted in this study:

1. How did capital levels change in the long term?
2. How did wages of waqf employees vary over time?

METHODOLOGY

Source

This study utilises a dataset of 934 cash waqf contracts spanning a 422-year period from the early sixteenth century to the early twentieth century. The dataset, published in collective works, is compiled from microfilm of cash waqf contracts housed in the archives of the T.R. Directorate General of Foundations (VGMA), Gazi Husrev Beg Library, and court records stored in the National Library of Türkiye (Bulut *et al.*, 2019). The dataset encompasses cash waqf contracts from Ottoman Rumelia, covering the period 1506–1921. However, there are only a few cash waqf contracts in the dataset for the first half of the sixteenth century, as cash waqf organisations were not yet widespread in the society at that time.

Prepared by the Ottoman judiciary at the behest of the founders, cash waqf contracts comprise comprehensive information pertaining to the endowed capital, profit rates (*ribh*), the location of the establishment, the names and appointment of the trustees, methods of capital

management, deeds of the organisations, employee wages, date of establishment, and the names of the witnesses present in court. Moreover, cash waqf contracts provide information on the complete names of the founders, including their titles, names, and the names of their fathers. This information facilitated our undertaking of a descriptive analysis of over 900 cash waqfs in Ottoman Rumelia.

When conducting quantitative research on cash waqf contracts as historical sources, it is essential to acknowledge and address the limitations arising from various factors. These limitations include:

1. The changes in the territories of provinces over time, which can affect the reliability of the data.
2. A tendency to underrepresent earlier organisations, while overrepresenting cash waqf organisations in subsequent periods, which can skew the results of the analysis.
3. The uneven distribution of cash waqf contracts among different provinces, making it challenging to compare the practices of different regions.
4. The problem of whether the sample of cash waqf contracts represents all organisations, which can call into question the validity of any conclusions drawn from the data.
5. The lack of complete documentation of cash waqf contracts in Rumelia province, as primary sources often fail to provide all relevant documents.

Data

This study encompasses eleven provinces in Ottoman Rumelia, extending from the Northwest Marmara region to Bosnia. These provinces comprise Albania, Bosnia, Bulgaria, Greece, Kosovo, Macedonia, Romania and Serbia in the Balkan regions, as well as the Thracian cities of Tekirdağ, Edirne, and Kırklareli in the Northwest Marmara region. Due to various economic and political factors, these provinces exhibit inconsistent numbers of cash waqfs throughout the sixteenth century to the early twentieth century. To address the issue of uneven distribution of cash waqfs across the regions, this study has grouped them into five main regions.

The data displayed in **Table 1** offers a long-term perspective on the allocation of cash waqfs among various regions. Upon initial examination, the number of newly established cash waqfs remained relatively low and improved from the second half of the eighteenth century. During the first half of the sixteenth century, only six cash waqfs were recorded. The highest annual average number of cash waqfs established (8.22) was observed in the most recent period. The distribution of cash waqfs by region is more balanced than the periodic distribution. Among these regions, Thrace holds the highest number of cash waqfs, at 248. The cash waqfs established in Bosnia closely follow Thrace. The remaining cash waqfs are distributed relatively evenly among the remaining regions. In contrast to the rapid proliferation of cash waqfs in Istanbul (Barkan & Ayverdi, 1970; Özcan, 2003; Kuran, 2011; Gürsoy, 2017, 2021; Gürsoy & Özdeğer, 2022), these findings indicate that cash waqfs became more prevalent in Rumelia during the second half of the eighteenth century.

Among the cash waqfs given in **Table 1**, a significant proportion (68%) belongs to titled individuals. In the Balkan region, the share of commoners and women in cash waqf formation is approximately 32 per cent. **Table 2** presents the distribution of cash waqfs by title. Eighteen different titles are available in the cash waqf deeds. The titles can be classified into two categories. The first group consists of military/administrative-based titles, whereas the second

comprises judicial/religious-based titles. As depicted in **Table 2**, the former category encompasses eight titles (Agha, Beg, Pasha, Soldier, Beşe, Kethüda, Khan and Captain), whereas the latter includes nine titles (Effendi, Hadji, Mullah, Sheikh, Dervish, Judge, Hodja, Preacher, and Seid). It is uncertain whether the Çelebi is an honorific title. The proportion of military/administrative groups was approximately 67 per cent, whereas that of judicial/religious groups was approximately 33 per cent. Although an assessment carried out by Güçlü Tülüveli (2005) provided more comprehensive information about the titles, a similar methodology was applied to the present classification. The data reveal a higher participation of individuals in the titles of Agha and Effendi. This finding is consistent with recent literature based on individual wealth levels, which suggests that individuals holding these titles comprised the wealthiest groups in the Ottoman Empire (Ergene & Berker, 2008; Coşgel & Ergene, 2011). Consequently, it is expected that these groups would participate more actively in cash waqf formation than the other groups. The proportion of men in waqf formation (85%) is notably higher than that of women (15%). This disparity in distribution among social groups impedes the ability of this study to conduct comparisons between these groups.

The distribution of services financed by cash waqfs in the Balkan Region is shown in **Figure 1**. These services were designated by the founders at the time of their establishment, and court officials recorded each service in the contracts. Each cash waqf provided financial resources to these services from the revenues generated through credit relationships. The shares in **Figure 1** exceeded 100 per cent because a waqf could finance more than one service. Religious services, which encompassed financing mosques, masjids, maintaining these facilities, and paying employees, were by far the most prevalent functions, and education was also substantial. No fewer than 26 per cent of all cash waqfs supported educational facilities, paid the salaries of scholars (*mudaris*), and provided scholarships to students. The remaining two categories appeared in only a few cash waqfs. Poor support, which included providing the poor with soup kitchens, shelters and clothing, had the lowest share (16%). Secular services, such as financing commercial facilities and infrastructure (e.g., roads bridges, waterways), appeared to be an important function in 22 per cent of the contracts.

Table 1: Cash Waqfs by Regions and Sub-Periods

	5 Countries*	Thrace**	Bulgaria	Greece	Bosnia	Total
1500/49	1	2	0	1	2	6
1550/99	4	25	2	4	11	46
1600/49	5	12	0	5	12	34
1650/99	11	8	5	5	3	32
1700/49	13	16	23	11	8	71
1750/99	13	71	22	30	18	154
1800/49	11	24	35	32	22	124
1850/99	55	53	36	62	80	286
1900/21	59	37	15	28	42	181
Total	172	248	138	178	198	934

Note: * Include Macedonia, Serbia, Albania, Kosovo, Romania. ** Include Edirne, Kırklareli, Tekirdağ.

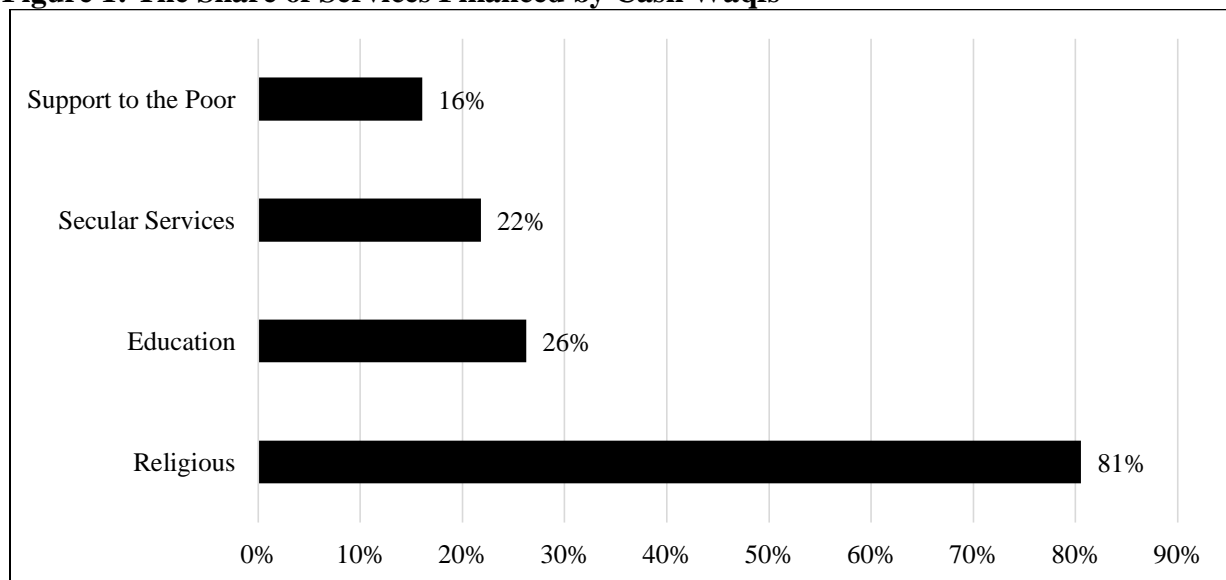
Source: This data is derived from primary sources, see Bulut *et al.* (2019).

Table 2: Titles of Founders

Title of Founders	Number of Cash Waqfs	Title of Founders	Number of Cash Waqfs	Title of Founders	Numbers of Cash Waqfs
Ağa (Agha)	310	Asker (Soldier)	11	Çelebi*	2
Efendi (Effendi)	116	Şeyh (Sheikh)	6	Kethüda (Chamberlein)	1
Hacı (Hadji)	57	Derviş (Dervish)	6	Hafız (Preacher)	1
Bey (Beg)	48	Beşe**	5	Han (Khan)	1
Paşa (Pasha)	46	Kadı (Judge)	4	Reis (Captain)	1
Molla (Mullah)	17	Hoca (Hodja)	3	Seyyid (Seid)	1

Note: * Even if Çelebi seems to be a title, this study evaluates individuals with this title as commoners in the Ottoman Empire. ** A title given to people of military background.

Source: This data is derived from primary sources, see Bulut *et al.* (2019).

Figure 1: The Share of Services Financed by Cash Waqfs

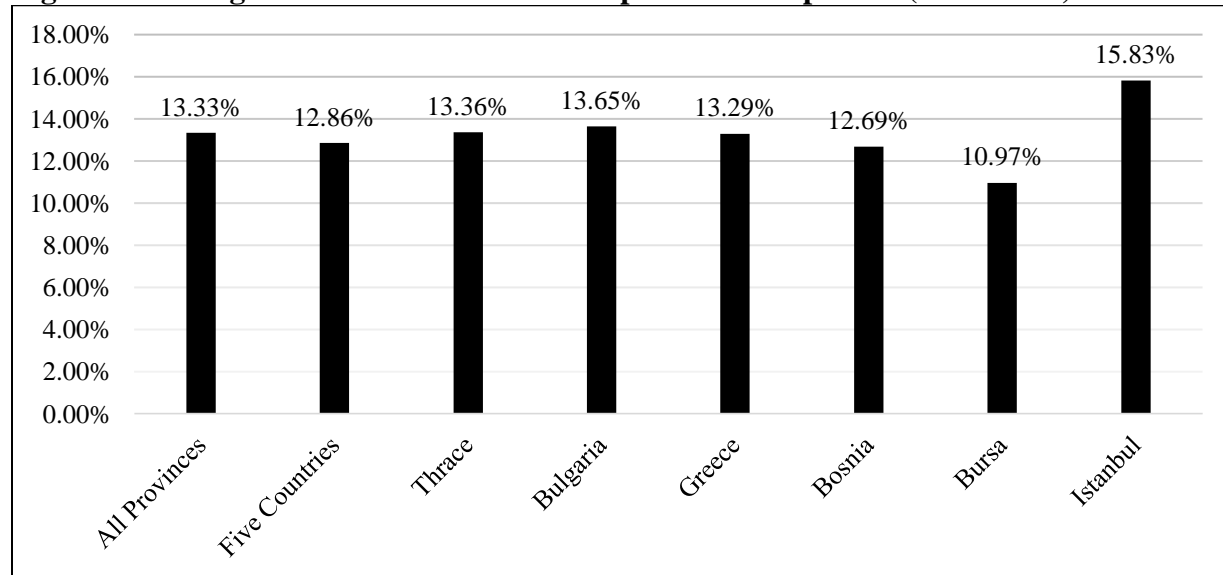
Source: This data is derived from primary sources, see Bulut *et al.* (2019)

The other significant aspect of cash waqf contracts was the specified rate of return on capital, which was necessary to finance waqf deeds. Although there were controversies about the nature and legitimacy of these rates, whether these rates constituted interest or not, waqf was required to generate profits to maintain perpetuity (as noted by Mandeville, 1979). In other words, each cash waqf was obligated to earn a particular amount of revenue, and the term ‘earn’ was of utmost importance in this context (Çizakça 1995, p. 330). Consequently, this study refers to the rate of return derived from the specified rates in cash waqf contracts as the profit share (*ribh*). Çizakça

(1995, pp. 330-31) posited that profit share represents the profit/capital ratio within a cash waqf institution.

Figure 2 presents the average profit share from a long-term perspective, encompassing eight categories that include both the regions in this study and two other important provinces of the Ottoman Empire. The ‘all provinces’ category represents the average of the Balkan regions examined in this study. Among these observations, the town of Bursa had the lowest rate. Bursa was a significant commercial and industrial province of the Ottoman Empire, known for its silk production and textiles from the middle of the sixteenth century (Çizakça 1980). Credit relations were dense, and more than 700 cash waqfs operated as borrowing organisations (Çizakça 1995). Thus, Bursa had lower interest rates than other provinces. Although Istanbul had more cash waqfs than other provinces, a higher density of credit relations emerged not only within cash waqfs, but also in different markets. Consequently, Istanbul had the highest profit rate of approximately 16 per cent, which was unexpected given its economic scale. This finding is noteworthy for future research.

Figure 2: Average Profit Shares from a Comparative Perspective (1500–1914)



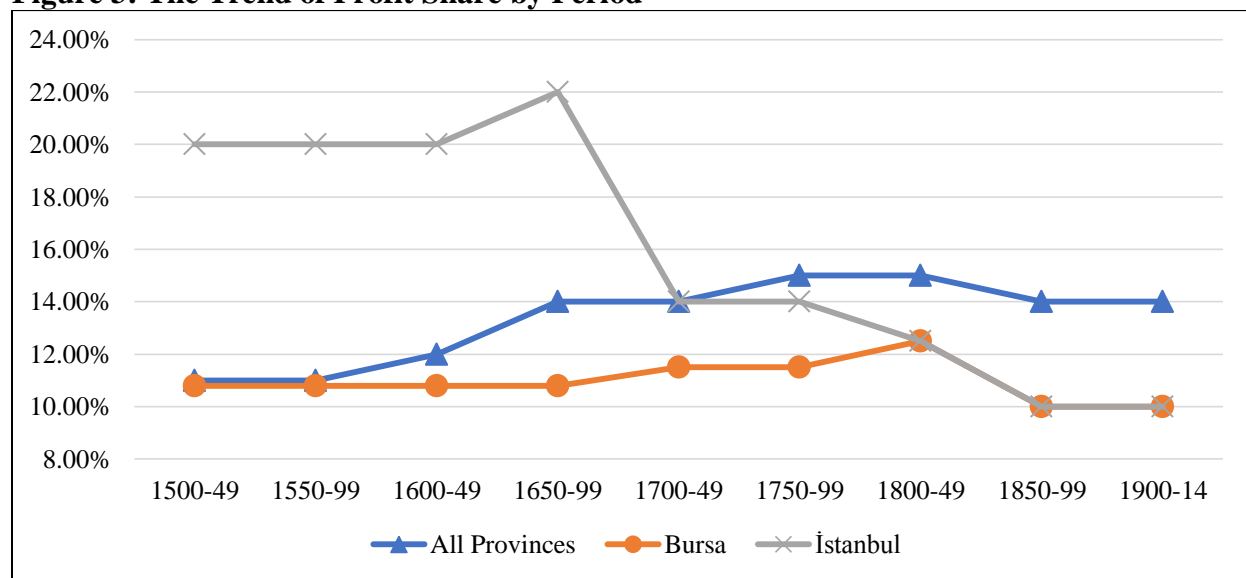
Source: This data is derived from primary sources, see Bulut *et al.* (2019). For Bursa, see Çizakça (1995, p. 331), and for İstanbul, see Çizakça (2004, pp. 15–16).

This study examined several regions and discovered that three provinces (Thrace, Bulgaria, Greece) had profit rates exceeding 13 per cent. The remaining two regions had slightly lower profit rates, at approximately 12.86 and 12.69 per cent, respectively. The overall profit share for Rumelia was 13.33 per cent, which was situated between the rates of Bursa and Istanbul provinces. Additionally, **Figure 3** illustrates the fluctuations in profit rates from the sixteenth century to the early twentieth century.

As depicted in **Figure 3**, the profit shares of Bursa and Ottoman Rumelia were nearly equal, at about 11 per cent during the sixteenth century, whereas the rates in Istanbul were higher, at 20 per cent. In the seventeenth century, however, the profit share of Ottoman Rumelia

(14%) diverged from Bursa (11 percent), and notably, Istanbul's profit share reached 22 per cent in the second half of the century. Although the trend of profit shares between Bursa and Balkan regions continued, the rates in Istanbul significantly declined to 14 per cent in the eighteenth century. Ottoman Rumelia experienced various difficulties due to autonomy and independence movements in the Balkan provinces (Palairot, 1997). These political problems offset the positive effects of centralisation, resulting in a higher profit share in the Balkan region. The data indicate a decreasing trend of rates for Bursa and Istanbul towards 10 per cent, while these rates remained at higher levels for the Balkan regions at about 15 per cent during the nineteenth century. Even though the profit share decreased slightly in Ottoman Rumelia during the early twentieth century, this rate was still above the rates of Bursa and Istanbul.

Figure 3: The Trend of Profit Share by Period



Source: This data is derived from primary sources, see Bulut *et al.* (2019). For Bursa, see Çizakça (1995, p. 331), and for Istanbul, see Çizakça (2004, pp. 15–16).

The level of capital endowed by founders is a key economic variable in cash waqf contracts. This study examined the capital levels of cash waqfs established in Ottoman Rumelia from two different perspectives and constructed a dataset on six different scales based on the capital level (see **Table 3**). The capital values were expressed in silver using the silver content of the *akçe* (Ottoman currency) given in **Table 6**. The main reason for using silver values is to provide values in a simpler way, whereas using *akçe* results in higher numbers of digits. The lowest tier of cash waqfs comprised those established with capital below 10,000 grammes of silver, and these private institutions were the most prevalent in all provinces. The share of cash waqfs in the second tier was also substantial at 23 per cent. Conversely, the highest tier included cash waqfs with capital exceeding 100,000 grammes of silver, constituting only 6 per cent of the total cash waqfs. The lowest share, however, appeared in the third tier, at 5 per cent in all provinces.

Table 3: Allocation of Cash Waqfs by Capital (Ottoman *Kuruş*)

	5 Provinces*	Thrace	Bulgaria	Greece	Bosnia	All Provinces
< 10,000	128 (74%)	174 (70%)	85 (62%)	111 (62%)	118 (60%)	616 (66%)
10,000– 49,000	31 (18%)	52 (21%)	35 (25%)	43 (24%)	52 (26%)	213 (23%)
50,000– 99,999	7 (5%)	7 (3%)	10 (7%)	9 (6%)	12 (6%)	45 (5%)
> 100,000	6 (3%)	15 (6%)	8 (6%)	15 (8%)	16 (8%)	60 (6%)

Note: * Include Macedonia, Serbia, Albania, Kosovo, and Romania.

Source: This data is derived from primary sources, see Bulut *et al.* (2019).

In the Balkan region, the distribution of cash waqfs by capital segment differed across regions. Notably, cash waqfs with the lowest capital comprised approximately 70 per cent of the share in Thrace and the cluster of five provinces (see first and second columns in **Table 3**), while the remaining three regions had a share of around 60 per cent. Conversely, cash waqfs with higher capital were less prevalent in these regions. In the second segment, the share of cash waqfs varied between 21 per cent and 26 per cent in the four regions, with the cluster of five provinces having a share below 20 per cent. The share of cash waqfs in the higher capital segments is lower than that in the lower capital segments. Specifically, the first region had the highest percentage (below 10%) of cash waqfs with high capital, while Bulgaria, Greece, and Bosnia had a percentage of approximately 13 per cent. Overall, a significant proportion of cash waqfs had lower capital, and high-capital organisations were relatively low in all regions.

Table 4 presents an analysis of the distribution of cash waqfs by capital segment according to period. During the sixteenth century, a more pronounced share of high-capital cash waqfs was observed than lower-capital cash waqfs. This might be attributed to the limited number of organisations (only six) included in the observations. In the second half of the sixteenth century, the number of observations improved and the share of the highest-capital cash waqfs surpassed that of the lowest segment. Although this trend persisted throughout the seventeenth century, the share of the second segment increased substantially to an average of 45 per cent. From the eighteenth century onward, these trends reversed and the share of the lowest-capital cash waqfs significantly increased by up to 65 per cent. During this period, the share of the highest segment ranged between 7 per cent and 17 per cent. In the nineteenth century, the trend among capital segments shifted in favour of the lower segments. **Table 4** indicates that the share of the lowest segment increased by 87 per cent, whereas the share of the highest segment was only 1 per cent. The highest capital segment disappeared in the early twentieth century. These findings reveal two main outcomes: first, participation in waqf formation with higher capital declined starting in the eighteenth century, and second, the participation of lower-wealth groups in waqf formation increased over time.

Table 4: Allocation of Cash Waqfs by Period (Ottoman *Kuruş*)

	1500/49	1550/99	1600/49	1650/99	1700/49	1750/99	1800/49	1850/99	1900/14
< 10,000	1 (17%)	16 (35%)	6 (18%)	4 (13%)	16 (23%)	77 (50%)	81 (65%)	249 (87%)	166 (92%)
10,000– 49,000	1 (17%)	10 (22%)	15 (44%)	15 (47%)	30 (42%)	60 (39%)	37 (30%)	31 (11%)	14 (7%)
50,000– 99,999	1 (17%)	2 (4%)	7 (20%)	7 (22%)	13 (18%)	6 (4%)	5 (4%)	3 (1%)	1 (1%)
> 100,000	3 (50%)	18 (39%)	6 (18%)	6 (18%)	12 (17%)	11 (7%)	1 (1%)	3 (1%)	-
Total	6 (100%)	46 (100%)	34 (100%)	32 (100%)	71 (100%)	154 (100%)	124 (100%)	286 (100%)	181 (100%)

Source: This data is derived from primary sources, see Bulut *et al.* (2019).

Wage Estimations

This study aims to investigate the wage levels of cash waqfs by gathering data from primary sources. These variables are essential for analysing major trends in wages. To convert all values into a common currency, this study utilises the exchange rates of various Ottoman currencies, with *akçe* serving as the primary unit of measurement (**Table 3**). By employing *akçe* as the primary currency, this study compares the values in a unique monetary unit. Second, the study employs the consumer price index to deflate nominal values, as the existing index is based on Ottoman *akçe* (Özmucur & Pamuk, 2002). This approach facilitates a more straightforward analysis of data from a long-term perspective using the monetary values in *akçe*. Therefore, this section presents a wage analysis for the five working groups commonly employed in cash waqf organisations. These groups are imam, muezzin, scholar (*mударis*), trustee, and daily workers. The first two groups consist of individuals who work in religious facilities, while the third group, *mударis*, is high-level lecturers or professors who work in *madrasahs*. Trustees represent the management groups employed by these organisations, and the final group, daily workers, provides low-skill services to these organisations.

The examination of wages paid to employees of waqf organisations has certain limitations. One limitation of this analysis is that it only determines whether wages remain stable. The inflationary effect is a significant problem in determining the wage levels. Furthermore, it is challenging to determine whether these organisations have increased wages to maintain their purchasing power. These findings may reflect lower outcomes than expected. Additionally, it should be noted that individuals employed in cash waqf organisations have the opportunity to work in other organisations, which may offer higher wages than those provided in the cash waqfs used in this study. This limitation likely contributes to the emergence of outcomes lower than expected. The third limitation is based on the capital levels of cash waqfs. Small-scale cash waqfs have limited abilities to provide adequate financial resources. Wages depend on revenues, defined as profit shares determined by the *ribh*. As shown in **Tables 3** and **4**, the higher shares of these small-scale organisations also cause lower wage levels than expected. Consequently, this analysis employs wages given only in cash waqf contracts, and the results should be evaluated based on these limitations.

Since the Ottoman Empire utilised various currencies, with cash waqf contracts involving different currencies based on their founding periods, this study identifies two stages in transforming all values into current values using prices from 1913. For example, during the first half of the sixteenth century, founders endowed capital in dirham, a silver-weight unit. Cash waqfs established with dirham had silver capital in gramme measurements. Ebubekir Effendi's cash waqf, established in 1577, had 46,466 dirhams of silver capital (VGMA, 623/65/71). In 1579, Hüdaverdi, a commoner, established a cash waqf with 141,600 dirhams of silver (Sarajevo Gazi Husrev-beg Library, V-169110). The Empire minted *akçe* from dirhams in varying amounts in response to exogenous shocks and endogenous changes. In the first half of the sixteenth century, 100 dirhams of silver comprised 420 *akçe*, which increased to 1,000 *akçe* a century later (Pamuk, 1997, p. 355). From the second half of the seventeenth century, dirham and *akçe* were replaced by Ottoman *kuruş*, another unit of currency. In the first stage, this study converted dirham values and *kuruş* to *akçe*, using established exchange rates from cash waqf contracts.

Table 5 provides a comprehensive overview of the exchange rates utilised to convert all values into Ottoman *akçe*, which also demonstrates the various currencies employed in cash waqf contracts. The 'values' column denotes 10 distinct currencies that are documented in the contracts, and these figures are utilised to perform the conversion of all values into Ottoman *akçe*. Subsequently, in the second stage of this study, the prices of consumer baskets and the consumer price index are employed from reliable secondary sources in accordance with the subperiods (Özmucur & Pamuk, 2002).

Table 5: Exchange Rates

Years	Values	Equivalents
1513	1 Coin (<i>sikke</i>)	6.5 <i>Akçe</i>
1588	1 Coin (<i>sikke</i>)	8 <i>Akçe</i>
	1 <i>Kise-i Rum</i>	500 <i>Kuruş</i>
	1 <i>Divani Kese</i>	416 <i>Kuruş</i>
Until 1689	1 <i>Riyal Kuruş</i>	80 <i>Akçe</i>
Until 1689	1 <i>Esedi Kuruş</i>	70 <i>Akçe</i>
After 1690	1 <i>Kuruş</i>	120 <i>Akçe</i>
After 1820	1 <i>Mecidiye Gold</i>	100 <i>Kuruş</i>
After 1820	1 Ottoman Gold	100 <i>Kuruş</i>
After 1875	1 <i>Forint</i>	2 <i>Krons</i>
After 1875	1 <i>Forint</i>	12 <i>Kuruş</i>
After 1875	1 <i>Kron</i>	6 <i>Kuruş</i>
After 1875	1 Hungary Gold	61.5 <i>Kuruş</i>

Source: Exchange rates are derived from various cash waqf contracts (*waqfiyyas*) that include monetary values (VGMA 990/68–69/59; 732/1–3/1; 990/39/33; 1595/1/1; Sarajevo Gazi Husrev Beg Library V-145533; V-081262; 2/110–11/430; Rodoscuk Court Records 08597.00004, v.15a).

Before delving into the overall trends in wages, it is essential to discuss the primary sources through which wages are determined. A relevant comparison can effectively illustrate the necessity of employing cash waqfs from the highest capital group. In 1598, Governor Mehmed Pasha established a cash waqf in the Mostar Province of Bosnia, depositing 23.220 Ottoman *Kuruş* (Sarajevo Gazi Husrev Beg Library, 1/216/147). The corpus amounted to approximately

1,857,600 *akçe* in the same year. The trustee of this private organisation had the authority to lend to borrowers at a 15 per cent profit share (*ribh*) on the cash waqf contract. According to the contract, the yearly profit of Governor Mehmed Pasha's waqf was approximately 3,500 Ottoman *kuruş*, equivalent to 280,000 *akçe*. The trustee was tasked with organising deeds for cash waqf based on the annual profit generated from credit transactions. In essence, this private organisation had large financial resources to manage the founder's deeds. In 1582, Sinan Beg, the son of Bayram Agha, established another significant cash waqf in Zepçe town of Bosnia by endowing 5,500 Ottoman *kuruş* (440.000 *akçe*) as the corpus. Sinan Beg allowed the trustee to lend to borrowers at a 10 per cent profit share, granting the trustee the authority to manage deeds as specified in the contracts, amounting to 550 Ottoman *kuruş* (44.000 *akçe*) per year. This study found that the latter, with limited financial resources, was unable to allocate a substantial portion of waqf revenue to the daily wages of employees. In contrast, the former had the financial resources to pay 120 *akçe* per day to a scholar, whereas the latter could pay only 18 *akçe* per day. It is important to note that the disparity was not a result of any difference in intellectual capacity between the scholars but, rather, a consequence of the varying financial resources of the two cash waqf organisations. To mitigate such issues, this study focuses on organisations from the highest capital group (see **Tables 3 and 4**).

According to **Table 6**, daily wages increased approximately 100 times from the sixteenth century to the early twentieth century. As noted above, this study used cash waqfs with the highest capital to calculate daily wages. These cash waqfs, which were the largest in terms of capital, provided financial resources for educational organisations. Each educational organisation, which was part of the cash waqf, employed scholars, teaching assistants, and students who received a certain level of scholarship. These organisations covered a broad range of subjects, including religious education, social sciences, health sciences, physical sciences, and astronomy. For example, a cash waqf established in 1836 provided funding for *muvakkithane*, a facility that was used for small-scale astronomy studies (The Waqf of Mehmed Emin Pasha, VGMA, 746/381/172). This cash waqf had an annual revenue of 1,200 *kuruş*, 70 per cent of which were designated to support astronomical research. The highest-paid scholars were those who held the highest teaching positions within cash waqf organisations. However, data on the daily wages of teaching assistants were not included in the analysis because of the lack of available information. Additionally, the daily wages of students (who received scholarships) were found to be similar to those of daily workers employed in cash waqf organisations.

Table 6: Daily Wages in Ottoman Rumelia by 1913 Prices

Periods	Imam	Muezzin	Scholar	Trustee	Daily Worker
16 th Century	44,88	28,56	48,00	22,00	9,20
17 th Century	105,00	67,00	113,00	52,00	22,00
18 th Century	214,00	136,00	229,00	105,00	44,00
19 th Century	3120,00	1985,00	3336,00	1529,00	639,00
20 th Century	4661,00	2966,00	4985,00	2285,00	956,00

Source: This data is derived from primary sources, see Bulut *et al.* (2019).

Each contract related to cash waqf provides specific information regarding the daily wages of religious employees within an organisation. A substantial portion of cash waqf organisations

allocate financial resources to support religious institutions, including mosques, lodges, *zawiyas*, and *masjids*. These institutions employ individuals, such as imams, muezzins, and other religious staff. Cash waqf contracts provide comprehensive details on the daily wages of these individuals. The founders of these organisations determine the distribution of labour among these groups, as well as their respective daily wages, based on the nature of their work. In this regard, imams are paid the highest wages compared to muezzins and other religious employees.

The trustees were tasked with managing the financial resources of these organisations. Each trustee was entitled to receive compensation for their service. The founders had the power to determine who would serve as trustees and what remuneration these groups would receive. Consequently, cash waqf contracts typically included information on the daily wages or salaries of trustees. In some instances, founders explicitly identified trustees by naming them in contracts. Additionally, the founders had the authority to designate subsequent trustees for the cash waqfs. Thus, the data revealed that trustees had generally lower wages than both imams and scholars.

This study also employs the USD values of earlier Ottoman currencies to calculate the net real wages in 2019 by converting 1998 USD values to 2019 values through a reliable secondary source.¹ By doing so, it enables the comparison of daily wages among various groups across different periods, ranging from the sixteenth to the early twentieth century. **Table 7** illustrates the daily wages expressed in recent Turkish lira, utilising 2019 prices, which serves as the initial attempt to determine real wage levels.

Table 7 illustrates the real wage rates in US dollars and Turkish lira, adjusted for 2019 prices, to show these two dimensions. This method is essential for comparing wages across groups over time. First, long-term changes in real wages provide insights into the relative positions of the different groups. Second, and more significantly, the progression of daily wages in real terms over centuries reflects the economic performance of the Ottoman Empire in the long run. The results in the final two columns of **Table 7** indicate that the trend in real wages forms an inverted U-shape for all groups. In other words, the data reveal that cash waqf organisations were more effective in offering higher wages during the seventeenth and eighteenth centuries in the Ottoman Empire. However, daily wages declined to their lowest levels during the initial years of the twentieth century. It can be inferred that the wars, uprisings, and revolutions that emerged in North Africa (Libya), the Balkans, and West Asia (modern Middle East) before World War I resulted in economic stagnation. The revolutions and insurrections in Balkan territories, specifically, ought to have had detrimental consequences for cash waqf organisations in Ottoman Rumelia.

¹ For values of Ottoman currencies in 1998 US dollars, see, https://ata.boun.edu.tr/sites/ata.boun.edu.tr/files/faculty/sevket.pamuk/database/1.3._tablo_gecmis_yillara_ait_parasal_buyukluklerin_esdegerleri.pdf. To convert values in US dollars from 1998 to 2019, see Williamson (2021).

Table 7: Wages in Ottoman Rumelia by 2019 Prices

16th Century				
	Daily Wage (<i>Akçe</i>)	Daily Wage (2019 US Dollars)	Daily Wage (2019 Turkish Lira)	Monthly Wage (2019 Turkish Lira)
Imam	44,88	43	286	8.580
Muezzin	28,56	27	180	5.400
Scholar	48,00	46	306	9.180
Trustee	22,00	21	140	4.200
Daily Worker	9,20	10	67	2.010
17th Century				
Imam	105,00	44	293	8.790
Muezzin	67,00	29	193	5.790
Scholar	113,00	48	320	9.600
Trustee	52,00	22	147	4.410
Daily Worker	22,00	10	67	2.010
18th Century				
Imam	214,00	57	380	11.400
Muezzin	136,00	37	247	7.410
Scholar	229,00	62	413	12.390
Trustee	105,00	29	193	5.790
Daily Worker	44,00	13	87	2.610
19th Century				
Imam	3120,00	60	399	11.970
Muezzin	1985,00	38	253	7.590
Scholar	3336,00	65	433	12.990
Trustee	1529,00	30	200	6.000
Daily Worker	639,00	13	87	2.610
20th Century				
Imam	4661,00	38	253	7.590
Muezzin	2966,00	24	160	5.400
Scholar	4985,00	40	266	7.980
Trustee	2285,00	19	127	3.810
Daily Worker	956,00	8	54	1.620

Source: The data for daily wages in *akçe* is derived from primary sources, see Bulut *et al.* (2019). The other findings are calculated as given above.

RESULTS AND DISCUSSION

The real-term daily wages of cash waqf employees exhibit a roughly symmetrical pattern characterised by a U-shape. The data suggest that there was an increase in living standards relative to real wages until the end of the nineteenth century. However, in the early twentieth century, real wages decreased for all occupational groups. This decline is likely attributable to a decrease in cash waqf capital, wars, uprisings and political struggles. The last three may have caused a decrease in capital, population and wages. A recent study argues that the factors affecting waqf capital were population decline, military campaigns, and environmental shifts (Orbay, 2014, pp. 985–86). It is hypothesised that the onset of the Balkan Wars at the beginning of the twentieth century and the ramifications of the transition to World War I may have contributed to the decrease in wages. It is possible that all of these factors contributed to the simultaneous decrease in wages. Owing to the lack of sufficient data, it is difficult to quantify the

impact of these factors on the wages charged by cash waqfs in Rumelia. With respect to nominal *akçe*, there was a noticeable upward trend in daily wages, which could be attributed to the inflationary pressures that persisted over time. Given that the findings derived from the analysis of daily wages reflect patterns, it is crucial to conduct comparisons to appreciate their significance.

The findings provide mixed support for recent literature on daily wages and living standards in the Ottoman Empire (Özmucur & Pamuk, 2002). During the sixteenth century, unskilled workers earned an average of 6.93 *akçe* per day in İstanbul, while daily wages in Rumelia cash waqfs stood at approximately 9.20 *akçe*. In the seventeenth century, unskilled workers in İstanbul earned 17.28 *akçe* per day, while workers in Rumelia cash waqfs earned about 22 *akçe*. In the eighteenth century, the daily wages in Rumelia's cash waqfs increased to 44 *akçe*, while unskilled workers in İstanbul earned 37.8 *akçe*. Throughout the eighteenth century, the daily wages of unskilled workers in Rumelia's cash waqfs exceeded those of unskilled workers in İstanbul. However, this trend reversed in the nineteenth and early twentieth centuries, with unskilled workers in İstanbul earning approximately 676 *akçe* per day, whereas workers in Rumelia cash waqfs earned 639 *akçe*. Moreover, unskilled workers in İstanbul earned double the daily wages of workers in Rumelia's cash waqfs. In the early twentieth century, the daily wage in İstanbul was approximately 1800 *akçe*, whereas in Rumelia, this was approximately 936 *akçe*.

In a related observation, the compensation of skilled workers displayed a parallel trajectory, particularly until the late eighteenth century. However, unlike the trends of unskilled workers from the nineteenth century onwards, the average daily income of skilled groups in Rumelia's cash waqfs continued to exceed those in İstanbul. While the living standards and conditions of unskilled workers employed in Rumelia cash waqfs appeared to decline compared to those in İstanbul, the living standards and conditions of skilled workers in this region remained superior to those in İstanbul.

Based on these findings, it is evident that Rumelia's cash waqfs offered substantial daily wages to skilled workers. However, as demonstrated in the data, the number of organisations with significant capital tends to decrease over time. Consequently, the income from cash waqfs remains low. Because wages are paid from these revenues, high wages are expected to restrict the financing of services from these revenues. Therefore, it is not surprising that cash waqfs have evolved into institutions that provide employment and high wages to individuals and groups rather than financing more social and religious services.

It is challenging to determine whether employees of cash waqfs earn income from a single job or from multiple organisations. For instance, if a professor works at multiple cash waqfs that fund education, their income is likely to be higher than the average level given in this study.

Considering these factors, the wages earned by those employed in cash waqfs may be on par with those reported in this study. However, these individuals may also receive substantial compensation from participating in additional cash waqfs, which could restrict their ability to redirect capital towards their primary objectives. To mitigate such circumstances, it is recommended that employees of cash waqfs be remunerated at the subsistence level. Consequently, even if these groups work for multiple organisations, these groups would receive

a smaller portion of their capital income. This would enable cash waqfs to finance the services specified in cash waqf deeds with greater ease. Furthermore, a mechanism should be established to ensure equitable income distribution and prevent employees from working in other cash waqfs. This would allow more resources to be allocated to funded services.

CONCLUSION

Employing data from cash waqf contracts in Ottoman Rumelia, this study contributes to one of the first quantitative and systematic examinations of cash waqf institutions in the Ottoman Empire spanning from the sixteenth to the early twentieth century. The results of this research help address an important knowledge gap regarding the capital levels of cash waqf organisations and the long-term trend in wages for waqf employees. While economic historians and historians have paid considerable attention to the roles and functions of cash waqf institutions in the Ottoman Empire, there has been a scarcity of aggregate estimates and analyses of these institutions. The findings of this study encourage further research on the long-term examination of cash waqf institutions in other regions and provinces of the Ottoman Empire, and suggest new approaches to understanding the patterns, trends and economic variables of these private organisations.

The findings reveal that the average capital levels of cash waqfs were higher during the sixteenth century than during the subsequent periods. This may be attributed to the fact that high-ranking bureaucrats and military personnel were inclined to establish these private organisations. It is reasonable to assume that individuals with a high social status had substantial financial resources to devote a significant portion of their wealth in establishing cash waqfs during the sixteenth century. The spread of cash waqf institutions for various reasons should have encouraged other segments of the society from the seventeenth century. Consequently, an increase in the number of cash waqfs with greater participation from different segments of the society would result in a decrease in the average capital levels of these private institutions. Although the increasing number of cash waqf organisations should have arisen from the higher participation of different socioeconomic groups in the Ottoman Empire, the trend of cash waqf institutions exhibited an inverted U-shaped pattern, particularly between the sixteenth and mid-nineteenth centuries. This pattern holds true for the first three quartiles of average capital levels until World War I. The only exception occurs in the last quartile, which includes cash waqf organisations with an average capital of less than 10,000 silver, in which the pattern increases during the same period.

The trend in daily wages paid by cash waqf organisations also displays similar results and outcomes. When examining the trend in Ottoman currencies, daily wages for different socioeconomic groups demonstrated a rising trend during the same period. This study employs real values for average daily wages, expressed in US dollars and Turkish lira with 2019 prices. The results show that real daily wages increased until the end of the eighteenth century and began to decrease during the nineteenth and early twentieth centuries. In other words, the long-term trend in average real daily wages exhibits an inverted U-shaped pattern. The peak points of both average capital levels and average real daily wages intersect in the same sub-periods. These two trends may be indicative of economic growth in the Ottoman Empire until the beginning of the nineteenth century.

Recommendations

Economic historians are encouraged to create new datasets for various economic variables found in waqf contracts (*waqfiyyas*). This research offers a new method for analysing these variables through descriptive analysis. Furthermore, it is suggested that these primary sources have immense potential for developing new analyses. As more analyses become available, policymakers can utilise the past experiences of these private organisations. This process has enabled economists to establish new modern financial organisations over time. Moreover, in addition to private and public sector performance, the waqf sector (philanthropy) must be taken into consideration in the comparison of the living standards between the East, West and Islamic world (the centre).

Implications of the Study

The establishment of cash waqf organisations served as a crucial means for accumulating capital, which subsequently facilitated the provision of public goods that augmented social welfare. Additionally, the results of this study suggest that these organisations play a role in fostering employment opportunities. People with diverse occupational expertise were able to secure employment within these organisations, receiving wages that were in close proximity to market rates. The waqf sector (philanthropy) can play a significant role in realising economic and social welfare and financial stability in the present time and the future.

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DECLARATION

Credit Authorship Contribution Statement

The authors contributed equally to the conceptualisation, writing, methods, discussion of findings, and conclusion sections.

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The authors declare none.

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Ethical Statement

The authors declare that they understand the Ethical Guidelines and have adhered to all the statements regarding ethics in publishing. They also confirm that this paper is original and has not been published in any other journal nor is under consideration by another publication.

Data Availability

The data used in this study comprise contracts that served as the primary source of cash waqfs in Ottoman Rumelia (see, Bulut *et al.*, 2019). Despite the long-term nature of these data, the data are not suitable for econometric analysis owing to significant gaps. Consequently, alternative statistical data were employed and are presented in the form of tables and graphs. The authors proceeded with their efforts to prepare a dataset for econometric analysis and make this data suitable for use.

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Appendix

None