

## WINE PRODUCTION, MARKETING AND CONSUMPTION IN THE OTTOMAN CRIMEA, 1520-1542

BY

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### *Abstract*

This effort to estimate the amount of wine production in the Southern Crimea in the sixteenth century opens a window into the ways of accommodation of viticulture, wine production and wine commerce by the Ottoman Empire in a province with a predominantly Christian population. The terminology invented by the Ottomans to denote the taxes levied on viticulture reveals their highly sophisticated rationalistic approach, by which they settled the contradiction between the Islamic prohibition of wine and their practical interest in such a lucrative business, while tax rates developed on this basis granted a significant tax break to Muslim viticulturists. The data of two extant Ottoman tax-registers for the Crimea show that such ingenious fiscal policy stimulated both Muslim investment in this business and conversion of local Christian peasants to Islam. Also, through data on the taxation of wine commerce, estimations of prices and tax rates for marketed wine were suggested.

Cet essai d'estimer la quantité de vin produit en Crimée du sud au XVI<sup>e</sup> siècle ouvre en fait des perspectives sur l'adaptation de la viticulture, de la production et du commerce du vin par les Ottomans dans une province ayant une population principalement chrétienne. La terminologie utilisée par les Ottomans pour la levée de taxe sur la viticulture révèle une approche rationnelle très sophistiquée, grâce à laquelle avait été résolue la contradiction existant entre la prohibition islamique du vin et l'intérêt pratique pour une occupation lucrative. L'imposition qui s'est développée sur cette base accordait aux viticulteurs musulmans des allègements fiscaux significatifs. Les données des deux registres de taxe existants montrent qu'une telle politique fiscale ingénieuse a apparemment stimulé à la fois les investissements musulmans dans ce domaine et la conversion des paysans chrétiens locaux à l'islam. À travers les informations sur l'imposition du commerce du vin, des estimations de prix et de niveaux d'imposition sur le vin mis en vente sont également suggérés.

*Keywords:* viticulture, wine production, taxation, Ottoman Empire, wine commerce

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The ideas and preliminary results of this study were investigated at the seminars and conferences arranged by Kate Fleet (Cambridge University), Gilles Veinstein (E.H.E.S.S.) and Cemal Kafadar (Harvard University). However, this "by-product of viticulture" has reached its full maturation in the climate of the highest expertise and patience provided by Heath Lowry during my stay at Princeton University as visiting researcher at the Program in Hellenic Studies (director Dimitri Gondicas) in 2003. I am sincerely indebted to all of these scholars. But, of course, with none of them do I share responsibility for whatever blunder is found in the recipe.

The Qur'an ambivalently treated wine both as an "intoxicant" and as "good food." What it did not do was explicitly prohibit its usage. It was later Islamic analytic and narrative discourses (in particular the *hadith* or sayings attributed to the Prophet Muhammad) that prohibited the consumption of wine in order to strengthen Muslim identity and provide the leadership with the means of controlling human behavior. Poetry and mystic literature, however, permitted the "vicarious consumption" of wine for limited purposes by those who deserved such a privilege (Kueny 2001). But why such a breach with Islamic doctrine was needed, even tolerated, and what was the real policy of Islamic states vis-à-vis viticulture, wine production and wine commerce still remain open questions. This stems from a lack of sources in which such relationships could be traced.

In an attempt to fill these gaps, wine production and usage in the Ottoman Empire seems to be a promising object of study. It is not only because of the well-known fact that many Ottomans, including the sultans themselves, drank wine, but also because the wine they consumed was produced within the Ottoman realm.<sup>1</sup> The Ottoman state even derived considerable tax income from viticulture and its related trades. The survival of a large corpus of fifteenth- and sixteenth-century tax-registers, which were working fiscal documents, provide us a window into the workings of the Ottoman state in this ideologically sensitive area.

Ottoman fiscal policy, however, was not uniform throughout the empire, nor was wine produced everywhere. The *sancak* (province) of Kefe, situated in the Southern Crimea, was one such wine-producing area. The presence of a sizeable and growing Muslim population in this area offers a chance to compare engagement in wine production between Muslims and Christians, by which one can estimate the limits of tolerance of the Islamic state towards wine and its origins (Veinstein 1980). Therefore, an examination of the contents of the extant tax-registers for this province, relevant to viticulture, wine making and trade in wine provides an interesting case study, which is the focus of this article.

Grapes and wine were introduced in the Crimea at the very beginning of the Greek colonization in the seventh century B.C. The production of wine, apparently due to demand among the region's northern Steppe neighbors (at that time Scythians) who readily exchanged it for slaves, furs and grain, very soon turned into a lucrative business. Even the eastern region of the Crimean peninsula produced a fair amount of wine, although because of severe frosts the vines needed

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<sup>1</sup> Relevant material evidence along with frequent references from written sources is gathered in Lowry (2003: 26-29; cf. Oberling and Smith 2001: 159).

to be turfed every winter.<sup>2</sup> Throughout antiquity, significant amounts of wine were also exported from Anatolia and the Archipelago.<sup>3</sup> In the medieval period both the Byzantines and the Genoese, who were deeply involved in Steppe politics, continued to engage in this business. However, very little is known to date about the wine trade in the Crimea prior to the end of the eighteenth century when the region was annexed to the Russian Empire. Even the relatively rich Genoese documentation from the thirteenth through fifteenth centuries does not shed adequate light on the region's rural economy. The fact that the Genoese documents refer to wine imports has led to the common misconception that even in pre-Ottoman times wine production in the Crimea was unable to meet the needs of the local market so wine was imported into the region from other places.<sup>4</sup> This would be tantamount to arguing that because much of the 'table wine' served in Italy and France today is imported from countries such as Turkey that these countries are not major wine producers. The fate of viticulture during the Ottoman period, which lasted in the Crimea for nearly three centuries, is heretofore unknown. This gap in knowledge still underlies the belief, very popular in Eastern Europe, that the appearance of Islamic states, such as the Golden Horde, the Crimean Khanate, and the Ottoman Empire, brought about the decline of viticulture in the Crimea, a situation which was to be reversed only following the Russian annexation.<sup>5</sup> This attempt to analyze wine production in the Ottoman Crimea may also shed important light for both Byzantinists and specialists in Russian studies.

<sup>2</sup> Strabo VII, 3, 18. See also the studies by Blavatski (1953: 86-87), Vinokurov (1999: 91-110), Gaydukevich (1955: 91), and Savvonidi (1991: 227-235).

<sup>3</sup> A catalogue of ancient Greek amphoras provides a glimpse of the areas that supplied wine to Eastern Europe. See Abramov 1993: 4-136.

<sup>4</sup> See Heyd 1967: 177. Russian scholar S. Karpov (1990: 127), referring to the studies of the Genoese colonies in the Black Sea by M. Balard, claimed that wine was "chronically in need" in the Crimea. It should be noted, however, that M. Balard (1978: 844) did not apply his arguments to the territory beyond the city of Caffa, although indeed he drew attention to the live export of wine from Chios and Southern Italy.

<sup>5</sup> Compare a typical statement made in an otherwise serious scholarly article by Viacheslav Rybintsev (1995: 35-48; cf. Gnilovskaya 2000: 12): "The annexation of the peninsula by the Tatars led once again to a decline in viticulture as a result of Islamic prohibitions on alcohol consumption."

## TAXATION OF WINE PRODUCTION

*The data*

There are only two extant Ottoman tax-registers pertaining to the province of Kefe. The first is of the type known as *icmal* (summary) and was drawn up around 1520.<sup>6</sup> As such it only lists the names of settlements and the total of the taxes that were assessed. Totals of the income received from the vineyards of Muslims and non-Muslims are only detailed for five towns. The second tax-register, drawn up in 1542, is of the detailed type (*mufassal*),<sup>7</sup> which provides both the names of the individual tax-payers as well as specific data about the income deriving from the region's taxable products, including viticulture. It was based upon a survey, carried out on the ground, and is the only surviving 'detailed' tax register for the region. According to a recent study of the province of Kefe, a similar survey carried out in 1568 did not result in the compilation of another tax-register due to complaints by the local population (Öztürk 2000: xxv, n. 18). When, at the end of the sixteenth century, the region saw the implementation of the *iltizam* (tax-farming) system, based on contracting out the sources of revenue (*muqata'a*) to private bidders through the auctions, and no longer required land surveying for revenue assessment, the process of compiling periodic *tahrir defters* (tax registers) came to an end. As in other provinces of the empire, account registers (*muqata'a-i iltizam defters*, *muhasebe defters* and others) listing incomes from various sources of revenues that were farmed out to private persons were introduced.<sup>8</sup> However, three such registers known for the province of Kefe lumped together the tax on marketed wine (*tamga-i hamr*), which affected both local and imported products as well as the tax on saloons (*meyhanes*) in the city of Kefe,<sup>9</sup> but they provide no information on viticulture per se. Therefore, the tax register of 1542 is a unique source for studying the actual taxes collected from the province's vineyards.

This province comprised the narrow strip of the peninsula's southern coast, naturally bordered on the north by the abrupt ridge of the Yayla mountain range, along with the adjoining mountainous district in the southwest corner of the peninsula around the city of Mangub. To this were attached three small dis-

<sup>6</sup> Istanbul: *Başbakanlık Archives: Tapu-Tahrir Defter #370*. I accept the dating of this *defter* suggested by Berindei and Veinstein (1979: 389).

<sup>7</sup> Istanbul: *Başbakanlık Archives: Tapu-Tahrir Defter #214* (hereafter TTD #214).

<sup>8</sup> A comprehensive list of financial documents pertaining to the province of Kefe demonstrates the increasing number of such registers since the middle of the sixteenth century (Fisher 1978: 191-205).

<sup>9</sup> For these data, see Öztürk 2000: 423, 433, 446.

tricts around the fortresses of Kerç, Taman and Azak. All of these places had been conquered in 1475, that is sixty-seven years before the survey of 1542 was compiled. A comparison of place names given in this register with the place names listed in the earlier *icmal* register, drawn up around 1520, as well as with contemporary maps of the region, shows only minor discrepancies, which can be overlooked for the purpose of the present study.

*Tapu-Tahrir Defter* #214 of 1542 includes data relevant to two taxes pertaining to viticulture. The first was levied exclusively on Muslim cultivators, and even though its revenues are listed in the register, they were leased out to tax-farmers under the heading *mukata'a-i kürüm der dest-i müslümanan* (the farmed-out shares of revenue from vineyards in the hands of Muslims).<sup>10</sup> The tax was collected from thirty-nine towns and villages, including the provincial capital of Kefe.

The second levy was the tithe on all forms of agricultural produce (10% of the crop),<sup>11</sup> which was also collected from the grape juice (*öşr-i şıra*) produced by non-Muslim cultivators, mostly Greek Orthodox Christians. In the *defter* the amount of this tax, exacted from each taxable unit (town or village), was entered both in kind (total *medres* = a unit of liquid measurement equal to 10,256 liters)<sup>12</sup> and in its cash value (6 *akçes* [a small Ottoman silver coin] per *medre*). The tithe on *şıra* was collected in sixty-six villages and towns, as well as in the provincial capital of Kefe, all situated in the south and southeast of the peninsula. In keeping with the more common Ottoman practice, the revenues provided by the tithe on *şıra* went to the local *timariots* (fief-holders). No additional viticulture-related taxes in favor of fief-holders, known in other regions of the empire under the names of *salariye* (Yücel and Pulaha 1995: 51-52)<sup>13</sup> or *hisse* (cf. Lowry 1992: 175), appear in the register.

<sup>10</sup> Leasing out the agrarian taxes as *muqata'a* to private persons was a common practice among holders of large *hass* benefices (see İnalçık and Quataert 1994: 65-66). This was the case in the province of Kefe where taxes levied on agricultural products were collected for the *hass* of the local *sancakbey* (*mirliva*). However, the tradition of farming-out taxes on vineyards in the Crimea goes back to the Byzantine practice, which continued into the time of the Genoese domination. In 1381, a certain Abram Gentile appears in the register of the financial office (*Massaria*) of the Genoese Caffa as a farmer of *ambelli apatici fructus vinearum de Locorso et Lobochocho* (Balard 1995: 28).

<sup>11</sup> While the *kanunname* of Kefe does not specify the actual amount of the tithe in Ottoman practice of the sixteenth century (unless specified otherwise), the *öşr* really was a tithe (i.e., 10% of production).

<sup>12</sup> İnalçık 1996: 178 (cf. 7 or 8 okka equal to 10-11.5 kilograms cited in İnalçık and Quataert 1994: 991).

<sup>13</sup> For a case in the Mardin province, see Akgündüz 1991: 101, and in the province of Ağrıboz (Euboea), see Akgündüz 1993: 395.

Viticulture-related taxes were not registered for the eastern districts (*kazas*) of the province of Kefe, areas such as the fortress towns of Kerç, Taman and Azak. Given the care with which the Ottomans collected taxes we may assume that had these regions possessed vineyards they too would have been taxed. Clearly, vineyards in the province of Kefe were located exclusively in the southern Crimea. The data showing the tax revenues derived from viticulture are shown in Figure 1.

Grapes were the single most valuable tax source in the agriculture of the province. They provided the treasury with one-fifth (21.4%) of the taxes paid by the local population (108,672 *akçes* out of 505,963 *akçes*), being second only to personal tax *ispence* only (140,195 *akçes* or 27.7%). By way of contrast, the tithe exacted from cereal crops such as wheat, barley and rye combined accounted for just one-eighth (12.5%) of the total revenues, that is 63,436 *akçes* out of 505,963 *akçes* in total taxes. The shares of viticulture related taxes in the total tax load assessed on villages and towns of the Southern Crimea can be adduced from the map (fig. 2). This map helps to evaluate the relative economic importance of viticulture in various places of this area. The next question posed by this data is what can such figures actually tell us about the overall wine production in the region?

*The rhetoric of fiscal interest: Terminology and rates, used for taxation of viticulture and wine production*

None of the taxes mentioned above, contain any specific indication that they were levied on wine. Rather, they refer in the case of Muslims to a tax on vineyards, and in that of Christians to a tax on grape juice (*sıra*). The customs taxes on marketed wine, mentioned earlier, could affect both local and imported produce and in no way can serve as a conclusive argument that wine was produced in the Crimea. This poses a question as to the extent to which the aforementioned data on acreage tax and the tithe on grape juice may be utilized in a study of wine production.

The ambiguity and controversy that surround the judiciary and literary discourse about wine in Islamic society warns against taking the aforementioned taxes at their face value. It is necessary to establish the real content of the terms, by which these taxes are referred to, and the purpose of their usage. It is crucial to understand the reasons for the controversy and incongruity between the taxes levied on Muslims and non-Muslims. Moreover, as neither of the two extant copies of the *kanunname* of the province of Kefe provides details pertaining to the exact nature of the aforementioned two taxes, it necessitates a broad look at the Ottoman taxation of viticulture.

Fig. 1. Taxes, derived from viticulture, in the villages and towns of the Southern Crimea (1542)

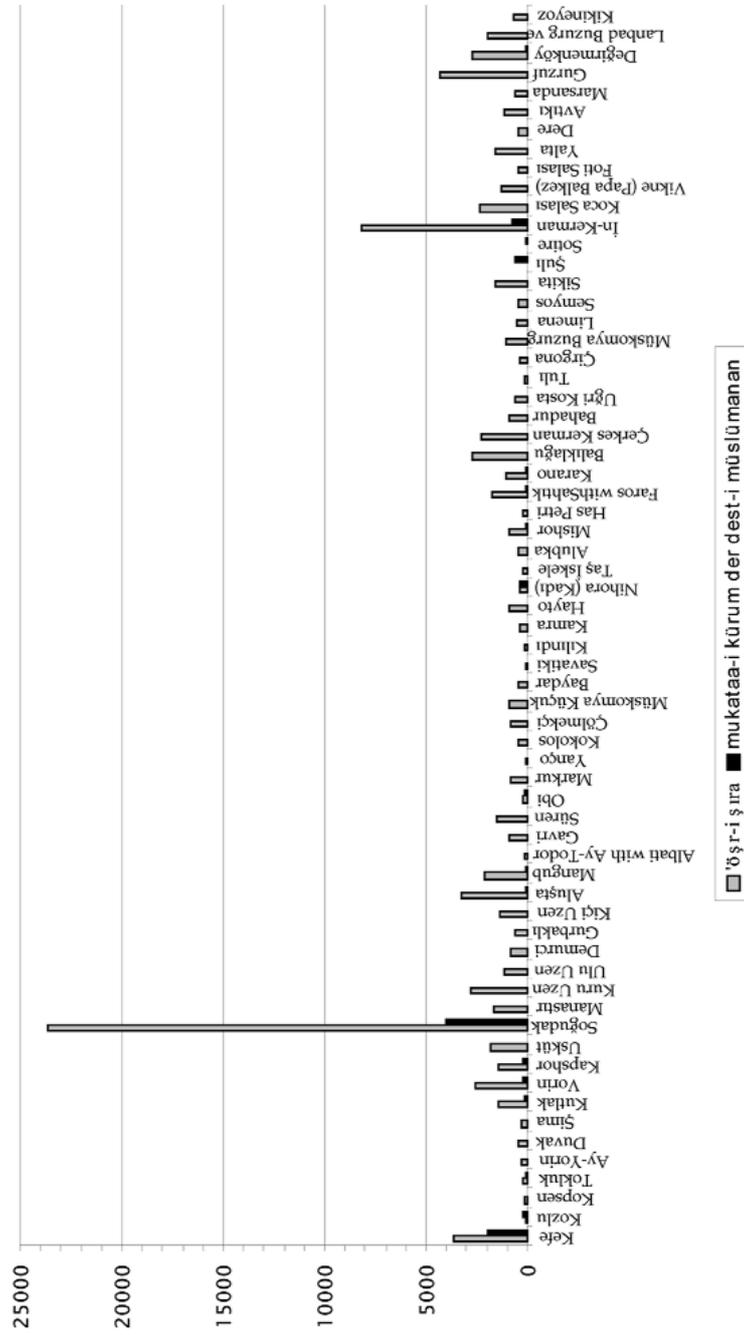




Fig. 2. Taxes, derived from viticulture, in the overall tax revenue, assessed on population of towns and villages in the Southern Crimea (1542).

‘*Ösr-i şıra*—The very meaning of the term *şıra* remained unclear for a long time. Recently Heath Lowry presented the evidence that explained the meaning of the term *şıra* as unfermented grape juice (Lowry 2002: 99-100).<sup>14</sup> But choosing *şıra* for the assessment of taxes due from viticulture hardly means that Ottoman subjects in the Crimea did not consume grapes, fresh or dry. Moreover, even the waste left after the extraction of juice was processed into spirit (‘*araki*).<sup>15</sup> So, *şıra* did not represent the total produce of the vineyards. In order to find out the reason *şıra* was used in this manner and to estimate what part of the crop it actually represented, we must examine the products derived from viticulture.

The fruit of the vine, that is fresh grapes, are the direct product of viticulture. Grapes can be consumed fresh, but because of natural fermentation, fresh grapes cannot be preserved for a long time. Grapes that are not consumed fresh could be processed as other products. They can be dried into raisins or processed into a variety of liquid products. A syrup or *pekmez*, produced by boiling the juice, was considered a valuable sweetener that could be stored for a long time, although it too was subject to fermentation.<sup>16</sup> If the fermentation was allowed to continue, the grape juice is transformed into wine. This does not stop the fermentation process as long as the wine contains the natural sugar of the grape. However, stored in caves, wine undergoes a sufficiently long period of ageing, during which it can be consumed in its partially fermented form. If the fermentation of the wine continues until all the sugar is neutralized, it turns into the non-fermented product of vinegar.

<sup>14</sup> The key argument in Lowry’s conclusions is based on the following observation from the book “The Present State of Morea” by an Englishman Bernard Randolph, who lived in the Morea in the 1670s: “Though Turks drink no Wine, yet they take New Wine and boyl it up to a Syrrup (which they call *Bekmez*, and we call Cute), putting it into small Jars, they drink it mingled with water, for this they account no Wine. They call New Wine *Shira*, and Old Wine *Shirab*.”

<sup>15</sup> Both versions of *kanunname* (TTD #370 and TTD #214) contain frequent references to ‘*araki*, *raki*, which is neatly distinguished from other alcoholic beverages, such as *boza* and mead, the latter being referred to as ‘*assel*, “Tatar honey” (*tatar bali*). Although tax regulations deal only with ‘*araki*, which was imported (mainly from Trapezund), local production of ‘*araki* existed as well, as references to experts in this craft (‘*arakıyeci*) point. TTD #214 contains references to Lefter ‘*Arakıyeci*, registered in the community of Greek Orthodox Christians, deported from Trabzon to Kefe (*cema’at-i Trabzonıyan*—p. 87), and ‘*Arakıyeci* Mustafa, a freed slave of a certain Edigen Tatar, registered in the Muslim community of the village Nihora, also known as Kadi (p. 147).

<sup>16</sup> This is why Bernard Randolph distanced himself from Turks on the issue, whether *pekmez* contained alcohol or not, as he wrote about *pekmez* (cute), that ‘this they account no Wine.’ Islamic tradition preserves the memory of a man who was punished on the order of *khalif* ‘Umar for getting drunk on *pekmez* (*tilā*’ in Arabic; see Wensink and Sadan 1978).

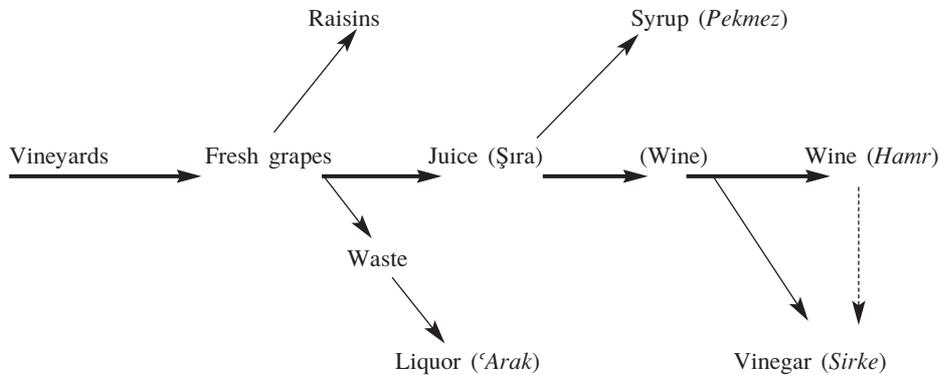


Fig. 3.

Thus, as it is shown in the above schema (fig. 3), other than the grapes themselves, all other products of viticulture represent consecutive stages in the processing of the fruit. Juice or *şıra* was the necessary first-step for making all of these liquid by-products, and its production most certainly accounted for the main part of the crop collected in vineyards. Moreover, liquids stored in large casks or other vessels were easy to take into account for purposes of taxation, whereas the assessment of the quantity of fresh grapes, which were consumed or sold before fully ripening, was simply impossible. That portion of the grapes that was brought to the market was taxed there, but otherwise this product was of no interest even to the pragmatic Ottoman tax collectors. Thus, by singling out *şıra* as the only tithed by-product of the vineyards, the Ottomans excluded from their accounting that part of the crop that was consumed in the form of fresh grapes (and dry raisins), and clearly indicated that the main by-product of viticulture was the grape juice and its other liquid by-products.

However, grape juice is a very unstable substance. Muslim jurists were aware that the ongoing fermentation of the liquid by-products of viticulture, except for vinegar, blurred the difference between the unfermented grape juice (*şıra*), syrup (*pekmez*), and fermented wine. Actually, vinegar too could be confused with wine.<sup>17</sup> The Hadith cautiously instructed that any beverage, even one prepared from raisins or dates, becomes a fermented intoxicant within just one day.<sup>18</sup>

<sup>17</sup> According to one Hadith, the Prophet was asked about the wine that takes the form of vinegar, and his answer was 'No' (Kueny 2001: 35).

<sup>18</sup> According to two Hadiths, quoted by Kueny (2001: 72-73), a drink prepared from raisins should steep no longer than several hours either between breakfast and dinner or overnight between dinner and breakfast.

From this point of view, the legalization of *şıra* alone was a de facto permission for wine production by non-Muslims. Indeed, the absence of *şıra* among the marketed products mentioned in the *kanunnames*,<sup>19</sup> is vivid proof that it was in fact an unstable substance. Thus, the *‘öşr-i şıra* was levied on the by-product, which was not consumed or marketed in its pure form and was rather processed into one of three other liquid products, i.e., wine, syrup and vinegar.

The reference in the *kanunname* of Selim I to taxes levied on marketed vinegar and (syrup) *pekmez*,<sup>20</sup> indicate that some portion of what had originally been taxed as *şıra* was subsequently processed into these by-products. However, the evaporation of two-thirds of the volume of the juice during the preparation of *pekmez* required both a significant outlay of effort (manpower) and resources (wood) within a very short time. It could hardly have tempted Christians to produce large quantities of *pekmez* because they, unlike their Muslim counterparts, could consume wine. *Pekmez* was not even mentioned in the law code of Kefe. As for vinegar, its production was limited by the demand, which was not to be compared to that for wine. After all, vinegar was a by-product of wine and in the *kanunname* of Kefe it was referred to only in connection with the customs and market taxes levied on wine.<sup>21</sup> This attests to the fact that the production of vinegar and *pekmez* could not account for a significant portion of the *şıra* shown as taxed in the registers.

In contrast to this, the tax regulations concerning wine are a very pronounced feature in the Ottoman legislation. In the law code of Kefe, the relevant cases are treated in four chapters, which will be discussed in the last part of this article. This allows us to infer that in Kefe, like in many other places, the production of *pekmez* and vinegar among the non-Muslims was not important, and that the majority of the *şıra* being taxed was subsequently being processed into wine. Since the Crimea is our major concern, it is noteworthy that a similar profile is presented in several other sources, including the register of arrears of customs dues for the port of Kefe in 1487-1490, in which wine appears as the

<sup>19</sup> As marketed product, *şıra* was mentioned once in the *kanunname* of the island of Imroz (TTD #75 [1519]), but in this case it was implied that the produce was purchased directly from the peasants (*cümle köylerinde satılan şıralardan medre başına bir akçe virürler—* “[a tax] one akçe per each medre is levied on the grape juice, sold in all villages”). However, given the short-living nature of *şıra*, this term most probably stood for wine (Akgündüz 1991: 398).

<sup>20</sup> See also the Imperial law code (Yücel and Pulaha 1995: 57-58, 191-92).

<sup>21</sup> One reference mentions vinegar that was transported through the port of Kefe, and another does this only in connection with wine when the tax rates levied on wine were extended to include vinegar. The latter was clearly to prevent smuggling wine under the name of vinegar.

only local by-product of viticulture visible on the market (İnalçık 1996). This interpretation is supported by the testimony of the extant *tahrirs* for the Aegean island of Limnos, where a detailed listing of the products subject to customs and market levies mentions neither syrup nor vinegar, and therefore evidently all of the island's *şıra* was being fermented into wine.

Thus, by way of deduction, it becomes clear that what the scribes compiling the registers called *şıra* was in fact wine.<sup>22</sup> For example, as the aforementioned census of Limnos from 1490 was carried out in January of that year (Lowry 2001: 9, 173), that is two or three months after the grapes were harvested and juiced, the census takers could not have encountered unfermented grape juice. What they did was refer to the wine they encountered as grape juice, that is, *şıra*. A close reading of the *kanunnames* of Limnos actually proves this assumption. In the clause dealing with the taxes levied on marketed wine, that part of the wine (*hamr*) that was taken for the treasury was referred to as juice (*şıra*)!<sup>23</sup> This leaves no doubt that the term *şıra* expressed only a learned abstraction that served as a legal euphemism for wine.

A brief survey of the introduction of the term *şıra* in Ottoman tax registers helps to understand the intention of such usage. The census-takers from the fifteenth century reveal their confusion when it came to naming the taxable product of vineyards. In the earliest surviving registers the tithe levied on vineyards was called just the tithe from vineyards (*öşr-i bağat*), while its produce was given in a liquid measurement (*medre*), which in fact pointed to the forbidden product.<sup>24</sup> With the passage of time, during which even personal drinking habits of sultans themselves became the target for *ulema* criticism,<sup>25</sup> the logic called for the removal of this ambiguity. The product should have either been properly defined or prohibited. So, by choosing the virtual product of unfermented grape juice or *şıra* as the primary taxable by-product of viticulture, a workable solution to this legal quandary was found.

<sup>22</sup> According to the study of Mehdi İlhan, the census-taking campaign in most cases took about one year (İlhan 1987: 19).

<sup>23</sup> Cezirede olan kurada satılan hamırdan yirmi medreden yüz medreye dahı ziyadeye varınca iki medre şıra alınıp hassa-i hümayun için zabt alınır ("From the wine, which is sold in the villages of the island, from twenty up to one hundred medre at the most two medre of grape juice is to be taken for the Treasury"). For the transcription and facsimile, see Lowry 1990.

<sup>24</sup> *öşr-i bâğât 1600 medre fi 5 yekûn 8000* (İnalçık 1954: 89, fol. 108b).

<sup>25</sup> Lowry (2003) refers to two such cases that took place during the reign of sultan Murad II.

The earliest *tahrirs* known to me, where the terms *şıra* and ‘*öşr-i şıra* were used, were the *tahrirs* of Trabzon (Trapezond) of 1487<sup>26</sup> and Limnos of 1490.<sup>27</sup> Perhaps it was not accidental that the populations of both these provinces were overwhelmingly Christian, and that both were major wine producing areas. In Limnos, the tithe from *şıra* was levied together with yet another tax that was assessed according to the acreage of vineyards (*resm-i dönüm*). The ultimate adoption of this term took several decades, during which the creativity of the Ottoman bureaucrats still produced such terms as *resm-i bağ*, *bağ akçesi* or *bağ haracı* for the same kind of tax (Akgündüz 1991: 253, 255). The appearance of the term *şıra* in the Imperial *Kanunname* (law code), issued during the reign of Selim I (1512-1520) suggests that by the opening decades of the sixteenth century it was being used throughout the empire.<sup>28</sup> Such tax policy of the Ottomans with regard to viticulture and wine production may be regarded as a good example of its *istimalet* (accommodation) policy toward its subjects, who remained predominantly Christian and for whom wine was an important component in their diet and religious practices.

This analysis proves that the introduction of the term *şıra* sought to provide the Islamic state of the Ottoman Empire with a legal basis, allowing it on the one hand to preserve viticulture for the sake of internal stability of the expanding state, and on the other to exploit this important fiscal source. Stated differently, the appearance of the tax levied on vineyards in the form of ‘*öşr-i şıra* did not reflect the Ottoman interest in levying tax on grape juice, but rather manifested the sustained effort on the part of the Ottoman state to legalize collecting taxes from the wine produced by its non-Muslim subjects.

Also, the introduction of the term *şıra* fully complied with the logic of Islamic law, which completely forbade the production of wine but allowed taxation of commerce in wine. This made it appear as if *şıra* was processed in products other than wine, while marketed wines were all imported. This is the case in Kefe, where significant amounts of marketed wine were brought from other territories. But the case of Limnos serves as an excellent illustration of the

<sup>26</sup> The *tahrir defters* of the province of Selanik (Thessaloniki) from 1465 and 1478 still refer to ‘*öşr-i bağ* (tithe on vineyards), but in the *tahrir* of Trabzon (Trapezond) from 1486/7, the produce of vineyards, accounted for taxation, is termed *şıra* (see Lowry 1992a: 158-59; 1992b: 175).

<sup>27</sup> See the text of *kanunname* stipulating the levy of the tithe from the grape juice in Lowry (2002: 182-83). This term is also used in the *kanunname* of the islands of İmroz (now Gökçeada) and Taşoz (Thasos) (Akgündüz 1991: 398, 404).

<sup>28</sup> bağların hasıl olan şıralar . . . (*şıra* due from the vineyards) (Yücel and Pulaha 1995: 79).

opposite reality in another important wine-producing area. The tax and customs regulations of the port from the 1519 *kanunname* of Limnos clearly deal only with the export of locally-produced wine (cf. Lowry 2002: 9, 173). This is in keeping with the fact that in many places of the Ottoman Empire and beyond, Limnos was famous for its red wine, produced from small grapes of the local sort (*kalambaki*), known since antiquity.<sup>29</sup> This parallel example strengthens the argument that in the Crimea *şıra* was mainly, if not exclusively, fermented into wine, and the amount of *şıra* can be considered equivalent to that of the amount of wine,<sup>30</sup> rather than any other substance.

*Resmi-i dönüm and other taxes, levied on vineyards in possession of Muslims*—The Prophet's message instructed those wine-producers who converted to Islam to conserve their grapes only in the form of dry raisins (Kueny 2001: 72). Juice from grapes, prepared by pressing them, was considered to be wine and was prohibited to Muslims by the authority of Hadith (Wensink and Sadan 1978: 995b). Therefore, even though the jurists of the Hanafi school (*madhhab*) allowed moderate consumption of wine, particularly for medicinal purposes (Wensink and Sadan 1978: 996a), the explicit prohibition of wine along with other liquid by-products of grapes, limited Muslims' engagement in viticulture. Thus, the tithe on *şıra* (*öşr-i şıra*) was inappropriate for Muslim cultivators. It was therefore necessary to invent another tax for them.

If Muslims, according to their creed, could enjoy vineyards for the pleasure of tasting grapes and raisins only, elementary fairness required that Muslims would pay less tax, because grapes and the raisins they produced were cheaper than wine, *pekmez* or vinegar. Therefore, the tithe levied on grapes and raisins had to be lower than the tithe levied on *şıra*. But the accounting of these two products for taxation was problematic, and therefore they were entirely disregarded in the assessment of the *öşr-i şıra* as was indicated earlier. The introduction of the tithe on *pekmez*<sup>31</sup> or vinegar, permissible in the opinion of Hanafi jurists, could be neither universal nor fully inclusive of all products. The tithe on the vineyards of Muslims should have been formulated in such a way that

<sup>29</sup> It was called 'limon' in the Crimea around 1490 (İnalçık 1996: 135-137). This term did not denote the lemon juice, as suggested İnalçık. In Moldavia and the Polish-Lithuanian Commonwealth, where Greek merchants brought it, it was known under the name 'limonya' (Podgradskaya 1991: 205). Nowadays it is still called, at least in Greece, 'limnio.' (Dimi-triadis 1995: 52; I thank H. Lowry for this reference).

<sup>30</sup> The ageing of wine, which entails the evaporation of the product, was not a common process until the late seventeenth century, when Madeira wine was introduced. Therefore, most wine was consumed during the first year of its life before it would completely ferment into vinegar.

<sup>31</sup> The tithe on *pekmez* was levied at the rate of 1/15 of the produce (Kazııcı 1977: 93).

it would refer to the grapes and allow effective assessment of the tax, but at the same time include all products of viticulture. It was not an easy task. A number of propositions were advanced.

In the imperial law code of Selim I, three kinds of taxes were enumerated on vineyards whose owners were Muslims.

If according to the current tax register the acreage tax (*resm-i dönüm*) is levied on the given vineyard the *dönüm resmi* is to be taken. The vineyard is measured by the rope, the length and the width of it are to be fifty-five *zira*<sup>6</sup> (if taylor *arşuns* are used), or forty-five *ağaç* (if construction *arşuns* are used). Then *resm-i dönüm* is taken.

But if (according to the current register) the fixed amount of money (*maktu'*) (is assigned to a given vineyard), then an amount matching to the tithe is to be taken.

If the fixed sum of the tax is not assigned, as if the tithe were to be taken, then after the grape ripens, reaches its perfection, in the places, where it is consumable the tithe is to be taken. But *'öşr-i şıra* is to be taken, (if it was prescribed) in the register.

If (according to) the old register (*tahrir*) vineyards are shown as belonging to infidels and paying the tithe from *şıra* (*'öşr-i şıra*), and if these (vineyards) pass into the hands of Muslims *'öşr-i şıra* is not to be collected, rather the tithe is to be collected from their grapes."<sup>32</sup>

The first tax was termed *resm-i dönüm*, and it was assessed on the size of vineyards, though the law failed to explain at what rate. The second tax was levied as a fixed share of the revenues equal to the tithe, but without specifying which product it would be levied on. From these passages it becomes clear that this tithe was to be assessed on the fresh grapes and not on *şıra*. So, this was the third tax, which should have been called *\*'öşr-i üzüm* (tithe of grapes), but as in fact it was left unnamed, it apparently existed only in theory. So, all three taxes were unspecified with a vague reference to the grapes and no instruction as to the rate of taxation.

Fortunately the *kanunname* for the Morea (Mora) in southern Greece, another wine producing area, provides evidence that in fact this tithe substitute (*bedel-i 'öşr*) of *'öşr-i şıra* levied on Muslim owned vineyards was assessed in cash at the rate of 4 to 5 *akçes* per *dönüm* of vineyard. Although the grape was not

<sup>32</sup> Ve bağ ahvali defterde *resm-i dönüm* yazılmış ise *dönüm resmi* alınur. Bağ ölçüsünün ipi vardır, derzi arşunıyla elli beş *zira*'dır, ki bina arşunıyla kırk beş *ağaç* olur *resm-i dönüm* ile alınur.

Amma bağlar *maktu'* ise, *'öşre* mu'addil *maktu'* alınur. Eğer *maktu'* kayd olmayub, *'öşr* yazılmış ise, üzüm irişüb, kemalin bulub, ekl-i kabil olduğu mahalde *'öşr* alınur. Amma defterde *'öşr-i şıra* alınur. Hin tahrirde kefere ellerinde bulunan bağlardan *'öşr-i şıra* yazılmışdır ba'dehu ol bağlar müslüman eline girse *'öşr-i şıra* virmez hasıl olan üzümlerinden *'öşr* virür (Yücel and Pulaha 1995: 72). In Morea Muslims were still obliged to pay the tithe from the vineyards owned by non-Muslims but this was an exception to the rule (Akgündüz 1993: 624).

directly mentioned in the text, it was clearly implied, because the law prescribed to collect the tithe from *şıra* if Muslim owners of vineyards produced it. The only way to account for all the grapes received from vineyards, no matter how they were used, was by determining the size of the vineyards and their estimated average productivity. By estimating the average productivity of grapes per *dönüm* in the fixed range between 40 and 50 *akçes* (that is the tithe multiplied by 10), the tax could be easily assessed. That is how the land unit *dönüm* appeared as the object of taxation. It also reveals that all three taxes, outlined in the *kanunname* of Selim I, were in fact one and the same tax, equivalent to *resm-i dönüm*. The following passage contains this key information.

Throughout the province on the vines owned by Muslims, if they are indeed planted by themselves and not purchased from the infidels, the tax is to be levied in substitution of the tithe (*bedel-i 'öşür*) in the amount of 4 *akçes* per *dönüm* in some places or 5 *akçes* per *dönüm* (in the others). This should be entered in the defter in the appropriate place. But if so happens, that they (i.e., Muslims) press juice (*şıra*) and sell it, then they have to pay the tithe. Also if the vineyard is purchased from infidels, they have to pay the tithe.<sup>33</sup>

It was a remarkable solution for the problem of how to adjust the fiscal interest of the Islamic state to the prescriptions of Islamic law. The terms *dönüm* and *kyürüm*, just like *şıra*, did not reflect the true object for taxation. A true tithe on grapes (as one might expect: \**'öşür-i üzüm*) has not been formulated as such; rather it was replaced by the *resm-i dönüm*, assessed in cash. The decision not to mention the taxable product is indicative of its purpose, which was to leave Muslim producers the freedom to choose what to produce from their grapes.

The object of taxation was completely blurred by the permission for Muslims to produce *şıra*, which required them in this case to pay *'öşür-i şıra*.<sup>34</sup> However, the enforcement of this regulation would require the census-takers to define which part of every Muslim-owned vineyard yielded grapes that were subsequently processed in *şıra* and which yielded grapes that were consumed fresh and dry. Otherwise, two taxes would be levied on the grapes harvested from one vineyard, which would have been unfair with regard to Muslims. Only if the entire vineyard was used for producing *şıra*, as one might expect to be the

<sup>33</sup> Ve cümle vilayetde müslümanlar elinde olan bağlar, eğer kendiler dikmişler ise ki, kâfirden alınmamış ola, bedel-i 'öşür her dönümüne dörder akçe ve bazı mahalde beşer akçe verürler. Defterde mahallinde mesturdur. Amma şöyleki şıra edüb satarlar, öşür verüler. Ve eğer kefereden alınmış bağ ise 'öşürün verürler (Akgündüz 1993: 624).

<sup>34</sup> Amma şöyleki şıra edüb satarlar, öşür verüler (But if it so happens, that they [Muslims] press juice [şıra] and sell it, then they have to pay the tithe) (Akgündüz 1993: 624).

case with vineyards of non-Muslims which passed into the hands of Muslims, could census-takers safely levy the tax on *şıra*. Actually, the Ottomans were interested in maintaining this revenue source and the law prescribed this as the means of doing so.<sup>35</sup> But Muslims could avoid such tax adjustment if they developed new vineyards or worked the abandoned ones, whose previous owners were unknown.

More important was the permission de jure to produce *şıra* by Muslims. This allows the data on *resm-i dönüm* to be used for the estimation of production of viticulture and winemaking. However, it would be untrue to claim that by this permission the prohibition was rendered completely irrelevant. On the contrary, the latter was reiterated in the imperial law code,<sup>36</sup> thus providing the state with means of deliberate control over viticulture and related industries. The concrete policy regarding viticulture and wine production depended on the real conditions on the ground and the political objectives of the Ottomans in different places and at different times. It was up to the central government to decide what to permit and what to forbid in a particular area at a particular time. This was an important variable that this current study reveals. It is with this in mind that I would like to use the data on the tax, levied on the vineyards of Muslims, in estimating wine production in the Crimea.

#### *Production of wine by non-Muslims*

The previous analysis showed that the amount of *öşr-i şıra* was one-tenth of the total amount of *şıra*, which was assessed on all of the vineyards of non-Muslims and possibly on some of the vineyards of Muslims (those formerly in the hands of Christians) who used them for making *şıra*. The census-takers in the Ottoman province of Kefe in 1542 determined the amount of the tithe as 16,499 *medre* of *şıra*. Consequently, by multiplying this amount by 10, the total output of *şıra* from the vineyards of non-Muslims can be estimated as 164,990 *medre*. This amount corresponds to the amount of wine into which the grape juice was processed.

<sup>35</sup> Amma defterde 'öşr-i şıra alınur (But 'öşr-i şıra is to be taken, [if it was prescribed] in the defter) (Yücel and Pulaha 1995: 72).; Ve eğer kefereden alınmış bağ ise 'öşrün verürler (Also if the vineyard is purchased from infidels, they have to pay the tithe) (Akgündüz 1993: 624).

<sup>36</sup> "If any Muslim sells or presses wine . . ." (Eğer Müslim hamr satsa yahud sıkısa . . .) (cf. Yücel and Pulaha 1995: 34, n. 14; Tveritina 1969: 35).

*Wine production by Muslims (the first estimate)*

Although the *kanunname* of Kefe does not specify the basis for computing the amount of the tax *mukata'a-i kyürum der dest-i müslümanan*, the previous analysis showed that it could be equal to 4 or 5 *akçes* per *dönüm* of vineyards. The data on this tax assessed on villages contain more totals that can be roundly divided by 4 than those that can be divided by 5. This leads to the assumption that this tax was fixed at the rate of 4 *akçes* per *dönüm*. The total amount of *mukata'a-i kyürum der dest-i müslümanan* (share of revenue from vineyards in the hands of Muslims) in the Ottoman Crimea in 1542 was 9,678 *akçes*.

Through the previous analysis of *mukata'a-i kyürum der dest-i müslümanan* it was demonstrated that, despite its vague definition, it reflected the tithe from the estimated value of grapes produced on each *dönüm*. On the basis of this tax, the following inferences are possible: 1) the size of the vineyards, 2) the value of fresh grapes on which tax was assessed, and 3) the productivity of the Muslim-owned vineyards.

- 1) The size of the vineyards is calculated by dividing the total 9,678 *akçes* by 4 *akçes/dönüm*, which yields 2,419.5 *dönüms* of vineyards.
- 2) If the total 9,678 *akçes* is the tithe from fresh grapes, the total produce of Muslim owned vineyards equaled 96,780 *akçes*.
- 3) If the tax rate of 4 *akçes/dönüm* was essentially the tithe (10%), the average cash value per *dönüm* of fresh grapes, on which this tax was assessed, would be 40 *akçes/dönüm*.

None of the results specify the amount of *şıra* received from the Muslim owned vineyards, even if we assume, for estimation purposes only, that all grapes yielded from these vineyards were processed into *şıra* and subsequently into wine. However, knowing the official cash value of *şıra*, which was 6 *akçes* per *medre*, it is possible to determine how much *şıra* could be produced from the fresh grapes yielded from one *dönüm* of Muslim owned vineyards, which would thus lead to the estimation of the total *şıra*/wine production. So, 40 *akçes* of the fresh grapes corresponded to the cash value of 6.67 *medre* of *şıra*/wine (= 40 *akçes*: 6 *akçes/medre*). Thus, the average productivity of the vineyards owned by Muslims, as it was fixed by the tax rate, corresponded to 6.67 *medre* of *şıra*/wine per *dönüm*.

Before proceeding to the estimation of the total produce, one should ask how realistic is the estimate of vineyard productivity thus obtained? There are no data on the productivity of vineyards in the Ottoman Crimea. The only point for comparison is provided by modern statistics for the region. But first, the

quantity of fresh grapes that could be processed into *şıra* should be established. Given that juice corresponded to about 70% of the weight of fresh grapes, while 30% was lost to waste, the initial amount of fresh grapes, necessary for production of 6.67 *medre* of *şıra*, must have been approximately 100 kilograms. Thus, 40 *akçes* was the price of approximately 100 kilograms of fresh grapes produced per *dönüm*.

By modern standards 100 kilograms per *dönüm* is quite a modest crop. Yet it was not unusual in the Crimea even as late as the first half of the twentieth century, to see similar yields. For example, the statistical survey by the Russian general governor of *Tavrisheskaya guberniya* (province) for the year 1905<sup>37</sup> provides the data on vineyard productivity by districts, which can serve as a point for comparison (see Table 1). The data from three districts that cover the territory of the former Ottoman province were selected. To better serve the purpose of comparison, they were converted into the production units and taxes according to the Ottoman system of measures.

Table 1. Production of the vineyards in the Southern Crimea according to the statistic survey of 1905.

<i>District</i>	<i>Yield of fresh grapes (puds/desiatina)</i> <sup>38</sup>	<i>*Yield of fresh grapes (kilograms/dönüm)</i>	<i>*Yield of şıra (medre/dönüm)</i> <sup>39</sup>	<i>*Hypothetical amount of 'öşr-i şıra (akçe)</i>
Yalta	88.5	118	8	4.8
Theodosia (Kefe)	45.5	60.7	4	2.5
Simferopol	101.2	135	9.2	5.5

<sup>37</sup> Обзор о состоянии Таврической губернии за 1905 год (The survey of Tavrisheskaya guberniya for 1905). Simferopol: 1906, chapter (vedomost') 3 (no pagination).

<sup>38</sup> Russian *pud* = 16 kilograms, Russian *desiatina* = 1.0925 hectares. Calculated on the basis of data reported in Обзор о состоянии Таврической губернии за 1905 год. Compare the average capacity of the vineyards in the Crimea in 1920 (80 *pud* per *desiatina*, would correspond 107 kilograms per *dönüm*). See Dayneko 2000: 8. The same figure for the district of Soğudak in 1939 was given in the volume on Krims'ka oblast' from the serial edition "The History of Cities and Villages of Ukrainian Soviet Socialist Republic" (*Історія міст і сіл Української РСР: Кримська область*) (Kiev, 1974), 668. The propagandist book "Советскому Крыму двадцать лет" (The twenty years of the Soviet Krym) (Simferopol, 1940) reports two to five times higher figures (pp. 96, 154) for the years 1936 and 1939.

<sup>39</sup> A loss of 30% of weight of fresh grape in juicing was taken into account.

The data are strikingly close to the estimated level of production chosen by the Ottoman tax officers in 1542 for their assessment of the average vineyard productivity in the Crimea.

Since it was established that the yield 6.67 *medres/dönüm* is a realistic estimate, the total product of *şıra*, which could have been obtained from all Muslim owned vineyards can be estimated at  $2,419.5 \text{ dönüms} \times 6.67 \text{ medres per dönüm}$  yielding a total of 16,138.065 *medres*.

*Wine production by Muslims (the second estimate)*

Since the quantity 16,138 *medres* of *şıra*/wine is true only for the average productivity of 100 kilograms of fresh grapes or 6.67 *medres* of *şıra* from each *dönüm* of vineyard, there is a need to provide another estimate, which would take into account different levels in the productivity. Such an estimate too can be made only by the way of comparison between the taxes, paid by Muslims and non-Muslims, which makes it possible to translate the amount of acreage tax into the amount of produce possible. Therefore it is necessary to analyze, how the proportion between the tax loads of Muslims and non-Muslims would change with the differential of the productivity. For this purpose, the functions of both taxes in their relation to the productivity of vineyards are graphically represented in figure 4.

This graph shows that if the productivity of vineyards dropped below the level of 100 kilograms/*dönüm*, as was the case in the Theodosia district in 1905 (see Table 1), non-Muslims would have to pay at the rate 2.5 *akçes/dönüm*, whereas Muslims would pay 4 *akçes/dönüm*. However, once the capacity of vineyards reached 200 or 300 kilograms per *dönüm*, or 13.3 or 20 *medres* of *şıra* per *dönüm*, Muslims would have paid correspondingly two or three times less than non-Muslims.

What was the reality in the Crimea for the sixteenth century? The optimal yield in the 1920s would be 5-30 *medres* per *dönüm*,<sup>40</sup> while the average figures, could be much lower (as we have seen from the data, presented above in Table 1). The data from the *tahrir* of the island of Limnos in 1490 suggest, that the census takers made their assessment of *öşr-i şıra* on the basis of the fixed estimated average yield of *şıra* as 20 *medres* per *dönüm* (Lowry 2002: 102-106, table 14). Although the capacity of the *medre* used in Limnos remains an open question it could be close to or even higher than the *medre* of Kefe. Therefore, judging by the example of Limnos, 20 *medres* per *dönüm* was likely to reflect

<sup>40</sup> 150-300 Russian *vedros* of wine per *desiatina* of vineyard was equal to 15-30 *medres* per *dönüm*. This was reported to be an optimal yield in the 1920s (Bogdanov 1910: 244).

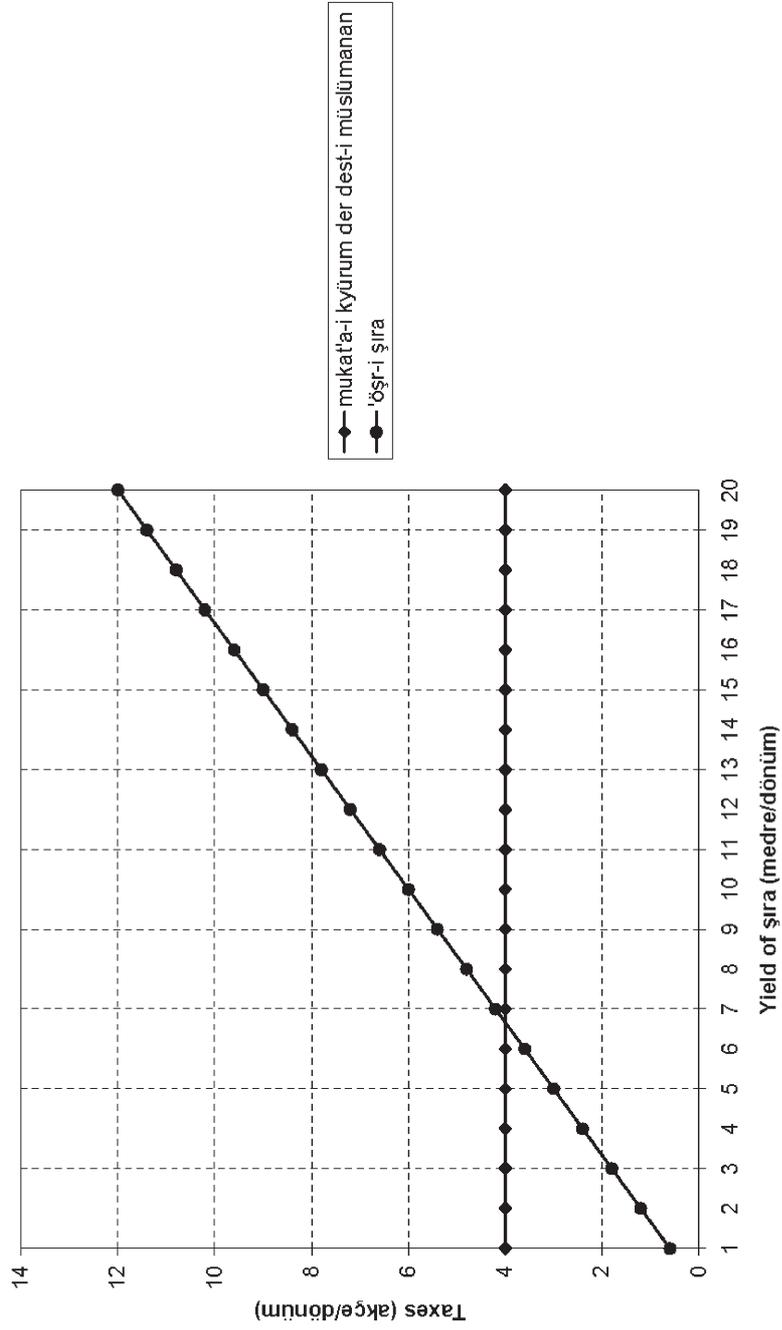


Fig. 4. Taxes, due from Muslim and non-Muslim viticulturers depending on productivity of their vineyards

a standard productivity. Had the same been true for the Crimea, the tax load of Muslims would have been three times less than that of Christians (20 *medre* per *dönüm*: 6.67 *medre* per *dönüm*). In this regard it is worth noting that the *kanun-name* of the foundation (*vakf*) of sultan Murad II in Edirne (1557), while overtly allowing Muslims to pay three times less than “infidels” even under the same tax on vineyards (*resm-i bağ* “traditional vineyard tax”), maintained this proportion:

*Resm-i bağ* is levied on Muslims on all kinds (of vineyards) at four and on unbelievers at twelve *akçes*.<sup>41</sup>

Thus, the translation of the amount of *mukata'a-i kyürum der dest-i müslümanan* (share of revenue from vineyards in the hands of Muslims) into the amount of *şıra/wine* on the basis of the value of 1 *medre* of *şıra*, requires the use of the co-efficient, which would take into account the actual productivity of vineyards. For example, if the actual productivity of vineyards was 20 *medre/dönüm*, this is three times more than 6.67 *medre/dönüm*, which was the basis of the first estimate. Thus, the actual amount of *şıra/wine* produced by Muslims would be three times more than was first estimated as 16,138 *medres* and would make 48,414 *medres*.

However, in view of the data available for the Crimea in the late nineteenth century and early twentieth century, the co-efficient 2, which corresponds to the yield of 200 kilograms of fresh grapes or 13.3 *medres* of *şıra/wine* per *dönüm*, seems to be more realistic. Using this co-efficient, the amount of *şıra/wine* annually produced by Muslims in the Ottoman Crimea can be estimated as 16,138 × 2 totaling 32,276 *medres*.

#### *The Muslim expansion in viticulture*

The previous analysis demonstrated that the low tax rate of *mukata'a-i kyürum der dest-i müslümanan* (share of revenue from vineyards in the hands of Muslims) granted to Muslims a significant tax break in the case of high yield vineyards. This raises the question of whether such a tax break indeed stimulated Muslims' engagement in the viticulture? The answer, if positive, would provide an argument in favor of either the co-efficient 2 or 3, discussed above.

It is fair to assume that Muslims, if they were interested in taking advantage of favorable taxes in viticulture, would attempt to own better and more productive vineyards. While it is impossible to estimate the quality of every vineyard

<sup>41</sup> Ve *resm-i bağ* müslümanlardan beher nevi dört ve gebrandan on ikişer *akçe* alınur (Akgündüz 1993: 535).

in the hands of Muslims, the *tahrir defter* allows us to recognize those areas that were better suited for growing vines. The share of the tax revenues, derived from viticulture, helps to define such areas.

*Areas of viticulture in the Southern Crimea*—As it was established earlier, the revenues derived from viticulture accounted for 21.4% of the total tax revenues assessed on the products of agriculture in the province of Kefe. In thirty-two villages and towns of the southern Crimea viticulture accounted for more than a quarter of the total taxes entered in the *defter*. The map (fig. 2) provides a clue to regional differences in viticulture. However, such a traditional way of visual presentation, as was used in this map, hampers accurate accounting for the share of particular taxes in the overall composition of the tax loads assessed on different tax units. It is difficult to abstract from the impression that a narrow wedge on the oversized “pie” would naturally look bigger, than even a half of a smaller “pie.” To eliminate such interference, I would suggest using the ranges of the same color in order to reflect the total share of viticulture-related taxes in the overall tax revenues assessed on the towns and villages. This color will be applied to conjecturally defined economic areas of each town or village.<sup>42</sup> This way the same data (see the map in figure 5) help to recognize four specific regions in which viticulture was the most lucrative branch of agriculture. Such were the valleys around Soğudak (area I), In-Kerman and Mangub (area II). The area near Balıklağı is another such region (area III), although the level of production seen in its surrounding villages was rather uneven. On the coast between Yalta and Alušta (area IV), which now produces the most famous fine wines in the Crimea, viticulture appears to have been an important branch of activities for local peasants in the sixteenth century, although much less so than in previously mentioned areas.

*The expansion of Muslims in the main areas of viticulture and wine production*—The detailed register does not indicate the owners or tenants of the vineyards or their size.<sup>43</sup> Therefore it is difficult to establish with precision who

<sup>42</sup> To date, such methods of mapping—apparently because of difficulties in defining administrative, economic or other areas—have only rarely been used in Ottoman studies (see Göyünç and Hütteroth 1997: 94, 100, 104). But the present study demonstrates that the risk of abstraction from the geographic reality in defining the economic areas for each town or village is rewarded by the possibility of more subtle observation.

<sup>43</sup> The rentable vineyard of the Imperial Palace in Kefe, once mentioned in the synoptic tax-register from around 1520, possibly had a Muslim tenant: Mukata‘a-i icare-i Saray-i Hassa ma‘ bağ ve bağçe der kurb-i Kefe—fi sene 1500 [akça] (TTD #370, p. 483). However, a separate vineyard yielding the tax revenue 100 akça, entered in the *defter* of 1542, was rented by a Christian Greek named Borançı son of Baba son of Kiryakoz: Bağ-i Baba veled-i Kiryakoz, hasil-i bedel-i ‘öşr, haliyan der tasarruf-i Borançı veled-i Baba mezbur (TTD #214, p. 114).

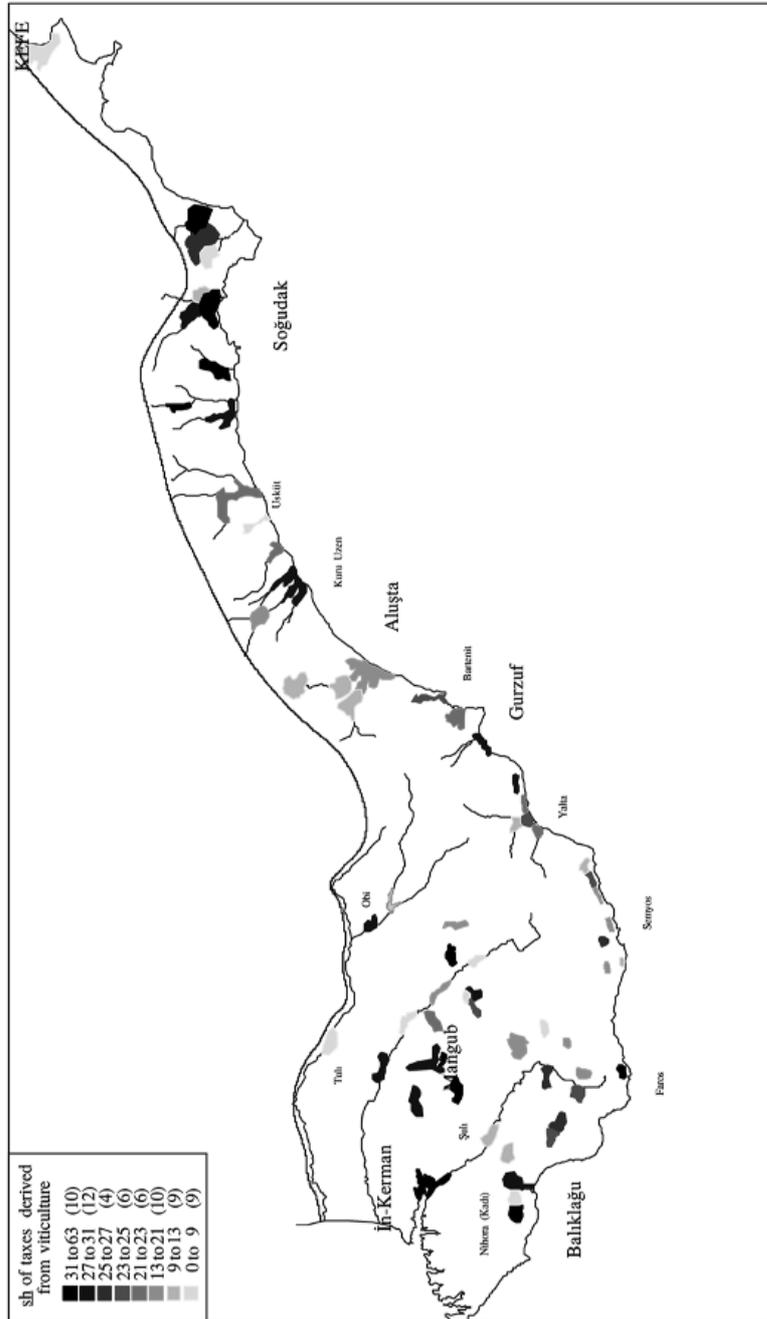


Fig. 5. Taxes, derived from viticulture, in the overall tax revenue, assessed on population of towns and villages in the Southern Crimea (1542).  
*(Note: the economic areas of towns and villages are purely conjectural and serve only to the purpose of the present study)*

actually owned the vineyards, let alone who worked them. And yet the data contain several indications of the growing engagement of Muslims in viticulture.

First, tax revenues from the Muslim-owned vineyards increased. Although the summary *tahrir defter* TTD #370 from around 1520 contains mainly the totals of the tax revenues, levied on the villages and towns, in five cases it also provides the break down of the totals by the sources of revenue, comparable to that, provided by TTD #214 of 1542. The matching data, presented in Table 2, help to trace the changes in taxation of viticulture during the period of two censuses, when the extant *defters* were compiled. The data reveals the growth of tax revenues derived from the Muslim owned vineyards in all five cities. At the same time, the amount of *'öyr-i şıra* levied on non-Muslims increased only in Mangup, while it remained stable in Kefe and Balıklağū and even shrunk in Soğudak and İn-Kerman, which were centers of the most important areas of viticulture.

Table 2. Tax revenues derived from the Muslim owned vineyards in the cities of the sancak of Kefe in ca. 1520 and 1542 (akçe).

Towns	Non-Muslims (1520)	Non-Muslims (1542)	Non-Muslims ±	Muslims (1520)	Muslims (1542)	Muslims ±
Kefe	3,600	3,600	0	600	1,964	+1,364
Balıklağū	2,700	2,700	0	388	550	+1,72
Soğudak	31,878	23,640	-8,238	3,798	3,996	+198
İN-Kerman	8,400	8,208	-192	666	788	+122
Mangup	1,200	2,100	+900	8	48	+40

The growing engagement in viticulture on the part of Muslims, however, can be partly explained by the growth of Muslim population in the aforementioned cities.

Second, there was an increase in the number of absentee landlords. More convincing evidence is provided by the case of four villages, where the tax was assessed on Muslim owned vineyards, but no Muslim population was registered. This raises the likelihood that these vineyards were in the hands of absentee landlords. Three villages (Kapshor, Tokluk and Usküt) belonged to the area I (in the vicinity of Soğudak) and one village (Çerkes Kerman) belonged to the area II (in the vicinity of İn-Kerman). Thus all four villages, where Muslims purchased vineyards, were situated in the areas, where viticulture was the major single source of revenue.

Third, the size of Muslim-owned vineyards expanded in the major vine-growing areas. The average size of vineyards, belonging to households in different areas of the province, also indicates the active interest of Muslims in deriving profit from viticulture and related businesses. Table 3 demonstrates that Muslims held larger vineyard plots in those villages where viticulture accounted for a larger part of the revenues levied on those villages. The top of the list represents exclusively the villages of the two most developed areas around Soğudak and İn-Kerman. It points to the fact that the prospective Muslim investors specifically chose to purchase the most productive vineyards. In other words, Ottoman practice on the ground seemingly encouraged Muslims to develop an interest in viticulture by allowing Muslim-owned vineyards to be taxed at a lower rate than that paid in the same villages on those plots still in Christian hands.

This observation also strengthens the assumption that the productivity of vineyards owned by Muslims should have been well above the level of 100 kilograms of fresh grapes, or 6.67 *medres* of *şıra*/wine per *dönüm*, fixed by the tax rate. This justifies the use of the coefficient 2 in estimating the *şıra*/wine production on the basis of *mukata'a-i kyürum der dest-i müslümanan* (share of revenue from vineyards in the hands of Muslims).

Fourth, viticulture increased in importance among Muslims. The case of the absentee landlords, clearly detected in four villages because no Muslim was registered in them, points to the possibility that absentee landlords could acquire vineyard plots in the villages where Muslim population was registered. From Table 3 it may be inferred that the average size of vineyards owned by Muslims was in the range between 0.25 and 100 *dönüms*, which hints at the possible presence of absentee landlords in the villages where Muslims owned larger vineyards.

In any case, the large size of the vineyards owned by Muslims indicates the concentration of vineyards in the hands of certain industrious Muslims. Where this was the case can be observed through the comparison between the shares of Muslims in the total make up of the population in any village or town and the estimated shares of *şıra* produced by Muslims. It is logical to expect that these shares should normally coincide if Muslim and non-Muslim cultivators owned vineyards of the same size and quality. Should Muslims acquire more vineyards and produce more, their share in production would be disproportionate compared to their share in the population. In Table 4, where the relevant data is presented, one can notice that the proportion of Muslim population matches or comes close to the proportion of *şıra*/wine estimated for Muslim-owned vineyards in the cities of Kefe and İn-Kerman, as well as in the villages of Nihora,

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Table 3. Dependence between the importance of viticulture and the average size of Muslim owned vineyards. In order to determine the size of the vineyards, the amount of the average tax per household should be divided by 4.

Town, Village	<i>Mukata'a-i kerm</i>	Muslim households	Average tax per household	% of revenue, derived from viticulture
Soğudak	3996	10	400	59.25%
Kapshor	256	0	<i>max</i> 256	29.51%
Şuh	592	4	148	46.84%
Obi	130	1	130	29.53%
Tokluk	88	0	<i>max</i> 88	24.64%
Kutlak	160	3	53	32.90%
Vorin	260	5	52	62.78%
Kozlar	204	4	51	35.24%
In-Kerman	788	38	21	33.84%
Çerkes Kerman	20	0	<i>max</i> 20	30.26%
Kuri Uzen	20	1	20	26.87%
Usküt	16	0	<i>max</i> 16	21.26%
Duvak	32	2	16	20.92%
Yalta	14	1	14	22.81%
Bartenit with Gurgulat	76	6	13	21.02%
Müskomya Küçük	32	3	11	23.39%
Mishor	52	5	10	24.09%
Şima	10	1	10	11.83%
Yanco	30	3	10	6.12%
Sotire	40	4	10	5.53%
Faros with Sahtık	84	9	9	37.75%
Lanbad Buzurg and Küçük	24	3	8	24.25%
Alubka	20	3	7	16.47%
Limena	36	6	6	26.12%
Aluşta	68	12	6	15.24%
Kamra	20	4	5	10.18%
Nihora (Kadı)	400	80	5	6.50%
Karano	40	8	5	30.56%
Gurbaklı	22	5	4	10.69%
Gavri	32	8	4	32.17%
Bocagan (Çölmekci)	12	3	4	25.08%
Ugri Kosta	24	6	4	15.68%
Müskomya Buzurg	4	1	4	26.33%
Çirgona	24	8	3	8.64%
Vikne (Papa Balkez)	6	2	3	21.46%
Taş Iskele	8	3	3	11.49%
Kurzuf	8	3	3	27.25%
Koca Salası	14	7	2	27.45%
Mangub	48	31	2	38.29%
Kefe	1964	1790	1	5.80%

Vorin, Kamra, Mishor, Alubka, Şima, Müskomya Küçük, Kuri Uzen (without application of the co-efficient there would have been not a single match!). At the same time, in the Soğudak, as well as in the villages Kozlar, Obi, Kutlak and Yanço, Muslims accounted for an even larger share in the production of *şıra* than was their share among the population. These four villages and the town Soğudak are situated in those two zones that were best suited to viticulture. Thus, Muslims not only demonstrated more activity in the main wine-producing areas of the province, but also achieved a much greater economic effect in their vineyards compared to the vineyards of non-Muslims in the same areas.

*Taxation, conversion and continuity*—The above-formulated analysis, although justifying the application of the co-efficient, raises another question. Namely, how did Muslims, less than 70 years after the Ottoman conquest, manage to adopt the experience and skills of viticulture to such an extent that they could achieve similar results to those obtained by local Greek Christians? Of course, one might assume that Muslims were relying on slaves. But slaves, with some exceptions, were not included in the registered population and therefore not reflected in the number of Muslims who were engaged in viticulture. But if we could show that they were in possession of better land, this would provide an alternative explanation. Finally, we may not disregard the possibility that the individuals listed as Muslims were in fact converted Greek Christians. In an effort to base these possible explanations on available data it is necessary to engage in a closer examination of the overall Muslim population.

Muslims constituted the majority of residents in such villages as Şulı, Sotire,<sup>44</sup> Yanço and Nihora,<sup>45</sup> and accounted for close to half of the inhabitants of the city of Keefe. Further comparison establishes that in most villages of the Crimea the Muslim share in wine production was lower than their percentage of the population. Hence, this data does not challenge the expectation that Greek Orthodox Christians should have been more skillful and experienced viticulturalists than Muslims. Moreover, converts were common among the Muslims registered in those villages where they constituted the majority population. The pre-Islamic experience of converts might have served to equalise the Muslim share of wine production to that of the overall population.

<sup>44</sup> The headings of the entries concerning both villages contain the same remark: “The unbelievers have been dispersed throughout neighboring villages. Nowadays they are registered according to the imperial order in their actual residing places, but they work on their (former) lands” (kefere etrafında olan karyelere perakende olmuşlar dır. Halyan sakin olan oldukları yerlerde ber mücib-i ‘emr-i ‘ali amma yerleri zira‘at olunur; TTD #214, p. 172).

<sup>45</sup> This village experienced a large influx of Muslims, most probably from the Crimean Khanate between 1520 and 1542.

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Table 4. Comparison of Muslims' shares in population and wine production

Village, town	Share of the wine, Produced by Muslims	Share of Muslim population
Şuh	100%	100%
Sotire	100%	100%
Kozlar	89%	29%
Nihora nam diger Kadı	70%	75%
Yanco	59%	50%
Kefe	52%	45%
Obi	50%	14%
Tokluk	42%	0%
Kapshor	27%	0%
Soğudak	25%	3%
Kutlak	18%	4%
Vorin	17%	17%
In-Kerman	16%	17%
Duvak	12%	22%
Limena	11%	23%
Çirgona	11%	22%
Kamra	10%	12%
Mishor	10%	9%
Faros with Sahtik	9%	17%
Alubka	8%	9%
Uğri Kosta	8%	13%
Karano	7%	32%
Gurbakly	7%	15%
Gavri	7%	33%
Şima	6%	6%
Müskomya Küçük	6%	7%
Taş İskele	6%	15%
Bartenit with Gurgulat	5%	10%
Mangub	4%	33%
Aluşta	4%	8%
Bocagan (Çölmekci)	3%	14%
Lanbad Buzurg ve Küçük	2%	4%
Yalta	2%	2%
Usküt	2%	0%
Çerkes Kerman	2%	0%
Kuri Uzen	1%	1%
Koca Salası	1%	10%
Demurci	1%	10%
Vikne (Papa Balkez)	1%	2%
Müskomya Buzurg	1%	3%
Kurzuf	0%	2%
Süren	0%	9%
Balıklağu	0%	18%
Albati with Ay-Todor	0%	33%
Markur	0%	25%
Kokolos	0%	100%

At the same time, there were sixteen villages and towns in which Muslims accounted for a greater percentage of wine production than their numbers indicated. Four of them were those with the absentee Muslim landlords possessing vineyards. For the rest of cases, the presence of the Muslim converts among the population may serve as a plausible explanation.

For example, in the village of Obi, there was only one Muslim household that was recorded as paying 130 *akçes* levied on his vineyards, the size of those vineyards reached 43 *dönüms* (over 10 acres). This vineyard seems too big for the labor force of a single family, which suggests either the presence of absentee landlords, or that the family in question used hired man power or slaves to actually work the vineyards. Perhaps this was also the case in the town of Soğudak where the figure of 100 *dönüms* (25 acres) looks unrealistically high for the average size of a vineyard for one Muslim household.

Upon closer examination, the list of taxpayers provides one more possible explanation to account for the predominant role played by Muslims in the viticulture of the region. In all the villages where Muslims produced a significant percentage of the wine, we may trace the presence of converts or their descendants. As a case in point, in the city of Kefe converts to Islam accounted for 17% of the Muslim population. One Muslim, registered in the village of Obi, was a certain Murad bin ‘Abdullah, who, judging by his patronymic ‘Abdullah (‘slave of God’), most likely was a convert. Likewise, in Soğudak four out of the registered ten heads of households were listed as “sons of Abdullah.” In the village of Vorin, five out of five Muslim heads of households were listed as “sons of Abdullah”; whereas in the village of Kozlar, two out of four Muslim households were headed by individuals bearing this patronymic, which was commonly adopted by converts to Islam in the sixteenth century (cf. Lowry 1998: 119-40). The Muslim community of In-Kerman comprised thirty-five households, whose five patriarchs were “sons of Abdullah.” In addition, eight of them were freed slaves (*mu’taks*), who were probably also converts. Finally, two Muslims of In-Kerman did not even bother to adopt an Islamic patronymic and retained for that purpose the Christian names of their fathers, such as Yoşki (diminutive of Joseph) and Yuvan (Ivan).

By way of contrast, we may cite the village of Nihora whose population was 75% Muslim. Among those eighty Muslim households who produced 70% of the village’s wine, there were eight households headed by individuals bearing the patronymic ‘Abdullah. A similar situation may be seen in the village Karano, where there were only two identifiable converts among the seven Muslim heads of households. A comparison of the data for the same villages from the 1520 register, with that preserved in the register TTD #214 of 1542,

attests to the significant influx of Muslim populations in those two villages. This fact suggests that local Muslims engaged in viticulture were not primarily converts and that their role in the total production was lower than their share in the population.

These examples speak in favor of the strong correlation between the expansion of Muslims in viticulture and presence of converts, who thus ensured the transfer of skills and techniques of viticulture to the Muslim community. The same can be said with regards to wine production as well, because of the pre-Islamic experience of many Muslim cultivators in the Crimea.

#### *Total wine production*

The total of *mukata'a-i kyürum der dest-i müslümanan* (share of revenue from vineyards in the hands of Muslims) paid by Muslims for the vineyards was 9,678 *akçes* or 8.9% of the total revenue derived from wine production. If the ratio between the taxes levied on Muslims and non-Muslim was 2, which seems to be the case, the total of the taxes translated into the production units would correspond to 32,260 *medre* of *şıra*/wine, that is, 16.4% of the total of 197,250 *medres* produced in the Crimea. Were we to use the coefficient of 3, the production would be 48,390 *medres*, and the share of wine produced from Muslim owned vineyards would reach 22.7% of the total of 213,380 *medres*.

#### *Are the results thus obtained applicable to other periods?*

It is tempting to compare these totals with those seen in the Southern Crimea under Russian rule. For this purpose the Ottoman *medre* (10.256 liters) should be converted into Russian capacity unit *vedro* (bucket 12.3 liters) used in the wine trade. This would make 164,471 or 177,920 *buckets* (with the coefficient 2 and 3 respectively), which is comparable with the total 299,073 *buckets* of the amount of wine received in 1905 in the districts of Yalta and Soğudak. As the level of agriculture should not have changed significantly before the large-scale introduction of mechanical power and agricultural technologies in the twentieth century, the augmentation of the output in comparison with the Ottoman time most probably was achieved at the expense of cultivating new vineyards, perhaps in the vicinity of Yalta and Gurzuf, which have remained major centers of wine production until the present day.

Two conclusions may be drawn from this comparison:

- 1) The tax registers contain quite realistic data, which are comparable to those reported by modern statistical sources. This also confirms our assumption about good coverage of the province by the tax-register.

- 2) The production of wine should not have suffered any severe crisis that one might expect for the period following the Ottoman conquest of the Crimea. If there was a certain slow down, detected by previous researchers of the Ottoman tax-registers of the Crimea (Berindei and Veinstein 1979: 435-441; İnalçık 1996: 109), it could not have been too grave in the area of viticulture.

A less obvious, but no less important, observation can be made with regard to the sufficiency of the local wine for consumption. The level of wine production of the sixteenth century most probably reflects the pre-existing status quo in the region, and it continued well into the nineteenth or even the twentieth century, when the Crimea turned into a major supplier of wine throughout Eastern Europe. Taking into account that the population in the Crimea as well as local consumption should have increased since the sixteenth century, it seems highly unlikely that the Crimean population did not produce wine in sufficient quantity for local consumption. The average output of wine per household for all the province of Kefe was 220 to 240 liters (depending on the coefficient 2 or 3), which was quite enough for consumption and trade. In the most important wine producing areas, the level of production went well beyond 1000 liters per household. These data are represented on the following map (figure 6).

Therefore, other arguments should be advanced to explain the import of wine to the Crimea in pre-Ottoman times. For example, the Genoese population may have created a market for fine wines, such as the wine from Chios and Southern Italy. Another explanation could be found in the re-exporting of imported wine farther into Eastern Europe, for which Caffa was the major commercial gate before another route through Moldavia assumed this role in the middle of the sixteenth century.<sup>46</sup>

#### COMMERCIAL TAXES

All taxes on commercial operations with wine broke down into two categories. The first were custom dues on import and export. The second category was comprised of market dues.

##### *Custom duties on export and import of wine*

Below are quoted the stipulations concerning the custom duties for imported and exported wine enforced by the *kanun-name* of the province.

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<sup>46</sup> As suggested by Berindei and Veinstein (1979: 436-441).

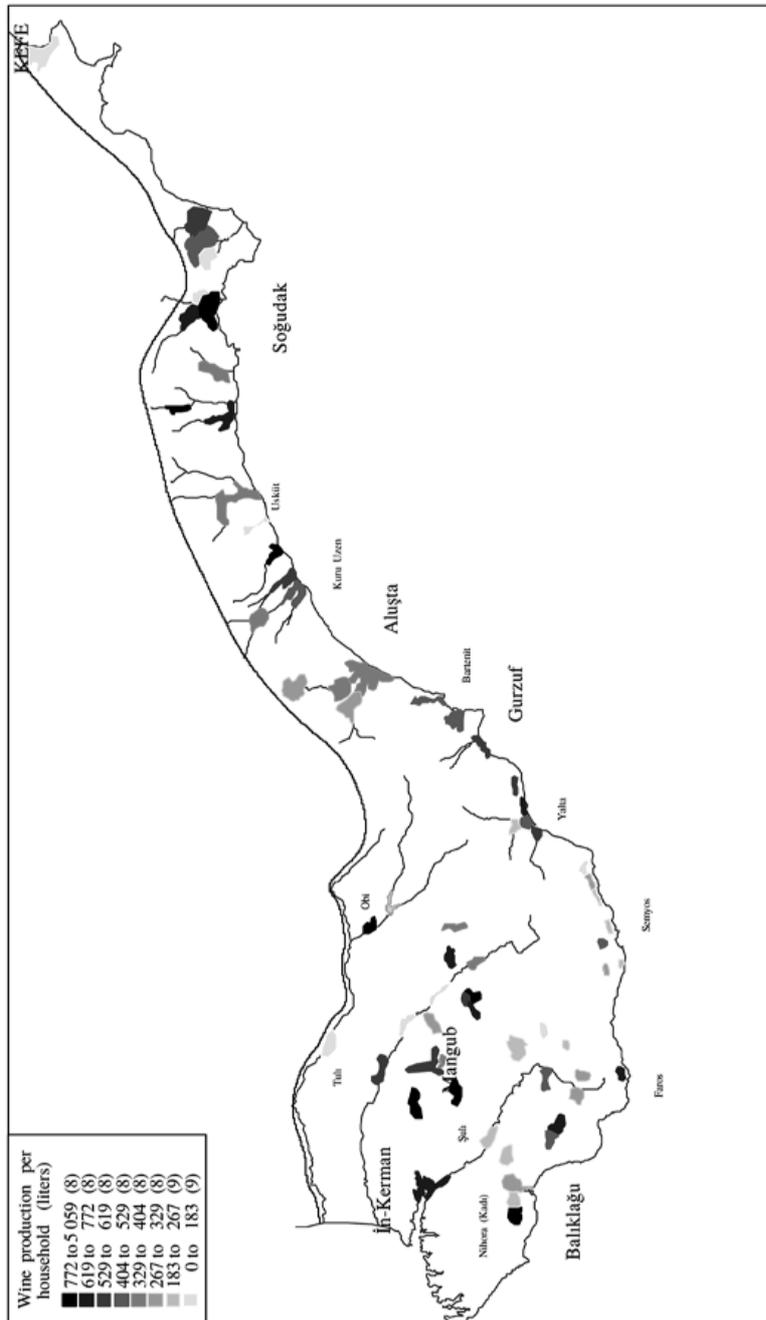


Fig. 6. Estimated wine production per household (in liters) in towns and villages of the Southern Crimea (1542).  
 (Note: the economic areas of towns and villages are purely conjectural and serve only to the purpose of the present study)

When *fuçı* of wine passes inside [the city] from the outside, one takes 16 *akçes*, but when from inside towards outside, one takes 12 *akçes*, per *karatil* one takes 8 *akçes*, per *baril* 4 *akçes*.<sup>47</sup>

. . . per each coming or leaving *fuçı* 2 *akçes*, per *karatil* and *baril* 1 *akçe* are to be taken.<sup>48</sup>

On various kinds of merchandise and other items, arriving in or taken from the port of Kefe, carried by Muslims or unbelievers per 1000 *akçes* of value 42 *akçes* are to be taken . . . Per one *fuçı* of wine 27 *akçes*, per one *karatil* 13 *akçes*, and per one *baril* 6 *akçes* are to be levied.<sup>49</sup>

Per each *fuçı* of wine, arriving [in the port] by sea, 6 *akçes* of Kefe<sup>50</sup> are to be levied under the name of *astazane*, per one *karatil* 4 *akçes* and per one *baril* 3 *akçes* are to be levied. *Fuçı* is the name for the cask of wine with capacity of more, than 40 *medre*, the capacity of *karatil* is 20 to 40 *medre*, and that of *baril* is 1 to 20 *medre*.

When one *fuçı* arrives by land in the cart, per each *fuçı* 9 *akçes* should be taken as the tax called *astazane*, 6 *akçes* are to be taken on one *karatil*, 4 *akçes*—per one *baril*.<sup>51</sup>

<sup>47</sup> The regulation concerning the Tatar gate (Kanunname-i Bab-i Tataran; TTD #214, p. 16): ve bir fuçı hamırdan tařradan ierü gelse on altı ake alınur, ve eęer ierüden dıřara ıkısa on iki ake alınur, ve bir karatilden sekiz ake alınur ve bir varıldan dört ake alınur.

<sup>48</sup> The regulation concerning the Tower gate (Kanunname-i Kule Kapı; TTD #214, p. 16): ierüden dıřara ve tařradan ierü gelseğinin hamı fuısına iki ake ve karatil ve varil olsa bir ake alınur.

<sup>49</sup> The regulation concerning the port of Kefe (Kanunname-i Iskele-i Kefe; TTD #214, p. 17): Gemi ile Kefe iskele sine gelen ve giden müslümanlardan ve kafirlerden götürdükleri emti'a kıymetten ve sa'r esbablarından kıymete dutulub her binde kırk iki ake alınur . . . ve bir fuçı hamırdan yigirmi yedi ake ve karatilden on üç ake ve varıldan altı ake alınur.

<sup>50</sup> As pointed İnalçık on the basis of TTD #214, the ratio between *aka-i Osmani* and *aka-i Kefevi* was either 1 to 2 or 1 to 5, depending on the case. The principle was to use a higher rate when money was collected for the treasury, while the lower was used when money was disbursed (İnalçık 1996: 185). At the same time in TTD #214 one can find the ratio 1 to 1.5, which was enforced for the conversion of taxes from the peasants living in Taman district: the official price of 1 keylce of wheat (*hunta*) was fixed at 9 *aka-i Kefevi*, while in the rest of the province it was priced as 6 *aka-i Kefevi*. The same ratio was adopted for barley 6 *Kefevi* to 4 *Osmani* (*řa'ir*) and 8 *Kefevi* to 5 *Osmani* for the millet (*erzen*). This "floating" exchange rate was in the interest of the treasury and of the officers who could apply it deliberately. Since the tax *astazane* was imposed on merchants who arrived in Kefe from other provinces of the empire or from abroad and could not have *Kefevi ake* available, they might have been forced to pay in Ottoman *aka*, in which case the low rate 1 to 1.5 was in the interest of the tax collector. Since in other cases the Ottoman state gave preference to the interest of the treasury over that of the subject, I suggest that in this case *Kefevi aka* should be converted into Ottoman *aka* at the rate 1.5 to 1. For local merchants paying in *Kefevi ake*, this rate could be close to the real exchange rate 5 *Kefevi* to 1 *Osmani*.

<sup>51</sup> The regulation concerning the wine (Kanunname-i hamı: TTD #214, p. 17): ve denizden gelen hamırın her fuçıdan astazane diyu altıřar kefevi [ake] alınur, karatilden dört ake varıldan üç ake alınur. Kırk medreden ziyade hamı koyıldan fuçı dirler, yigirmi medreden kırk medreye varılca karatil dirler, bir medreden yigirmi medreye varılca varil dirler. Ve karadan arabayla hamı fuçı gelse her fuçıdan astazane diyu dokuz kefevi ake alınur, karatilden altı ake alınur, varıldan dört ake alınur.

The provincial capital Kefe was the center of a vast customs zone that included ports across the Northern Black Sea area where similar customs rates were enforced (İnalçık 1996: 91-98). As we can see, the province of Kefe both imported and exported wine. Thus, it appears as the center of transit commerce in wine. Indeed, on one hand it was surrounded by such wine producing areas as Trapezund and the Mediterranean (across the Black Sea), Moldavia (via the sea and the land), and the Crimean Khanate, on the other it had vast markets in the Eastern Europe and in the Northern Caucasus. Therefore, it would be crucial for understanding the principles and rates of customs dues to sort out which roads led where. This question should be addressed within the framework of the historical topography of Kefe.

Through the Tower Gate (*Kule Kapi*), the city was linked to its northern suburbs and with the town of Kerch lying on the Bosphorus Cimmerian. The wine, which could be brought to Kefe this way, should have been produced only in the nearby suburbs, that is inside the customs zone. Considered as an item of local commerce, it was thus subjected to very modest customs. The road that passed through the Tatar Gate (*Bab-i Tataran*) connected the city with the Crimean Khanate, which did not belong to the Ottoman customs zone of Kefe and thus merchandise imported from there were subjected to customs dues at higher rates, a fact vividly demonstrated by the levies assessed in the *Kanun-name-i Bab-i Tataran*.

The wine, like any other merchandise imported by sea and arriving in the port was subjected to the highest custom at the rate 4.2% *ad valorem*. The reduced rate, applicable to Muslim merchants in other cases, was to pay customs on wine at the same rate. Moreover, it looks as if the local Crimean wine, for example, produced in Soğudak, was subject to this custom as well, when it arrived at Kefe.

An additional custom, called *astazane*, was levied on all wine imported from the outside the province. Ottomans inherited this custom together with its name from the Genoese. They collected the identical tax, imposed according to the quantity of the wine and called it *stazia vini* (Balard 1978: 411). It is interesting to note that this custom was higher when the wine was transported by land from the Crimean Khanate or Moldavia, compared to wine brought by sea from the localities of the Ottoman Empire, such as Trapezund or the Greek Archipelago. This was contrary to the Ottoman practice that favored overland transport (İnalçık 1996: 92).

The key point for the calculation of various customs rates is the clause in the regulation concerning wine that gives the equivalent of the custom 42 *akçes* per 1000 *akçes ad valorem* for the wine, stipulating that 4.2% custom would make

27 *akçes* per *fuçi* for the wine imported by sea. Knowing the amount of tax in each other case, it is easy to establish the rates for other customs and the official price of each kind of cask used for transportation. The data about content and rates are arranged in the following table (Table 5).

Table 5. Custom duties on wine in Kefe

#	Regulation	Content, amount ( <i>akçes</i> per <i>fuçi</i> )	Rate (%)	Conditions
1	Kanunname-i Bab-i Tataran	Import 16	2.5	Overland import through the Crimean Khanate
2	Kanunname-i Bab-i Tataran	Export 12	1.9	Overland export to the Crimean Khanate, Caucasus and Eastern Europe by land
3	Kanunname-i Kule Kapı	Export/import 2	0.3	Commerce by land with the suburbs of Kefe
4	Kanunname-i iskele-i Kefe	Export/import 27	4.2	Export and import by sea for local and imported wine
5	Kanunname-i hamr	Import by sea 2 to 6 <sup>52</sup>	0.3/ 0.9	<i>Astazane</i> : 2 <i>akçes</i> for local merchants, 6 <i>akçes</i> for the import from Anatolia and the Mediterranean
6	Kanunname-i hamr	Import by land 3 to 9 <sup>53</sup>	0.5/ 1.4	<i>Astazane</i> : 3 <i>akçes</i> for local merchants, 9 <i>akçes</i> for import through the Crimean Khanate

The total amount of customs for the transportation of local wine, depending on the particular case, could reach 0.8% (case 3 + *astazane* 0.5%), 3.6% (case 1 + *astazane* 0.5%), and 4.5% (case 4 + *astazane* 0.3%). The customs on overland transportation of wine from the Crimean Khanate or Moldavia to Kefe would cost the owner 3.9% (2.5% + *astazane* 1.4%) of its value. In shipping the wine from Trapezund, Chios or other overseas territories of the Ottoman Empire, it could be subjected to customs reaching up to 5.1% (case 4 + *astazane* 0.9%).

<sup>52</sup> See above fn. 19.

<sup>53</sup> See above fn. 19.

### Market Taxes

In the province of Kefe a unique tax was established for wine and vinegar, which would be sold on the market. It consisted of two parts. First, 3.5 *akçe-i Kefevi* were levied per each *medre*. Then, 122 *akçe-i Kefevi* were to be taken on each 1000 *akçe-i Kefevi* of the total value, that is, 12.2%. This last part was called a tithe (*öşr*).<sup>54</sup>

The question arises as to the price of one *medre* of wine. The estimated price of one *fuçı* of wine can be calculated on the basis of the 4.2% customs due on all merchandise imported by sea, which equaled in the case of one *fuçı* of wine to 27 *akçes*. It makes the price 643 *akçes* for one *fuçı*.

Now we have to establish the capacity of *fuçı*, for which it is only known that it should exceed 40 *medre*. The ratio of capacities between two other kinds of casks, namely *baril* and *karatil*, explained in the "Regulations concerning the wine," as 1 to 2 (1-20 *medre* against 20-40 *medre*), requires that the ratio between *karatil* and *fuçı* should be the same, making the maximum of *fuçı* capacity as 80 *medre*. However it should have been much lower. Firstly, a cask of 820 liters was rather large to produce or transport. Secondly, the ratios between taxes levied on all three kinds of casks were 1 to 1.5. In three cases, when Kanun reports on taxes due from all three types of casks, the ratio was 1: 1.5 (4: 6; 6: 9; 8: 12), and only in one case was it set approximately at 1: 2 (13: 27). Of course, it would be in the interest of treasure to levy a two times heavier tax of 27 *akçes* per *fuçı*, in comparison with 13 *akçes* per *karatil*, while in reality *fuçı* could not be two times larger. Therefore, it was hardly possible that *fuçı* could be more than 60 *medre* what was still too big for a cooper of the sixteenth century to construct.<sup>55</sup> But what could be the average size? To answer this question one has to estimate the size of two other casks.

The taxation ratio between *baril* and *karatil* as 2 to 1 more or less corresponded to the ratio in their capacities—1/20 *medre* to 20/40 *medre*. The average size could not be less than 10 *medre*, as it would have been against the interest of the merchants to pay the doubled custom duties compared with the case when they would carry their merchandise in casks with the capacity of 20 *medre*. However, it would be safe to use the casks under 20 *medre*, as there might be a risk that the custom officer would "guestimate" *baril* equal to and double the custom payment. Thus, the capacity of *baril* might be established

<sup>54</sup> TTD #214, *Kanun-name-i hamr*.

<sup>55</sup> Even now in the wine cellars of the Crimea the most common capacity of oak casks is within the range of 300-500 liters.

between 10 and 20 *medre*, but close to 20, that is 15-17 *medre*. The capacity of *karatil* would then be about 30-35 *medre*, which put *fuçı* (according to the proportion in the amount of taxes, levied on *karatil* and *fuçı* 1: 1.5) in the range 45-52 *medre* (461-533 liters). The regulation concerning the fisheries in the area of Azak, which is one chapter of the *kanun-name* for the province of Kefe, put *fuçı* as precisely 52 *medre*.<sup>56</sup> It should have been the maximum capacity of *fuçı*. Thus, the average *fuçı* could be somewhere between 45 and 52 *medre*, that is 48 *medre*. An additional argument in favor of this estimate would be that casks of this capacity survived in Russia until the twentieth century. The Russian term denoting it was *bočka*, which exhibits Turkish influence.

The value of one *medre* of wine would be  $643 / 48 = 13.4$  *akçes* per *medre*. Depending on the ratio between Ottoman *akçe* and *akçe* of Kefe, the tax in question (3.5 *akçes* of Kefe) would be from 5.22% (under the rate 1 to 5) to 17.3% (under the rate 1 to 1.5). When this tax is added to *öşr* (12.2% *ad valorem*), the total tax on the marketed wine would be 17.4% to 29.5% of the value of the wine. Thus, the total tax burden on the wine brought to the market in the province of Kefe (customs and market dues) would be between 18.2% and 34.6% of the value of the wine.

With these assessments at hand, it becomes possible to estimate the total amount of wine sold in the markets of the Ottoman Crimea, although because of the nature of the data (see fn. 8) such estimates cannot be made with a high degree of precision. Only TTD #370 contains relatively "pure" data, namely the amount of income derived from the market tax on wine in Kefe and Kerç, which totaled 280,000 *akçes* a year. Knowing the range of market tax (17.4% to 29.5% of the value of the wine) and estimated price of one *medre* of wine (13.4 *akçes*), one can estimate that the amount of wine from which such income could be derived falls into a range between 60,391 and 120,081 *medres*. However, it is impossible to assess which part of this amount was locally produced, which was imported, and which was exported and where.

## CONCLUSIONS

This analysis of the taxation of viticulture, wine production and wine commerce leads to many conclusions and prompts some reevaluations. In my view the most important are the following:

<sup>56</sup> TTD #214, *Kanun-name-i mukata'a-i mahi-i Azak* (cf. Berindei and Veinstein DATE: 82).

- 1) Viticulture and related businesses constituted a major aspect of the economy of the southern Crimea in the Ottoman period. Thus, rather than representing a break in the practice of viticulture, the Ottoman period establishes an important link of continuity between earlier Byzantine/Genoese and later Russian practices.
- 2) The extent of the importance of winemaking is reflected in the fact that throughout the period under study we are able to trace an ever-increasing number of Muslims who opt to engage in viticulture. While on the one hand, this may reflect nothing more than the post-conquest influx of Muslim settlers finding a niche in the area's pre-existing economy, on the other it certainly indicates that this was an area considered worthy of investment.
- 3) The Ottoman bureaucracy demonstrated a highly sophisticated approach in settling the contradiction between the prohibition of wine required by Islamic law and the interest of the State in the exploitation of such rich sources of revenue. This case points to the strong rationalistic foundations of Ottoman policy, without which its correct representations in terms of tolerance, pragmatism, or even plunder, tend to be over simplistic.
- 4) The potential of the *tahrir defters* as a source of reliable information, especially for local history, is far from exhausted. But in order to be useful they must be properly decoded. As the present study illustrates this is not an easy task either for the author or his readership.

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