Cihannüma
Tarih ve Coğrafya Araştırmaları Dergisi
Sayı XII/1 – Temmuz 2026, 31-67
Doi: 10.30517/1737168
Research Article

THE USE OF LATE OTTOMAN POPULATION DATA IN HISTORICAL GEOGRAPHY: THE CASE OF BURDUR KAZA POPULATION REGISTERS (1834 AND 1841)*

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Abstract

This study examines the usability of the late Ottoman period population records in historical geography with a spatial approach, taking the 1834 and 1841 registers of Burdur Kazası into consideration as a case study. It is intended to show that it is possible not only to describe demographic data, but also to analyse how they relate to geographical elements. Population records were examined and deciphered using retrospective and comparative methods. The prominent aspect of the study is that it demonstrates the usability of historical data in geographical studies based on examples. The design of the data in the Late Ottoman period population registers was

* This article makes use of a Master's thesis entitled "The Population of the City of Burdur and Its Surroundings in 1841 According to the Population Register, from the Perspective of Historical Geography", see Güzel, Şerife. *Tarihi Coğrafya Yönüyle, 1841 Tarihli Nüfus Defterine Göre Burdur Şehri ve Çevresinin Nüfusu*. Master's Thesis, Hatay Mustafa Kemal University, 2018.

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Makale Geliş Tarihi / Received Date: 08.07.2025 Makale Kabul Tarihi / Acceptance Date: 24.01.2026

analysed. Subsequently, the ways in which the distribution according to economic organisation and settlement locations were used in geographical studies was examined. Indeed, the applicability of the distribution according to spatial elements such as altitude and morphological units was demonstrated. Furthermore, examples were provided of how demographic data such as age, religion-ethnic origin, education, birth, death, and migration could be distributed spatially in relation to administrative units and settlements, and how settlements could be classified. The applicability of age definitions based on physical characteristics in the production of narrow and wide-range age pyramids in historical geography research has been demonstrated. Although there are relative differences in the Ottoman population registers of the 19th century, we believe that they can be examined on a spatial basis, as in the examples presented in this study.
Keywords: Late Ottoman population, Burdur, population registation, historical geography, spatial methodology.

Geç Dönem Osmanlı Nüfus Verilerinin Tarihi Coğrafyada Kullanımı: Burdur Kazası Nüfus Defterleri Örneği (1834 ve 1841)

Öz

Çalışmada, Burdur Kazası 1834 ve 1841 nüfus defterleri örnek alınarak, geç Osmanlı dönemi nüfus kayıtlarının tarihî coğrafya araştırmalarındaki kullanılabilirliği, mekân eksenli bir yaklaşımla incelenmiştir. Amaç, demografik verilerin yalnızca betimleme değil, coğrafi unsurlarla ilişkisinin analizinin mümkün olduğunu ortaya koymaktır. Nüfus kayıtları retrospektif ve karşılaştırmalı yöntemlerle incelenmiş, deşifre edilmiştir. Çalışmanın öne çıkan yönü, tarihî verilerin coğrafya çalışmalarında tarihî verilerin kullanılabilirliğini örneklere dayalı olarak göstermesidir.Öncelikle Geç Osmanlı dönemi nüfus defterlerindeki verilerin dizayn edilişinin çözümlemesi yapılmıştır. Sonrasında nüfus verilerinin ekonomik örgütlenme ve yerleşim yerlerine göre dağılışının coğrafya araştırmalarında kullanım şekilleri üzerinde durulmuştur. Nitekim yükseklik ve morfolojik birimler gibi mekânsal unsurlara göre dağılımının uygulanabilirliği gösterilmiştir. Yine nüfusun yaş, inanç-etnik köken, eğitim, doğum, ölüm ve göç gibi demografik verilerinin mekânsal temelde idari birimleri ve yerleşmelerle ilişkili dağılışının yapılabileceği ve yerleşmelerin sınıflandırılabileceği örneklendirilmiştir. Verilerde eşkâle dayalı yaş tanımlamalarının tarihî coğrafya araştırmalarında dar ve geniş aralıklı yaş piramitlerinin üretiminde kullanılabilirliği gösterilmiştir. 19. yüzyıldaki Osmanlı nüfus defterlerinde görece farklılıklar olsa da çalışmada sunulan örneklerdeki gibi mekân temelli olarak incelenebileceği kanaatini taşımaktayız.
Anahtar Kelimeler: Geç Osmanlı nüfusu, Burdur, nüfus kayıtları, tarihi coğrafya, mekânsal metodoloji.

Introduction

The population censuses and registration system directly aimed at identifying the population in the Ottoman state (administration) began to gain significance in the second quarter of the nineteenth century.[1] As in many other countries[2], the attempts to conduct censuses through modern institutions in the Ottoman administration were a result of the needs that became evident with modernization. Censuses, land surveys, and the establishment of a time-based permanent population registration system in the nineteenth century emerged from the need to base the management of human and financial resources on accurate data, in line with the state's centralization tendencies. Especially with the establishment of a modern army, the systematic structuring of active and reserve units was envisaged.[3] While the recruitment of soldiers and the identification of taxpayers constituted the most prominent reasons, they also had an impact on issues such as migration to Anatolia from lost territories, urbanization, and maintaining security in cities. Sultan Mahmud II (1808–1839) and Sultan Abdülhamid II (1876–1909) were deeply engaged in population surveys and statistics as part of their efforts to reestablish the strong centralized administrative structure of the past.[4]

The population records of the late Ottoman period began with the 1831 population defters, which included the first censuses. These defters represent a highly comprehensive collection[5], consisting of statistics from each region.[6] In Turkish literature, the commonly used term is *Ottoman population defters* (*Osmanlı*

1 Ratip Yüceuluğ, *İstatistik Dersleri,* (Ankara: T.C. Başbakanlık İstatistik Genel Müdürlüğü, Doğuş Matbaası Yayın No: 268, 1947), p. 10; Numan Elibol, "Osmanlı İmparatorluğu'nda Nüfus Meselesi ve Demografi Araştırmaları", *Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Yayınları* 12, no. 2 (2007), p. 157; Kemal Karpat, *Ottoman Population 1830-1914 Demographic and Social Characteristics,* (Madison: The University of Wisconsin Press, 1985), p. 6; Michelle U. Campos, "Placing Jerusalemites in the History of Jerusalem: The Ottoman Census (*sicil-i nüfus*) as a Historical Source (Chapter I)", *Ordinary Jerusalem Opening New Archives, Revisiting a Global City, 1946–1956,* ed. Angelos Dalachanis and Vincent Lemire, (Series: Open Jerusalem, Volume: 1, 2018), p. 17.

2 Anthony J. Christopher, "The quest for a census of the British Empire c. 1840-1940"*, Journal of Historical Geography* 34 (2008), pp. 268-269; Mohamed Saleh, "A Pre-Colonial Population Brought to Light: Digitization of the Nineteenth Century Egyptian Censuses", *Historical Methods: A Journal of Quantitative and Interdisciplinary History* 46 (2013), p. 5.

3 Kemal Karpat, *Osmanlı'da Değişim Modernleşme ve Uluslaşma.* trans. Dilek Özdemir, (Ankara: İmge Kitabevi, 2006), p. 400.

4 Karpat, *Ottoman Population 1830-1914,* p. 6.

5 The population defters are located in the Prime Ministerial Ottoman Archives (hereafter BOA), under the NFS. d. catalog of the Directorate of Ottoman Archives within the General Directorate of State Archives of the Prime Ministerial of the Republic of Turkey.

6 Justin McCarthy, "The Defters of the Late Ottoman Period", *Turkish Studies Association Bulletin* 8, no. 2 (1984), p. 7.

nüfus defteri), although various other terms such as *tahrir-i nüfus*[7] and *sicil-i nüfüs*[8] are also employed. The censuses conducted after 1831, continuing into the early twentieth century (1844, 1866, 1874, 1881/1882, 1905/1906, 1914, and 1917), provide significant statistical data on the nineteenth century population.[9] The records after 1881, unlike the earlier defters, included all individuals, both male and female. Additionally, these records exhibited greater diversity in data due to the state's efforts to establish permanent identity cards (*nüfus tezkeresi*). In this context, it is possible to examine the population records in two groups in general terms. The records, which are the research objects of the article, are from the first period defters. These defters, prepared based on the Ottoman administrative units of *kaza* and *sancak*, do not share the same characteristics in terms of standardization as those created after 1881. This is because the census methods and registration systems of the period were developed in accordance with the unique understanding and needs of the Ottoman State and its era.[10] Until the 1881 censuses, only the male population had been recorded. Therefore, it is important to investigate and analyze certain specific characteristics and relative differences present in the statistics recorded in population defters.

The first period of population records was planned to record the births, deaths and migrations in cities, towns and villages on a day-to-day basis. In addition, with these defters, it was intended to record the migrations to major cities, which was one of the biggest problems of the period. In this way, it is envisaged that the defters will also serve to ensure internal security. The Office of Population Registers (*Ceride-i Nüfus Nezareti*) is the center where statistics are collected in the kazas, which is the main population registration unit, in the form of lists and briefly of those who were born, died, migrated or settled from other settlements every six months.[11] In the late Ottoman period, the main administrative units were *nahiye, kaza, sancak* and *vilayet*, respectively. In the administrative structure, the smallest unit is the village (*karye*), which includes all its subordinate settlements (Tr. *yayla*, *oba,mezra, mahalle,* Fr. *Hameau,* İng. Hamlet, DE *Weiler* etc.).[12]

7 McCarthy, "The Defters," p. 7.

8 Campos, "Placing Jerusalemites," p. 17.

9 Elibol, "Osmanlı İmparatorluğu'nda Nüfus," pp. 152-153; Mehmet Güneş, "Osmanlı Dönemi Nüfus Sayımları ve Bu Sayımları İçeren Kayıtların Tahlili", *Akademik Bakış* 8, no. 15 (2014) pp. 269-298.

10 Karpat, *Ottoman Population 1830-1914*, p. 6.

11 McCarthy, "The Defters," p. 7; Musa Şaşmaz, "The Ottoman Censuses and The Registration Systems in The Nineteenth and Early Twentieth Centuries", *OTAM Ankara Üniversitesi Osmanlı Tarihi Araştırma ve Uygulama Merkezi Dergisi* 6, 6 (1995), pp. 290-291; Musa Çadırcı, *Tanzimat Döneminde Anadolu Kentlerinin Sosyal ve Ekonomik Yapısı,* (Ankara: Türk Tarih Kurumu Yayınları 2013), pp. 45-46.

12 Osman Gümüşçü, *XVI. Yüzyıl Larende (Karaman) Kazasında Yerleşme ve Nüfus, (*Ankara: Türk Tarih Kurumu Yayınları 2001), p. 127.

Modern population survey studies in the Ottoman Empire have brought with them modern institutions. In this context, the first official population unit, the *Ceride-i Nüfus Nezareti*, was established between 1829 and 1831 under the Ministry of Interior.[13] Afterwards, the civil registry offices were first transferred to the Tahrir-i Emlak Administration (*Tahrir-i Emlak İdaresi*) and then to the Military Affairs Department (*Askeri İşler Dairesi*) for a short time. After the establishment of the Council of State (*Şuray-ı Devlet*) in 1867, it came under the jurisdiction of the Tanzimat department.[14] Accordingly, in 1881-1882, the General Population Administration (*Nüfus-u Umumi İdaresi*) was established, which continued until the end of the Ottoman State.[15] The first *Sicil-i Nüfus Nizamnâmesi* was issued in 1881, and extensive censuses were carried out throughout the empire over the next decade.[16]

In the population defters, information about the administrative units of the nineteenth century can be found on the first pages. In these sections, the relevant sancak to which the kaza was affiliated is typically indicated first, followed by a sequential list of central neighborhoods and villages within the administrative unit of the kaza, as recorded in the defters. The numerical value, which usually comes immediately after the name of a particular administrative center, gives the population of the central kaza.[17]

Ottoman population records are sources that have been little studied and used in the field of historical geography until today. These records have largely been processed at the level of transcription in the field of history. In historical studies, demographic data have been analysed not statistically, but in the manner of defterology[18] or Latinization of records.[19] Therefore, the determination of the data

13 Stanford J. Shaw, "The Ottoman Census System and Population, 1831-1914". *International Journal of Middle East Studies* 9, no. 3 (1978), pp. 326-327; Çadırcı, "1830 Genel Sayımına Göre Ankara Şehir Merkezi Nüfusu Üzerinde Bir Araştırma", *Osmanlı Araştırmaları* 1, no. 01 (1980), p. 111; Şaşmaz, "The Ottoman Censuses," p. 289-290; Karpat, *Ottoman Population 1830-1914*, pp. 19-20; Çadırcı, *Tanzimat Döneminde Anadolu*, p. 45; İsmail Kıvrım, *Şebinkarahisar Kazası Nüfus Defteri (1251/1835),* (İstanbul: Giresun İl Özel İdaresi Yayınları, Kültür Serisi: 4 2015), p. 6.

14 Shaw, "The Ottoman Census System," p. 327; Kemal Karpat, "Ottoman Population Records and the Census of 1881/82-1893", *International Journal of Middle East Studies* 18, 1 (1978), p. 242; Karpat, *Ottoman Population 1830-1914*, p. 29.

15 Shaw, "The Ottoman Census System", p. 330; Karpat, *Ottoman Population 1830-1914*, p. 26.

16 Campos, "Placing Jerusalemites," p. 18.

17 Karpat, "Ottoman Population Records," p. 42; Karpat, *Ottoman Population 1830-1914*, p. 33.

18 The term "Defterology" was used by Heath Lowry to describe studies based on the *tahrir defters*. This field has evolved into a research tradition spanning a long period, with techniques and terminology developed for evaluating the data in the tahrir defters. See, Colin Heywood, "Between historical myth and 'Inythohistory': the limits of Ottoman history", *Byzantine and Modern Greek Studies* 12, 1 (1988), p. 337; Mehmet Öz, "Tahrir Defterlerinin Osmanlı Tarihi Araştırmalarında Kullanılması Hakkında Bazı Düşünceler", *Vakıflar Dergisi* 22, (1991), p. 432; Fatma Acun, "Osmanlı Tarihi Araştırmalarının Genişleyen Sınırları: Defteroloji", *Türk Kültürü İncelemeleri Dergisi* 1, 1 (1999), p. 316; Miroslav Pavlović, "Postclassical Defterology: Possibilities of

presented by the Ottoman population defters, their classification according to

Socio-Economic Research in Contemporary Ottoman Studies", *Journal of Historical Researches (Istrazivanja)* 26, (2015), pp. 66-67. Historians generally consider defterology as a contemporary subfield of Ottoman historiography. For these studies, see Leyla Aksu, "Osmanlı Tarihi Araştırmalarında Bir Alt Disiplin: Defteroloji", *Tarih İçin Metodoloji*, ed. Ahmet Şimşek, (Ankara: PEGEM Akademi Yayıncılık, 2016), pp. 376-383; Yunus Koç, "Defteroloji Çalışmaları Üzerine Bir Değerlendirme", *Türkiye'de Akademik Tarihçilik*, ed. Ahmet Şimşek, (İstanbul: Kronik Kitap, 2017), pp. 146-159. Some, however, describe it as an example of weak historiography. For studies, see Oktay Özel, *Dün Sancısı, Türkiye'de Geçmiş Algısı ve Akademik Tarihçilik*, (İstanbul: Tarih Vakfı Yurt Yayınları, 2012); Edhem Eldem, "Osmanlı Tarihini Türklerden Kurtarmak", *Cogito Tarihyazıcılığı*, ed. Teyfur Erdoğdu, (Ankara: Yapı Kredi Yayınları, 2013), pp. 263-264. Defterology studies initially focused on the tahrir defters, which allowed for population estimates during the Ottoman period. See Osman Gümüşçü, "The Ottoman Tahrir Defters as a Source for Historical Geography". *BELLETEN* 72, 265 (2008), p. 911. Later, with the opening of nineteenth century population defters for research, defterology studies also began to focus on these defters. For some studies related to the field of defterology, see Ömer Lütfi Barkan, *XV ve XVI. Asırlarda Osmanlı İmparatorluğunda Zirai Ekonominin Hukuki ve Mali Esasları Kanunlar I,* (İstanbul: Bürhaneddin Matbası, 1943); Halil İnalcık, *Hicrî 835 Tarihli Sûret-i Defter-i Sancak-i Arvanid*, (Ankara: Türk Tarih Kurumu Yayınları, 1954); Tibor Halasi-Kun, "Some Notes on Ottoman Mufassal Defter Studies", *Journal of Turkish Studies* 10, (1986), pp. 163-166; Heywood, "Between historical myth," pp. 315-345; Rhoads Murphey, "Ottoman Census Methods in the Mid-sixteenth Century: Three Case Studies", *Studia Islamica*, *71*, (1990), pp. 115-126; Feridun M. Emecen, "Sosyal Tarih Kaynağı Olarak Tahrir Defterleri", *Tarih ve Sosyoloji Semineri, 28-29 Mayıs 1990: Bildiriler* içinde, (İstanbul: İstanbul Üniversitesi Edebiyat Fakültesi Yayınları, 1991), pp. 149-155; Heath W. Lowry, *Studies in Defterology. Ottoman Society in the Fifteenth and Sixteenth Centuries,* (İstanbul: ISIS Press, 1992); Kemal Çiçek, "Osmanlılardan Önce Akdeniz Dünyasında Yapılan Tahrirler Hakkında Bazı Gözlemler", *OTAM Ankara Üniversitesi Osmanlı Tarihi Araştırma ve Uygulama Merkezi Dergisi* 6, 6 (1995), pp. 51-89; Acun, "Osmanlı Tarihi Araştırmalarının", pp. 315-328; Leslie Peirce, "Changing Perceptions of the Ottoman Empire: The Early Centuries", *Mediterranean Historical Review* 19, 1 (2004), pp. 6-28; Elias Kolovos, The Monks and The Sultan outside the newly conquered Ottoman Salonica in 1430. The paper was published in the *Journal of Turkish Studies* 40, (2013) = Defterology. Festchrift in Honor of Heath Lowry: 271-279 and is republished here with minor additions; Lafi Nora, "Organizing Coexistence in Early Ottoman Aleppo: an Interpretation of the 1518, 1526, and 1536 *Tahrîr Defteri*s and the 1536 Qanunname", *Human Mobility and Multiethnic Coexistence in Middle Eastern Urban Societies.* ed. Hidemitsu Kuroki, (Tokio: ILCAA, 2015), pp. 103-120; Pavlović, "Postclassical Defterology", pp. 66-81; Marijan Premović, "Settlements and Population of the Presentday Montenegrin Polimlje in the Second Half of Fifteenth Century", *BELLETEN* 83, 297 (2019), pp. 555-584; Gürer Karagedikli, "Erken Modern Osmanlı İmparatorluğu'nda Devlet, Toprak ve Kayıt Pratikleri: 1670-1671 Edirne Tahriri Bize Ne Anlatır?", *Hacettepe Üniversitesi Türkiyat Araştırmaları (HÜTAD)* 31, (2019), pp. 7-28.

[19] Musa Çadırcı, "1830 Genel Sayımına," pp. 109-132; Yunus Özger, "XIX. Yüzyılın İlk Yarısında Tercan ve Köylerinin Demografik Yapısı (1835 Tarihli Nüfus Defterine Göre)", *Erzincan Üniversitesi Eğitim Fakültesi Dergisi* 10, 2 (2008), pp. 59-75; Mehmet Başaran, "1830-1842 Yılları Arasında Nüfus Defterleri Kapsamında Ödemiş ve Köyleri", *Adnan Menderes Üniversitesi Sosyal Bilimler Enstitüsü Dergisi* 4, 3 (2017), pp. 307-321; Hatice Uzer, "01444 Numaralı İnegöl Müslim Nüfus Defteri'nin Transkripsiyon ve Değerlendirmesi" (Yüksek Lisans Tezi), Bursa Uludağ Üniversitesi, Sosyal Bilimler Enstitüsü, 2019; Ferhat Berber and Mustafa M. Özekmekçi, "19. Yüzyılın İlk Yarısında İzmir Nüfusunun Kaynakları", *Akademik Tarih ve Düşünce Dergisi* 8, 3 (2021), pp. 1066-1086; Hasan Topuz and Safa Temiz, *Çarşamba "Arım, Ökse ve Ayvacık" Nüfus Defteri 1834-1845,* (Samsun: Çarşamba Belediyesi Kültür Yayınları-9, 2022).

demographic characteristics and the association of statistical data with the real place is an important problematic of the historical geography literature. For the statistical analysis of demographic data, their application to geographical space, and their association with settlement patterns have been addressed only to a limited extent in the existing literature. Nevertheless, recent studies demonstrate that population registers constitute an important source of data for historical population geography and settlement geography.[20] For population defters to be used in spatial analyses, the data must be systematically processed, classified, and associated with geographical space.[21]

In the research, answers to questions such as whether the data in the Ottoman population defters can be used in historical geography researches and how they can be used for the analysis of geographical spatial analysis were sought. In addition to the determination of the problematic pointed out, this study claims to contribute to both the acquisition of data and the statistical association of the population with real geographical spatial elements and how to do this.

Adhering to the selected sample population defters, it was aimed to determine the systematics of the data together with the administrative and

[20] Şerife Güzel, "Tarihi Coğrafya Yönüyle, 1841 Tarihli Nüfus Defterine Göre Burdur Şehri ve Çevresinin Nüfusu" (Yüksek Lisans Tezi), Hatay Mustafa Kemal Üniversitesi, Sosyal Bilimler Enstitüsü, 2018); Bayram Tuncer & İhsan Bulut, "Tarihi Coğrafya Açısından Haymana Kazasında Nüfus (1831-1914)". *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi,* 23,4 (2019), pp. 1571-1588; İlker Yiğit, "Burdur ve Çevre Kazalarda Nüfus (1834)," *Doğu Coğrafya Dergisi* 25, 44 (2020), pp. 13-30. https://doi.org/10.17295/ataunidcd.764364; Didem S. Kaya, "1834 Tarihli Burdur Kazası Nüfus Defterine Göre Burdur Şehrinin Nüfusu," *Uluslararası Sosyal Araştırmalar Dergisi/ The Journal of International Social Research* 13, 71 (2020), pp. 231-244. https://doi.org/10.17719/jisr.10684; Ziya Ç. Yazgan, "XIX. Yüzyılın İlk Yarısında Tefenni Kazasında Yerleşme ve Nüfus" (Yüksek Lisans Tezi), Burdur Mehmet Akif Ersoy Üniversitesi, Sosyal Bilimler Enstitüsü, 2021; İlker Yiğit, & Mustafa Yakar, "Tarihi Bir Kaynak Olarak XIX. Yüzyıl Nüfus Defterlerindeki Yabancıyân Kayıtlarının Göç Araştırmalarındaki Yeri Isparta ve Çevre Kazalar Örneği". *Ege Coğrafya Dergisi*, 30, 2, (2021), pp. 247–263, https://doi.org/10.51800/ecd.959738; Cennet Yücedağ, "XIX. Yüzyılın İlk Yarısında Bucak ve Kızılkaya Kazalarında Nüfus", (Yüksek Lisans Tezi), Burdur Mehmet Akif Ersoy Üniversitesi, Sosyal Bilimler Enstitüsü, 2022. Mustafa Yakar, & İlker Yiğit, "Tarihi Nüfus Coğrafyası 19. Yüzyıl İlk Yarısında Hamid Sancağı Yalvaç Kazasında Nüfusun Yaş Yapısı ve Yaşlanma Düzeyi", *Ege Coğrafya Dergisi*, 31, 2, (2022). pp. 233–253, https://doi.org/10.51800/ecd.1159042.

[21] Osman Gümüşçü & İlker Yiğit, *Mekan, Yöntem ve Teknikleriyle Tarihi Coğrafya*, (İstanbul: Yeditepe Yayınevi, 2023). For further information on how geographic information systems can be used in historical settlement studies, see İlker Yiğit & Hasan Demirtaş, "Osmanlı Dönemi Köy Sınırlarının Haritalanmasında Vakfiyeler ve Vakıf Hududnâme Defterleri", (Presented at the 2. Uluslararası Osmanlı Coğrafyası Arşiv Kongresi, İstanbul, 2017); Ziya Çağrı Yazgan, & İlker Yiğit, "Tarihi Yerleşme Coğrafyası Çalışmalarında Coğrafi Bilgi Sistemleri: XIX. Yüzyıl Tefenni Kazası Örneği". *Journal of Migration and Settlement Studies,* 1, 1, (2023), pp. 111-129. https://doi.org/10.29329/jomiss.2023.560.8; Emre Doğandor, Coğrafi Bilgi Sistemlerinden (CBS), Tarihsel Coğrafi Bilgi Sistemlerine (TCBS), (Ed. O. Gümüşçü ve İ. Yiğit) *Türkiye Tarihi Coğrafya Araştırmaları*, (İstanbul: Yeditepe Yayınevi 2023).

settlement structure. In particular, we expect that it will guide the identification, deciphering and associating the data with geographical elements in accordance with the system of the defters and its arrangement on the page (*varak*). It was intended to associate statistical data with spatial elements such as area, elevation, and morphological units to analyze their distribution. The study is significant for serving as a model for research utilizing population defters as a data source and for its contribution to the historical geography literature.

In the research, the population defters of Burdur Kaza of Hamid Sancak in the years 1834 and 1841 were taken as a model (Fig. 1). Today, the study area largely overlaps with the borders of the central district of Burdur province.

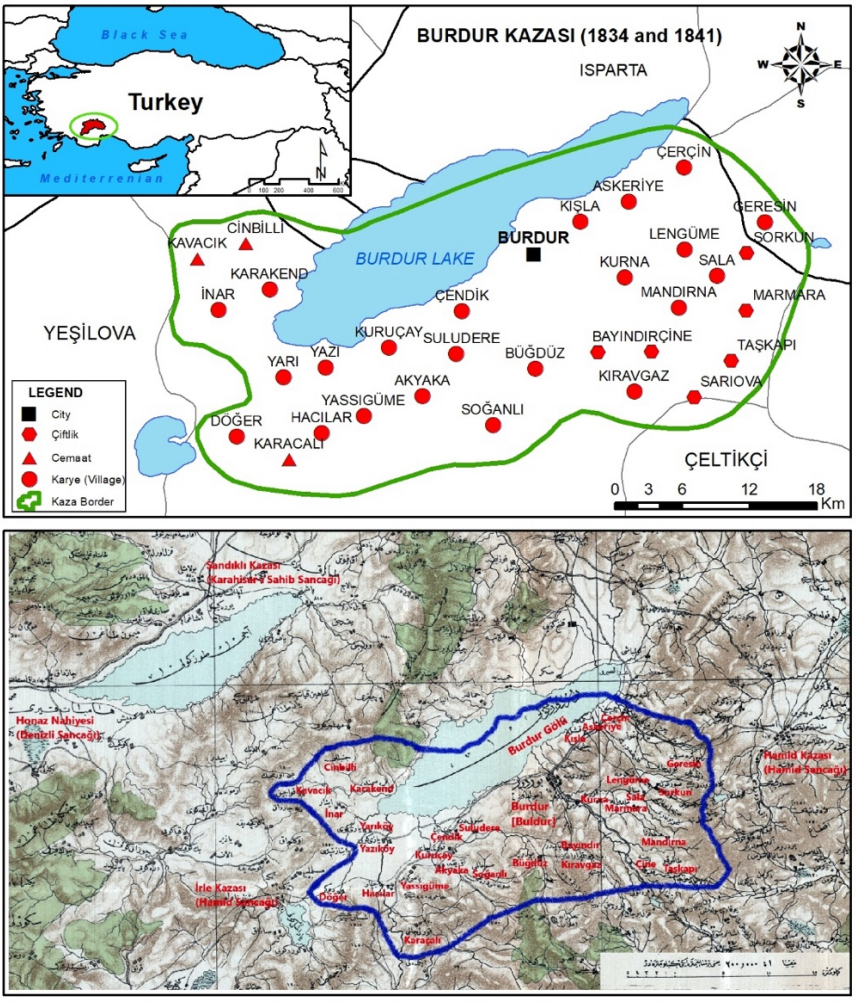

Figure 1. Location Map of Burdur Kaza and Surroundings source: produced by the authors above, the boundaries of the Burdur Kaza were drawn by the authors below

through translated and Latinization., Atatürk Kitaplığı, 912.564.12 BUR, Hrt_011064 (H. 1328).

Purpose, data and method

It is possible to explain the purpose of the study in two categories. The first is the decipherment of the entries in the population registers based on the model registers. Deciphering the data is a preliminary phase, but it is also the key to the next phase in which the data will be processed. Here, it is aimed to determine the systematics of the data.

The second and main purpose of the study is to demonstrate the usability of statistical demographic data in historical geography research with a spatial approach. The spatial distribution of settlement, population and economic data in the population defters, together with their geographical context, are presented. Accordingly, the distribution of demographic characteristics of the population such as age, belief-ethnicity, education, birth, death and migration according to administrative units and settlements is in the group of data that can be provided directly. Furthermore, in addition to the distribution of population and settlements according to morphological units, the geographical distribution of settlement types and their functions has also been examined.

Two defters of Burdur kaza dated 1834 and 1841 were used as data. Because the record templates of the defters vary according to the space and time difference between the records, the needs of the period and the perception of the officers who keep the records. In order to detect minor data differences between the ledgers, two ledgers prepared at different dates were modelled and compared.

The process of compiling and verifying all data is not limited solely to the transcription of the defters as a method. At this stage, materials such as maps were needed along with a detailed Geographical survey. The location and boundaries of the settlements were determined by field work. In addition, some studies and geographical surveys have been carried out to correctly read the names of the settlements and to determine the location. In this context, the determination of the names and locations of mountains, hills, streams, settlements in the research area was carried out with 1/200,000 scale late Ottoman period maps as well as 1/25,000 scale current topography maps.

The data obtained from the defters were processed primarily by *retrospective* and *comparative* methods. Two defters were selected in order to make this comparison. Then, together with the results of the observations in the field, a *retrogressive* approach was used to overlap with the spatial context of the past.

The following are the highlights of the article. It offers methodological suggestions and determinations for determining the spatial patterns of late Ottoman population data. It demonstrates how the data are used in examining the distribution of the population by settlements and its economic organisation. It

reveals how the distribution of late Ottoman population data in relation to spatial elements such as elevation and morphological units can be effectively processed with graphs and maps. It also presents the systematic analysis of late Ottoman population defters and demonstrates how these records can be used effectively and efficiently in research through their interrelations. The study claims to serve as a model for studies on population history, settlement history and economic history that use population registers as a data source.

1. Scheme and design of spatial and demographic data in population defters

In the Ottoman State, population registration efforts in the nineteenth century were conducted based on the administrative units of *eyalet/vilayet*, *sancak/liva*,[22] and *kaza*.

In the 1834 Burdur Kaza population defter, each *varak* (pace) was assigned a page number. In the 1841 population defter of Burdur Kaza, however, each *varak* was divided into two, and page numbers were added. Accordingly, the 1834 population defter consists of 163 pages, while the 1841 population defter contains 200 pages.

It is possible to determine information about the administrative structure of Burdur Kaza from the 1834 and 1841 population defters. As a matter of fact, both financial and administrative divisions and nomenclature in the records are given based on a certain systematic, starting from the first pages. As it can be seen, in the population defter dated 1834, Burdur Kaza and other kazas (*Karaağaç*, *Gölhisar*, *Gölhisar-ı Hamid*, etc.) a detailed explanation has been given about their inclusion in the *Terkemiş* revenues and the general characteristics of the population defters. On the same page, at the beginning of the defter, the phrase "*Kaza-i Burdur der Hass-ı Terkemiş*" was used.[23] In the defter dated 1841, on the first page, the expression "*Ceride-i Nüfus-u Kaza-i Burdur tabî Terkemiş Hass-ı*" is mentioned for the Burdur Kaza.[24] As understood from this statement, Burdur Kaza was affiliated with the *Terkemiş (Hamidili)* revenues. After this information in the population defters, the information about the neighborhoods and villages in the kaza center is systematically included together with the population records (Fig. 2).

22 Zeki Arıkan, *XV-XVI. Yüzyıllarda Hamit Sancağı,* (İzmir: Ege Üniversitesi Edebiyat Fakültesi Yayınları, 1988), p. 42; Tuncer Baykara, *Anadolu'nun Tarihi Coğrafyasına Giriş I Anadolu'nun İdari Taksimatı,* (Ankara: Türk Kültürünü Araştırma Enstitüsü Yayınları: 160, 2000), p. 110; Behset Karaca, *1501'de Hamid Sancağı Vakıfları (MAD 3331 Numaralı Vakıf Defterinin Transkripsiyonu ve Değerlendirilmesi,* (Burdur: T.C. Burdur Valiliği İl Kültür ve Turizm Müdürlüğü Yayınları, 2014), p. 42.

23 BOA, Nüfus Defteri (NFS. d.), 3248 (29 Zilhicce 1249).

24 BOA, NFS. d., 3249 (H. 1256).

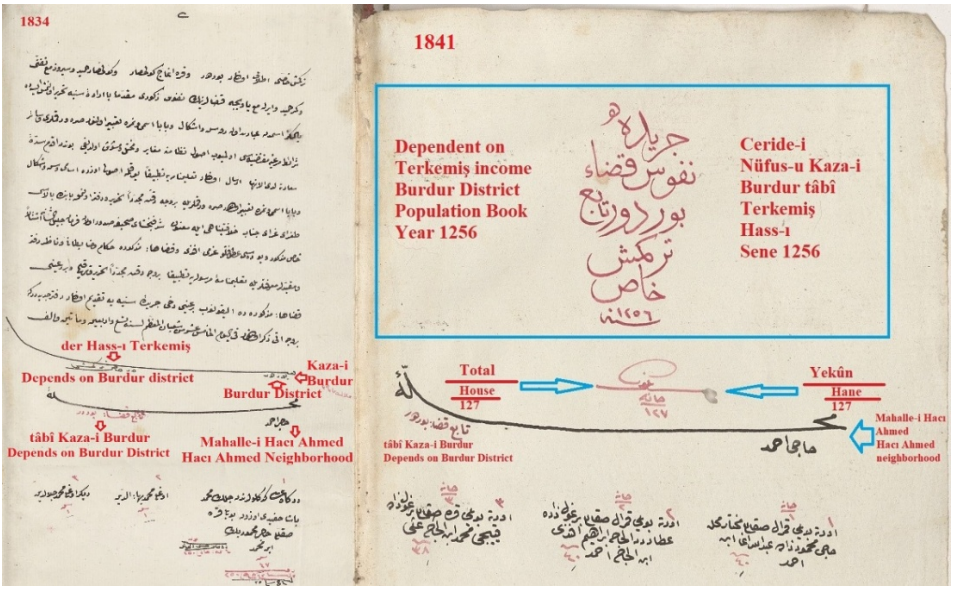

Figure 2. Sample Page from the Population Defters of 1834 and 1841 on Administrative Units and Settlements source: BOA, Nüfus Defteri (NFS. d.), 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256), The data on the defters were translated and Latinized by the authors.

On the first page of the 1834 population defter, the settlement units were classified in a hierarchical order in the table. The hierarchy started with the cities and their neighborhoods, and was ordered to the *karye* (village) and subordinate settlements (Tr. *yayla, oba, mezra, mahalle* Fr. *Hameau,* İng. Hamlet, DE *Weiler* etc.)., which are units attached to the village, and the communities or *taifes* that maintained a nomadic lifestyle.[25] According to the population records in 1834, Burdur Kaza consists of 19 neighborhoods and 26 village settlements (Fig. 3). We suggest that the numbers given to the settlements in the table are related to the censuses made throughout the sancak. Therefore, there is no meaningful integrity between the numbers. The number of households and populations of the settlements was also examined, and no relationship between the numbers could be determined (Fig. 3).

On the other hand, there was no such table in the 1841 defter. However, it is possible to construct a similar picture from the scattered information associated with settlements throughout the defter. It is possible to determine the administrative boundaries of the period from the defters according to the administrative division.

25 BOA, NFS. d., 3248 (29 Zilhicce 1249).

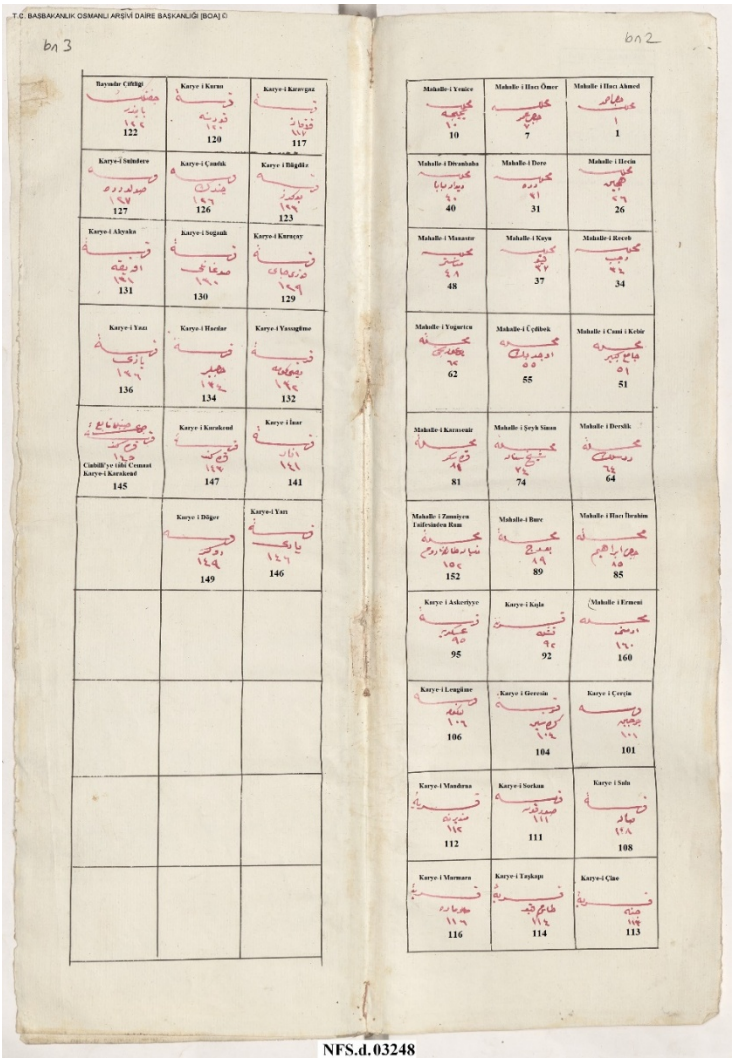

Figure 3. List of Settlements in the 1834 Burdur Kaza Population Defter source: BOA, NFS. d., 3248 (29 Zilhicce 1249), The data on the defters were translated and Latinized by the authors.

2. Distribution of population by administrative units and settlements

2.1. Demographic structure on the basis of administrative units and settlements

Demographic data in the nineteenth century population defters were systematized on the basis of administrative units and settlements in line with the needs of the state. Although the settlements were classified as Muslim and non-

Muslim, the population of the non-Muslim settlements was recorded in the defters following the population records of the Muslim settlements and added to the end of the defters (Fig. 4).[26]

Another principle taken into consideration in the defters systematics is the shape and hierarchy of settlements. In the 1834 and 1841 population defters, a systematic hierarchy from urban to permanent rural settlements and then to temporary settlements is followed. Accordingly, firstly, the population records of the neighborhoods (urban) were included, and then the demographic data of the subordinate settlements (Tr. *yayla, oba, mezra, mahalle,* Fr. *Hameau*, İng. Hamlet, DE *Weiler* etc.) such as the *karyes* (village) and the *çiftlik* (farms) connected to them, and the nomadic *cemaat* (communities) or *taifes* were recorded.[27] This systematic approach, based on the form and hierarchy of settlements, also applies to the records of non-Muslim Greek and Armenian communities living in urban and rural areas of Burdur Kaza. The structure of the defter allows for the classification of the rural population based on their lifestyle as sedentary and nomadic.

Population data are for the male population, including newborn males.[28] For this reason, a general idea can be obtained from the population data in the defters about the total population of the *kazas* or *sancaks* by multiplying them by 2, that is, over twice (Table 1).

Table 1. Distribution of the Male Population According to Settlements in Burdur Kaza (1841)

Settlements	1834 Number of Settlements	1834 Male Population	1834 Total Population*	1841 Number of Settlements	1841 Male Population	1841 Total Population*
Neighbourhood	19	6.399	12.798	19	6.107	12.214
Village (*Karye*)	22	3.638	7.276	22	3.366	6.732
Çiftlik (Farm)	5	281	562	6	218	436
Cemaat (communities) (Nomadic)	1	40	80	3	243	486
Taife (Nomadic)				2	114	228
Total	**47**	**10.358**	**20.716**	**52**	**10.048**	**20.096**

*When calculating the total population, the formula "total male population × 2 = total population" was used.

2.2. Determination of urban and rural population

Since the records are generally classified according to the settlement hierarchy, it is possible to obtain urban and rural population values and

26 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).
27 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).
28 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).

distribution, as well as their relative proportional distribution. Therefore, according to the data in both defters, it was possible to determine and compare the proportional distribution of the urban and rural population of the Burdur Kaza (Fig. 4).

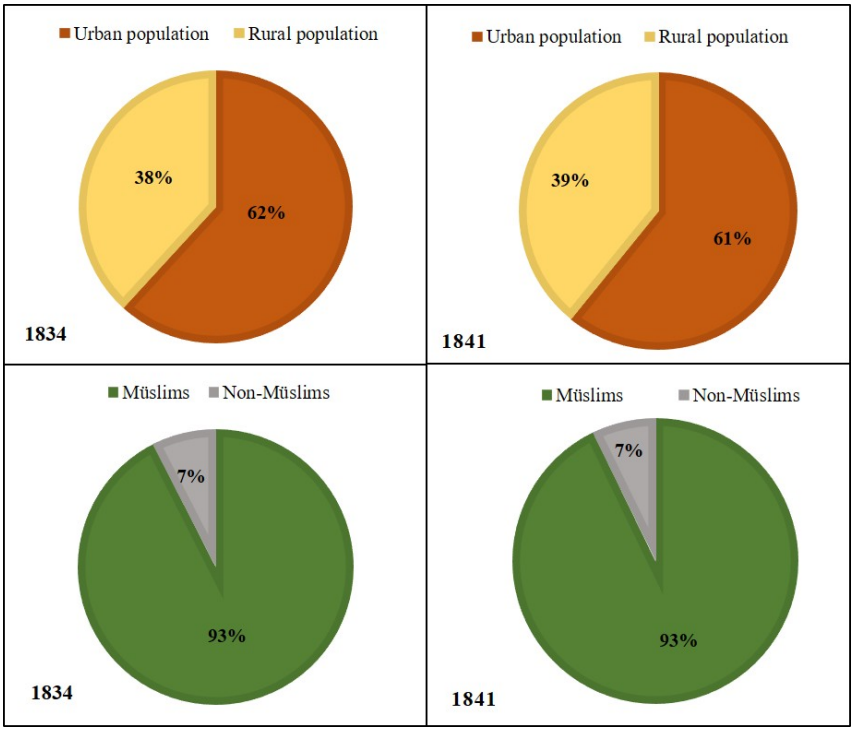

Figure 4. Distribution of Urban and Rural Populations, and Muslim and Non-Muslim Populations in Burdur Kaza in 1834 and 1841 (There is no data on the non-Muslim male population within the rural population of Burdur in 1834), source: BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256), Produced by the authors.

2.3. Household size

The 19th century population records contain data on the number of households and household sizes, albeit with minor changes according to the defters. There is no direct information about the number of households and the size of households in the Burdur Kaza population defter dated 1834.[29] However, when the recording system of the defter is followed well, estimates can be made about the number of households and the size of households. After the eldest male in the family is written in the said defter, expressions such as *son (oğlu), other son (diğer oğlu), brother (karındaşı), brother's son (karındaşının oğlu), uncle (amcası) uncle's son*

[29] BOA, NFS. d., 3248 (29 Zilhicce 1249).

(amcasının oğlu), grandson (torunu), nephew (yeğeni) are used for the male population recorded.[30] These records have data value in order to make inferences about household size.

The population records in the population defters of the *Burdur Kaza* dated 1841 were kept systematically on the basis of households. The total number of households is written in the upper part of the area where the settlement names are located in order to give the male population in the relevant settlement. When registering the population living in these settlements, after the demographic information is written with the head of the *household* (*hane reisi*-the eldest male in the household), the other male population living in the same household is his *son (oğlu), brother (karındaşı), adopted son (oğulluğu), son-in-law (damadı), nephew (yeğeni), etc.* recorded by sequence number. Additionally, in some households, individuals considered household members, such as *gulam (slave), janitor (hademesi),* or *apprentice (çırağı),* were also recorded.[31] Thus, it is also possible to determine the size of the household (Fig. 5).



Figure 5. Examples Showing Data on Number of Households and Household Size in the 1834 and 1841 Population Defters, source: BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256), The data on the defters were translated and Latinized by the authors.

Again, the average household sizes and situations of the settlements can be determined from the records. Accordingly, the amount of male population varies from household to household. The records include households with only 1 male population, as well as households with up to 10 males.[32] From the population defters, the household sizes of the urban and rural population can be compared, and the distribution of the number of households according to the household sizes can be made. Comparison and distribution can also be made according to the belief systems to which one belongs. In addition, in line with the data in the defter, the nuclear family or large family structure can be determined (Fig. 6).

30 BOA, NFS. d., 3248 (29 Zilhicce 1249).
31 BOA, NFS. d., 3249 (H. 1256).
32 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).

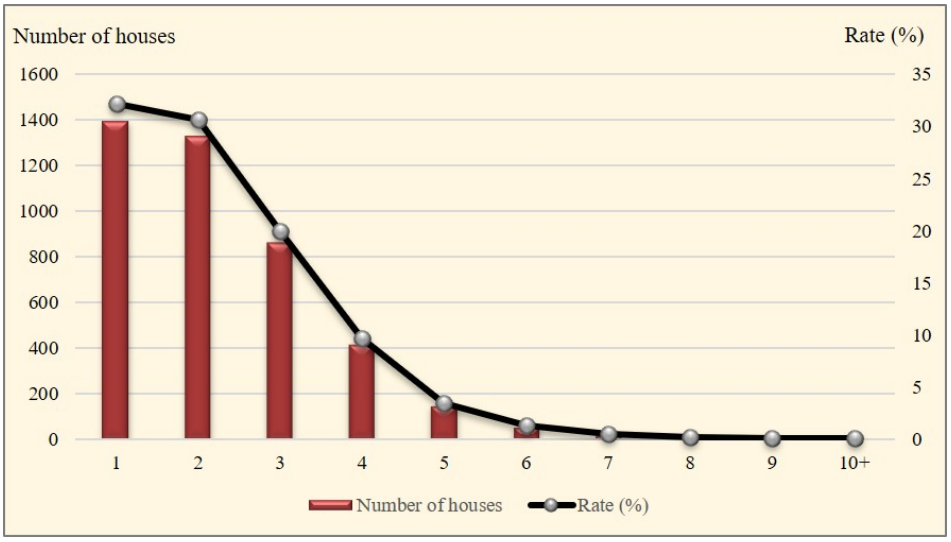

Figure 6. Distribution of Number of Households by Household Size (Based on Male Population) in Burdur Kaza (1841) source: BOA, NFS. d., 3249 (H. 1256), Produced by the authors.

2.4. Age characteristics

By distributing the male population according to narrowly spaced age groups and creating population pyramids from the population registers, the developmental stages of the population for the last 50-60 years can be determined. It is also possible to comment on the demographic transition phase by considering the formal features of the pyramid. When the age groups are examined according to the 1834 and 1841 population defters, it is possible to see fluctuations in some groups based on different reasons such as low living conditions, diseases, military service and war (Fig. 7). As with other demographic characteristics, it is also possible to construct age-range pyramids based on settlements, the urban-rural distinction, and religious affiliations.

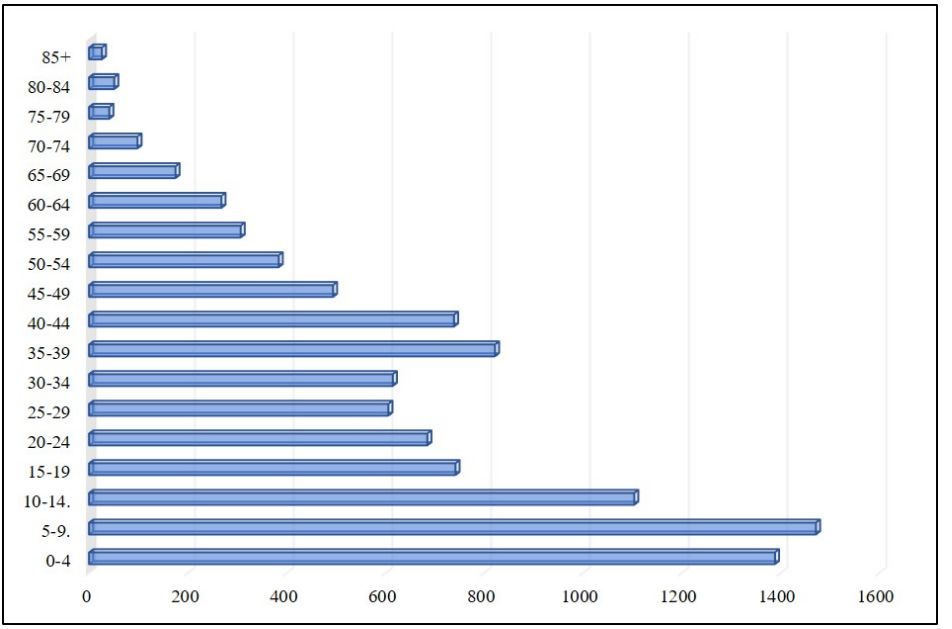

Figure 7. Population Pyramid of Burdur Kaza in 1841 (M) source: BOA, NFS. d., 3249 (H. 1256), Produced by the authors.

The widely spaced population pyramid is highly significant for determining demographic resources, both in the present and in the period it represents. Because the working and social security conditions of the Ottoman Period are quite different. Particularly notable is the absence of a defined retirement age for the agricultural population. In addition, the age of participation in production begins before the age of 15 and continues until death or inability to work. For this reason, in order to reach more accurate results and to analyze the population defters in a better way, the widely spaced age structure and population pyramid used in geography studies were used in the population defters that are the subject of the study. This wide-ranging classification is based on the age classification used by the Ottoman Empire during the census in the nineteenth century.

In the instructions to be applied during censuses, it was recommended that the male population be classified as follows during registration: those aged 0–8 as *asgar* (smallest), 8–15 as *sagir* (small), 15–40 as *şâbb-ı emred* (beardless), 40–60 as *sinni vusta* (middle aged), and 60+ as *pir* (sage, old men). However, in the censuses of that period, in line with the initiative of the civil registrars, age groups were separated in the defters in some regions and not in others.[33] As exemplified in the

[33] Karpat, *Ottoman Population 1830-1914,* p. 19.

population defters analyzed in the study, changes in the definitions made for individuals and their corresponding age groups are commonplace.[34]

In the 1834 and 1841 *Burdur Kaza* population defters, expressions such as *sagir* (small), *şâbb-ı emred* (beardless), *ter bıyıklı* (newly mustached), *kara sakallı* (black-bearded), *kır sakallı* (gray-bearded), and *aksakallı* (white-bearded) were used in accordance with the instructions for population classification in the region. The data in the population defters reflect not only the individual's age but also their height, physical development, and appearance.[35] The reason for considering an individual's development is thought to be the identification of the active population that would contribute to the economic structure. The age group classified as *sagir* generally includes the population between the ages of 0-11. While referring to the population in this age group, the term *sabi* was also occasionally used, albeit very rarely. The population in the 12–15 age group was defined as *şâbb-ı emred*. The term *şâbb-ı emred* was used to refer to adolescents, meaning young, youth, or beardless men. However, it has been observed that, depending on an individual's development, the term *şâbb-ı emred* was occasionally used for individuals as old as 20. The population described as *ter bıyıklı* (newly mustached) includes those in the 16–25 age group. In the population defters, alongside the term *ter bıyıklı*, expressions such as *taze sakallı* (freshly bearded), *az bıyıklı* (lightly mustached), and *matruş* (clean-shaven) were also occasionally used to represent the same age group. It has been determined that the records, which generally represent the 26–45 age group and are broadly categorized as *kara sakalli* (black-bearded), sometimes also describe individuals based on their appearance with terms such as *kumral* (auburn bearded), *köse* (beardless), *müzellef* (stubbly beard), *sarı* (blond bearded), *kızıl* (red bearded), *gür* (bushy), and *siyah sakallı* (dark-bearded). The population classified as *kır sakallı* (gray-bearded) generally covered the 46–59 age range, although it sometimes varied depending on whether the individual was capable of working or not. The population group aged 60 and above was referred to as *aksakallı* (white-bearded) (Fig. 8). In this period, when the average life expectancy is also short, it seems difficult for the population in this age group to contribute to economic activities.

34 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).
35 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).

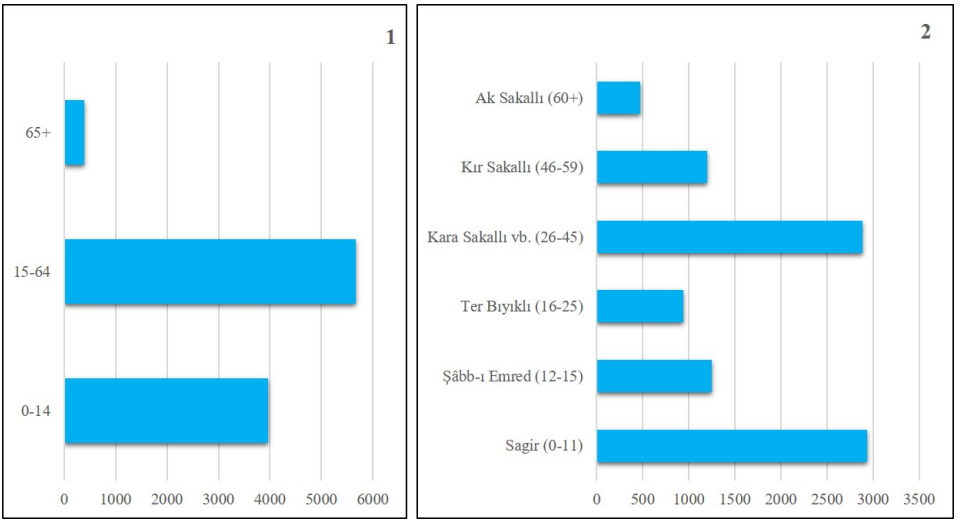

Figure 8. The Modernly Transformed Wide-Range Model of the Male Population in *Burdur Kaza* in 1841 (1) and The nineteenth Century Ottoman Age Classification Based on Physical Development and Appearance (Eşkâl) of the Male Population According to the 1841 *Burdur Kaza* Population Defter (2), source: BOA, NFS. d., 3249 (H. 1256), Produced by the authors.

As it is shown above, the division of the population into age groups based on specific physical descriptions is noteworthy, particularly in relation to the applicability of the system implemented in 1838 under Sultan Mahmud II, which subjected Muslim males to military service for a period of twenty-four years (a duration that may have varied in certain periods). Likewise, Muslim men between the ages of 20 and 40 are obliged to serve in the military.[36]

In the context of the military system, the term *nizama ilhak* was used in the 1834 population defter to refer to those who were actively serving in the military, i.e., regular soldiers (*muvazzaf*).[37] In the 1841 Burdur Kaza population defter, the male population, in general, was categorized into three groups related to military service: those serving in the *redif* (inactive military reserves), those in the mansurede (Soldiers of the *Asakir-i Mansure-i Muhammediyye*), and those listed as having "*nizama gitmiştir*" ("gone to the *nizam*"- soldiers of the *Asakir-i Nizamiye*). These terms refer to soldiers of the *Redif*, *Asakir-i Mansure-i Muhammediyye* and *Asakir-i Nizamiye*. As evidenced by the sources and the expressions in the defter, the terms "*Mansure"*

36 Karpat, *Ottoman Population 1830-1914,* p. 6; Karpat, *Osmanlı'da Değişim Modernleşme,* pp. 400-401; Ali Rıza Şimşek, "Osmanlı Ordusunda 18. ve 19. Yüzyıllarda Yapılan Islahat Çalışmaları ve Bu Çalışmalarda Yabancı Uzmanların Rolü" (Yüksek Lisans Tezi), Sakarya Üniversitesi, Sosyal Bilimler Enstitüsü, 2006, p. 192.

37 BOA, NFS. d., 3248 (29 Zilhicce 1249).

and "*nizama gitmiştir*"[38] (gone to the *nizam*) refer to the same military group. In the 1834 and 1841 *Burdur Kaza* population defters, those deemed unfit for military service due to certain disabilities (*topal* (lame), *çolak* (maimed), *a'rac*, *a'mâ* (blind), *yekçeşm*, *sağır* (deaf), *ebkem*, *mecnun* (insane or lunatic), *meczub* (moonling), *ma'lûl*, *alîl*, *masrû'*, *mariz*) had these conditions noted directly above their population records. (Fig. 9).[39]

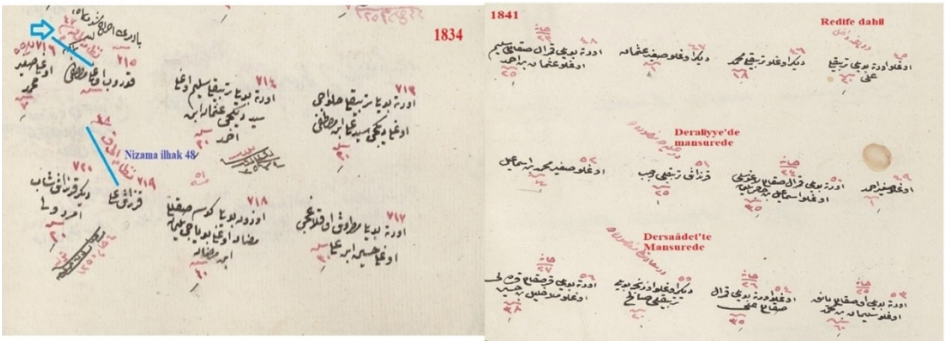

Figure 9. Examples Related to Military Records in the 1834 and 1841 Population Defters source: BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256), The data on the defters were translated and Latinized by the authors.

2.5. The identification of the demographic characteristics of population based on religion and ethnicity

The distribution of the population based on religious and ethnic characteristics can be analyzed within the framework of the administrative structure and settlement unit systematics in the 1834 and 1841 population defters. Non-Muslims already consisted of two ethnic groups, *Rumyan* (Greeks) and *Ermeniyyan* (Armenians), and resided in the neighborhoods of the town of Burdur.[40] On the basis of religious and ethnic characteristics, it is possible to determine not only the population size but also other demographic characteristics such as the number of households, age structure, population movements, physical characteristics (*eşkâl*), (appearance, physical description), and occupation, birth rates or average life expectancy within the age structure of the population description and occupation[41] These can be compared with the characteristics of the Muslim population. Additionally, both narrow-range and wide-range population pyramids can be constructed, allowing for the analysis of population development, the stages it has undergone, and the factors influencing these processes across different population groups. Unlike the 1841 population defter, the 1834 defter

38 BOA, NFS. d., 3249 (H. 1256).
39 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).
40 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).
41 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).

also includes information on births and deaths within the population.[42] Another difference between Muslim and non-Muslim records is that the terms *ibn* or *bin* are used to refer to the father in Muslim records, whereas the term *veledi* is used in non-Muslim records.[43]

Since the non-Muslim population was taxed for military service, military tax records are another important source of data. Information on the non-Muslim population consists of the records of military service taxes (*cizye or jizya*). Although there are records of all non-Muslim men in the population defters, there are also poll tax records for those who are over the age of 12 and do not have a jizya exemption. The amount of *jizya* tax was abbreviated as *âlâ*, *evsat*, or *ednâ* and written in the upper left corner of the population records in the defter.[44] Thus, the economic structure of the non-Muslim population can be determined, as well as its distribution according to income status.

2.6. The identification of the educational characteristics of the population

Data on the educational status of the population, as seen in the 1834 and 1841 population defters, can generally be obtained indirectly. Additionally, the educational statistics in these defters generally pertain to the Muslim male population, and no information related to the educational status of non-Muslims has been recorded. However, the fact that individuals are referred to by the professions they perform and the titles given to educated people are guiding in this regard. In the Ottoman period (nineteenth and twentieth centuries), the use of the term *Efendi* (a title used for educated or respected individuals) to refer to educated individuals, and the fact that educated individuals were recorded as *Efendi*[45] in the 1841 population defter, is significant. In addition, the registration of those who were studying alongside the *muderris* and (professors) and *muallim-i sıbyan* (teachers of elementary schools) muallim-el sıbya working in the educational institutions in the kaza were also recorded as *talebe* (students) those receiving education. Individuals recorded in the population defter as *hafiz* (Quran reciter), *şeyh* (sheikh), *derviş* (dervish), *molla* (scholar), *hatib* (preacher), *kethüda* (steward), *mahkeme kâtibi* (court clerk), *kadı* (judge), and *müftü* (mufti) can also be considered part of the educated population. Again, the distribution of the educated population can be made according to town and rural settlements or according to settlement units (neighborhood, *karye* (village), *çiftlik* (farm), etc.).

42 BOA, NFS. d., 3248 (29 Zilhicce 1249).
43 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).
44 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).
45 BOA, NFS. d., 3249 (H. 1256).

2.7. Determinations regarding population change (births, deaths and migrations)

Population registers also contain data on population change, that is, births, deaths and migrations. The population offices within the Ottoman State tracked population movement through the *Defatir Nezareti* (Office of Registers or Office for Supervision of Registers). Accordingly, newborns, the deceased, and those who relocated, i.e., migrants, were recorded in the population defter on a daily basis by the *Defatir Naziris* (Chief of Registers). In some population defters, the terms *tevellüd* (birth), *müteveffa* (deceased), *fevt* (death), or *helak* (perished) were used, also serving as a form of census roll call.[46] According to the regulations in place, *Defatir Nazirs* (Chief of Registers) were responsible for reporting lists of births, deaths, emigrants, and new settlers to the *Ceride Nezareti*[47] in three-to-six-month periods. The *Ceride Nezareti* was also granted the authority to issue *Mürûr Tezkeresi* (Travel Permits), which were mandatory for those wishing to travel, as part of efforts to manage migration to major cities -one of the biggest challenges of the period- and to maintain internal security.[48]

In the first population defter of *Burdur Kaza*, dated 1834, it is possible to find records not only of births, deaths, and migrations but also of the *Mürûr Tezkeresi* (Travel Permit), which served as an authorization document for travelers.[49] However, it is thought that most of these records were added later with polls or notifications of individuals. Most of these records were not included in the 1841 population defter. This is one of the key differences that distinguish the 1834 and 1841 *Burdur Kaza* population defters from each other. Similarly, in the 1834 defter, the terms *tevellüd* (birth) and *fevt* (death) were included as part of the census records.[50] The 1841 population defter does not contain census roll call records. Therefore, there are no records of births, deaths, or individuals traveling with a *Mürûr Tezkeresi.*

As a result of the statistical structure of the 1834 and 1841 population defters, the lack of detailed data on the female population led to an assessment based only on the male population (which also applies to infants and children). Since the population polls were added to the 1834 population defter, newborn males were recorded (Fig. 10).[51] However, since newborns are not specified separately in the 1841 population records, the number of population recorded as 1

46 McCarthy, "The Defters", p. 7; Güneş, "Osmanlı Dönemi Nüfus Sayımları", pp. 269-298.

47 Defatir and ceride both mean "registers," but ceride had at the time a more modern connotation; the census office was the Ceride-i Kalemi. See Karpat, *Ottoman Population 1830-1914*, p. 20.

48 Çadırcı, *Tanzimat Döneminde Anadolu,* pp. 45-46.

49 BOA, NFS. d., 3248 (29 Zilhicce 1249).

50 BOA, NFS. d., 3248 (29 Zilhicce 1249).

51 BOA, NFS. d., 3248 (29 Zilhicce 1249).

year old[52] in the population defter can be used to determine the birth rate. With the statistical information obtained as a result of the transcript of the population defters, raw birth rates can be determined and examined in detail with the distinctions between urban and rural and Muslim-non-Muslim. Unlike 1841, the 1834 census defter also contains death data.[53] It is possible to detect population mobility using these data, which have an impact on the increase or decrease of the population. Calculating the raw birth rates as well as the raw death rates of the male population allows estimating natural population growth. In addition, finding the age data of the deceased is important in determining the raw mortality and infant mortality rates in that period.

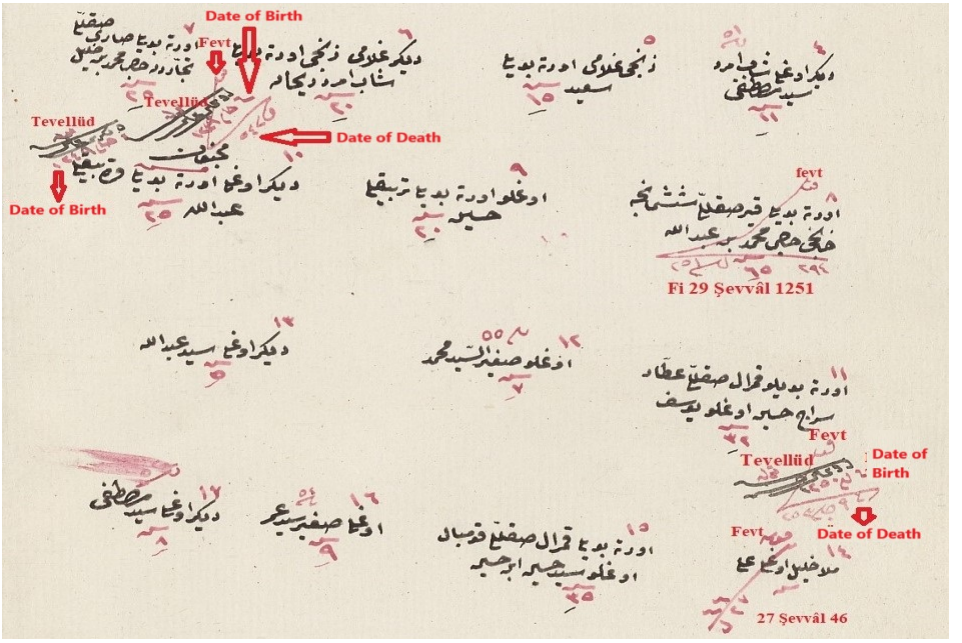

Figure 10. Examples Related to Birth and Death Records in the 1834 Population Defter source: BOA, NFS. d., 3248 (29 Zilhicce 1249), The data on the defters were translated and Latinized by the authors.

The 1834 and 1841 population defters of *Burdur Kaza* include data on relocation and migration. These records were noted by the scribe (*kâtib*) in red ink, written horizontally just above the individual's population information in the defter. These notes in the defter provide explanations regarding where the recorded individuals went and for what reason, as well as where they came from. It is also possible to see information about where they are from or where they come

52 BOA, NFS. d., 3249 (H. 1256).
53 BOA, NFS. d., 3248 (29 Zilhicce 1249).

from, which is used to introduce people who have migrated.[54] Additionally, in the 1834 population defter, the records of individuals who traveled with a *Mürûr Tezkeresi* (Travel Permit) were also documented.[55]

First of all, it is necessary to focus on the records of migration that are noted in red ink. Records containing travel information are different from records written in red horizontally just above the population information mentioned above. These records differ from the general writing style used throughout the population defters. Additionally, in terms of content, those who departed were recorded as *reft* (departed), while those who arrived were recorded as *amed* (arrived).[56] The information for *reft* was written either above or below the individual's population record, including the name of the destination and the date of departure. The *amed* were recorded immediately below the individual's population information, in the section following the age entry, with details of the place of origin and the date of arrival. Additionally, those recorded as *amed* were noted again at the end of the settlement entry, using a different writing style. These records were maintained in accordance with the population registration system, including details such as physical description (*eşkâl*), age, occupation, nickname, father's name, and other similar information. Following the individual's information, the term *amed* (come, coming, arrival) was written in red, along with details of the neighborhood they came from and the date of their arrival. Additionally, other family members were also recorded among the arrivals in sequence, with the term *bu dahi* (*this also*) used to indicate them. In the 1834 population defter, among the arrivals (*amed*) recorded at the end of the settlements, those who later departed were noted as *reft* (departed), added in red above the original entry. Additionally, those who were born or died during their stay after their *amed* (arrival) were also recorded in accordance with the defter's systematic structure (Fig. 11).[57]

54 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).
55 BOA, NFS. d., 3248 (29 Zilhicce 1249).
56 BOA, NFS. d., 3248 (29 Zilhicce 1249).
57 BOA, NFS. d., 3248 (29 Zilhicce 1249).

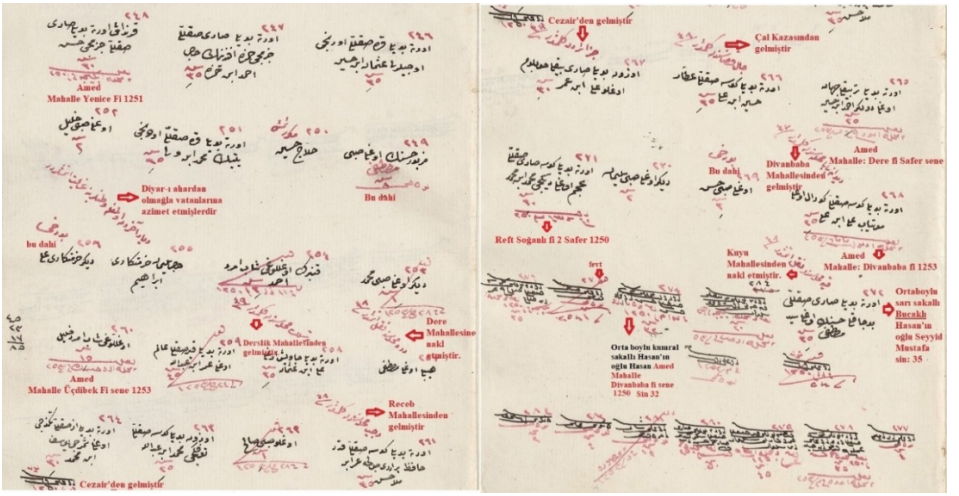

Figure 11. Examples of Data Related to the Records of Those Traveling with *Mürûr Tezkeresi* (Travel Permits) and Migration in the 1834 Population Defter, source: BOA, NFS. d., 3248 (29 Zilhicce 1249), The data on the defters were translated and Latinized by the authors.

From the population defters, spatially-based information can be obtained regarding where Burdur Kaza received and sent migrations[58], prior to 1834 and 1841, as well as how its demographic structure was shaped. Migration data can be analyzed under two main categories: migrations from *Burdur Kaza* to outside regions, and migrations from Burdur town and rural settlements to other areas. Based on the migration-related data in the population defters, migrations to *Burdur Kaza* from outside regions can be classified into two categories: migrations to the town of Burdur and migrations to rural settlements within the Burdur Kaza. Additionally, internal migrations within the *kaza* can be categorized into four main types: 1-Migrations from rural areas to cities, 2- Migrations from cities to rural areas, 3- Migrations from one town to another, 4- Migrations from one rural area to another. Therefore, it is possible to directly determine population mobility between settlements.

In the example of the population defters of *Burdur Kaza*, another aspect that needs to be addressed in relation to migrations is the recording of non-permanent residents, such as temporary visitors for purposes like trade or family visits. In this regard, the transportation conditions and distances[59] of the period played a role in extending the stay of such visitors.

58 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).

59 In the nineteenth century, due to the transportation conditions in the Burdur Kaza and its surroundings, commercial activities with the nearest ports were largely conducted by road. In this regard, the distance of the ports that kept Burdur within their hinterland is informative. The

3. Indirect observations regarding settlements and economic life

3.1. Types and sizes of settlements

According to the 1834 and 1841 population defters, it is possible to analyze and classify the distribution of the Burdur Kaza population based on settlement types. Settlement types, which are primarily divided into two groups -urban and rural- based on various criteria, particularly population and economic functions, can be further categorized into neighborhoods, villages, farms (*çiftlik*), summer pastures (*yaylak*), and winter pastures (*kışlak*), among others. In Ottoman State documents, all administrative units, along with their subunits, were listed, and distinguishing descriptors were also used to identify settlements. They were recorded with terms such as *Nefs-i Burdur Kaza* (central Burdur district), *Mahalle-i Yenice* (Yenice neighborhood), *Karye-i Hacılar* (Hacılar village), and *Çiftlik-i Bayındır* (Bayındır farm), among others.[60] Through these records, it is possible to determine the absolute population, number of households, economic characteristics, as well as the types and sizes of the settlements.

The economic characteristics of the population were generally determined by specifying an individual's occupation when recording the Muslim population. For non-Muslims, in addition to this, records related to the *jizya* tax, which was paid in exchange for exemption from military service, can also be examined based on income status. From the population defters, it is possible to analyze professions classified by settlement units and determine the overall economic structure they reveal. Thus, the economic character of the settlement units is also determined. If the settlement is in the size of a town, the distribution of economic activities or those who carry them out by neighborhood can also be determined.

The population defters also provide the means to identify the types and sizes of rural settlements. In the Burdur Kaza population defters, the primary indicators for this are the terms *karye* (village) or *çiftlik* (farm) written next to the settlements.[61] The term *karye* is used for permanent settlements, while *çiftlik* can be categorized as either permanent or temporary subordinate settlements, depending on the period or region in which it was used. In the records of the 1834 and 1841 population defters of Burdur Kaza, the nomadic groups were separately classified under the categories of *cemaat* (communities) and *taife*.[62] Additionally, the population defters include not only groups referred to as Muslim *cemaat* but also non-Muslim *taife* (Fig. 12). The non-Muslim *taife* were recorded in the population

distance between Burdur-Antalya is (approximately) 19-23 hours, between Burdur-Istanbul is 101 hours, and between Burdur-Izmir is around 70-75 hours. For more information, see Yusuf Halaçoğlu, *Osmanlılarda Ulaşım ve Haberleşme (Menziller),* (Ankara: PTT Genel Müdürlüğü Yayınları, 2002), pp. 64-65.

60 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).

61 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).

62 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).

defters with designations such as *taife-i müste'cir Acem hane-i Ermeniyyan* (land-leasing Armenians)[63] and *taife-i elekçi göçebeleri Ermeniyyan*[64], (nomadic Armenians who were gypsies by lifestyle).

The data in the Burdur population defters were supported by the field studies, and the locations, topographic structure and history of the settlements and their textures were determined. Based on this, the settlements in the field can be classified into three types: clustered, dispersed, and loosely structured. Accordingly, 20 out of the 22 villages in Burdur Kaza have a clustered settlement pattern. The village of Suludere is included in this group and is also classified as a roadside village. In contrast, Soğanlı Village differs from these and is classified as a loosely structured settlement.

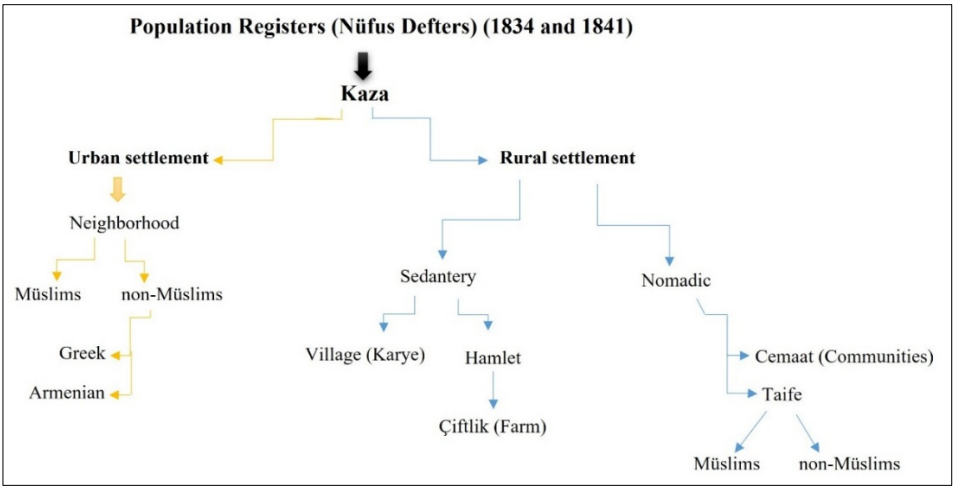

Figure 12. Settlement Systematics in the Records of the 1834 and 1841 Population Defters of Burdur Kaza source: BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256), Produced by the authors.

3.2. Determination of population density

Based on the data obtained from the 1834 and 1841 population defters of Burdur Kaza, it is possible to estimate the projected area of Burdur Kaza in square kilometers and determine its arithmetic population density accordingly. In this context, the arithmetic population density of Burdur Kaza has been calculated by determining the number of people per square kilometer based on either the male population or the estimated total population. Similarly, the population density within the town of Burdur has been analyzed at the neighborhood level. To

63 Hasan Babacan, "1840 Tarihli Nüfus Defterine Göre Burdur", *Teke Yöresi Sempozyumu 04-06 Mart 2015 Bildiriler Kitabı C.2,* ed. Şevkiye Kazan Nas, (Burdur: University of Mehmet Akif Ersoy, 2015), p. 1005.

64 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).

provide a general perspective, the arithmetic population density per hectare was calculated based on approximate current boundaries and represented through choropleth maps as well as point distribution maps. Thus, the distribution of the population by neighborhood and its density in relation to area has been visualized (Fig. 13).

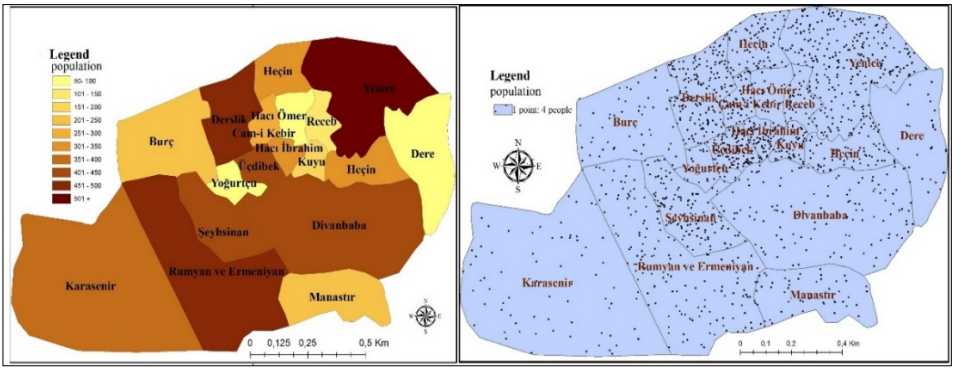

Figure 13. Population Distribution by Neighborhoods in the Town of Burdur (1841), source: Şerife Güzel, "Tarihi Coğrafya Yönüyle, 1841 Tarihli Nüfus Defterine Göre Burdur Şehri ve Çevresinin Nüfusu" (Yüksek Lisans Tezi), Hatay Mustafa Kemal Üniversitsi, 2018, pp. 146-147.

3.3. The identification of the distribution of population and settlements by elevation levels and morphological units

In historical geography studies, we believe that it is possible to analyze the population and settlements according to topographical elements in order to better reveal the relationship between the natural environment. Accordingly, the distribution of the population can be made according to elevation steps and morphological units. Settlements can be classified according to their places of establishment as those on plains and those established on sloping surfaces (hillshide). The determination of the establishment places of the settlements can be done with field studies and topography maps as well as the settlement data provided by the population defters.

As in the example of Burdur Kaza, by distributing the settlements according to morphological units, it can be determined in which units the settlements and population are concentrated and the types of economic activity that develop accordingly.[65] [66]

The settlement and population data obtained from the Burdur Kaza population defters can be mapped onto an elevation-level map using proportional

[65] Bayram Çetin, "Burdur Kent Coğrafyası" (Doktora Tezi), Erzurum Atatürk, Üniversitesi, Sosyal Bilimler Enstitüsü, 2007, p. 2.

[66] Güzel, "Tarihi Coğrafya Yönüyle, 1841", p. 115.

symbols to visualize which settlements are located at each elevation level and how the population is distributed across these levels (Fig.14). Considering the geographical distribution of data from both defters, it is observed that large settlements are primarily located on or near depression floors and plains, influenced by water supply conditions. As seen in Fig. 16, it can be stated that the population is particularly concentrated in settlements located on and around the Burdur depression floor.

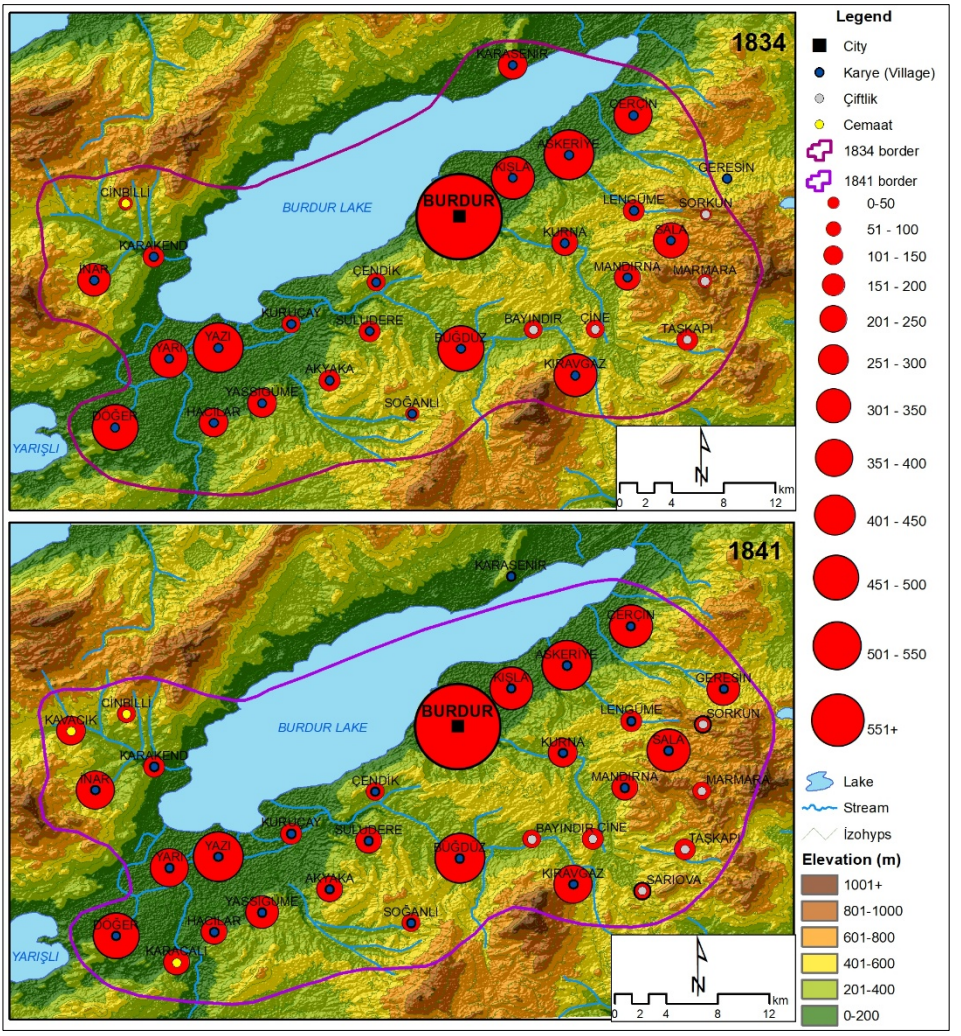

Figure 14. Distribution of the Population of Burdur and Its Surroundings According to Elevation Levels (1834 and 1841), Produced by the authors.

3.4. The identification of the general economic structure and the functions of settlements

The Ottoman society is broadly classified in a way that reflects both social structure and economic division of labor, with categories such as merchants and artisans, as well as peasants and nomadic groups. Peasants and nomadic groups were engaged in agricultural production in rural settlements, while artisans and merchants produced and distributed goods and services needed by society in towns and cities.[67]

The recording of individuals' occupations in the population defters makes it possible to further detail and refine this classification. The neighborhood records in the 1834 and 1841 Burdur Kaza population defters indicate that the occupational descriptions[68] of the Muslim male population are generally suitable for classification into three sectors: industry, services, and agriculture. This data serves as a key resource for determining the economic structure and, consequently, the functions of both urban and rural settlements within the kaza. Accordingly, in the 1834 and 1841 defters of Burdur Kaza, following the agricultural sector, services and industry stand out. In *Nefs-i Burdur* (central Burdur), however, the dominant presence of the services, industry, and trade sectors, alongside agriculture, is particularly noteworthy (Fig. 15).

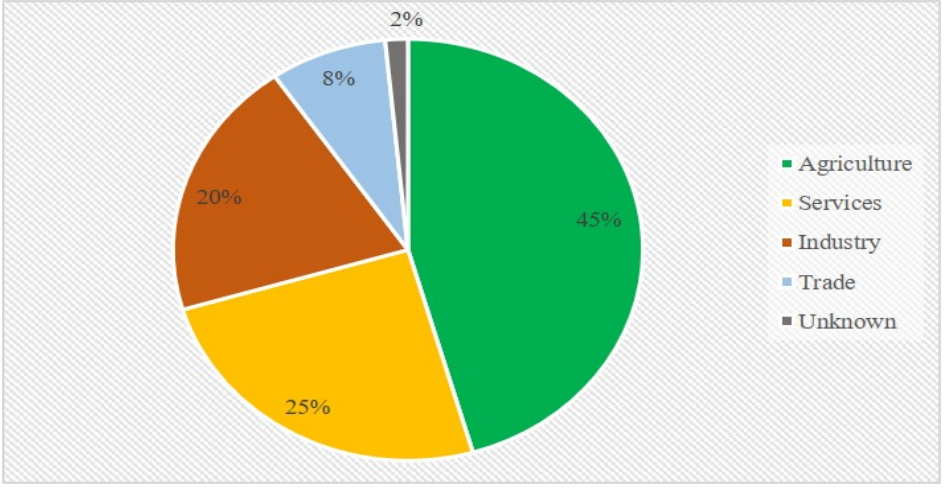

Figure 15. Distribution of the Working Population by Sectors in the Burdur Kaza (1841) source: BOA, NFS. d., 3249 (H. 1256), Produced by the authors.

67 Bahaeddin Yediyıldız, "Klasik Dönem Osmanlı Toplumuna Genel Bir Bakış", *Türkler Ansiklopedisi (Cilt 1),* ed. Celâl Güzel, Kemal Çiçek ve Salim Koca, (Ankara: Yeni Türkiye Yayınları, 2002), p. 29.

68 BOA, NFS. d., 3248 (29 Zilhicce 1249); BOA, NFS. d., 3249 (H. 1256).

The migration statistics in the 1834 and 1841 population defters indicate that population mobility for trade purposes also took place. When the reasons for the migrations were examined, it was determined that expressions such as trade or merchant were used and migrations out of the town were experienced for this purpose.

Additionally, records reflecting tax classification, which indicate the economic status, cannot be overlooked. In particular, the non-Muslim population was recorded in these defters not only by their occupations but also by the *jizya* tax amounts categorized into three levels: *âlâ* (high), *evsat* (medium), and *ednâ* (low). (Fig. 16). This creates a scale that can reflect the income status of the population.

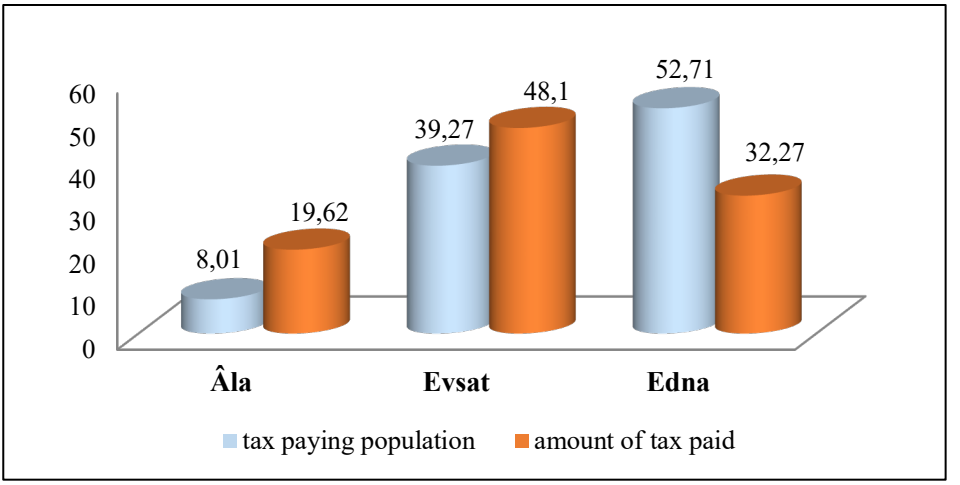

Figure 16. Distribution of the Jizye Tax Collected from the Non-Muslim Population in Burdur by Tax Types (1841), source: BOA, NFS. d., 3249 (H. 1256), Produced by the authors.

Conclusions and recommendations

The population defters of the late Ottoman period provide rich numerical data suitable for statistical analysis in terms of including the on-site determination and recording of taxable economic activities and human resources of the last century of the Ottoman Empire. This article examines the decipherment of the systematics of late Ottoman population records and shows that they can be used efficiently and effectively in research within the framework of their interrelationships. It takes the population records of Burdur as a model and argues that it is possible to determine the relationship between the population and the geographical space in which it lives by re-evaluating the Ottoman population data according to geographical elements. The potential of using the population registers, which are mostly trancribed in the style of defterology, in the socio-economic analysis of space in historical geography has been determined. Thus, it was

determined that it can be used as a resource in historical geography studies with a spatial methodology.

The 1834 and 1841 defters differ slightly in terms of the demographic data they contain. Both have the basic demographic data (other than the female population) needed for the analysis of the population. Thus, in terms of data content, these model defters are representative of all Ottoman population registers between 1830 and 1881.

From these defters, particularly through descriptions based on physical characteristics (*eşkâl*), both narrow and wide age pyramids have been generated. The defters are a source of systematic data on settlement and administrative hierarchy, as well as on belief and identity. Therefore, when carefully examined, they can reflect the relationship of demographic characteristics with geographical elements.

The article proves that it is possible to identify births, deaths and migrations according to settlement and administrative hierarchy as well as beliefs. Similarly, the spatial characteristics of population movements indicating external and internal migrations were also determined.

It reveals how the distribution of late Ottoman population data in relation to spatial elements such as elevation and morphological units can be effectively processed with graphs and maps. It proves that the data can be analysed in the context of the economic organisation of the population and its distribution according to settlements.

According to the systematic structure of the defters, it has been possible not only to identify the urban and rural populations but also to analyze the distribution of settlement characteristics, particularly their functions. In addition to population geography, knowledge has also been produced in the fields of settlement geography and economic geography. When analysed in detail, the data provide the opportunity to distribute horizontally and vertically in spatial distribution as well as distribution and comparison over time. As can be seen in the matrix, there is a complex interrelationship between demographic data such as age, birth, death, migration, spatial and geographical elements, settlement and economic data. (Fig. 17).

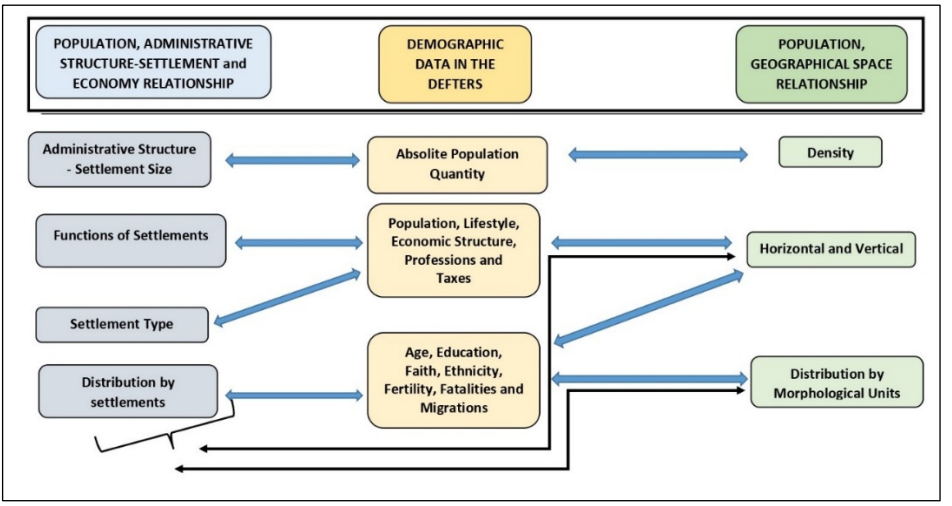

Figure 17. The Role and Use of Population Defter Data in Historical Geography Studies in Terms of Their Relational Aspects, Produced by the authors.

The demographic data of the model defters of Burdur kaza allow for place-based analyses. For a long period of time until 1880, it is possible to say that Ottoman population records of different dates contain similar data. New research is needed to determine the similarities and differences between these registers

We believe that the article at hand can serve as a guide for spatially focused complex analyses of population records from other provinces (*vilayet*), districts (*sancak*), and sub-districts (*kaza*) of the Ottoman State, particularly those dating between 1831 and 1880.

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