The Eastern Mediterranean Under Ottoman Rule: Crete, 1645-1840

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SPHAKIA IN OTTOMAN CENSUS RECORDS:
A VAKIF AND ITS AGRICULTURAL PRODUCTION

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Introduction

This paper arises out of our work on an archaeological field survey of Sphakia (SW Crete). The survey begins back in the Prehistoric period (c. 4400 BC) and runs through the Graeco-Roman period to around the time that the Ottomans leave Crete (1898), so over 6,000 years.1 The survey is investigating settlement patterns, land use, and population sizes in all three epochs (Prehistoric, Graeco-Roman, and Byzantine-Venetian-Ottoman). We integrate material evidence (buildings, pottery, etc.) with written evidence (inscriptions, travellers, official reports, and Ottoman survey records, the focus of this paper) (Fig. 1).

Our interest in census data is shared with other field surveys in Greece and Turkey. A number of other archaeological surveys in Greece and Turkey also have a serious interest in the Venetian and Ottoman periods, and use census and other data from those periods.2

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2 Balboura: M. Kiel in J. J. Coulton et alii, Balboura: A Highland City and its Territory. Results
Fig. 1: Map of Sphakia. Map of principal settlements in Sphakia in the Ottoman period. The names in brackets are not separate villages (karye) in the censuses: Askyphou is linked with Vouvas; Imbros, Asphendou and Kallikrati are summer settlements only; Nomikiana, if it existed in the seventeenth century, must have been counted with Vouvas. The boundary indicates the likely extent of the territory of the eleven villages of the vakif; the three eastern villages, Kapsodasos, Skaloti and Argoule, did not form part of the vakif, but were included in the province (eparchy) of Sphakia only in the mid-nineteenth century. The contours are at every 400 m, with an extra contour at 200 m. The inset map of Crete shows the location of Sphakia.
Ottomanists have also studied Ottoman census data very intensively, but sometimes with only a belated interest in the actual landscape and its resources which are recorded in the censuses. Those working on archaeological field surveys know the terrain, and are committed to bringing together material and textual evidence.

For Sphakia it is sometimes held that the area was never really subject to the Ottomans, which if true would entail that there were no Ottoman census records for Sphakia. This local claim that Sphakia was never really subject to the Ottomans is a piece of myth-making, a part of the claim to contemporary independence for this proud area. Knowing this, we asked Prof. Machiel Kiel (who has played such an important role for archaeologists in the exploitation of Ottoman census data) to see if he could discover anything for us in the Turkish archives. To our amazement, in 1994 and 1995 he discovered six splendid documents, five in Istanbul and one in Ankara. He generously transcribed the key elements in the texts, furnished us with xeroxes of some of them, and gave us a preliminary analysis of them. This paper would not exist without his work and his enormous scholarly generosity in permitting us to make full use of his work.

In this paper, we discuss just two issues that arise from these records: first the creation of the vakıf of Sphakia, and secondly, one aspect of the census data, that for agricultural production.

Documents

1. BOA, Istanbul: Tahrir Defter 820 (Defter-i Hanya). This document, which covers all four sancaks of Crete, contains 660 pages, of which pages 48 and 97-102 are on Sphakia. It lists both people and agricultural produce. Fig. 2 reproduces the entry for one village, Patsianos.

   Prof. Kiel reasons that, of the two early tahrirs extant for Sphakia (Tahrir Defter 820 and 822), Tahrir Defter 820 is the earlier of the two. Immediately after the conquest, two

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4 S. Damer, Cretan Highlanders: The Making of the Sphakiot Legend (Glasgow 1989); Nixon, ‘Seeing Voices’. 
tax censuses were made of western Crete (in 1647), but their tahrir defter do not survive. Tahrir Defter 820 was completed soon after the death of Sultan İbrahim (18 August 1648; deposed 8 August 1648), because the imperial monogram (tuğra) of the new Sultan, Mehmed IV, covers the first page of the register. In fact it is probably the record of a new census carried out in 1650 as the result of a ferman sent to the governor of Chania dated 10 Rebiyülevvel 1060 (13 March 1650).

2. BOA, Istanbul: Tahrir Defter 822, on the sancaks of Chania and Rethymno, contains 658 pages, of which pages 320-324 are on Sphakia. It is written by a different scribe from Tahrir Defter 820. It lists only the heads of households, and not the individual taxes also. Fig. 3 illustrates the entry for the same village, Patsianos, as in Fig. 2; Fig. 4 illustrates a different section of Tahrir Defter 822.

The document postdates the death in 1652 of the Valide Sultan (Kösem Mahpeyker), but predates the death in late 1658 of Deli Hüseyin Paşa, who is mentioned in this document as alive. A second argument for a date relatively close to that of Tahrir Defter 820 is that both documents record, village by village, essentially the same people, in the same

5 Gülsoy, Girit’ın Fethi, xx-xxi, on the basis of a good contemporary source, Kâtib Çelebi’s Fezleke.
6 Ibid., xxi-xxii.
order, grouped by fathers and their married, or unmarried sons; Prof. Kiel has shown this
by a close study of two Sphakiote villages, Vraskas and Kolokasia. The spellings of the
names are different (which shows that the two documents were independently compiled),
and there are fewer unmarried sons in the second document, but the overall number of
names for the eleven vakıf villages is almost identical (867 and 864). It must have been
made between five and ten years after Tahrir Defter 820 (so c. 1655). Gülsoy states that
this document dates a generation later, in 1670, but he does not take account of these ar-
guments for an early date, and his own argument for a later date is purely circumstan-
tial.7 There are clear parallels both from Crete and from other parts of the Empire for a
sequence of defters only a few years apart.

The Sphakiote villages, according to Prof. Kiel, seem not to have been included in the
poll-tax register (cizye defter) of 1077 (1666-1667), now in Istanbul, covering the whole
of the western half of the island, presumably because they were not liable to poll tax.

3. BOA, Istanbul: Maliyeden Müdevver 4717, Evkaf Muhasebe Defter (Account
Book of the Vakıfs) dated 4 Ramazan 1069 (26 May 1659). This document includes the
vakıf of Sphakia.

4. Tapu ve Kadastro Genel Müdürlüğü, Ankara: Defter 1, Eski 489. A register of
1116-1117 (AD 1704-1705); 20 x 57 cm; old leather binding with golden şemsiyes (3) on
front and back cover; 330 folia; paper and ink in perfect shape; large gilded and coloured
(blue and rose) tuğra of Sultan Ahmed bin Mehmed (Ahmed III) on fol. 5r. It includes the
population of the vakıf villages of Sphakia (at pages 80v-82r).

Fig. 3: Entry for Patsianos from Tahrir Defter 822, p. 323

7 Ibid., xxii-xxiii.
5. BOA, Istanbul: Cevdet Evkaf 27749. Two petitions from Fatma Hanım Sultan in 1185 (AD 1771); Chinese water-based ink on thick, polished paper. The larger petition includes comments and decisions.

6. BOA, Istanbul: Evkaf Nezareti, Haremeyn Muhasebeciliği 8550. A vakıf account register of 1817-1818 gives the total number of the population of the vakıf villages paying cizye as well as their agricultural production; the script is very hard to read and we have not fully exploited this text.

The Organisation of the Vakıf

The Creation of the Vakıf

The Ottoman fleet set sail from Istanbul for Crete at the end of April 1645. Most of the island was conquered quite quickly. Chania fell on 22 August.

The Sphakiotes were defending a key position on the north side of the White Mountains (which lie between Chania and Sphakia), but in early December (according to Camillo Gonzaga, a Venetian spy, reporting at the time) the Sphakiotes, faced with a seemingly invincible force of 30,000 infantry, abandoned their position and “submitted to the Turk”. The Ottoman forces then pressed on eastwards, and by autumn 1647 held all the island except for Candia (which held out until 1669) and the islet forts of Spinalonga, Souda and Grambousa.

However, in the summer or autumn of 1647 the regions of Rethymno and Sphakia revolted (the revolt is known only through the unpublished report of Mormori). In 1648 Sphakia was invaded and again subjugated. But Deli Hüseyin Paşa treated Sphakia mildly; he declared an amnesty, and “applied a systematic policy of protection of the rural population, their cattle and their crops”. Sphakia for a period was problematic for the Ottomans, because of Sphakiote support for the Venetians besieged in Candia. However, by the time that the Ottoman traveller Evliya Çelebi passed through in 1668, he notes that a fort (either Chora Sphakion or Frangokastello) had been ruined by the Ottoman capture of it, and that it was not garrisoned. He also claims that the Ottomans had captured a ring...

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10 Eickhoff, Venedig, Wien und die Osmanen, 48.


of four forts round Sphakia, commanding the only routes into the area, which had made possible the final conquest of Sphakia, but this account is very confused.\textsuperscript{13}

In the meantime, an Ottoman census of the whole island (excluding the area still held by the Venetians) was commenced.\textsuperscript{14} Deli Hüseyin Paşa, straight after the conquest of Chania, started to organise a census of people and revenues, village by village, including Sphakia; in this respect the Ottomans followed the precedent of the Venetians, who had long compiled lists of individual towns (ville).\textsuperscript{15} But Venetian censuses were incomplete for the area of Sphakia, which lay on the margins of Venetian control. In drawing up a complete census for Sphakia within a few years of conquest, the Ottoman Empire thus had a more microscopic knowledge of Sphakia than Venice had ever acquired. The level of detailed knowledge and control was considerable. We know from a later document, of 1671, that around 1650 (“twenty years ago”) escheated land (mahlûl) in the Anopolis Plain was deemed to belong to the Ottomans. Three Ottoman officials, Kasım Ağa, Mehmed Ağa and Turak Bey, were responsible for selling such land, presumably to ensure the maximum tax base for the vakıf. The document of 1671 was an appeal to the Ottoman authorities over the ownership of a piece of land in the Anopolis Plain that had been so sold.\textsuperscript{16}

The original census document was called by its classical name – it is a tahrir defteri – but a close examination shows that its main purpose was no longer to establish the timar system, at least not in Sphakia. Indeed, as Molly Greene has shown, the system instituted elsewhere on Crete bore little resemblance to the original timar system; this system became redundant in the seventeenth century as a result of military changes (cavalry, paid for by the timar system, ceased to be the key element in Ottoman forces).\textsuperscript{17} We wonder whether in the case of Sphakia it should be seen as a continuation of what was left of the Venetian system of manorial lordships.

The circumstances of Crete’s incorporation in the Empire, therefore, are unusual. Crete was the main territory won for the Ottoman Empire long after the golden age of expansion had come to a halt. The other conquests were Neuhäusel/Nové Zámky in Slovakia in 1663, and Podolia (in the Ukraine) in 1672 (whose defter has been splendidly published


\textsuperscript{13} \textit{Evliyâ Çelebi Seyahatnâmesi. 8. Kitap}, 246; Evlia Tselebi, \textit{Hodoiporiko}, 292-293.

\textsuperscript{14} The official label of the survey is “Girândan umumnamesiye Girîd’in nûfûs ve hasîlâtını ve Girîd evkafını havi mufassal tahrîr defteri”.


\textsuperscript{17} Greene, \textit{A Shared World}, 33-35.
by Kołodziejczyk), the Morea was retaken in 1715; and as late as 1727-1728 a new series of poll-tax registers was drawn up in both the eastern and northern borderlands of the Empire.Crete and these other areas were organised as Ottoman provinces well after the tapu tahrirs had fallen into disuse at the end of the sixteenth century. However, the conquerors would have recognised the remains of the parallel Venetian system, still in theory organising the administration of the island.

The Ottomans, moreover, took over, or introduced, a complex system of taxes, rents, and dues, including the mukataa (any tax whose revenues were collected through state agents or farmed out to private individuals), some owed to the beneficiaries of the timar system and some to the state. As in the rest of the Empire, they introduced the cizye tax on Christians, a tax paid by non-Muslim adult males, in exchange for retaining their religion under Islamic rule.

None of the revenue recorded for Sphakia is earmarked for the provincial cavalry, which was the theoretical purpose of the timar system. The three eastern villages of modern Sphakia – Kapsodasos, Skaloti and Argoule – in Venetian and early Ottoman times belonged to the district of Agios Vasileios; they sent their taxes along to the central treasury as part of the income of the hâss-i hümâyun rather than to a timar lord, in accordance with the seventeenth-century policy of assigning revenue away from those serving in the provinces, and towards Istanbul.

The revenues of the eleven villages included in the Ottoman district of Sphakia (nahiye-i Esfakya) were assigned to the religious endowment of Mecca and Medina. That is, these eleven villages had a special status, as forming a religious endowment (vakıf). The endowment was founded in the earliest years of Ottoman rule. Evliya Çelebi writes that Deli Hüseyin Paşa conquered Sphakia on the order of Melek Ahmed Paşa, Grand Vizier 1650-1651. The nature of Ottoman rule in Sphakia during these war years is somewhat murky, but the eleven villages of Sphakia have a special status already in the first two surviving tahrir defters (820, 1650, and 822, c. 1655). The first tahrir defter (820) contains the notation “Vakıf-ı Medine-i Münevvere” next to the data for each of the eleven villages. The second tahrir defter (822: 321) includes the following set of statements about Sphakia (Fig. 4):

The eleven villages (karye) and the arable, but uninhabited, piece of land called Guta [the island of Gavdos?], situated in the aforesaid nahiye [district, of Sphakia] have been entered into the New Imperial Register (tahrir-i cedid defterlerine) as being free and outside the normal administrative procedure.

The yearly occurring revenue of 5,000 gurûş, including the Poll Tax (cizye), shall be taken by the Treasurer (defterdar) of the aforesaid island and shall be sent to the

20 Evliyâ Çelebi Seyahatnâmesi. 8. Kitap, 240; Evliya Tselebi, Hodoiporiko, 278.
Threshold of Felicity [in Istanbul] and shall from there be the Yearly Gift (sürre), of which 3,000 guruş shall be sent to the poor of Medina the Radiant and 2,000 guruş to the pious of Mecca the Brilliant.

And from the summer pastures on mountains and hills (tilal ve cibal yaylakları) of the aforementioned district and from the sown but uninhabited land (mezraa) from the subjects, and from their metochia, which from old have been connected with these villages, tithes shall be taken (for the vakif).

And the public and special revenues (beytülmal) and the custom duties of the ports and altogether all other revenues shall be taken for the vakif.

Because the subjects [of Sphakia] are free and outside the normal administrative procedure, they shall, when one of them commits a weighty crime, for which the death penalty or cutting off of limbs is due, he should not be taken out of the district but shall be taken (directly) by the Defterdar. [followed by golden kuyruklu imza and seal]21

Sphakia, formally registered as being “free and outside the normal administrative procedure”, paid a global sum of 5,000 guruş (to include the usual poll tax); tithes for the vakif were to be derived from the whole territory of the villages; indirect taxes were to be raised for the vakif; and Sphakiotes were to have special judicial privileges in the most serious offences.

21 We are most grateful to Prof. Kiel for the translation of this passage.
Guruş and Akçe

At this point a small excursus is needed, on the relationship between the 5,000 guruş, the global sum to be paid, and the 207,000 akçe specified later in the actual census. The akçe was the basic Ottoman coin and unit of account, but the guruş, a non-Ottoman coin, is harder to pin down. One might think that it is the Venetian gold ducat, which was the leading foreign currency in the Ottoman Empire in the sixteenth century. But from the later sixteenth century large silver coins were imported into the Ottoman Empire by Western merchants, and in the seventeenth century they became the leading foreign currencies in most parts of the Empire.22 By the 1640s many of the provincial defterdars, from Cyprus to Syria, kept their accounts in terms of these foreign silver coins.23

Two main sorts of coins were in circulation, Spanish riyal guruş (also known as piastrers), and Dutch thalers or lion dollars (esedi guruş or aslanlı guruş); in addition there were French coins, known as sülye guruş. These coins posed accounting problems for the Ottoman state, because they varied in size and silver content, and therefore had varying akçe values. The conversion rates varied considerably over time, partly because of the ongoing debasement of the akçe (whose silver content fell from 0.682 grams in 1572 to 0.256 grams in 1685).24 To complicate things further, local conversion rates sometimes varied from those used in Istanbul.

In the state budget for 1582-1583 the most common type of guruş, the esedi guruş, was valued at 39 akçe (with other types valued at 55, 48 and 40 akçe).25 From 1588 until 1659 the Istanbul conversion rate for the esedi guruş went from 70 to around 80 akçe. It subsequently moved further upwards, from 100 akçe in 1668 to 144 akçe in 1725.26

The earliest attested local Cretan exchange rate for the esedi guruş (the coin in which Cretan taxes were assessed) is 88 akçe in 1671;27 from the following year, 1672, it had increased to 120 akçe.28

The rate for c. 1655, the date of TD 822, will have been slightly less than the 88 akçe attested in 1671. We assume a rate of 80 akçe for this year (which falls within the range of rates attested for Istanbul). From this it follows that the 5,000 guruş of TD 822 was the equivalent of 400,000 akçe. This is almost exactly double the 207,000 akçe specified in the census. The difference must have been made up by other, indirect, taxes specified in

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22 Ş. Pamuk, A Monetary History of the Ottoman Empire (Cambridge 2000), 92-111, 134; cf. also Idem, ‘Money in the Ottoman Empire, 1326-1914’ in H. İnalcık with D. Quataert (eds), An Economic and Social History of the Ottoman Empire, 1300-1914 (Cambridge 1994), 961-966.
23 H. Sahillioğlu, Studies on Ottoman Economic and Social History (Istanbul 1999), 46.
24 TDVI'A, s.v. ‘Akçe’ (H. Sahillioğlu).
25 Sahillioğlu, Studies, 41 and Table 5 at pp. 58-59.
26 Pamuk, Monetary History, 144.
27 Karantzikou and Proteinou, Tritos kodikas, No. 694; mistranslated by Stavrinidis, Metaphrases, No. 415 as 88 paras.
the same document – “public and special revenues and the custom duties of the ports and altogether all other revenues” – which were destined for the vakıf.

The Preservation of Vakıf Status

The formal arrangements for the endowment of the vakıf were recorded a few years later, just before the death of Deli Hüseyin Paşa in late 1658. Two deeds recording Deli Hüseyin Paşa’s endowments in Crete, including Sphakia, are dated 1658.29 The one concerning Sphakia, known to us only from an obscure Greek translation, has a good story. In 1909, a decade after the Ottomans had left and Crete formed an autonomous state, there was local dissension as to whether or not Sphakia had ever been subject to the Ottomans. The Secretary General of the Cretan State therefore wrote to the Sublime Porte asking for a ruling. The reply consisted of a copy of Deli Hüseyin Paşa’s endowment document, then held in Istanbul by the Directorate of vakıfs, and now probably in the Archives of the General Directorate of the Vakıfs in Ankara. In order to end the local dissension, the Secretary General, Kalaïsakis, published a Greek translation of this document. It reads as follows:

The conqueror of Crete, Gazi Hüseyin Paşa, has declared before the Islamic Court, which was convened in the Cretan camp, that those villages, which by virtue of the imperial rule were under his possession and were situated in the eparchy of Sphakia, that is, Anopolis, Agia Roumeli, Ovtzikas, Komitades, Samaria, Agios Ioannis, Semalo, Vouvas, Askyphou, Kolokasia, Mitraska, the Castle of Mesochori (i.e., Chora Sphakion) and the territory of Gavdi (i.e., the islands of Gavdos and Gavdopoula), along with all the inhabitants subject to them, with their offspring, with the hills, the mountains, their pasturages, with the fields of those subjects who live in free territories, with the little villages (the so-called ‘metochia’), with the tithe and all the rights, with the capitation tax of those villages and with all the rest, all this he dedicates, together with the public and private property in this eparchy, to the sacred cities of Mecca and Medina and appoints İbrahim Ağa, the son of Ahmed, as Mouteveli (i.e., mütevelli, Administrator) of the dedication (i.e., vakıf) on the following conditions:

1. that there should be sent each year 3,000 guruş to the poor of Medina and 2,000 guruş to the poor of Mecca out of the revenues from those villages and the capitation tax;
2. that whoever is Imperial High Eunuch at the time shall oversee the dedication (i.e., vakıf);

3. that for as long as the dedicator lives, the 5,000 guruş offered for the poor of the two cities should be divided as stated, out of the incomes of the dedication (i.e., vakıf); that the dedicator should keep and have at his free disposal all the remaining income;

4. that after the death of the dedicator, the supervision, the dedication (i.e., vakıf) and the remainder of the incomes of all the aforesaid villages should pass on to his offspring, and to his descendants, according to the rights of succession, to the senior child of the family; and

5. that if ever the family of the dedicator vanishes, the aforesaid Imperial High Eunuchs shall see to the appointment of a loyal and pious warden and the annual assignment of the appointed 5,000 guruş to the poor of the holy cities.

Following the above declaration of the dedicator and after the aforesaid İbrahim had accepted the appointment of the supervision of the dedication (i.e., vakıf), all the necessary religious formulations took place and the Islamic Court acknowledged the validity of this dedication (i.e., vakıf). 10 Rabi Al-Akhar 1068 (i.e., 14 January 1658).

This document formalised the special status of the eleven villages of Sphakia – but three of the names are not certainly identifiable with the canonical names – making clearer the tax arrangements mentioned in the earlier tahrir defter of c. 1655, and arranging for their long term administration. In the following year, 1659, the eleven vakıf villages of Sphakia are included in a general account book of the vakıfs of Deli Hüseyin Paşa dated June 1659 (the third of Prof. Kiel’s documents); it mentions the villages as part of the vakıf of Medina and gives the same amounts of taxes to be paid as in both tahrir defters. In the same year, 1659, “one of the inhabitants of Askopolis [i.e., Anopolis] in the province of Sphakia, whose revenue from taxation is released to the outstanding conqueror Kaptan Paşa”, appeared before the court in Rethymno; the seemingly irrelevant point about the revenues of Anopolis was made no doubt because the man concerned was appearing voluntarily before the court to report on Venetian piracy.

These documents make it clear that Sphakia became part of a pious endowment very soon after the Ottomans arrived in Crete and that it was Sphakia’s conqueror, Deli Hüseyin Paşa, who founded the vakıf as a means of ensuring long-term profit for himself and his family from the conquest.

The reason for the separate treatment of the eleven villages of western Sphakia lies in the Venetian past. In the early fourteenth century the island was divided into four large units or provinces (‘territorii’), each subdivided into regions (‘castelli’ or ‘castellanie’);

30 BOA, Evkaf Muhasebe Defter, Maliyeden Müdavver 4717.
this system lasted with minor alterations until the twentieth century. The area of Sphakia fell into two different provinces: the eastern part, known as ‘Castel Franco’ or ‘Santo Nichita’, fell within Rethymno province; the western part, Castel di Sfachià, which formed the bulk of Sphakia, fell within Chania province. The boundary between these two provinces was drawn right through the middle of the Frangokastello Plain: on a drawing of 1615 by Basilicata a line (labelled as “Linea del confin”) runs between the adjacent villages of Patsianos and Kapsodasos down to the west side of the fort of Frangokastello on the shore.

The Castel di Sfachià had a special status under the Venetians. In a charter seemingly of 1191 the Byzantine Emperor Isaac II Angelos confirms the governance and revenues of a territory dependent on Anopolis to the Skordylis family. This land grant, allegedly of the late Byzantine period, but current in early Venetian times, defined as a single unit the whole area from the coast below Vouvas in the east, round via the southern part of the Askyphou Plain and the north side of the White Mountains, down the Samaria Gorge to Agia Roumeli in the west. The Skordylis family, one of the Twelve Noble Families (archontopouloi) of Crete, continued in the early Venetian period to lay claim to their allegedly ancestral rights, and membership of this family remained a legal privilege throughout the Venetian period. Within their region lay all the eleven villages of the Ottoman vakıf.

The separate treatment by the Ottomans of the three eastern villages of modern Sphakia (Kapsodasos, Skaloti and Argoule) conforms to Venetian precedent. These three villages, not part of the Skordylis grant, fell within a different province from the rest of Sphakia. Though Tahrir Defter 820 places them in “nahiye-i Esfakya”, it records them fifty pages apart from the other Sphakiote villages, and places them, as we have seen, in the Imperial Domain. Their tax position was therefore quite different.

The revenues of the eleven villages, 5,000 guruş per year, were assigned to the religious endowment of Mecca and Medina. Religious endowments (vakıf) were an important aspect of the Ottoman system, especially in its later centuries. Any private source of revenue – a rural or urban property, such as a bathhouse, even the interest generated by cash loans – could be designated vakıf. Such a designation meant that the income was permanently assigned to some charitable or religious purpose. Sphakia was part of the endowment of Mecca the Radiant and Medina the Brilliant, and is so described in court documents from Crete.

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34 S. Xanthoudidis, ‘To diploma (provelegion) ton Skordylon Kretes’ [The Diploma (Privilege) of the Skordylis Family of Crete], *Epeteris Hetaireias Kretikon Spoudon*, 2 (1939), 299-312.
Not that all the region’s revenue ended up in Mecca and Medina. Typically, a vakıf’s income paid for items such as the salaries of the endowment’s employees and the upkeep of its buildings. The founder’s family was very often also the beneficiary of these funds; this was one of the main attractions in establishing a vakıf. The poor of Mecca and Medina might benefit only once the family line had died out. As to where and to whom Sphakiote revenues were dispensed, this can only be ascertained by a thorough examination of the endowment’s documents. It cannot be determined from the tahrir defter, which is concerned to identify sources of revenue, rather than their disbursement.

After Deli Hüseyin Paşa’s death, his son, Mehmed Ağa b. Hüseyin, became the mütevellı, despite the fact that his father had been executed for alleged treason, and he was still in place at the very end of the century. A granddaughter of Deli Hüseyin Paşa, Fatma Hanım Sultan, is attested as mütevellı in 1762, but as she was also a member of the imperial family, the relationship to the Sultan himself became closer. By the 1720s the Sultan gave rulings on matters of Sphakiote taxation, and in turn was petitioned by the inhabitants of the province of Sphakia: “From the vakıf of the province of Sphakia belonging to the Sultan’s family …”. The special status of Sphakia was maintained even after the major revolts of 1770 and 1821. In the first instance this was because the Sultan, Fatma Hanım Sultan, who had already in 1765 upheld the liberties of the province, petitioned twice in 1771 that Sphakia retain its vakıf status (the fifth of the documents which we know thanks to Prof. Kiel). After the Egyptian takeover of Crete (1830-1840), the new government tried to impose standard levies and practices on the Sphakiotes (as on the rest of Crete). To the credit of the new rulers, they responded favourably to Sphakiote representations of their traditional immunity from special levies. After the restoration of the rule of Istanbul, the vakıf status of Sphakia continued until the end of the nineteenth century; it was terminated finally only in 1901, after the ending of Ottoman control of Crete.

36 See M. Hoexter, *Endowments, Rulers and Community: Waqf al-Haramayn in Ottoman Algiers* (Leiden 1998), for an admirably clear discussion of the complicated matter of vakıf finances. Her study focuses on Algiers where “the poor of the two holy cities of Islam were hardly ever designated as the primary beneficiary … In the vast majority of cases they figured as the ultimate beneficiary, preceded by a line of private ones … Only when the entire family died out, would the poor of Mecca and Medina come into the picture as the ultimate beneficiary” (ibid., 9).
39 Papiomtyoglou, *Eggrapha*, Nos 172 (AD 1721), 175 (AD 1722).
41 BOA, Cevdet Evkaf 27749 (H. 1185).
42 N. V. Tomadakis, ‘Tourkograikika’ [Turkish-Greek Matters], *Epeteris Hetaireias Kretikon Spoudon*, 1 (1938), 133-134, No. 2 (AD 1833).
Sphakia and Changing Provincial Administration

The vakıf status of Sphakia fits in with seventeenth-century trends in provincial administration. The decline of the timar system meant that, more and more, the Sultan relied on high-ranking officials, such as Deli Hüseyin Paşa, to provide troops for campaigns as the need arose. Some way had to be found of helping these pashas maintain their large households; one option was to grant state lands in private ownership. This is almost certainly how Deli Hüseyin Paşa came into possession of Sphakia, since it was very common to create pious endowments from such grants. The granting of land as private property meant that a permanent relationship was established between a specific group of villages and an elite household. In this case Sphakia should have had such a relationship to the household of Deli Hüseyin Paşa, but in practice the vakıf seems merely to have allowed the Sphakiotes to pay up and then enjoy quite a degree of freedom (according to the Ottoman state, as we have seen, the Sphakiotes were “free and outside the normal administrative procedure”).

The recording of vakıf revenues in a tahrir might seem to be an indication of the peculiar nature of the tahrirs generated by the conquest of Crete. One might think that a region whose revenue was earmarked for a religious endowment would not appear in a tahrir, since vakıfs were unconnected to the military system that tahrirs were intended to support; freedom from central government control and taxation was an important, indeed an essential aspect, of a religious endowment, whereas the tahrir lay at the heart of the state’s claims over the revenue of the Empire. In fact, most sixteenth-century tahrirs give a survey of all vakıf property and revenue at the end of the register, following the hass, zeamet, and timar sections. In addition to recording revenue available for timar grants, tahrirs thus provided a full register of newly conquered territory. A completed survey, kept by the central administration in Istanbul, would give the new overlords essential information on the area’s population, its settlement patterns and the types of crops it produced (as did Domesday Book for England in 1086). Therefore, the central administration would want to include the entire area, vakıf and all. In an earlier age there was no conflict, since newly conquered areas were wholly subsumed into the timar system. Only later on might some revenues pass out of the control of the central government (at which point those lands would disappear from the tahrir). By the time Crete was conquered, however, the timar system had sufficiently deteriorated that Sphakia had already passed into the control of a private individual even before the area had been surveyed. Nevertheless, it was important to have a complete record of what had been conquered, regardless of who controlled the revenues. The tahrir, in other words, still had a cadastral function, and therefore included Deli Hüseyin Paşa’s endowment.

Court records from Crete strongly suggest an additional reason for the inclusion of the vakıf in the tahrir. The vakıf’s founder might well have thought that this was the best way to secure his property rights, now and in the future, and to secure the land to his fam-

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ily should his own head ever be forfeit. A close parallel is the awarding of villages to the Grand Vizier who conquered Podolia in 1672. He immediately converted the gift into a vakıf, and specified all the details in a separate deed (vakfiye); in this case the supporting documentation, including a perambulation, survives.45 For Sphakia, Cretan records show that, when disputes occurred over what the villagers owed, state officials backed up the claims of the vakıf, sometimes with explicit reference to what was written in the survey document.46 The question remains as to how to square this reality with the common view of vakıf land as land that had “escaped state control”47.

Cretans as a whole were better off under the Ottomans in that they no longer had to do the hated Venetian labour services in the galleys or on public works (angarie). This freedom was offset by a new and complex system of taxation, and a much more efficient administration than the Venetians had imposed.

For Sphakiotes, the conquest would have brought a change for the worse, since they had already been exempt from the services but still had to pay the new dues. But they still enjoyed a privileged status and were better off than most Cretans. Vakıf status relieved the people from some of the taxes and from having to support an often tyrannous and rapacious local lord. In practice they still kept something of their privileged status in the late Venetian period. The province’s dues to the vakıf, 5,000 guruş a year,48 equivalent to something like £1,000 in the money of the time or 150,000 euros today, seem not particularly onerous by modern standards.

Much of Sphakia’s income seems to have come from seafaring activities out of reach of the mukataa. If Sphakiotes chose not to pay the dues, their distant, institutional overlord would have found it difficult to collect. The cizye, too, seems to have turned into a nominal payment, divorced from the actual number of menfolk, who would have been particularly difficult to count in a land of mountaineers and seafarers. For the first forty years the Sphakiotes, or some of them, seem to have been content; occasionally they expressly said so.49

Sphakia had, as under the Venetians, something of a reputation for lawlessness. In 1659 the hayduds, brigands, were said to be based there. In 1671-1672 a Cretan was murdered in the very rooms of the provincial governor, probably in Chora Sphakion castle.50

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45 Kołodziejeczky, *Ottoman Survey Register of Podolia*, I: 51-57, 469-478. The editor writes (ibid., I: 20): “Judging by the way the Podolian defter was used, the Ottomans still regarded the provincial defter as an authoritative legal document, according to which all territorial claims could be checked and resolved. It was no accident that even the grand vizir, Kara Mustafa, was concerned to include and confirm his vakıf documents in the provincial register. He must have believed that this was the best way to secure his and his descendants’ future claims”.


47 H. İnalcık, ‘The Ottoman State: Economy and Society, 1300-1600’, in Idem with Quataert (eds), *An Economic and Social History*, 124.


50 Idem, *Metaphraseis*, Nos 139, 630.
However, Ottoman census officials and taxgatherers seem to have penetrated the remotest parts of Sphakia with impunity. The *tahrir defter* includes the names of all heads of households and unmarried adult males, and a census of crops, mills, and other taxable activities, which they could hardly have done without the people’s co-operation.

Trouble enters the record in 1689, when the system of assessing *cizye* was reorganised throughout Crete (as it was to be in the rest of the Empire from 1690 onwards): instead of a flat-rate payment per head, those liable were organised into three categories. This reorganisation of the tax system was very unpopular in Sphakia, because the inhabitants of the *vakıf* had not previously been liable to poll tax. In 1704-1705 a great register of the western half of Crete was made, listing the male heads of households in every village in every castellate and assessing them for tax (this is the fourth of Prof. Kiel’s documents listed above). “Nahiye-i Esfakya” again appears divided into eleven *karyes*, or villages. Whereas as a rule the *defter* does not give the names of the heads of households, but only all their immoveable property, in the case of Sphakia the recording is reversed. Property is not recorded, but instead the names of all the heads of households are listed, village by village. The tax per village was then specified, but any connection with the actual number of people seems to have been abandoned: Vraskas with 32 households paid the same tax (20,000 *akçe*) as Patsianos with 61 households, and not much less than Chora Sphakion, whose 228 households paid only 30,000 *akçe*. The new arrangement seems to have worked to the Sphakiotes’ disadvantage, especially since the dues to Mecca and Medina were treated as a supplementary *cizye* rather than being assessed separately. Apparently other *vakıf* estates were entitled to exemption from *cizye*, but not Sphakia. This gave rise to a long string of disputes and lawsuits, involving teams of *kapetanoi* representing the various villages in Sphakia.

In 1817-1818 (after the 1770 Revolt of Daskaloyannis, but before the major revolt of 1821) a *vakıf* account register includes the *vakıf* of Sphakia (the sixth of Prof. Kiel’s documents listed above). It gives the total number of the population of the *vakıf* villages as well as their agricultural production. This is the same type of data as in Tahrir Deftir 820, but the unit of measure is specified as *muzur* (which is the old Venetian term, to which we will return below). Unfortunately, we have not been able to make full use of this text (though it should cast unique light on the state of Sphakia before the disasters of the 1821 revolt).
**Fig. 5:** Household and agricultural taxes (from Tahrir Defter 820)

Tabulated are the values in akçe of the various taxable commodities, by village. The last three villages are in modern, but not Ottoman, Sphakia, and are included in the total.

<table>
<thead>
<tr>
<th>Village name (and Sphakia Survey number)</th>
<th>Sa-maria (1.22)</th>
<th>Ag. Roumelis (1.29)</th>
<th>Ag. Ioannis (3.08)</th>
<th>Ara-daina (4.20)</th>
<th>Chora Sphakion (6.12)</th>
<th>Komi-tades (8.02)</th>
<th>Vra-skas (8.04)</th>
<th>Vouvas (8.05) / Askyphou (7.14)</th>
<th>Kolo-kasia (8.26)</th>
<th>Patsia-nos (8.42)</th>
<th>Kapsodasos (8.51)</th>
<th>Skaloti (8.70)</th>
<th>Argou-le (8.77)</th>
<th>Total Amount per inhabitant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household (ispence)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household (ispence)</td>
<td>1240</td>
<td>2040</td>
<td>1820</td>
<td>1200</td>
<td>6160</td>
<td>8000</td>
<td>2000</td>
<td>800</td>
<td>2640</td>
<td>680</td>
<td>1240</td>
<td>920</td>
<td>760</td>
<td>440</td>
</tr>
<tr>
<td>Wheat (hınta)</td>
<td>3000</td>
<td>4000</td>
<td>6000</td>
<td>2000</td>
<td>8000</td>
<td>14000</td>
<td>6000</td>
<td>8000</td>
<td>4000</td>
<td>3000</td>
<td>6000</td>
<td>6000</td>
<td>2000</td>
<td>2000</td>
</tr>
<tr>
<td>Barley (şair)</td>
<td>2000</td>
<td>3000</td>
<td>2000</td>
<td>1800</td>
<td>3000</td>
<td>6000</td>
<td>2000</td>
<td>4000</td>
<td>2000</td>
<td>2000</td>
<td>4000</td>
<td>4000</td>
<td>100</td>
<td>400</td>
</tr>
<tr>
<td>Oats (ulaf)</td>
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<td>600</td>
<td>200</td>
<td>400</td>
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<td>1000</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>200</td>
<td>800</td>
<td>400</td>
<td>100</td>
<td>400</td>
</tr>
<tr>
<td>Broad beans (bakla)</td>
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<td>800</td>
<td>600</td>
<td>800</td>
<td>4000</td>
<td>1600</td>
<td>2000</td>
<td>800</td>
<td>600</td>
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<td>600</td>
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<td>Chickpeas (nohud)</td>
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<td>600</td>
<td>400</td>
<td>400</td>
<td>200</td>
<td>200</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>0</td>
<td>400</td>
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<tr>
<td>Lentils (mercimek)</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>200</td>
<td>400</td>
<td>600</td>
<td>400</td>
<td>200</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>0</td>
<td>200</td>
</tr>
<tr>
<td>Vetch (burcak)</td>
<td>300</td>
<td>400</td>
<td>300</td>
<td>400</td>
<td>300</td>
<td>400</td>
<td>300</td>
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<td>300</td>
<td>100</td>
<td>0</td>
<td>200</td>
<td>200</td>
</tr>
</tbody>
</table>

+++ >5 times the average tax per inhabitant
+++ 3-5 times
++ 2-3 times
+ 1½-2 times

<1/5 the average tax per inhabitant
1/5-1/3
1/3-1/2
1/2-2/3

++++ >5 times the average tax per inhabitant
+++ 3-5 times
++ 2-3 times
+ 1½-2 times

<1/5 the average tax per inhabitant
| Common vetch (fiğ) | 200 | 200 | 200 | 100 | 200 | 400 | 200 | 400 | 100 | 100 | 200 | 300 | 0 | 100 | 2700 | 0.8 |
| Grazing tax (resm-i giyah) | 150 | 250 | 150 | 150 | 250 | 150 | 250 | 150 | 250 | 650 | 250 | 0 | 1200 | 4100 | 1.2 |
| Beehive tax (resm-i küvware) | 250 | 350 | 250 | 250 | 250 | 250 | 250 | 350 | 350 | 150 | 200 | 200 | 3600 | 1.0 |
| Water mill tax (resm-i asiyab) | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 0 | 120 | 1560 | 0.4 |
| Marriage tax (resm-i arusane) | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 840 | 0.3 |
| Pig tax (resm-i bid'at) | 120 | 320 | 280 | 220 | 320 | 220 | 320 | 320 | 320 | 220 | 150 | 540 | 250 | 3720 | 1.0 |
| Kitchen garden tithe (öşr-i bostan) | 160 | + | 200 | 220 | 100 | 260 | 200 | 200 | 200 | 260 | 250 | 0 | 150 | 2500 | 0.7 |
| Cotton tithe (öşr-i penbe) | 100 | 200 | 200 | 100 | 300 | 100 | 200 | 200 | 200 | 200 | 200 | 0 | 200 | 2450 | 0.7 |
| Grape must tithe (öşr-i şire-i hamr) | 400 | 800 | 800 | 3200 | 1600 | 1600 | 800 | 160 | 400 | 1600 | 1600 | 800 | 400 | 14960 | 4.2 |

cont. →
<table>
<thead>
<tr>
<th>Village name (and Sphakia Survey number)</th>
<th>Samaria (1.22)</th>
<th>Ag. Roumeli (1.29)</th>
<th>Ag. Ioannis (3.08)</th>
<th>Aradena (4.20)</th>
<th>Anopolis (6.12)</th>
<th>Chora Sphakion (8.02)</th>
<th>Vraskas (8.04)</th>
<th>Vouvas (8.05) / Askphou (7.14)</th>
<th>Koloasaki (8.26)</th>
<th>Patsianos (8.42)</th>
<th>Kapsodasos (8.51)</th>
<th>Skaloti (8.70)</th>
<th>Argoule (8.77)</th>
<th>Total</th>
<th>Amount per inhabitant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olive oil tithe (ösr-i revgan-i zeyt)</td>
<td>400 800 400 (+)</td>
<td>2000 1000 (+)</td>
<td>1000</td>
<td>400</td>
<td>2000</td>
<td>1000</td>
<td>800 -</td>
<td>400 (++)</td>
<td>2000</td>
<td>600 ++</td>
<td>400</td>
<td>14800</td>
<td>400</td>
<td>14800</td>
<td>4.2</td>
</tr>
<tr>
<td>Misc.*</td>
<td>200 500 400 200</td>
<td>800</td>
<td>220 (+)</td>
<td>200 -</td>
<td>220</td>
<td>200</td>
<td>200 -</td>
<td>1000 540 (+)</td>
<td>2000</td>
<td>540 ++</td>
<td>200</td>
<td>5330</td>
<td>1.5</td>
<td>5330</td>
<td>1.5</td>
</tr>
<tr>
<td>Actual total</td>
<td>9900 (+) 15040 14900</td>
<td>10000 300220 (-)</td>
<td>40000 (-)</td>
<td>18000 (+) 19320 (+++)</td>
<td>13000</td>
<td>10000 ++</td>
<td>18000</td>
<td>18000 7900 ++</td>
<td>232000 ++</td>
<td>63.1 ++</td>
<td>232000 (+)</td>
<td>230000</td>
<td>64.5</td>
<td>230000</td>
<td>64.5</td>
</tr>
<tr>
<td>Official total</td>
<td>10000 (+) 15000 15000</td>
<td>10000 30000 (-) 40000 (-)</td>
<td>20000 (+)</td>
<td>20000 ++</td>
<td>12000 -</td>
<td>10000 ++</td>
<td>20000</td>
<td>18000 7000 +</td>
<td>3000</td>
<td>230000</td>
<td>64.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Agricultural Production

These documents shed light on two other topics: the demography of Sphakia; and agricultural production. Here we will explore only the implications for agriculture.

Cretans were supposed to render, among other taxes, one-seventh of their agricultural produce. The tax registers give the valuation of the produce and the amount payable. The key register is Tahrir Defter 820, the first of Prof. Kiel’s four documents, which alone lists agricultural production village by village.

None of the mountain plains is recorded separately, except Anopolis; Askyphou is explicitly listed with Vouvas. We conjecture that (as in the nineteenth century) Imbros belongs to Vraskas, Asphendou to Kolokasia, and Kallikrati to Patianos and Kapsodasos, though this is not stated. That is, the settlements on the minor mountain plains are the metochia, “which from old have been connected with these villages” (in the words of Tahrir Defter 822; above, p. 77), and are therefore not listed separately.

It has been argued that actual production figures cannot be calculated from tahrir defters, because these documents record expected revenues, based on arbitrary ratios between different crops imposed by the tax assessors. There is some truth in this case. It would never have been practicable to collect an actual proportion of the product of each and every terrace in Sphakia, which would have varied enormously from year to year. But the taxes on agricultural products do seem to reflect average yields.

The crops subjected to tax were ones specific to Crete. As the rather different list of taxes imposed on Podolia at around the same time shows, the tax assessors did not seek to tax the same set of crops across the whole Empire. The taxes also seem to be based on real estimates of crop production. In two cases only was the tax set at a uniform level for each village. The tax on mills was assessed at a flat rate of 120 akçe per village, except for Skaloti. And the tax on marriages was assessed at 60 akçe per village, regardless of the size of the village; it simply assumes an average of one marriage per village per year. But the other taxes do vary from village to village: the variation is not simply in proportion to the number of households of those villages, and it is also notable that the figures for wheat and barley do not neatly co-vary. The taxes were therefore assessed on estimates of actual production. The figures are of course rounded, but are not implausible. We surmise that the Ottomans, recognising that it would be impracticable to inspect and measure every terrace in Sphakia year by year, or to count the marriages or even the mills, came to terms with the inhabitants and negotiated a composition fee in money.

In the cases of crops (wheat, barley, oats, beans etc.) and also grape must and olive oil the document records not only the monetary tax, but also the units of assessment. As the regulations (kanunname) at the beginning of the document state that one-seventh of the harvest was to be taken as tax (slightly more than in mainland Greece), it is possi-

52 Kołodziejczyk, Ottoman Survey Register of Podolia, I: 64-68.
ble to calculate the assumed annual production of each crop by each village. For the dry measures, the calculation is a little complex. The unit of measurement is not stated in this document, but in the account book of the vakıf of 1817-1818 the local measure is called the muzur. This Veneto-Cretan unit of volume (misura in Venetian, mouzouri in Greek) is 18.44 litres, roughly equal to 15 (or sometimes 16) okkas (or c. 19.2 kg) of wheat or 13 okkas (or c. 16.6 kg) of barley (the amount varies because these grains differ in density) (Fig. 6). For liquids (grape must and olive oil) the Venetian unit of volume, the mistaton, remained in use in Ottoman Crete. The defter uses the term medre, usually a translation of the Greek metron, but here probably the equivalent of mistaton. The mistaton at this period corresponded to 10 okkas (12.8 kg) of oil and 9-12 okkas (11.5-15.4 kg) of wine, depending on the region. These weights are the equivalent in litres (bearing in mind the different specific gravities of oil and wine) of 12 litres for oil and 12-15 litres for wine (Fig. 7).

The global production figures implied by the tahrir defter for Sphakia (Fig. 8) can be compared to other production figures for this area. There are no Venetian figures, because Sphakia did not receive the precise censuses found in the rest of Crete, but we do have credible data for the mid-nineteenth century. The French consul in Chania, M. Hitier, made a special study of the agriculture of the island, on the basis of systematic local enquiries, and established production figures for each region for a typical year, c. 1847. He did not publish his statistics, but made them available to the French geographer Raulin (Fig. 9). For dry goods, the balance of production between wheat and barley, and the total production of both, is very different. In the Ottoman document, the eleven vakıf villages of Sphakia produced 215 metric tons of wheat and 185 tons of barley per year.


54 Petropoulos, ‘Symvole’, 81; Stavrinidis, Metaphraseis, I: 5 n. 3; cf. also Papadogiannis, ‘To mouzouri’.

55 We will use 13.5 litres for wine as the basis for calculations below. The medre was in fact of a similar size. It varied regionally, but the editor of the Limnos defter has calculated a median figure for the Aegean, of 15.023 litres: Lowry, Fifteenth Century Ottoman Realities, 100-101.

56 V. Raulin, Description physique de l’île de Crète, Vol. 1 (Paris 1869), 249. Raulin expressed the data in ‘quint. m.’, i.e., the French metric quintal of 100 kg. Because of the systematic nature of Hitier’s work, we do not think that he was misled by the Levantine kantar, pronounced identically in Cretan French, of 44 okkas, 56.2 kg. Nor was he using the pre-1800 measurement of the quintal (= 100 livres, or c. 49 kg), because he refers explicitly to “cent kilogrammes.”
while according to Hitier, Sphakia produced almost three times as much wheat, 600 tons, but very little barley, only 90 tons.57

As the overall population of Sphakia in 1650 and 1847 was roughly the same, indeed if anything slightly larger in 1847, the differences in the overall production figures are worth exploring. At a very rough estimate, we would expect a hectare of land to produce 2.5 metric tons of grain per year. The total production of 467 tons in 1650 implies a cultivated area of around 190 ha (for grain and beans). To take one village, Anopolis, which produced 52 metric tons of grain and beans, will have needed 21 ha of level ground. There will have been ample space in the mountain plain of Anopolis to grow this amount of crops without resorting to terracing, even if the land was cropped only in alternate years and if some of the space was taken up with vines and the other crops specified in the defter. However, production would have varied greatly from year to year, and later in the Ottoman period Sphakia often failed to grow enough grain to support itself. Thus, in 1724 the Sultan Ahmed III noted that Sphakia, “being situated in high and mountainous regions”, was “unsuitable for growing and harvesting cereals” and hitherto had bought grain from other parts of Crete, and by a ferma commanded the police not to interfere with that trade. His successor twice repeated the order.58

The production of about 700 tons of grain in 1847 implies nearly twice this cultivated area. This may correspond to the huge extent of now abandoned terraces all over the less rocky and less steep slopes up to some 1,200 m. altitude. How and when the Sphakiotes in the preceding 200 years found the time and energy to construct these terraces remains to be investigated. Why they developed a taste for wheat, instead of the barley which ought to have grown better in this harsh environment, also remains unknown.

It is also worth relating the grain production figures to the size of the population. In 1650 the 727 households in the eleven vakıf villages of Sphakia produced 432 metric tons of grain. This gives an average annual grain production per household of around 600 kg. This is a very poor rate of production by comparison with the rich land of Boeotia, where in the mid-sixteenth century annual production was around 2,500-2,700 kg per household,59 which implies either very large households or people specialising in producing grain, but is plausible as a production level at or below subsistence. If the 1650 census data is converted into population figures, we get a population of 3,357, and on the assumption of average annual consumption/head of 128 kg, there was demand for 430 tons.60 To this must be added 20% for seed corn for the following year, which leads to a

57 We have considered the possibility that the 90 tons of barley should be 900 tons. This would give a more normal ratio between wheat and barley. But the figure of 90 tons is embedded in the calculations of the table (i.e., it is not a simple typographical error), and so we have not emended the figure.
58 Stavrinidis, Metaphraseis, No. 2146 (AD 1724), No. 2197 (AD 1732), No. 2241B (AD 1735).
60 Our population calculation assumes a family multiplier of 4.42, plus the specified unmarried adult males. The figure of 128 kg is taken from J. L. Davis, ‘Contributions to a Mediterranean
total annual need for 516 tons. The demand is thus about 20% above production, which fits with the eighteenth-century claims of Sphakiote insufficiency in grain production. The 1847 production figure of 690 tons of grain production marks a move towards self-sufficiency. A population for the same eleven villages of 4,084 people had an estimated demand for 627 tons (including seed corn), which is slightly less than the amount produced. 61 Overall, these calculations serve to confirm the overall plausibility of the production data: they form what has been termed a “wigwam argument”, in which a number of independent elements, each on their own somewhat fragile, produce a mutually reinforcing structure. 62 They also suggest an improvement in local self-sufficiency by the mid-nineteenth century, maybe because seafaring and woodcutting have declined.

For liquid goods, the Ottoman census implies c. 72,000 litres of grape must and 25,000 litres of olive oil for the eleven vakıf villages of Sphakia. By comparison, Hitier claims for the same area ca. 125,000 litres of wine, 3,500 litres of spirits (raki) and just 80 quintals (8,000 kg, or c. 7,360 litres) of olive oil production. From this it looks as though wine production had increased greatly, but olive oil production had decreased dramatically. The figure for olive oil production is indeed extremely small, in comparison both with 1650 and with the other provinces of Crete in 1847. A possible reason is that in 1824 the Ottoman army, which camped in the Anopolis Plain for 17 days, devastated the more than 2,000 olive trees; according to Pashley, it consumed “the greater part of the olive-trees” as firewood. Pashley also says somewhat mysteriously that “the olives were all cut so low that none of them recovered”. 63 Pashley’s claim about the large number of olive trees before 1824 confirms in a general way the Ottoman census document, in which Anopolis produced about a third of all the olive oil in Sphakia. In other words, taking into account later events, the implied Ottoman production figures for grape must and olive oil are highly plausible.


61 The population for ‘1847’ is taken as the mid-point between the data for 1834 (3,749) and 1881 (4,419).


**Fig. 6:** Production figures in kilograms:  μζυρ x 7 (the tithe for Crete) x 19.2 kg for wheat or 16.6 kg for barley and other products

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**Fig. 7:** Production figures in litres: medre x 7 (the tithe for Crete) x 13.5 litres (for wine) and 12 litres (for oil)
Sheep and goats, which will have been important in Sphakia then (as now), are not
directly attested in this type of document, since they were taxed and recorded separate-
ly. However, the grazing tax can be used as an index of the importance of pastoralism
(which we have other grounds for thinking important in Sphakia).64

The statistics seem to show that every village in Sphakia grew at least some of almost
every crop. It might be possible to read some significance into, for example, the great
preponderance of wheat over barley in Anopolis and Komitades compared to Samaria
or Patsianos. Argoule was rated particularly high on grazing, and Anopolis and Chora
Sphakion particularly low, which is most unexpected. Vraskas and Kolokasia were high-
ly rated on most types of produce, but we dare not say whether that was because they
were good farmers or poor negotiators.

Although the details of the statistics are inextricably complicated by bureaucratic fic-
tion, some general conclusions can be drawn. Everywhere had some cropland. Legumes
of five kinds were a crop comparable in importance to the major cereals, not least because
they provided a protein source. Wine and oil were minor to middling crops in comparison
to other produce. To grow these crops in most of Sphakia required terracing, which is a

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very prominent feature of the landscape today. Dating terraces is difficult, but we have shown that terracing was extensive in the Venetian-Ottoman periods. For example, in the centre of the Samaria Gorge, there are terraces on the east side of the gorge above the hamlet of Ano Samaria, up to a height of 480 m, and 540 m on the Pyrgos ridge. The terraces predate the building of the Ottoman fort on the Pyrgos ridge in 1867 (because they were damaged by the new mule track built up to the fort), and must have been used by the village of Samaria in the Venetian and earlier Ottoman periods. In some of the places which were taxed on their olive oil production we have found olive trees which date back to this period. For example, below the village of Komitades are olive trees around 500 years old, growing on their own terraces.

Cotton, although only a minor crop, is of great interest in that it was apparently grown in many places. Such a water-demanding crop should have been difficult to grow in Sphakia at all, let alone in waterless or Aradaina with no water source other than rain. According to the sixteenth-century tahrirs of the sancaks of Thessaly, Boeotia and Attica, a bale (teker) of cotton cost 6 akçe. Assuming that prices remained stable a century later, the tax on Sphakia would be the equivalent of 408 bales; as the tax was assessed at one-seventh of production, total production was 2,856 bales. As a teker weighed 4 əkkəs or 5.08 kg, 2,856 bales weighed 14.5 tons. This is not a trivial amount. Cotton was certainly an important crop on Crete in the Venetian and Ottoman periods, and there is evidence from the nineteenth century for its growth in Sphakia. We know that according to Hitier in c. 1847 18 tons of cotton were grown annually in Sphakia (2% of the total Cretan production). The two production figures are of the same order of magnitude. Was this production an effect of the Little Ice Age, a period between the fourteenth and nineteenth centuries of climatic instability, with an increased frequency of extreme events: frost, heat-waves, drought, and floods?

Cotton-growing may be related to the tax on water mills (asiyab). Such a tax also seems rather implausible, as Sphakia today is extremely dry, and water mills have operated in living memory only in the Samaria Gorge (which has a strong river). We have

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66 BOA, Tahrir Defter 367, 137 (kanunname of the sancak of Eğriboz/Euboea from 1521): “Teker veznide dört vukiyedir” (“The teker is four okkas in weight”); text and translation in J. C. Alexander, Toward a History of Post-Byzantine Greece: The Ottoman Kanunnames for the Greek Lands, circa 1500 – circa 1600 (Athens 1985), 138, 305.
69 Asiyab comes from the Persian, where the suffix ‘-ab’ is indicative of water. But the word is used in the Limnos defter, with different suffixes, for both windmills (asiyab-i yelleri) and water mills (asiyab-i abî), which are taxed at different rates (because in use for different lengths of time) (Lowry, Fifteenth Century Ottoman Realities, 118). It can also be used, with another suffix (revgan) to mean ‘olive-press’ (Zarinebaf et alii, Historical and Economic Geography of Ottoman Greece, 56 n. 17).
noted remains of water mills in two other locations (at the mouth of the Aradaina Gorge and east of Argoule). We found only two windmills, at Loutro and Frangokastello, both of them probably later than the defter. In villages with no evidence for windmills or water mills the tax could have been on olive-presses, which are known from six villages.70 However, from 1625, just 25 years before the census, there is a list of 28 Cretan rivers “abounding in good water” – important to Venetian galleys, which needed to fill up their drinking water every few days and operated in late summer, when streams were at their lowest.71 Out of these 28 rivers, only four abound in good water today (and only five when Raulin studied Crete in 1847). The most plausible explanation is that rain and snow were more evenly spread round the year than now. So water mills, even in Sphakia, were more possible in the seventeenth century than they are today.

In short, the agricultural data employed in the first census is obviously the result of local negotiations, but it is worth emphasising the overall match with the data collected two hundred years later by Hitier. Though the Ottoman census does not include much related to sheep and goats, which were probably an important part of the local economy, it does seem a reliable source of data. But the data has to be read in the light of the changing environment and with knowledge of the physical topography.

Conclusions

The value of collecting environmental and archaeological data for literate periods has often been discussed and sometimes neglected in Mediterranean survey projects. “Why bother to collect pottery fragments when there are documents which can give us such minuscule detail?” is a common refrain. But the Sphakia Survey has tried to adhere to the principle of ‘enforced consistency’ – if something is important for one epoch, then it is important for all of them. Collecting environmental, vegetational and archaeological data is important for all epochs.

There are three reasons for this. The first is epistemological: why ignore a source of evidence if you have got it? There is no point in deliberately ignoring a whole data set that might prove useful. Secondly, one type of evidence can act as a yardstick for a completely different kind of evidence. It can act as a means of checking the accuracy and nature of that second type of evidence. Thirdly, using more than one kind of evidence can suggest further questions. For example, what is the reason for the different assessments of the resources of Argoule in the Ottoman census and in our own knowledge of the area, or how could there be a common tax on water mills in Ottoman Sphakia?

In addition to these general comments, the Survey has added some specific points that the documentary evidence alone could not:

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70 We recorded olive-presses at Samaria (1.22); Anopolis: Kambos (4.19); Livaniana (5.08); and Dichalomata (6.09), and others are mentioned in the nineteenth century at Kolokasia (8.26; 2 presses), and Patsianos (8.42; 3 presses).

1. A check on accuracy – our detailed knowledge of the micro-landscapes of the different villages permits us to check, and largely confirm the plausibility of the individual taxes. Autopsy can provide a check on just how accurate the imperialists were in selecting things to be taxed, and in setting the rates of individual taxes.

2. How Ottomanised was an area? Sphakia, though it made much of its special status within, even independence from, the Ottoman Empire, shared many aspects of a widespread Ottoman culture. Sphakia was relatively poor and unurbanised, had no resident Muslims except a few officials and (at times) soldiers, and suffered very significant losses as a result of the failed revolts from 1770 onwards. It thus has no large-scale Ottoman architecture, no hamams, no fountains, and no mosques. The architectural exception was the chain of Ottoman forts built in 1867 as a final attempt to prevent future revolts. There was also practically no permanent use of Ottoman writing (the only exception is an Ottoman inscription preserved as the threshold to the sanctuary of the church of Agioi Apostoloi at Tholos, Chora Sphakion). On the other hand, Sphakia borrowed deeply from Ottoman culture. The region’s involvement in a market exchange system wider than its own area was intensified. This change can be seen in increased prosperity measured through ownership of imported luxury ceramics. Contact with northern Italy, established under the Venetians, seems to have stopped, but products of southern Italy and western Greece were reaching Sphakia in significant quantities. In even larger quantities a wide range of wares from the ceramic factories of the northern Aegean was reaching Sphakia. And trade in ceramics within Crete itself, beyond Chania, developed significantly under Ottoman rule. The Greek of Sphakia was no more or less influenced by the Turkish language than the language on other parts of Crete. Houses had corner hearths, called by the Turkish name (tzaki). Embroidery patterns were adapted from Turkish motifs. Another major change could be the method of building mule tracks, now called by a term, kaldirimia, derived from the Turkish kaldırım; Crete had these before the Ottomans (when they were called by the Venetian name strade commune), but perhaps there was a new way of doing it that brought the new name (as for hearths). As these routes were fundamental to trade and other connections, their building and maintenance is a matter of some importance.

Crete was ruled by an Ottoman authority with all the usual imperialist bureaucratic mechanisms. Our examination of the material culture of the time shows a widespread penetration of Ottoman material culture. But this penetration was limited in comparison to cities like Chania, with its minarets, hamams, fountains, and inscriptions.

There are aspects of Ottoman Crete and Sphakia which are not at all discussed in the Ottoman taxation documents. If we had not done a survey which collected archaeological

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72 We owe this point to Dr P. Armstrong, who is publishing the Venetian and Ottoman period pottery from Sphakia.
evidence for all periods, we would not be able to say anything about cheese production, trade, church-building, or vernacular architecture.

In setting up mechanisms for determining and collecting taxes in Sphakia, the Ottomans built on their Venetian predecessors. The Venetians had compiled lists of towns, villages and hamlets, to which the Ottomans added the detail necessary for the direct taxation of a region which had largely escaped the normally eagle-eyed Venetian officials. The Ottomans did not seek to change or improve on the boundaries that had existed under the Venetians. To take the diachronic perspective that underpins the whole enterprise of the Sphakia Survey, we can point out that these two aspects of Ottoman administration in Sphakia – the conservative tendency to incorporate previous systems, and the omission of all topics not directly relevant to assessment – can be seen in other examples of new administrations. For example, the Mycenaean administrators of Crete, whose work can be seen in the Linear B tablets, built heavily on previous systems, and the Linear B texts are notorious for saying practically nothing about important connections between Crete and other areas in the Mediterranean and further afield.73

Thus examination of documentary and material evidence permits us to situate Sphakia in terms of Ottoman administrative procedures and in terms of the penetration of Ottoman material culture in a specific region of the Ottoman Empire. As people have shown elsewhere, it is crucial to collect all available kinds of evidence, to check one type of information against another, and then to construct a synthetic analysis.

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73 For an exemplary analysis of the Linear B tablets from Pylos in the Peloponnese, see J. Bennet, ‘The Linear B Archives and the Kingdom of Nestor’, in J. L. Davis (ed.), *Sandy Pylos: An Archaeological History from Nestor to Navarino* (Austin, TX 1998), 111-133.