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THE OTTOMAN TAHRIR DEFTERLERI AND AGRICULTURAL PRODUCTIVITY

The Case for Northern Syria

Margaret L. Venzke

Forty years have passed since the 'international debut' of the Ottoman *tahrir defterleri* (provincial tax registers) in the early 1950s, a debut marked by the first publications, in a western language, of Ömer Lûtfi Barkan's pioneering studies using this source. This debut closely followed the appearance of Fernand Braudel's seminal *La Méditerranée et le monde méditerranéen à l'époque de Philippe II*, first published in 1949, which raised to ever-greater heights the standard of the *Annales* school and inspired, at the same time, a new generation of Ottoman historians.¹ From this time on was forged the link between investigations into the Ottoman *tahrir defterleri* and the *Annales'* approach to history. Braudel acknowledged the research potential of the Ottoman *tahrir defterleri* in the second edition of his *Méditerranée*, in 1966, as a result of his contact with the work of Barkan, who would become the doyen of Ottoman

¹ This 'coincidence' in the publication dates of Braudel's *Méditerranée* and the articles of Barkan has also been noted recently by Colin Heywood, in "CRITICAL STUDIES Between historical myth and 'mythohistory': the limits of Ottoman history, *Byzantine and Modern Greek Studies* 12 (1988), pp. 337-38. Note that Barkan's studies (in Turkish) using the Ottoman *tahrirs* go back to the late 1930s, and they appeared with some frequency throughout the 1940s, before his 'international debut' in the 1950s. For the corpus of Barkan's work, see the bibliographies of Amnon Cohen and Bernard Lewis, *Population and Revenue in the Towns of Palestine in the Sixteenth Century* (Princeton, c. 1978), pp. 174 and 178-79, and Suraiya Faroqhi, *Towns and Townsmen of Ottoman Anatolia: Trade, crafts and food production in an urban setting, 1520-1650* (Cambridge, London, New York, et al., 1984), pp. 392-93. It should also be noted that, in the same time period as Barkan's 'debut,' Bernard Lewis published a series of articles that underscored the significance of the Ottoman *tahrirs* to the history of the Arab provinces. These articles are cited in Heywood, "Critical Studies," n. 79, p. 338.

historians of the *Annales* school of his generation. Braudel reckoned that this source held a key to the demographic history of the eastern Mediterranean in the 16th century.² Since their international debut, quite a few scholars, working individually, have explored these *tahrir* registers for selected parameters, limited, for example, to a particular *sanjaq* (the basic administrative division within the Ottoman provinces, often of great territorial expanse; several *sanjaqs* would comprise a province), or to one line of inquiry, or to one register alone. The length of these registers, which may number a thousand pages, as it is the case for many of the registers for Ottoman Syria, can present a daunting task for research, and indeed, it necessitates both a well-thought-out methodology and a strict limitation to be imposed on the focus of investigation. Quite simply, the 'size' of the *tahrir* registers adversely affects the scholarly endeavor.

In the same time period as the *tahrir* registers began to be exploited, computer technology developed that today offers Ottoman scholars the opportunity to break through the narrow confines, within which the registers to this very day continue to be mined, to obtain not only a broader picture, but also to complete, as far as these registers allow us, the basic foundation for the economic life, land/taxation system, and institutions of the Ottoman provinces in the 16th century, when these registers were in their heyday. This opportunity obviously prompts the question of why not enlist the computer to exploit the *tahrir* registers in a more systematic and comprehensive manner. Can not a team of scholars, for example, undertake today a study of the economic or demographic history of the eastern Mediterranean in the 16th century, as Braudel had held out expectations? The possibilities for a greater exploitation of the Ottoman *tahrir* registers was the focus of an international conference held in Konya, Turkey, October 26-28, 1992, at which a part of this article was first presented, and of a second conference held in Erlangen, Germany, March 17-19, 1994.³ This article addresses itself to that question by focusing on the research potential of the Ottoman *tahrir* registers for a study of agricultural productivity in northern Syria, as it was delimited by the Ottoman *Sanjaq* of Aleppo, in the 16th century. This focus also would naturally fall within the broader purview of that hoped-

² *The Mediterranean and the Mediterranean World in the Age of Philip II*, 2nd ed. rev., trans. Siân Reynolds, 2 vols. (New York, Cambridge, et al., 1976), vol. 1, pp. 325-26, n. 193, pp. 394-95, 394-98, and 410; and vol. 2, Fig. 55 and p. 663.

³ The author would like to express her appreciation to Professors Nejat Göyünç and W. - D. Hütteroth, the sponsors of these two conferences, for their kind invitation and the expenses paid, and for the most interesting exchange that took place at these conferences. It is most important to note that a computer program for the utilization of the data of the *tahrir defterleri* was developed by Professor Arno Kleber, of the University of Bayreuth, at the direction of Professors Göyünç and Hütteroth, and is available to all interested researchers of the *tahrir defterleri*.

for study of the economic history of the eastern Mediterranean. For the comparative dimension, reference will be made, in this article, to the *sanjaqs* of Homs and Hamah in central Syria, which, by the mid-16th-century, were incorporated into the Province of Aleppo, and to the *sanjaqs* of Damascus, in southern Syria, and Tripoli, on the Mediterranean coast of central Syria. Aleppo, Damascus, and Tripoli, alike, became 'pasha' *sanjaqs*, representing the governmental seats of the three great provinces, of the same name, of Ottoman Syria in the 16th century. This article also has an ulterior objective, and that is simply to indicate something of both the problems and the potential of the *tahrirs*.

The use of the Ottoman *tahrir* registers for the question of agricultural productivity is a much more complicated matter than it might appear to be on first consideration. Before adumbrating some of this complication, it might be useful to indicate, in advance, the general outline of the conclusions reached on this matter. Although the author would readily welcome the idea of a collaborative effort by a team of scholars to establish a common methodology, to use a common computer program, and to coordinate its collective results to produce comprehensive findings for an area as great as the eastern Mediterranean, it will prove to be, she believes, a far more difficult task to achieve, producing valid results, than perhaps now imagined. This guarded assessment springs from a recognition of the fact that, even within a clearly-delimited area, the one *sanjaq*, quite a few internal problems will be encountered that, in the end, are not easily resolved. When we increase the area of investigation, we simply end up multiplying the number of these problems, which further complicates the task of comparative analysis.

Given the problems, it might be preferable, in place of a team project, to coordinate the efforts of individual scholars toward the fulfillment of a common objective. Even in this instance, however, before comparative analyses can be successfully undertaken and collective judgments rendered, the 'coordinating mechanisms' by which widely disparate data can be shaped into comparable and uniform equivalences must first be established. They do not exist at present. Such coordinating mechanisms must include, for example, both conversion tables for the many weights and measures used in the Ottoman Empire, which take fully into account their regional variations, too, and conversion tables for land measurements. Coinage, its debasement and devaluation, and the history of prices represent other areas for which 'coordinating mechanisms' are still very much needed.⁴ In truth, other shortcomings, such as the still present, and sometimes gaping, lacunae in our knowledge and

understanding of the fundamentals of the economic, social, and institutional history of the Ottoman Empire in the 15th and 16th centuries, the period covered by these *tahrir* registers, continue to hamper our research efforts involving the registers.⁵ This situation, too, would benefit from some outside direction being given to the individual effort. Whether a team effort or that of the individual, research involving the *tahrir* regis-

4 In these areas, it must be recognized, however, that 'the glass is half-full.' Most welcome is the fairly recent contribution to Ottoman metrology by Halil İnalçık -who, in this as in many of his works, has 'thrown down the gauntlet,' here on the issue of Ottoman metrology, challenging scholars to illuminate this area, at the same time as he set out for us the rudimentary foundation--,"Introduction to Ottoman Metrology," *Turcica: revue d'études turques* (hereafter *Turcica*) 15 (1983), pp. 311-348. Also to be noted and commended is the commitment by *Turcica* to publish future studies on Ottoman metrology in a series toward the realization of a definitive guide on the subject (*ibid.*, p. 312). Still a fundamental source on Islamic metrology is Walther Hinz's *Islamische Masse und Gewichte* (Leiden, 1955).

Similarly, on the issues of coinage and price history, including the officially 'fixed price' (*narh*), in the so-called 'classical age', there exist important works that have helped to lay a foundation, such as the following, but these need to be augmented and their collective findings brought together into one or several basic and definitive volumes of reference: İbrahim Artuk and Cevriye Artuk, *İstanbul Arkeoloji Müzeleri Teşhirdeki İslâmî Sikkeler Kataloğu*, 2 vols. (İstanbul, 1970-74), vol. 2 especially; Ömer Lütfi Barkan. "XV. Asrın Sonunda Bazı Büyük Şehirlerde Eşya ve Yiyecek Fiyatlarının Tesbit ve Teftişi Hususlarını Tanzim Eden Kanunlar," *Tarih Vesikaları* 1:5 (1942), pp. 326-40, 2:7 (1942), pp. 15-40, and 2:9 (1942), pp. 168-77; *idem*, "Fatih Câmî ve İmâretî Tesislerinin 1489-1490 Yıllarına Ait Muhasebe Bilâncoları," *İstanbul Üniversitesi, İktisat Fakültesi Mecmuası* (hereafter *İFM*) 23:1-2 (1962-63), pp. 297-341; *idem*, "Edirne ve Civarındaki Bazı İmâret Tesislerinin Yıllık Muhasebe Bilâncoları," *Türk Tarih Kurumu Belgeler* (hereafter *Belgeler*) 1:1-2 (1964), pp. 235-377; *idem*, "Edirne Askerî Kassamına Ait Tereke Defterleri (1545-1659)," *Belgeler* 3:5-6 (1966), pp. 1-479; *idem*, "XVI. Asrın İkinci Yarısında Türkiye'de Fiyat Hareketleri," *Türk Tarih Kurumu Belleten* (hereafter *Belleten*) 34 (1970), pp. 557-607; *idem*, "The Price Revolution of the Sixteenth Century: A Turning Point in the Economic History of the Near East," *International Journal of Middle East Studies* 6:1 (1975), pp. 3-28; *idem*, "İstanbul Saraylarına Ait Muhasebe Defterleri," *Belgeler* 9:13 (1979), pp. 1-380; Mübahat S. Küçüköğlü, "1009 (1600) Tarihli Narh Defterine Göre İstanbul'da Çeşitli Eşya ve Hizmet Fiyatları," *İstanbul Üniversitesi Edebiyat Fakültesi, Tarih Enstitüsü Dergisi* 9 (1978), pp. 1-85; and Halil Sahillioğlu, "Osmanlılarda Narh Müessesesi ve 1525 Yılı Sonunda İstanbul'da Fiyatlar," *Belgelerle Türk Tarihi Dergisi* 1-3 (1967), pp. 36-40, 54-56, and 50-53.

5 There is some irony in this situation since the 15th and 16th centuries, along with the 19th century, are the 'most-studied' periods in Ottoman history. Still, it is true that we need many more monographs, such as those indicated in n. 4 and the following examples: Ömer Lütfi Barkan, *XV ve XVI inci Asırlarda Osmanlı İmparatorluğunda Ziraat Ekonominin Hukukî ve Malî Esasları*, vol. 1: *Kanunlar* (İstanbul, 1943); Nicoară Beldiceanu and Irène Beldiceanu-Steinherr, "Recherches sur la province de Quaraman au XVIe siècle: étude et actes," *Journal of the Economic and Social History of the Orient* (hereafter *JESHO*) 11:1 (March 1968), pp. 1-129; Irène Beldiceanu-Steinherr, "Fiscalité et formes de possession de la terre arable dans l'Anatolie préottomane," *JESHO* 19:3 (September 1976), pp. 233-322; Cohen and Lewis, *Population and Revenue*; M. A. Cook, *Population Pressure in Rural Anatolia 1450-1600* (London, New York, Toronto, 1972); Faroqhi, *Towns and Townsmen of Ottoman Anatolia*; Nejat Göyünç, *XVI. Yüzyılda Mardin Sancağı* (İstanbul, 1969); Lütfi Güçer, *XVI-XVII. Asırlarda Osmanlı İmparatorluğunda Hububat Meselesi ve Hububattan Alınan Vergiler* (İstanbul, 1964); Uriel Heyd, *Studies in Old Ottoman Criminal Law*, ed. V. L. Ménage (Oxford, 1973); Wolf-Dieter Hütteroth and Kamal Abdulfattah, *Historical Geography of Palestine, Transjordan and Southern Syria in the Late 16th Century* (Erlangen, 1977); Halil İnalçık, "Osmanlı İmparatorluğunun Kuruluş ve İnkişafı Devrinde Türkiye'nin İktisadî Vaziyeti üzerinde bir Tetkik Münasebetiyle," *Belleten* 15 (October 1951), pp. 629-90; *idem*, "Osmanlılar'da Raiyyet Rüşümü," *Belleten* 23 (1959), pp. 575-610; *idem*, *The Ottoman Empire; The Classical Age 1300-1600*, trans. Norman Itzkowitz and Colin Imber (New York and Washington, 1973); *idem*, "Military and Fiscal Transformation in the Ottoman Empire, 1600-1700," *Archivum Ottomanicum* 6 (1980), pp. 283-337; Gyula Káldy-Nagy, "The First Centuries of the Ottoman Military Organization," *Acta Orientalia Academiae Scientiarum Hungaricae* (hereafter *Acta Orientalia*) 31:2 (1977), pp. 147-83; Bruce

ters is most successful when it follows a deep immersion into the *tahrir* data, within whatever imposed limitations, because only an intimate knowledge and understanding of the data allows identification of the problem and peculiarities that can pose difficulties for comparative analysis.

Because the Ottoman *tahrir* registers have been within the research domain of historians of the 'West' since the end of World War II, any attempt to describe them courts the possibility of being not only jejune, but perhaps, simply quite unnecessary as well. Nevertheless, let one run these risks to make the following brief observations. First, perhaps it is indicative of the questions we continue to harbor regarding the nature of the Ottoman *tahrir defterleri* as an historical source that we still do not agree on the designation for this source. "*Defterler*" is not the problem, as we readily translate this as 'registers' (s. *defter*). Our problem lies with capturing the meaning of "*tahrir*." "*Tahrir*" expresses the root meaning of 'recording,' or 'registering.' By some degree of mental extrapolation, we might also read into "*tahrir*" the word 'survey,' as we do indeed know that the *tahrir* registers were the product of state-conducted surveys undertaken in the Ottoman provinces. Consequently, "*tahrir*" can be seen as expressing the results of a cadastral survey, by the recording of those results in a register.

A second issue, however, complicates our arriving at a suitable translation. What exactly was being surveyed in the Ottoman provinces? Quite simply, the state surveyed all known revenue-bearing sources, with the view in mind of taxing these sources. Occasionally, inactive revenue sources were also recorded in the resulting registers. Since the wealth of the Ottoman Empire was overwhelmingly agricultural, the *tahrir* registers are frequently, and with some justification, identified as 'land registers,' or some variation thereof, which recognizes the land as being the primary source of wealth. Indeed, the *New Redhouse Turkish-English Dictionary* translates "*tahrir*" as 'land register' in the context of the meaning it held in Ottoman history.⁶ But, it is also quite well-known that the *tahrir* registers recorded non-agricultural sources of revenue as well, and therefore, the translation 'land register' does not capture the full meaning and scope of the "*tahrir*" registers.⁷

McGowan, *Economic Life in Ottoman Europe: Taxation, trade and the struggle for land, 1600-1800* (Cambridge, London, et al., 1981); *idem*, "Food Supply and Taxation on the Middle Danube (1568-1579)," *Archivum Ottomanicum* 1 (1969), pp. 139-96; and Vera P. Moutafchieva, *Agrarian Relations in the Ottoman Empire in the 15th and 16th Centuries* (New York, 1988).

⁶ 9th ed., s.v. "Tahrir."

⁷ "*Tahrir defterleri*" is itself a generic term, of later usage, that simply designates the 'final product' of the Ottoman practice of conducting periodic surveys of their provinces in the 15th and 16th centu-

The *tahrir* registers recorded, in addition to agriculturally-derived revenues, the revenues collected on animals yielding a usable product (read: from sheep to bees!; draught animals were not taxed), the 'instruments' that processed agricultural products, such as oil presses and mills, the rural industries, such as dye-works and looms, and the towns and trade and commerce, local and inter-regional, of the industries and cities. These attributes of the *tahrir* registers are simply not being conveyed by the definition 'land register.' In addition, the *tahrirs* simply do not qualify as land registers, because they provide so few details, if any, regarding the size, value, and registration of land holdings, among other attributes that we would normally expect of a proper land register.⁸

Finally, it is well-known that the *tahrir* registers recorded people, but never the entire population. The paramount, if not exclusive, consideration that determined who was to be recorded in the *tahrirs* was tax liability, which was incurred by virtue both of their status as 'subjects' of

ries. The registers themselves were not officially titled "*tahrir defteri*." They were kept, beginning in the 1540s, in the Ottoman Imperial Registry (Defter-i hakanî, also known as the Defter-i dergâh-i 'âli and the Defterhane; see D. A. Howard, "The Historical Development of the Ottoman Imperial Registry [Defter-i hakanî]: Mid-Fifteenth to Mid-Seventeenth Centuries," *Archivum Ottomanicum* 11 (1986/1988), pp. 213-14, 216-17, 221, and 229), and hence, they were also known as the 'Imperial Registers.' These registers are also called "*Tapu*" (here, 'Land'; for the term "*tapu*," see Cohen and Lewis, *Population and Revenue*, n. 2, p. 3) Registers.

The Imperial Registry actually oversaw and housed three type of registers: the *mufassal defterleri* ('detailed registers'), *i jmal defterleri* ('summary registers'), and *ruzmançe defterleri* ('daily account register'). In the author's view, only the first two registers can properly be regarded as "*tahrir*" registers, because only these, actually, were the product of the periodic surveys. The distinction between these two *tahrir* registers is that the *mufassal* register recorded the 'full complement' of the data collected on all fiscal sources within a specified area, including as well the entire range of land/revenue holdings, while the *i jmal* register recorded this data only in an abbreviated form, and, in addition, the scope of this register was often limited to one category of revenue holding alone, such as to the *timar* holdings (the Ottoman military revenue fiefs), and therefore, the latter register is not comprehensive, either in its scope or in the details it offers. Note that the designation "*mufassal*" or "*i jmal*" usually constituted part of the official title of the Aleppo *tahrir* registers, found on their opening pages. In this present study, use of the term "*tahrir defterleri*," or "*tahrirs*" for short, will encompass both the *mufassal* and *ijmal* registers, although, in actuality, the study has availed itself only of the data from the *mufassal* registers represent a 'daily' (i.e., far-removed from the 'periodic'), chronological record, principally of the changes that occurred regarding the tenure-status of the Empire's military revenue fiefs.

The main repository of Ottoman documents, the Başkanlık Arşivi (the Archives of the Prime Ministry), in Istanbul, recognizes, in effect, the fundamental difference between the *mufassal* and *i jmal* registers on the one side and the *ruzmançe* registers on the other, by classifying the former in the present "Tapu ve Tahrir" (here, 'Land-Deed and Survey'; note the ambiguity of this designation) Section of the Archives and the latter in the recently opened "Ruznamçe" Section. A few *tahrir* registers are also to be found in the "Maliyeden Müdevver" ('Transferred from the Finance Ministry') Section of the Archives of the Prime Ministry, and a very important collection of *tahrirs* is found at the Tapu ve Kadastro Genel Müdürlüğü ('Land-Deed and Cadastral General Directorate') in Ankara. An excellent study of the Ottoman Imperial Registry is Howard's "Historical Development of the Imperial Registry," pp. 213-30. For a description of the *tahrir* registers and their value to historians, see *The Encyclopaedia of Islam*, 2nd ed., s.v. "Daftar-i Khâkânî," by Ömer Lütü Barkan; Cohen and Lewis, *Population and Revenue*, pp. 3-18; and G. Káldy-Nagy, "The Administration of the *sanjâq* Registrations in Hungary," *Acta Orientalia* 21 (1968), pp. 181-223.

⁸ Indeed, no less an aficionado of the Ottoman *tahrirs* as Ömer Lütü Barkan acknowledged that they did not constitute land registers ("Daftar-i Khâkânî," p. 82).

the Empire and of their age and capability to work. Consequently, the *tahrirs* recorded tax-payers, which, more than anything else, affirms that it is the 'taxation dimension' that is at the heart of this source. In recording virtually only tax-payers, a whole segment of population was systematically being excluded from the *tahrirs*. This was the military and administrative, including the judicial, elite of the Empire, the true 'Osmanlis' (Ottomans), who enjoyed the privilege and prestige of tax exemption. At the other end of the social scale, slaves were also exempted from paying taxes.⁹ The tax-payers, then, were the farmers and farm-labor hands, tribesmen, artisans, shopkeepers, traders, and merchants, i.e., the economically productive members of Ottoman society, although tribesmen are traditionally less associated with their economically productive pursuits, animal husbandry namely, than with their potential for causing harm to the legitimate economic activities of others.

In addition to whole segments of the population being systematically excluded from the purview of the Ottoman *tahrirs*, another exclusion was at work within the ranks of the tax-payers themselves. This is the exclusion of the family members of tax-payers if they, themselves, were personally not liable for taxation, as many of them were not. Women and girls as a rule did not pay taxes, and neither did pre-pubescent boys.¹⁰ The tax-payers, then, were adult men, and their names were recorded, individually, under their village of residence, the quarter of the town or city in which they lived, or their clan or tribe (the village, town, tribe, etc., might be regarded as fiscal units). Among these adult men, Ottoman administration made a further distinction between "*hane*" (lit.,

⁹ Early on, Ömer Lütfi Barkan recognized this deficiency, which was a phenomenon of the administrative town and city, and he came to compensate for it, in his calculations of total population based on the *tahrir* data, by adding to his totals another 10 or 15 per cent of their value, or, in the case of Istanbul, 20 per cent ("Essai sur les données statistiques des registres de recensement dans l'empire ottoman aux XVe et XVIe siècles," *JESHO* 1:1 [August 1957], pp. 22-23; and "Research on the Ottoman Fiscal Surveys," *Studies in the Economic History of the Middle East; From the Rise of Islam to the Present Day*, ed. M.A. Cook [London, New York, and Toronto, 1970], pp. 167-68).

¹⁰ Christian women alone were held accountable for taxation, but this occurred only when they became widowed heads of a household (*bive*). This practice, however, was not consistently applied among the Christian population of the Empire (Cook, *Population Pressure*, p. 60), and it may turn out to have been characterized more by its absence than its presence. For example, it was not applied to the Christian population of Ottoman Syria; *bives* were recorded, however, in Ottoman Trabzon (Heath W. Lowry, *Trabzon Şehrinin İslâmlaşma ve Türkleşmesi, 1461-1583* [Istanbul, 1981]). 'Girls' were simply not taxed. And, as a general practice, which by no means was strictly observed at all times, pre-pubescent boys were not liable for any taxation, and therefore, they were not recorded in the *tahrirs*. When they reached the age of puberty, however, these boys, now considered to be young men who were capable of earning a livelihood, would be entered in the *tahrirs* as 'bachelors' (*müjherreds*). The issue of these bachelors, whether they were in fact young adult men and whether or how they should figure into the computation of total population figures, has been, for some time now, a lively topic of debate among Ottoman historians. For an example of this debate, see Géza Dávid, "The Age of Unmarried Male Children in the *Tahrir-Defters* (Notes on the Coefficient)," *Acta Orientalia* 31:3 (1977), pp. 347-57.

'household') and "*müjered*" (bachelor), recording in the *tahrirs* the total number of persons who fell under each category. What this distinction more accurately connotes, in this context, is 'the head of a household', who, most usually, was married, as opposed to the bachelor, who did not head his own household.¹¹ The constituent members of a *hane* were recorded in the *tahrirs* only to the extent that they paid taxes, and consequently, the household itself can not be reconstructed on the basis of the *tahrirs*; not even the size of the household is known. Moreover, the *tahrirs* rarely offer any information that would allow us to determine the age and sex structure of the population. Given the paucity of their demographic offering, it is surprising that the *tahrir* registers have been, and continue to be, referred to as 'census surveys'.¹² Such serious deficiencies simply do not qualify the *tahrir* as a census survey.

What has happened is that the *tahrir* registers are being designated as 'census surveys,' 'land registers,' 'tax registers,' etc., according to the

11 Like the *müjered* (see n. 10), the *hane* has long been the subject of an intense, ongoing debate among Ottoman historians. Unlike the question of the *müjered*, however, the *hane* is absolutely central to the question of computation of total population, just as it is for European history. This author would argue that, despite the obvious sociological dimension of the *hane* (household), the *hane* of the Ottoman *tahrirs* must be considered as a fiscal unit since the nature of the source in which it occurs is fundamentally fiscal in nature. Consequently, we might assume that, given the natural impulse of governments to obtain as much tax revenue as possible, Ottoman government identified all persons who could conceivably qualify as 'head of a household,' which is what "*hane*" actually means in this context; Ottoman government was not interested, *per se*, in the totality of the household itself, only in the person who, as head of a household, was thus liable for taxation. As if to underscore the 'tax-liability-dimension' of the Ottoman *hane*, some level of tax exemption was given to certain 'categories' of persons who would otherwise have qualified as being *hane*. These were low-level religious functionaries such as the *imam*, the infirm, and the aged. Hence, the *hane*, as it is recorded in the Ottoman *tahrirs*, represents those who were liable for the full measure of Ottoman taxation.

It follows, then, that Ottoman administration had no particular interest in the actual, physical, living arrangement of the 'household head.' What did it matter whether he lived with his family together with another household head and his family under the same roof, or in an area warmed by the same hearth, or not, or whether he was the head of an extended family or not? In the case of an extended family, however, we can assume that more than one 'household head' might be counted if that were the actual case, and absent the disqualifying factors of infirmity and old age. These observations are based on the author's knowledge and understanding of the situation as it existed for the Province of Aleppo in the 16th century.

'Disqualified *hane*' must be taken into account when calculating total population, but the central question is that of the coefficient to be applied to the total *hane* statistic in order to arrive at an estimation of total population. The coefficient should, no doubt, vary according to time, place, circumstance, and 'lifestyle' (i.e., tribal vs. settled), and therefore, this is an issue that can not be satisfactorily settled, and certainly not 'standardized.' The secondary question that needs to be answered is whether the 'bachelors' should automatically be assumed to be included in the '*hane*' count, since they were not living in their own, independent household, or should they be added in, at some point to the calculation of total population. This author's inclination is to exclude them.

12 More than anyone else, Barkan, propagated this characterization of the Ottoman *tahrirs* (as, for ex., in his "Essai sur les données statistiques des registres de recensement," pp. 9-36), and through him it was picked up by Braudel. Times are changing, so that we now see so keen a scholar of Ottoman demography as Leila Erder, who appreciates the extent to which the *tahrirs* are not a proper 'census,' characterize the *tahrirs*, more correctly, as 'fiscal surveys' ("The Measurement of Preindustrial Population Changes: The Ottoman Empire from the 15th to the 17th Century," *Middle Eastern Studies* 11:3 [October 1975], pp. 284-301).

particular interests of the individual researcher. There is, intrinsically, no harm in this, and the question of nomenclature is itself not important as long as there is basic agreement as to the nature of the data of the *tahrirs*, their potential for research, and their limitations for research, too. But, there is still no such consensus at present. Therefore, it might be useful, if we can agree on the preeminence of the revenue objective of the *tahrirs*-- the fact that they are fiscal documents, intended, first and foremost, for the purposes of taxation--, to designate them by a name that reflects this, to wit, 'tax registers' or 'provincial tax registers.' These are terms already long in use.¹³ What we would gain from this more appropriate name is a highlighting of the nature of this source, i.e., that it was intended to serve the fiscal purposes of the Ottoman state, and therefore, we, at the very outset, should have more realistic expectations regarding the *tahrirs* as an historical source. In drawing up the *tahrirs*, the Ottoman state was not thinking of making a record for future economic or social historians to pursue, and consequently, the researcher must recognize the fact that data recorded for fiscal purposes may, very well, fall short of expectations when examined with other purposes in mind.

Even where such an awareness of the actual nature of the *tahrirs* exists, there needs to be the further recognition that the *tahrirs* pose particular problems for historical research. The sheer abundance of their data offering can overwhelm the researcher, as previously noted. This 'expansive' quality of the *tahrirs*, however, which, in a quite literal sense, often cover a great breadth of ground, must not be construed for comprehensiveness. If, for the purposes of illustration, we can reduce the data offering of the Ottoman *tahrirs* to 'categories of information,' admittedly a mechanistic view, we would have to acknowledge that the 'categories' covered by this source are actually quite limited in number. As it is true for any historical source, the *tahrirs*, too, need to be supplemented with other sources. As to their limited 'category offering,' in this lies both their shortcoming, the nature of which is evident, and their strength. The strength of the *tahrirs* rests with their presenting, usually in a more consistent form than not, data for categories of information that, in no other source, are to be found with such frequency and consistency. The *tahrirs* also offer a statistical record. This is both their uniqueness and their significance for historical research. No other source

¹³ The terms 'fiscal survey' or 'cadastral survey' are also acceptable as long as, for the latter, we understand what was being surveyed. This author's teacher and mentor, the late Professor Tibor Halasi-Kun, Columbia University, who was an unqualifiedly enthusiastic champion of the Ottoman *tahrirs*, was fond of the term 'domesday book' (as in his "Some Notes on Ottoman *Mufassal Defter* Studies," *Raiyyet Rûsûmü; Essays presented to Halil İnalcık on his Seventieth Birthday*, published as vol. 10 of *Journal of Turkish Studies* [1986], pp. 163-66).

offers the possibility to obtain the outline of an entire provincial taxation regime.¹⁴

Particular note needs to be made of the fact that the *tahrir* registers exhibit a two-dimensional quality, lacking a true 'organic' depth, which poses further challenges for research. They represent merely a snapshot, frozen in their time-frame, for the year in which the data was collected.¹⁵ We do not know, and very likely we will never know, if, or to what extent, their tax requirements continued to be followed and taxes collected according to them up until the time of the next register. Not infrequently, a significant interval, fifteen years, twenty years, or longer, separated one *tahrir* register from its successor. What are we to make of this situation? It would be difficult to maintain the belief that tax rates or tax requirements could have remained entirely static over such lengthy periods of time.¹⁶ Surely, then, we have to regard the recorded tax rates and tax requirements, and other data, as being 'approximations', to some extent, of the reality. It has long been thought that the conquest of a new territory or the accession of a new sultan required that a survey be made, but other factors appear also to have been involved.¹⁷

The timing of the Ottoman *tahrirs* for Syria offers an example of the intervals between *tahrirs* that one might encounter. In the case of the Syrian *tahrirs*, two registers were made in quick succession in the early years following the Ottoman conquest in 1516; the fact that Sultan Suleiman (1520-66) acceded to the throne four years after his father's con-

14 Before we 'wring our hands' in despair over the deficiencies and shortcomings of the Ottoman *tahrirs*, we might remember the words of the economic historian Roger Owen, commenting on the scant statistical confirmation at our disposal for the decline of the Middle Eastern economy between 1500-1800: "... nothing is known about the vital relationships between the size of population, cultivated area, and agricultural production. Figures for the volume of intra-regional trade and for the output of the craft industry are similarly lacking; and yet without such information no proper evaluation of changes in the total volume of economic activity is possible." (*The Middle East in the World Economy 1800-1914* [London and New York, 1981], p. 1.) The Ottoman *tahrirs* can shed some light on these questions.

15 Some slight amendment is necessary here. Ottoman officials carrying out a *tahrir* were instructed to use, as their yardstick for estimating projected revenues, a 'three-years-average,' which, in the case of agricultural revenues, would have obviated the disastrous effect of the 'extraordinary yield' occasioned by drought, locusts, etc. (Káldy-Nagy, "*sancaq* Registrations," p. 197). Bruce McGowan suspects that calculating these averages proved to be too onerous in practice, and hence, this method was likely not being followed, although he believes that consideration to the 'typical situation' was indeed being given ("Food Supply and Taxation," p. 147). This Ottoman practice, whether actually enforced or not, would appear to reflect the classical Islamic practice of the '*ibra*' (valuation) for determining agricultural revenues. For the '*ibra*', see *The Encyclopaedia of Islam*, 2nd ed., s.v. "Kharâdj," p. 1038, by A. K. S. Lambton.

16 Cohen and Lewis describe the cash amounts recorded in the *tahrirs* as 'notional' rather than 'practical' (*Population and Revenue*, pp. 7-8).

17 For an excellent discussion of the possible factors responsible for the timing of the *tahrirs*, see *ibid.*, pp. 4-6 and 10-11.

quest of Syria may explain this short interval between these *tahrirs*. Then, the next register was made in the 1530s, to be followed by one last Suleiman register executed in the late 1540s/early 1550s, with the sole exception of one yet-later Suleiman register for Hamah in the 1560s. Next followed a register recognizing the accession of Sultan Selim II (1566-74). Finally, there was one last *tahrir* executed in the latter part of the 16th century, i.e., in the 1580s or 1590s, either quite a few years into the reign of Sultan Murad III (1574-95) or at the start of the reign of Sultan Mehmed III (1595-1603). For these Syrian *tahrirs*, the shortest period of time between *tahrirs* is the five-year interval seen for Tripoli between its earliest two *tahrirs*, while the longest is the twenty-seven-year interval between the last two *tahrirs* for Damascus.¹⁸

18 The Time Sequence for the Ottoman *Tahrir* Registers (here, the 'detailed' [*mufassal*] registers) for the *Sanjâqs* of Aleppo, Damascus, Tripoli, Hamah, and Homs in the 16th Century

<u>Aleppo</u>	<u>Damascus</u>	<u>Tripoli</u>
1. TT 93 ca. 926/1519-20	TT 68 925/1519
2. TT 146/1040 ca. 933/1526-27	TT 430 ca. 932/1525-26	TT 1017 ca. 931/1524-25
3. TT 397 ca. 943/1536-37	TT 401 ca. 942/1535-36	TT 372 [ca 943?/1536-37]
4. TT 454 ca. 959/1551-52	TT 263/383 ca. 955/1548-49	*TK 203 954/1547-48
5. TT 493 978/1570-71	TT 474/543/*491 ca. 977/1569-70	TT 513/512 ca. 979/1571-72
6. TT 610 992/1584	TK 195/177/99 ca. 1005/1596-97
<u>Hamah</u>	<u>Homs</u>	
1.	
2. Hamah + Homs, TT 137-1/418	ca. 933/1526-27	
3.	
4a. TT 1052 ca. 959/1551-52	TT 281 959/1551-52	
4b. TT 344 ca. 970/1562-63	
5. TT 564 ca. 980/1572-73	TT 502 978/1570-71	
6. TK 92 1003/1594-95	TK 179 ca. 995/1586-87.	

* Register was not personally examined by the author.

NOTE: It remains a question whether a pre-932/1525-26-dated *mufassal* register once existed for Damascus, as such a register is seen for both Aleppo and Tripoli. We might assume the existence of a *mufassal* register of this time period for Hamah and Homs, on the basis of an existing *ijmal* (summary) register that covers not only these two *sanjâqs* but also Tripoli --TT 548, dated ca. 925/1519. It is noteworthy that the *tahrirs* for the Palestinian *sanjâqs*, which were part of the Province of Damascus, basically reflect the time-sequence seen for the Damascus *tahrirs*, similarly revealing no register before the 1520s, but diverging to show one additional register in the 1550s (cf. Cohen and Lewis, *Population and Revenue*, p. 10).

The registers prefaced by 'TT' are found in the Tapu Tahrir Section of the Archives of the Prime Ministry, in Istanbul, while the registers prefaced by 'TK' are located in the Tapu ve Kadastro General Directorate, in Ankara. The dates for these registers are those established by the author, with the exception of the dates for TT 491, dated by Bernard Lewis, in "The Ottoman Archives as a Source for the history of the Arab Lands," *Journal of the Royal Asiatic Society* (1951), p. 153, and for TK 203, dated by Barkan, in *Kanunlar*, p. 211. In the absence of an official date, approximate dates were determined on the basis either of dated internal notes or of official dates found for the corresponding *ijmal* register. Where two or three registers were used to record the results of one survey (denoted above by 'No./No.'), an approximate date was determined, and given above, on the basis of an official date, which, in all cases, was found for one register of a companion set. Dates for many of the above registers can be found in Lewis, "Arab Lands," pp. 150-54; for the dates of the Damascus registers, see

Given these intervals, 'continuous process,' is clearly not characteristic of the *tahrir* register. There should also be no *a priori* assumption that 'change' can readily be discerned from looking at one register alone. Yet, it is also true that the officials conducting the surveys not infrequently recorded changes regarding the status of a situation, in the form of notes, within the registers. Many of the early Anatolian *tahrirs* are rich in such notes, while this is less true for the earliest Syrian *tahrirs*. Whether such notes are present or not, certainly the researcher can distinguish change by comparing the *tahrirs* of a particular *tahrir* sequence, which, however, can be quite a difficult task. It remains noteworthy that change is not readily distinguished from the single *tahrir* register. This situation, therefore, beckons the researcher to take into consideration at least several *tahrirs* of a *tahrir* sequence. Preferably, however, all *tahrirs* of a *tahrir* sequence should be considered.

There is, today, an increasing recognition of the limitations and problems for historical research that the *tahrirs* pose.¹⁹ This recognition is both salutary and long overdue. It, no doubt, is a reflection of the growing maturity of our field, but it may represent, too, a reaction to our heretofore unbridled enthusiasm for and somewhat unquestioning attitude toward the *tahrirs*. It would be foolhardy for us, however, now to take our newly-found criticism so far as to dismiss this source altogether. In no way can we imagine that a world empire at the height of its power and enjoying the benefits from its still well-functioning institutions, like the Ottoman Empire in the 16th century, would spend so much effort to produce a 'misbegotten' record that would hold little of interest for historians centuries later.²⁰ We might remember that the Ottoman state expended

Muhammed Adnan Bakhit, *The Ottoman Province of Damascus in the Sixteenth Century* (Beirut, 1982), pp. 297-98. Note that the author established significantly different dates for Damascus registers TT 401 and TT 383 (see the above table) from those established by Bakhit- i.e., ca. 950/1543 and ca. 937/1530, resp.-, which affects the chronological order for the Damascus *mufassal* registers as assigned by Bakhit.

The registers given on the table above are inclusive of all extant *mufassal* registers of the 16th century to be found for these five *sanjâqs*, as of January 1989, in the two above-mentioned collections in Istanbul and in Ankara, with the following exceptions: Tripoli *Mufassal* Register TK 84, which was not examined by the author; and Aleppo *Mufassal* Registers TK 3 and TK 39/36, dated 943/1536-37 and 992/1584, resp., which, to judge from their dates, established by the author, appear to be copies of TT 397 and TT 610, resp., given on the table above.

¹⁹ In his provocative article posing the epistemological question-- "Wherein then is the reality of Ottoman history to be found?" (p.319)--, Colin Heywood gives, 'pried of place' to the Ottoman *tahrirs*, if only for the purpose of criticizing our uncritical assessment and use of them ("Critical Studies," pp. 315-45). By no means should those neologisms 'defterology' and 'defterologist' (*ibid.*, pp. 322 and 325-26, resp.), implying a particular sub-field of Ottoman history with its own coterie of 'practitioner,' be accepted into the lexicon of Ottoman studies. Such terms deny the very existence of 'intrinsic interest' and 'creative thought,' out of which union the best history-writing is produced.

²⁰ Generalization and idealization pose 'twin dangers' for the historian. It must be acknowledged that even within this so-called 'classical period' of Ottoman history, i.e., the 16th century, fundamental problems were already at work that would eventually destroy the classical facade. The ever-in-

much time and attention on the process by which the *tahrirs* were produced. It was not unusual for one year's time to be spent in executing a single *tahrir* register.²¹ Although this, in no way, guarantees the quality of the results, it does demonstrate the seriousness with which the Ottoman state viewed the undertaking and their expectation that the purposes for which they intended these *tahrirs* were being served. Our responsibility as researchers is to recognize these limitations and problems, and to find a way around them in as far as it is possible, so that we might exploit the rich, albeit 'imperfect,' data offering of the *tahrirs* to their fullest. Certainly we are the beneficiaries of their remarkably rich offering.

THE QUESTION OF AGRICULTURAL PRODUCTIVITY

Agricultural productivity would appear to be one of the areas most easily addressed through the *tahrir* registers. Moreover, since it is a matter that involves numbers, it would appear to be a most suitable candidate for computer analysis. It will be demonstrated in the pages to follow that the numbers themselves present significant problems. Two considerations should be born in mind when one sets out to use the Ottoman *tahrirs* to determine questions of agricultural productivity. The first consideration is, again, that the Ottoman state undertook the *tahrirs* with their fiscal interest as the primary objective, and therefore, simply the need for more revenue, or more grain, might very well have taken precedence over the actual conditions of agricultural productivity. Consequently, we should not automatically assume that tax rates are necessarily an accurate indicator of agricultural productivity. Yet, given the fact that the *tahrirs* do not

creasing demands, at this time, on the Empire's tax-paying subjects to maintain Ottoman armies in the field led to a series of popular revolts, often under the guise of religion (this is the theme of Gyula Káldy-Nagy's study, "Rural and urban Life in the Age of Sultan Suleiman," *Acta Orientalia* 32:3 [1978], pp. 285-319). In addition, the world-wide inflation of the 'Age of Discovery' would strike the Empire in full force in the late 16th century, eventually destroying the financial stability of the Empire and undermining its institutions (see Barkan, "Price Revolution," pp. 3-28). And, in the words of Barkan: "In reality, in spite of spectacular conquests and the acquisition of vast territories, the extended wars of the last half of the sixteenth century exhausted more and more the financial reserves of the Ottoman Empire.... And, what is worse, Ottoman conquests had passed the 'optimum' territorial limit. They ceased to be of benefit to the finances of the state, while the defense of the conquered lands created enormous expense." *Ibid.*, p.18.

21 M. Mehdi İlhan estimates that, under normal circumstances, a *tahrir* could not be completed in less than a year's time ("The Process of Ottoman Cadastral Surveys during the Second Half of [the] Sixteenth Century: A Study Based on the Documents from *Mühimme Defterleri*," *Anuarul Institutului de Istorie și Arheologie 'A.D. Xenopol'* [Publication of the Alexander I. Cuza University, Jassy, Rumania] 24:1[1987], pp. 19-20). See also Irène Beldiceanu-Steinherr and N. Beldiceanu, "Règlement ottoman concernant le recensement (première moitié du XV e siècle)," *Südost-Forschungen* 37 (1978), pp. 8-9, on this question of the time-requirements for a *tahrir*. For the process that the *tahrir*: entailed, see İlhan, "Cadastral Surveys," pp. 17-23, and Beldiceanu-Steinherr and Beldiceanu, "Règlement," pp. 1-24.

record total agricultural yields, we are wholly dependent upon their recorded tax rates and tax revenues, whether recorded as in-cash or in-kind levies or both, to arrive at some estimation of agricultural productivity. Hence, it emerges as a major question how we, then, can assess true agricultural productivity, if we can not completely 'trust' the given tax rates. The *tahrirs*' given tax rates might be seen as reflecting one of several possibilities:

- 1) some relationship to productivity, at least at times
- 2) government needs for more revenue or more grain, or
- 3) the traditional tax rate applied in an area, or in a village, regardless of actual productivity. These possibilities will be discussed in due course.

A second consideration for the question of agricultural productivity is recognition of the fact that productivity may involve more than the usual panoply of factors, such as the quality of the soil, weather and the climate, or the degree of rainfall or irrigation potential. Good agricultural land may simply not be productive because of a shortage of cultivators or a lack of security; obviously, the latter may cause the former. To the casual traveler to northern Syria today, the plain situated north of the city of Aleppo, extending west of the town A'zaz and unfolding east towards the towns of Bab and Manbij, which reveals a plowed earth of rich, deep brown hues, appears to be good agricultural land.²² But, the Ottoman *tahrirs* of the 16th century do not reveal this area to have been particularly productive at that time, to judge productivity, from the value of the tax revenues being collected there. This area was both tribal and frontier in the 16th century. A'zaz became the seat of the *Sanjaq* of A'zaz (also known as "*Livâ'-i A'zâz ve Ekrâd*" and as "*Livâ'-i Ekrâd ve Kilîs*"), which also encompassed the town of Kilis/Killiz and the area's Kurdish population; this area had a Turcoman population as well.²³ Consequently, this area's low agricultural productivity, back then, might have been the result of the prevalence of the transhumance way of life among many of

22 Abdul-Rahman Hamidé noted that this plain, known as the plain of Defterdar, plus the plain of Idlib, situated southwest of the city of Aleppo, were the agriculturally richest plains of the Aleppo region in the 1950s (*La région d'Alep: étude de géographie rurale* [Paris, 1959], pp. 61-62).

23 The Ottoman provincial administrative units-- province, *sanjaq* (the Arabic "liva" was in common use in the Arab lands, including northern Syria, but the author has chosen to use the term "*sanjaq*" instead), and *nahiye*-- were nothing if not variable, with provinces and *sanjaqs* frequently being reconfigured simply by the addition or subtraction of *sanjaqs* and *nahiyes* from their larger units. This was certainly true for the Province of Aleppo in the 16th century. A'zaz constituted a *nahiye* of the *Sanjaq* of Aleppo in the first two *tahrirs* for Aleppo (BA [for Başbakanlık Arşivi], TT [for Tapu Tahrir] 93, pp. 201-81, and TT 146, pp. 490-648), after which it became an independent *sanjaq* of the Province of Aleppo, for which two later *tahrirs* survive, BA, TT 181 and TT 506 (these are identified by Bernad Lewis, in "Arab Lands", p.151).

its population, and the resulting conditions of generally less security. Conversely, districts (i.e., *nahiyes*) of the *Sanjaq* of Aleppo that showed a substantial degree of agricultural productivity in the 16th century, such as Jabal Sim'an and Sarmin, today reveal so much rock and rubble in their soil that it is hard to believe that they were once quite productive; actually, this area is still productive today.²⁴ One imagines that the rock and rubble were, to some degree, present in their soil in the 16th century. In addition to their apparent agricultural productiveness, one suspects that what made these districts so productive back then was the fact that they were situated in the interior, and therefore, they enjoyed some measure of protection from tribal incursions. These districts in the 16th century were dotted with many villages, of which quite a few, to all appearances, not only were flourishing, but were supporting as well a significant population.

THE QUESTION OF TAX RATES

The Qasim Rates

In Syria of the 16th century, two basic methods for the tax assessment of the agricultural product were in use. The more prevalent was the *qasim* method, based directly on crop yield. It assessed the harvest of a particular crop at a specified fraction--always a simple fraction--of its total yield. For example, a village's wheat harvest might be taxed at one-fifth of its yield. In contrast, the other assessment, designated as either the *maqtû'* or *deymûs* (these terms were often used interchangeably), was based on the cultivated surface, taxing each crop on the basis of the cultivated acreage, given in *feddân*, at rates expressed in terms of either cash, i.e., the Ottoman silver *aqche*, or a unit of measurement, such as the *mekkûk*, for in-kind levies. For example, a village's agricultural tax obligation might be computed as two *mekkûk* of wheat per *feddân*, one *mekkûk* of barley, 12 *menn* of olive oil, and 100 *aqche* of 'summer crops' per *feddân*.²⁵ Or, the *maqtû'*-*deymûs* assesment might compute a

24 Writing in the 1950s, Hamidé noted for the region of Aleppo, in general, that not only was it the most populated region of Syria, but it was also the richest in terms of its agricultural production (*La région d'Alep*, p.3).

25 "Bi-her feddân 2 mekkûk qamh ve şa'ir bir mekkûk ve zeyt 12 menn ve Sayfi yüz aqche." These rates are recorded for the village of Jadrâyâ al-Jurz of the *Nahiye* of Sarmin, where the assessment is designated as the *maqtû'* (BA, TT 1040, pp. 972-73). The *mekkûk* is discussed, below, in the text.

The *feddân* seen here is a surface measure that dates back to the Byzantine period. It can perhaps be identified with the Egyptian *feddân* of the Middle Ages, which was equal to 6,368 sq. m. (Hinz, *Isla-*

village's agricultural tax obligation simply as a single tax, i.e., in 'blanket' fashion without distinguishing individual crops, such as at the rate of 1,000 *aqche* per *feddân*²⁶; for these blanket assessments, the tax was computed and collected in coin. Whether expressed in terms of coin or in-kind measurement, the *maqtû'* and *deymûs* denoted a fixed rate of assessment per unit of cultivated land. These terms can cause no small measure of confusion, because, in the later *tahrirs*, they often denoted simply a lump-sum cash payment, apparently devoid of their meaning as a particular method of tax assessment.²⁷

The *qasim* and the *maqtû'-deymûs* methods of assessment were

mische Masse, p. 65). Note, however, that the Syrian *feddân* of recent times represents a far-smaller area than either the contemporary or older Egyptian *feddân* (William Popper, *Egypt and Syria under the Circassian Sultans 1382-1468 A.-D.: Systematic Notes to Ibn Taghrî Birdî's Chronicles of Egypt*. Part 2 [Berkeley and Los Angeles, 1957], p. 37). The *feddân* is not addressed in under the Circassian Sultans 1382-1468 A.D.: Systematic Notes to Ibn Taghrî Birdî's Chronicles of Egypt Aleppo law codes. Where a *feddân* total is given in the Aleppo *tahrirs*, it is usually without a qualifying name. There are some few cases where a *feddân* is described as "Rûmânî" or "Rûmî" (these perhaps denote the same surface value, and indicate, in general, the Roman/Byzantine period). In such instances, the "Rûmânî" or "Rûmî" *feddân* is sometimes found 'in opposition to' the so-called "Islâmî" (Islamic) *feddân*. In a few cases, it is indicated that the Islamic *feddân* was half the area of the Rûmî *feddân* (as, for ex., for the villages of Kitiyân and Yahmûl of Sarmin, BA, TT 93, pp. 483 and 551). Can we assume that, when and where the *feddân* appears without qualification, it is the Islamic *feddân*? In a Damascus law code, dated 955/1548-49, the *feddân* is defined in terms of the *chift*, another Byzantine surface measurement, which, however, was more variable in nature, and hence, less precise than the *feddân*. The *chift* (lit., 'pair of oxen yoked to a plow'; *New Redhouse Turkish-English Dictionary*, 9th ed., s.v. "Çift") expressed the amount of land that a yoke of oxen could plough within various periods of time (for the Byzantine *feddân* and *chift*, see *The Encyclopaedia of Islam*, 2nd ed., s.v. "Kharâdj," by Cl. Cahen, p. 1031). According to the above Damascus law code, there existed three different *feddâns*, identified by the amount of land that a yoke of oxen could plough in a period of a day and night (the Rûmânî *feddân*), in a day alone (the Islamic *feddân*; the equivalence of the Rûmânî and Rûmî *feddâns*, and the value of the Islamic *feddân* as half of their value, would thus appear to be confirmed), or up to the time of noon (reproduced by Barkan, in *Kanunlar*, prov. no. 1, p. 220; this law code prefaces BA, TT 263). In the Aleppo *tahrirs*, *feddân* totals were very infrequently given for the villages. Similarly, Hütteroth and Abdulfattah found that these totals were given for only about 20 per cent of the villages of southern Syria and Palestine in the late 16th century (*Historical Geography*, p.76).

In the given example, above, 100 *menn*, then *menn* being a weight, are seen to equal one *qintâr*. The Syrian *menn*, in the Middle Ages, was equal to 819 gr., but the *menn* in question here appears to be better identified by the contemporary Egyptian *menn* equalling 812.5 gr. (or possibly, 814 gr.), which, in turn, corresponds to the Egyptian *qintâr* (of which there were five types in the Middle Ages) of 81.25 kg. (or possibly, 81.4kg.), and not to the contemporary Aleppo *qintâr* of 228 kg. (see Hinz, *Islamische Masse*, pp. 16 and 24-26). Note that 'summer crops' are a common tax entry (i.e., "*mâl-i* [or, '*âdet-i Sayfî*']") in the Ottoman *tahrirs* for Syria. This represents a collective designation for a range of summer crops, meaning crops that were usually sown in spring and harvested in summer or early fall, which, because of the small quantities in which they were being grown, were lumped together for purposes of taxation; their collective tax requirement was expressed in terms of cash. For the 'summer crops' of Syria, see Margaret L. Venzke, "Special Use of the Tithe as a Revenue-Raising Measure in the Sixteenth-Century *Sanjaq* of Aleppo," *JESHO* 29 (October 1986), n.46, p. 268.

26 "Maqtû, fi 1000 [aqche]." This is seen for the village of Hasfâyâ of the *Nahiye* of Sarmin; the tax obligation itself is designated as *deymûs* (BA, TT 93, p.504.)

27 In their later manifestation as a cash payment, *maqtû* and *deymûs* may also connote the tax-farming situation, particularly in the presence of the expression "der 'uhde-i" ('in the charge of ...') For further discussion of the *qasim* and *maqtû'-deymûs* assessments, and of their antecedents, see Venzke, "Tithe," nn. 38-40, pp. 260-62, pp 260-61, nn. 78-83, pp. 290-93, and pp. 289-93.

not Ottoman in origin; their roots extend far-back into Islamic history.²⁸ We know that, historically, cultivators favored the *qasim* method of assessment because of its innate flexibility--when harvests were poor, this automatically resulted in lower tax requirements. In contrast, the *maqtû'-deymûs* method of assessment was inelastic to actual changes in productivity--when harvests were poor, tax requirements were, in no way, reduced, since they were based on the cultivated surface, not on the actual yields.²⁹ The *qasim* method of assessment would appear, then, to be the more reliable indicator of actual agricultural activity. In no way would this judgment need to be revised if it were established that Ottoman administration was using a 'three-years-average' (the *'ibra*), previously referred to, in determining the *qasim* tax requirements. Obviously the 'distortion' occasioned by a 'three-years-average' pales in comparison with the distortion inherent in the long intervals that are frequently seen between *tahrirs*. At this point, too, we will resist the temptation to dismiss both assessments on the grounds that the *tahrirs* can not bear much relationship to reality anyway because of the sometimes-long intervals between them. This view, which is not entirely unjustified, is nevertheless bankrupt, because it will take us nowhere!

Some further reflection on how the *maqtû'-deymûs* assessment actually worked will invariably lead to an appreciation of the fact that it is not as good an indicator of agricultural productivity as the *qasim*, because it taxed crops according to the 'total' cultivated surface of the village or *mezra'a*³⁰ (the named, cultivated sites that lay outside of the village lands, often representing former villages), not according to the actual acreage being devoted to a particular crop. The very fact that a village's lands, for example, may not have been of uniform fertility causes distortion. Furthermore, appreciate that a minor crop, such as the various vetches (i.e., *julbân/julubbân* and *kushene*), which, in the *Sanjaq* of

28 For their antecedents in Islamic history, the *muqâseme* and the *misâha* (and possibly also the *fasl/mafsûl* for the *deymûs*), resp., see Claude Cahen, "Aperçu sur les impôts du sol en Syrie au moyen âge," *JESHO* 18 (October 1975), pp. 238-42; Lambton, "Kharâdj," pp. 1037-40; Frede Løkkegaard, *Islamic Taxation in the Classic Period: With Special Reference to Circumstances in Iraq* (Copenhagen, 1950), pp. 109-125; Ahmad Ibn 'Abd al-Wahhâb al-Nuwayrî, *Nihâyat al-arab fî funûn al-adab*, 14 vols. (Cairo, 1923-43), 8 (1931), pp. 258-61; and A. N. Poliak, *Feudalism in Egypt, Syria, Palestine, and the Lebanon, 1250-1900* (London, 1939), n. 4, p.45, and pp. 47-48 and 65-67.

29 Lambton, "Kharâdj," pp. 1037-38. It might also be noted that the *qasim* method of assessment proved to be something of a disincentive to cultivators extending and improving the cultivated surface (ibid., p. 1038).

30 In truth, note that the author has assumed that the *maqtû'-deymûs* assessment was based on the 'total cultivated surface,' as opposed to the 'total surface,' which would have included pastureland and other, but this is nowhere indicated in the sources. Another question that arises here is whether the cultivated surface included the fallow, which, at all times, represented a fairly considerable area. Again, we have no evidence on this point.

Aleppo in this period, occupied only a small part of the cultivated area to judge from their tax revenues, was nevertheless being taxed at a rate based on the total cultivated surface. We can also recognize that, where one single *maqtû'-deymûs* assessment determined the entire agricultural tax obligation of a village or *mezra'a*, the potential for distortion of the reality was even greater. Finally, one must also note that, in the case of the Aleppo *tahrirs*, the rates by which the *maqtû'-deymûs* assessments were computed are usually not indicated.³¹ Therefore, one is left no choice but to base a study of agricultural productivity on those situations where the *qasim* method of assessment was in use.

Despite the foregoing validation of the *qasim* assessment for the purposes of a study of agricultural productivity, such a study will nevertheless encounter difficulties. Let one illustrate this point with situations encountered, in the *tahrirs*, for the *Sanjaq* of Aleppo in the 16th century. To start out, let us consider the *qasim* tax rates themselves, which appear, *prima facie*, to represent clear beacons that readily lend themselves to comparison with *qasim* rates from other areas. A cursory review of the later Aleppo *tahrirs* (from mid-century on) reveals the prevalence of the *qasim* rates of one-eighth, one-seventh, one-sixth, and one-fifth. As it is typical of research involving the *tahrirs*, the volume of data, at this point, demands that it be controlled in order to obtain meaningful findings. Accordingly, if we limit the inquiry to Aleppo's *qasim* tax rates as they are revealed in one *tahrir*--let us choose for this purpose the fifth *tahrir*, dated 1570-71--, we can identify 765 *qasim* villages or towns (occasionally, agricultural activity was seen for towns), out of a total number of 1,008 villages and towns. Clearly the *qasim* method of assessment predominated in Aleppo at this time. It was also discovered that Aleppo's prevalent *qasim* rates fell within a relatively narrow range, from one-eighth to one-fifth of the agricultural yield. The rate of one-fifth was seen for 46.5 per cent of the *qasim* villages, followed by the rate of one-seventh, for 24 per cent of the villages, to be followed by the rate of one-eighth, for 18 per cent of the villages. The rate of one-sixth was also fairly common, seen for 11 per cent of the *qasim* villages. The only other *qasim* rates encountered for Aleppo's villages were the rates of one-tenth and one-fourth, each seen, however, for only two villages. Table 1, below, presents these statistics.

³¹ Rates are sometimes indicated in the first two *tahrirs*, but rarely after this time.

TABLE 1. --The Range and Representation of the *Qasim* Tax Rates as Seen for the Villages of the *Sanjaq* of Aleppo in 1570-71

<i>Qasim</i> Villages	1/4	%	1/5	%	1/6	%	1/7	%	1/8	%	1/10	%
765	2	0.3	356	46.5	84	11	183	24	138	18	2	0.3

SOURCE: Compiled from the data of BA, TT 493.

NOTE: For 51 of Aleppo's 1,008 villages and towns, no method of agricultural assessment was indicated. These cases represented villages that were either no longer inhabited or else had very few inhabitants.

Aleppo's *qasim* rates strike one as being reasonable rates, if not actually low rates. These rates particularly appear to be low when they are compared with the prevalent *qasim* rates seen for the *Sanjâq* of Damascus in the same period--rates of one-fourth or one-third of the agricultural yield. These higher rates were also the prevalent rates seen, in the same period, for the Palestinian *sanjâqs*, which constituted the southern part of the Province of Damascus.³² This finding prompts the obvious question of whether Aleppo's lower *qasim* rates truly signified a lower agricultural productivity, or were they the result of a more favorable treatment, by Ottoman administration, in respect to taxes. The answer to both is 'no.' *Qasim* tax rates can not simply be extracted from their context and compared readily with the rates from other regions.

There were two factors that affected Aleppo's tax rates, causing them to appear to be lower than they actually were: the presence in this *Sanjaq* of both the *resm-i chift* (farm tax) system and the *mâlikâne-dîvânî* system (the latter will be discussed in due course). The *resm-i chift* system, represented by the *resm-i chift*, *resm-i bennak* (*bennak* tax), and *resm-i müjerrred* (bachelor tax) taxes,³³ was in effect in the

³² The rates identified for Ottoman Damascus are based on the author's examination of the Damascus *tahrirs*. Not surprisingly, the same higher rates were identified for the Palestinian *sanjâqs* (Hütteroth and Abdulfattah, *Historical Geography*, pp. 64-65 and 77-78). The rates of one-fourth and one-third also appear to have predominated in Mamluk Syria, where, similarly, they were assigned to non-irrigated but reasonably productive land (al-Nuwayrî, *Nihâyat*, vol. 8, pp. 258-59).

³³ The farm-tax system represents the great cornerstone of Ottoman provincial administration. It accorded the peasant-cultivator usufruct of and 'security of tenure' to a plot of land (the *chift* or farm), and a limited right of disposal of the holding, in return for the yearly payment of the 'farm tax,' according to the number of farms held. Also under this system, married adult men who held less-than-half-a farm, who were known as "*bennak*," paid the *bennak* tax, while landless, unmarried young men, known as "bachelor," paid the bachelor (*müjerrred*) tax (as outlined in the law code of the fifth Aleppo *tahrir*, reproduced by Barkan, in *Kanunlar*, prov. no. 1, p. 206, and as identified in the actual practice). For the *resm-i chift* system, see *The Encyclopaedia of Islam*, 2nd ed., s.v. "Çift-Resmi" and "Çiftlik," by Halil İnalçık; *İslâm Ansiklopedisi*, s.v. "Çiftlik," by Ömer Lütfi Barkan; Neş'et Çağatay, "Osmanlı İmparatorluğunda Reayadan Alınan Vergi ve Resimler," *Ankara Üniversitesi Dil ve Tarih-Coğrafya Fakültesi Dergisi* 5:1 (January-February 1947), pp. 491-93 and 495-501; and İnalçık, "Raiyyet Rüsümü," pp. 575-601. Recognize that this territorial *chift*, which is largely identifiable with the ploughland, must owe some debt to the Byzantine *chift* land-measure (for this, see n. 25).

Sanjâq of Aleppo in the 16th century, while it was neither introduced into the *Sanjâq* of Damascus, nor into the Palestinian *sanjâqs*, nor into the *Sanjâq* of Tripoli.³⁴ In all of Syria, the *resm-i chift* system was applied only in the Province of Aleppo, but even here, it was not uniformly introduced into all *sanjâqs* immediately following the Ottoman conquest. When one considers the impact of the *resm-i chift* taxes on the villages of Aleppo, their revenues, if added to the revenues obtained from Aleppo's common one-fifth *qasim* tax rate, could easily have made Aleppo's tax requirements comparable in 'burden' to the revenues being obtained from the higher *qasim* rates seen for Damascus and the Palestinian *sanjâqs*. Consequently, before making a comparison of the *qasim* tax rates of different regions, one, first, must determine whether the *resm-i chift* system was uniformly in place in the regions to be compared. More pertinent to this study, it has thus been seen that an administrative factor, here, the presence of the *resm-i chift* system, appears to have had some effect on the levels at which Aleppo's *qasim* rates were set. The implications of this for research is to obviate the possibility of an easy comparison being made between, for example, Aleppo's and Damascus's *qasim* rates, as their rates are simply not comparable, and therefore, to complicate any comparative analysis of agricultural productivity based on these rates.

The rates at which the *resm-i chift*, *resm-i bennak*, and *resm-i müjered* taxes were being assessed in Aleppo remained the same throughout the 16th century after the first *tahrir*, where the rates were higher. In fact, the *resm-i chift*, in the first *tahrir*, was twice as high as the later *resm-i chift*, while the *resm-i bennak* was only slightly higher. The *resm-i chift* was eighty *aqche* in the first register, while only forty *aqche* in the subsequent registers. The *resm-i bennak* was reduced from sixteen *aqche* in the first register to twelve *aqche* in the later registers. Perhaps one justification for the initially higher *resm-i chift* rates was that no *resm-i müjered* was being assessed in the first *tahrir*, although bachelors were being counted and recorded in that register; in the second *tahrir*, bachelors were being only erratically taxed. We might conclude from this constancy seen in the *resm-i chift* rates that, in the 16th century, these taxes were basically 'impervious' to changes in agricultural productivity and that the Ottoman state, at this time, was in no way manipulating these rates to obtain more revenue.

³⁴ This conclusion is based on the author's examination of the *tahrir*-series for the *sanjaqs* of Damascus and Tripoli (for these registers, see n. 18). The research of Hütteroth and Abdulfattah, resulting in their *Historical Geography*, has confirmed the absence of this system in the Palestinian *sanjaqs*.

TABLE 2. --The Taxes (Expressed in *Aqche*) of the *Resm-i Chift* System as Seen for the *Sanjaq* of Aleppo in the 16th Century According to the Ottoman *Tahrirs*

	(1584)	(1570-71)	(1551-52)	(1536-37)	(1526-27)	(1519-20)
<i>Chift</i>	40	40	40	40	40	80
<i>Bennak</i>	12	12	12	12	12	16
<i>Müjjerred</i>	6	6	6	6	6	--

SOURCE: BA, TT 610, TT 493, TT 454, TT 397, TT 146 and 1040 (these are companion volumes), and TT 93, from the latest to earliest *tahrir*.

NOTE: These rates are based on the data for the three districts (*nahiyes*) of the *Sanjaq*--Jabal Sim'an, Sarmin, and Shughr--that served as the control group for the first five *tahrirs*, plus the market towns and villages of the entire *Sanjaq*. Note that Shughr was not recorded with the *Sanjaq* of Aleppo in the first *tahrir* (nor is this district to be found in any of the early *tahrirs* of surrounding areas). Finally note that Jabal Sim'an alone constituted the control group for the sixth and last *tahrir* for Aleppo in the 16th century.

The limited presence of the *resm-i chift* system in Ottoman Syria is itself an issue of great interest that merits further consideration, but it is not within the focus of this article. Let one, however, observe that, if this system was truly a cornerstone of Ottoman provincial administration.³⁵

³⁵ The roots of the *resm-i chift* system, which go back to the early days of the Ottoman Empire, remain very much in question. Something of a 'dual personality' can be seen for the system. The earliest 'empire-wide' Ottoman *qanunname*, that of Sultan Mehmed II (1451-81), in theory representing a statement of general Ottoman practice, but some of whose provisions may be bedded in a 'localized' situation, reveals this dual personality. It depicts this system both as a commutation, into cash taxes, of the labor-services previously required of the peasant, although these labor-services might be continued in lieu of cash payments, and as a territorial entity (see provs. nos. 1-4 and 14, Part 4; and prov. no. 16, Part 3, and prov. no. 7, Part 4, resp., in Barkan, *Kanunlar*, pp. 390-91). For a proper understanding of the aforesaid provs. 1-4, Part 4, one must consult İnalcık, *Raiyyet Rûsûmu*, pp. 577-81.

By the time of Mehmed II, the Ottoman Empire had made extensive conquests into what should be regarded as, at the very least, two distinctively different areas, in terms not only of population but also of prior administrative practice, i.e., areas wrested directly from Byzantine control, as in the Balkans, as opposed to areas under prior Islamic rule, as in Anatolia (although these latter areas, too, were once Byzantine). It is tempting to equate the first definition of the *resm-i chift* system, as a commutation of labor-services, with the newly-conquered Byzantine areas, and the latter with those areas already under Islamic rule and practice, but such a clear-cut division simply appears not to be warranted on the basis of the present state of research.

For the area measurements connoted by the territorial *chift*, see prov. no. 6, of the Hudavendigâr *qanunname*, dated 892/1486-87, reproduced by Barkan, in *Kanunlar*, p. 2; the *Sanjaq* of Hudavendigâr, in northwestern Anatolia, with Bursa as its major center, might be regarded as a 'mother-lode' of Ottoman provincial administrative practices, and as thus, it was the subject of a very important study

As we have come to view it, why was it, then, not introduced into the provinces of Damascus and Tripoli? We have discovered that Ottoman administration gradually extended, within the Province of Aleppo, the areas within which the *resm-i chift* system was to be applied, so that, by the mid-16th-century, the system appears to have been uniformly in place throughout the Province.³⁶ Clearly, Ottoman administration deliberated over the question of whether to introduce the *resm-i chift* system into a particular area. It would be most interesting to know what considerations resulted in the decisions limiting the system in Syria to its northern part, i.e., to the Province of Aleppo.

This question of the presence of the *resm-i chift* system also reveals another problem that the *tahrirs* might pose for research. We, traditionally, rely very heavily upon the *qanunnames*, i.e., the statements of the regulations and practices that were in force for a *sanjâq*, which frequently are to be found at the very beginning of a *tahrir* register, thus

by Ömer Lütü Barkan and Enver Meriçli, *Hüdavendigâr Livasi Tahrir Defterleri* (Ankara, 1988). It is important to note that, in eastern Anatolia, in particular, some labor services remained an obligation for the peasants even after the *resm-i chift* taxes had been introduced, and such services were to be rendered in addition to the payment of cash taxes, although they might also be fulfilled by a cash payment (see, for example, the Diyarbekir *qanunname*, dated 947/1540, pov. no. 8, reproduced by Barkan, in *Kanunlar*, p. 132).

The late Osman Turan believed the *resm-i chift* system to be a practice of the Anatolian (or, Rum) Seljuq State (1075-1277), thereby claiming for it both a Turkish and Islamic origin ("Le droit terrien sous les Seljoukides de Turquie: terres domaniales et diverses formes de propriété privée," *Revue des études islamiques* [1948], pp. 34-37). Northern Syria was itself subject to a brief period of Seljuq rule under the so-called Syrian Seljuqs, but given the centuries-long interregnum between the Seljuk and Ottoman rule of Syria, it seems unlikely that the system would have survived until the Ottoman period, if indeed it ever did exist in Seljuq Syria. It is quite likely that the Ottomans were influenced by different traditions, including the Seljuq, and that they combined various features from these to come up with their distinctive *resm-i chift* system. In the 16th century, by which time the *chift* was, most often, identified by a territorial holding, it appears to have acquired the legal attributes that secured to its peasant-cultivators some security of tenure (see İnalcık, *Raiyyet Rûsûmu*, p. 595, although this point is not entirely made here).

³⁶ The *resm-i chift* system is seen for the *Sanjaq* of Aleppo in the first Ottoman *tahrir*, dated ca. 1519-20, i.e., four years after the Ottoman conquest in 1516. It is also seen, in this *tahrir*, for what will later become the independent *Sanjaq* of "A'zâz and the Kurds," and for the southern *nahiyes* of Kafr Tâb, Shayzar, and Afâmiya, which, later on, will be recorded for other *sanjaqs* of the Province of Aleppo. By the time of the second *tahrirs*, compiled for Syria in the mid-1520s, the *sanjaqs* of Hamah and Homs, to the south of Aleppo, appear to have been joined to the Province of Aleppo, having formerly been surveyed as part of the Province of Tripoli, but the *resm-i chift* system was not introduced into these *sanjaqs* at this time. It is not until the fourth *tahrir* at mid-century, i.e., thirty-five years after the Ottoman conquest, that the *resm-i chift* system was introduced into the *sanjaqs* of Hamah and Homs (Margaret L. Venzke, "Syria's Land-Taxation in the Ottoman 'Classical Age' Broadly Considered," *V. Milletlerarası Türkiye Sosyal ve İktisat Tarihi Kongresi: Tebliğler*, İstanbul, 21-25 August 1989 [Ankara, 1990], pp. 422-23). [Note that, in the cited article, what should be the top line of the text for p. 423 is mistakenly placed at the top of p. 422. Also, the following section was omitted in the printed text after "Mamluk" on line 4, p. 423: "*dawra* and *himâye*. When the *resm-i chift* system is finally introduced in Hamah and Homs some twenty-five years later, the reason given, at that time, in the *qanunname* for Homs, is simply that the last of the Mamluk..."] As a result of this later extension of the *resm-i chift* system, the system will be seen, apparently, in the whole of the Province of Aleppo. However, the system will not be introduced elsewhere in central Syria, nor at all in southern Syria.

serving as an introduction. We need to recognize that the *qanunnames* can exhibit an 'ahistorical' quality. They can be most imprecise as to the actual time when a measure or practice was introduced. For example, the successive Aleppo *qanunnames* each mention, in turn, that "formerly" (*muqaddemâ*), when an imperial *tahrir* had been ordered, the "innovations" (*bid'atlar*) that had been introduced in the time of the "Cherâkise," i.e., the Circassians or Mamluks, who ruled Syria from 1260 to 1516, were abolished and in their place the *resm-i chift* system was introduced.³⁷ When exactly was the *resm-i chift* system introduced into the *Sanjaq* of Aleppo? Had we read this notice in the *qanunname* of the fourth *tahrir*, we might have surmised that the change had taken place in the third Aleppo *tahrir*. But, this same notice appears in the *qanunname* of the third *tahrir*, and therefore, we realize that the change had taken place earlier. Since no earlier *qanunname* survives for Aleppo, we had to check the actual entries of the first and second Aleppo *tahrirs* to determine whether the system was actually present there. It was found in both *tahrirs*, and therefore, we can conclude that the system was introduced shortly after the Ottoman conquest. The Aleppo *qanunnames* did not tell us this. On the contrary, given their tendency toward repetition, they can truly be misleading on this point, as well as on other points. Perhaps one reason for the repetition of this notice is that Ottoman administration must have grappled for some years with this question whether to introduce the *resm-i chift* system into other *sanjaqs* of the Province of Aleppo, namely Hamah and Homs, and consequently, this issue remained of real topical concern.³⁸ We should stand hereby warned that the information in the *qanunnames* must be checked against the actual *tahrir* entries, otherwise one can be seriously misled.

*Are the Qasim Tax Rates a Reliable
Indicator of Agricultural Productivity?*

Recognition of the fact that *qasim* tax rates from different regions may not be entirely comparable need not discredit their validity for any one *sanjaq*. We might still harbor the expectation that *qasim* rates can be a reliable indicator of agricultural productivity within a *sanjâq*. And yet, this author would have to acknowledge that, in her experience, it has

³⁷ The *qanunnames* of the third, fourth, and fifth Aleppo *tahrirs*, TK 3, p. 1-b, BA, TT 454, p. 2, and BA, TT 493, p. 8, resp. (this last is also reproduced by Barkan, in *Kanunlar*, prov. no. 1, p. 206).

³⁸ Note that the *qanunname* of the fourth *tahrir* for Homs clearly indicates, and correctly so, that the *resm-i chift* system was being newly introduced at that time, i.e., at mid-century (BA, TT 281, pp. 3-4).

been difficult to assess both the significance and the reliability of *qasim* tax rates even within one *sanjaq*. W. -D. Hütteroth and K. Abdulfattah arrived at a similar conclusion when they investigated this question for the Palestinian *sanjaqs* in the late 16th century.³⁹ This situation presents us with a real puzzle: was there no correlation between tax rates and agricultural productivity in the Ottoman provinces in the 16th century? If not, then, was there any rationality in the Ottoman agricultural tax system? On what factors were Ottoman agricultural tax rates based?

These are most difficult questions to answer, and they will not, indeed can not, be answered here. Any attempt to determine the degree of correlation that existed between *qasim* rates and agricultural productivity, even for one *sanjaq*, must naturally entail the comparative approach. That approach might seek to investigate either one area, be it a single *nahiye* or the whole of a *sanjaq*, over a period in time, i.e., through a series of *tahrirs*, or the constituent *nahiyes* of a *sanjaq* might be compared against each other for one moment in time, as represented by a single *tahrir*. Although the most conclusive results might be obtained from a *sanjaq*-wide focus over a period of time, this focus would overwhelm the lone researcher, in terms of the volume of data involved, especially absent use of the computer in the arduous data-collecting stage, which the present regulations of the Archives of the Prime Ministry in İstanbul do not allow. Of these options, let us consider a comparison of *nahiyes* at the same moment in time.

This approach was undertaken for the occasion of the Ottoman *Tahrir Defterleri* Conference in Konya, in 1992, when the author attempted an investigation into the question of agricultural productivity focusing on two *nahiyes* of the *sanjaq* of Aleppo, with the ulterior objective to identify the problems that one might encounter in *tahrir* research. But, how does one single out two *nahiyes*? Should one have chosen two *nahiyes* that had similar *qasim* rates or widely varying ones? Given the potential problems that the *tahrir* registers might pose for research, these problems are likely to be even more evident when a comparison of similar situations is conducted, and therefore, the situation of similar *qasim* rates was chosen. Along analogous lines of reasoning, areas of higher *qasim* rates might reflect agricultural productivity more faithfully than areas of lower rates, where non-agriculturally-related factors might have had greater play, thereby preventing areas that were potentially productive from actually becoming so. Therefore, it might be of greater interest to look at districts that had lower *qasim* rates. Accord-

³⁹ *Historical Geography*, pp. 64-65 and 77-78.

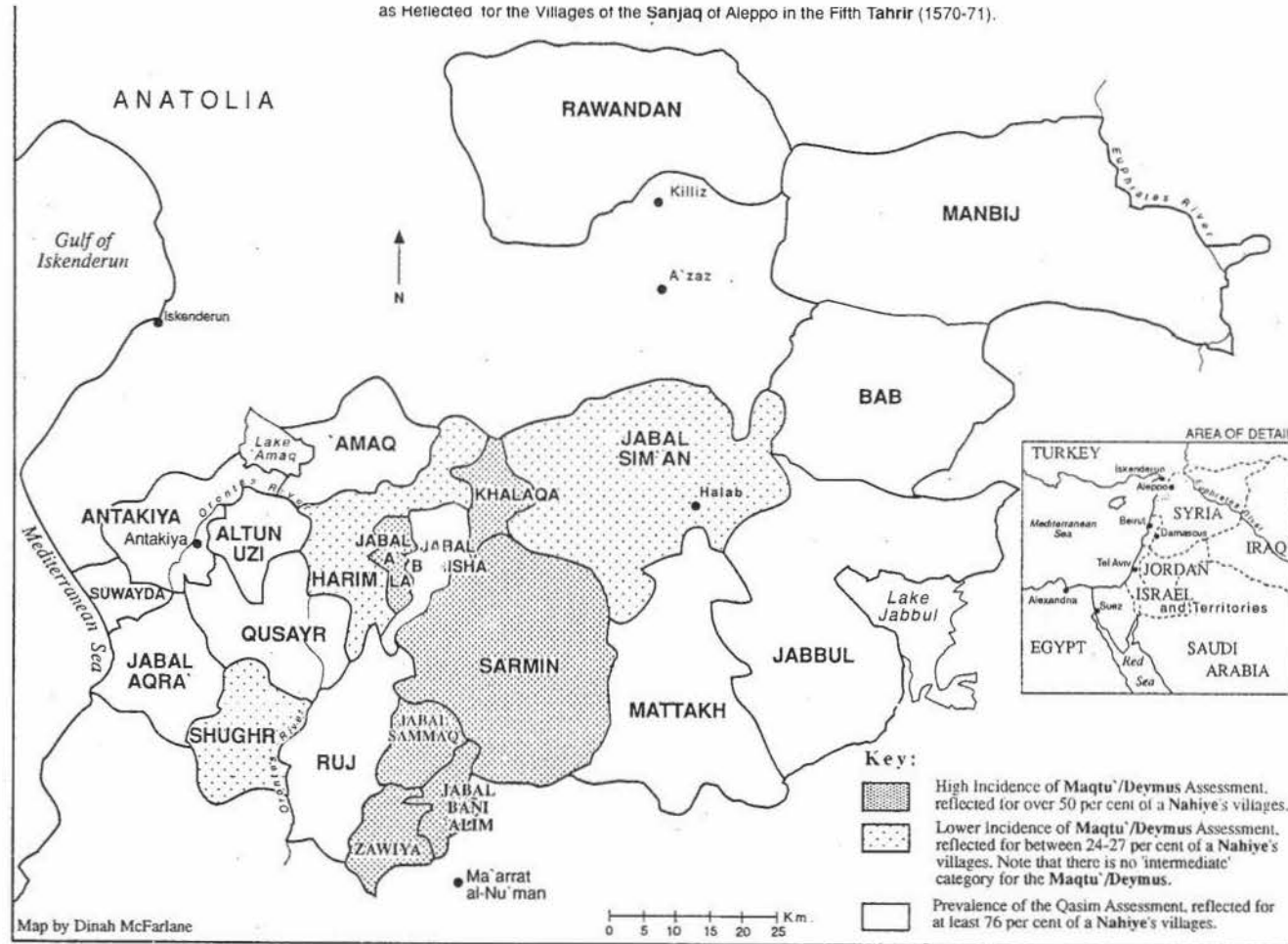
ingly, the comparison was made of two Aleppo *nahiyes* that had low *qasim* rates in the 16th century. First, however, note the benefits to be obtained from the *sanjaq*-wide perspective. In this case, it allowed us to single out the districts having low *qasim* rates.

The 'low-tax' *nahiyes* thus chosen for focus were 'Amaq and Manbij at the time of the fifth Aleppo *tahrir*, dated 1570-71. Here, the *qasim* rates of one-seventh and one-eighth, respectively, predominated. Both *nahiyes* were situated on the periphery of the *Sanjaq*, and hence, they might be regarded as 'frontier' districts. The other *nahiyes* of Aleppo that, similarly, had low *qasim* rates at this time were Bâb, Jabbûl, and Râwandân.⁴⁰ See Map 1, below, for these locations. These five *nahiyes* were located on the northern and eastern peripheries of the *Sanjaq*, abutting areas where tribalism was still strong. Amaq was situated east of Lake 'Amaq, on the frontier of the *sanjaqs* of "Uzayr and A'zâz and the Kurds", to the north. (Lake 'Amaq itself was reclaimed for land after World War II and today is quite agriculturally productive.) 'Amaq very likely was the more protected of the two *nahiyes*, because Manbij, with its eastern boundary extending to the Euphrates River, where it thus delimited the northeastern periphery of the *Sanjaq*, confronted an even sharper 'divide' between 'the desert and the sown.' Beyond the Euphrates River lay the more sparsely settled northern Iraqi lands, and Iraq itself was to remain a battleground between the Ottoman Turks and Safavid Iran until the issue was decisively settled in favor of the Ottomans in 1639. 'Amaq had less than a third of the territory of Manbij, which was the largest of Aleppo's *nahiyes*. 'Amaq also had only a third of the number of Manbij's villages: fifty-three villages to Manbij's 153 villages. Among these so-named villages for both *nahiyes*, however, there were quite a few uninhabited villages--fifteen and sixteen for 'Amaq and Manbij, respectively--; these might, more fittingly, be regarded as *mezra'as*. These uninhabited villages, plus even a cursory review of the *tahrir* entries for 'Amaq and Manbij, impress one with the incidence of low-population density in both districts.

When one looked more closely at the *tahrir* entries for all of the villages of 'Amaq and Manbij, however, differences between them could be discerned that held implications for the question of the degree of correlation existing between tax rates and actual agricultural productivity. 'Amaq had slightly higher *qasim* tax rates, rates of one-seventh and one-sixth of the agricultural yield. The lower rate of one-seventh predom-

40 See Table 1, pp. 190-92, where the *qasim* tax rates for Aleppo are presented by *nahiye*, in Margaret L. Venzke, "The Sixteenth-Century Ottoman *Sanjaq* of Aleppo: A Study of Provincial Taxation," Ph. D. dissertation, Columbia University, New York, 1981.

as Reflected for the Villages of the Sanjaq of Aleppo in the Fifth Tahrir (1570-71).



inated, being reflected in 43 per cent of 'Amaq's villages, and in 57.5 per cent of its *qasim* villages. In contrast, the *qasim* rates seen for Manbij were, decidedly, a degree lower. Manbij reflected *qasim* rates of one-eighth and one-seventh, a scale lower than 'Amaq's rates. There was also one lone rate of one-tenth. The tax rates seen for both 'Amaq and Manbij, ranging from one-sixth to one-eighth of the agricultural yield, were moderate rates, without question.

What merited such moderate rates? In both districts, there were relatively fewer cultivators per village than seen for many of the districts of the *sanjaq*, and therefore, this factor alone might have justified the lower tax rates, irrespective of the fertility of the soil in these districts in any absolute sense. For 'Amaq, the average number of cultivators per village was 16.2, counting all villages, even the uninhabited ones, which, obviously, were being cultivated by 'outsiders.' For Manbij, the average was 14.9 cultivators.⁴¹ At this point, to achieve more meaningful statistics, we need to limit our focus to the *qasim* villages of both districts, and, moreover, to restrict ourselves further to those *qasim* villages for which complete data was given. Consequently, our focus group for 'Amaq will consist of thirty-six of its forty *qasim* villages, and for Manbij, 126 of its 139 *qasim* villages. This more restricted focus reveals for 'Amaq an even higher cultivator-per-village average than that of Manbij, 23.5 cultivators *versus* 17.8.⁴²

Can we infer that 'Amaq had slightly higher tax rates because it had a greater number of cultivators per *qasim* village? The situation is far from clear, because Manbij's cultivators, though fewer in number per *qasim* village, produced more per capita than 'Amaq's cultivators. The average Manbij cultivator produced sixteen *mekkûk* of wheat and barley, as compared to the ten *mekkûk* of wheat and barley produced by the average 'Amaq cultivator. Should we now ask whether higher tax rates were imposed on 'Amaq in an effort to goad greater productivity? It is also true that the average *qasim* village of 'Amaq produced less wheat and barley than the average Manbij village. The average 'Amaq village

41 BA, TT 493, 'Amaq, pp. 596-617, and Manbij, pp. 240-93.

42 BA, TT 493, 'Amaq, pp. 596-617, and Manbij, pp. 240-93. Note that only one *maqtû'-deymûs* village each is seen for 'Amaq and Manbij; in both cases, *maqtû'* appears in the context of tax-farming, and therefore, it may not actually have denoted a method of assessment (*ibid.*, pp. 606 and 255, resp.). For each district, there were quite a number of villages--12 and 13, resp.--for which no method of agricultural assessment was indicated; these were either uninhabited or sparsely inhabited villages, and their taxes were recorded as a single, lump-sum cash payment (as also occurred for certain *qasim* villages), hence offering no information regarding the types of crops grown. Also note that the given statistics for cultivators, in the text above, reflect the recorded "*neferan*" ('individuals'; here, adult males) totals. The recorded "*hane*" ('household') totals were not used because they excluded certain cultivators, such as all 'bachelors' (*mijjerreds*), who did not head their own household, and also individuals, like the *imam*, who received a measure of tax exemption.

produced 234 *mekkûk* of wheat and barley, as compared to the 286 *mekkûk* of wheat and barley produced by the average Manbij village. If both the average cultivator and average village of Manbij produced slightly more than the average cultivator and village of 'Amaq, then why were their tax rates slightly lower than those of 'Amaq? Was Manbij more productive because of its lower *qasim* rates? Was 'Amaq's agricultural land overworked in terms of its number of cultivators, and did this, consequently, result in lower productivity? The answers to these questions are by no means evident. Indeed, we are drowning here in a sea of speculation! The impasse we have reached is, by no means, an unusual experience in *tahrir* research. Table 3, below, sets out these statistics for 'Amaq and Manbij.'

TABLE 3.-- Wheat and Barley Production for the Low-Tax Aleppo *Nahiyes* of 'Amaq and Manbij as Seen for Their *Qasim* Villages in 1570-71

<u>Nahiye</u>	<u>No. Villages, No. Cultivators</u>	<u>Total Wheat and Barley Yield In Halabi Mekkûk</u>	<u>Total Agricultural and Wheat and Barley Revenue in Aqche</u>	
'Amaq	36--846	8,426	182,759--142,880	
Manbij	126--2248	36,031.6	510,981--478,872	
			<u>'Amaq</u>	<u>Manbij</u>
<u>Average No. of Cultivators Per Qasim Village</u>			23.5	18
<u>Ratio of Cultivator to Wheat and Barley Yield in Mekkûk</u>			1:10	1:16
<u>Ratio of Qasim Village to Wheat and Barley Yield in Mekkûk</u>			1:234	1:286.

SOURCE: BA, TT 493, *Nahiye* of 'Amaq, pp. 596-617, and *Nahiye* of Manbij, pp. 240-293.

NOTE: Note the limitation of this table to the *qasim* villages for which data was available, as opposed to the total number of *qasim* villages for 'Amaq and Manbij--40 and 139, resp. Note also that the given statistics for 'cultivators,' above, reflect the *neferân* ('individuals') totals recorded in the *tahrir* entries, which reflect all adult cultivators, even those who may have received some degree of tax exemption. In order to obtain the 'total-wheat-and-barley-yield' statistics, above, the author multiplied their recorded revenue requirements by the inverse of the *qasim* tax rate. Finally, note that the given statistics for 'total agricultural revenue,' above, reflect the recorded taxes on all agricultural production,

excluding the *rūsûm-i 'örfiyye* ('customary taxes') taxes (whose premier representatives are the *resm-i chift* taxes), which do not represent direct levies on the actual agricultural product. It is quite noteworthy that the revenue from the taxes on wheat and barley represent the far-greater part of the 'total agricultural revenue.'

For 'Amaq and Manbij, it appears, quite simply, that there was little correlation between *qasim* tax rates and agricultural productivity. Tax rates were low regardless of the number of cultivators. It was also not unusual to see that more wheat and barley were being produced per-cultivator when there were fewer cultivators. In addition to the previous speculation on this point, we need to consider the possibility that the cultivation of *mezra'as* played some role here, diverting some agricultural activity away from certain villages, which would result in these villages reflecting less agricultural productivity than what we otherwise might expect. Unfortunately, the *tahrirs* frequently do not give the names of the villages that were cultivating *mezra'as*, and therefore, we can not accurately assess the actual agricultural activity of such villages.⁴³ Furthermore, the revenue obligations of the *mezra'as* tend to be given as an undifferentiated cash sum; certainly, this is true of the later Aleppo *tahrirs*. This obviates the possibility of knowing what the *mezra'as* actually produced, and consequently, of being able to determine the actual contribution, by *mezra'as*, to the wheat and barley production of a *sanjaq* or *nahiye*.⁴⁴ Both 'Amaq and Manbij had a significant number of *mezra'as* under cultivation. 'Amaq's *mezra'as*, fifty-five in number, actually surpassed the number of its villages, although not by much, while 121 *mezra'as* were seen for Manbij.⁴⁵ *Mezra'as*, however, may not provide the entire answer to this question of tax rates and village productivity, because *mezra'as*, quite simply, outnumbered villages in the *Sanjaq* of Aleppo in the fifth *tahrir*.⁴⁶ Therefore, 'Amaq and Manbij were not

43 The *tahrirs* frequently give, in the *mezra'a* entry, the name of the village in whose vicinity (designated by "der nezd-i qariye-i"; 'in the vicinity of the village of...') the *mezra'a* was located. Very much less frequently indicated, however, is the name of the village responsible for cultivating the *mezra'a*, designated by "der yed-i ahâli-i" ('in the possession of the inhabitants of ...'). In the absence of this latter designation, are we to assume that the *mezra'a* was being cultivated by the village in whose vicinity it was located?

44 It is believed that the *mezra'as* were largely devoted to the cultivation of cereal crops because of their generally less-protected locations (Hütteroth and Abdulfattah, *Historical Geography*, pp. 78-79). Even if we can assume this to be true for most *mezra'as*, we nevertheless have no information regarding the actual quantity of grain being produced. Again, we have only cash sums to work with.

45 BA, TT 493, 'Amaq, pp. 596-617, and Manbij, pp. 240-93. Note that in cases seen for Manbij where more than one *mezra'a* was recorded in a single *mezra'a* entry, the entry, as a whole, was counted simply as one *mezra'a* (*ibid.*, pp. 254, 261, 270, 280, and 291).

46 This, however, attests their importance in the equation of agricultural production. In most of the *sanjaqs* investigated by Hütteroth and Abdulfattah, *mezra'as* represented about one-quarter of a *sanjaq's* agricultural tax yield (*Historical Geography*, pp. 78 and 96, Fig. 10).

unique in this matter. For example, the more heavily-taxed district of Jabal Sim'an, which was also a much more urban district since it surrounded the city of Aleppo, had a far-greater number of *mezra'as* in relation to its villages in this period--166 *mezra'as* versus 64 villages.⁴⁷

Finally, one last point, which contradicts the previous observation regarding the greater per-cultivator productivity when there were fewer cultivators, is that where there existed in 'Amaq or Manbij a village with many cultivators, these cultivators were producing a seemingly healthy tax revenue despite the low tax rates; to all appearances, these cultivators could have paid higher taxes. This raises the question whether tax requirements, in the first place, were being rationally calculated on the basis of their stated tax rates. In sum, the *qasim* rates for 'Amaq and Manbij appear to have remained consistently low regardless of differing circumstances as to number of cultivators, and presumably also as to agricultural potential. This situation leads one to suspect that other factors were being considered when authorities set out to establish the *qasim* rates. Certainly, in the case of 'Amaq and Manbij, there was no obvious correlation of tax rates with actual productivity, nor with the number of cultivators.

W. -D. Hütteroth and K. Abdulfattah came to the conclusion, regarding the differences in tax rates they encountered for the Palestinian *sanjaqs* in the late 16th century, that these differences could only, in part, be explained by natural conditions. They surmised that the *qasim* rates must reflect the hand of tradition,⁴⁸ resulting in the situation where earlier tax rates, which, by the advent of the Ottoman period, had come to be regarded as the traditional rates, were simply being continued in use. If tradition were to prove to be the decisive factor in the establishment of the *qasim* tax rates, then any *a priori* belief in the existence of a rational relationship, in the 16th century, between tax rates and actual productivity is simply not warranted. And, certainly today's researcher can not automatically assume the existence of a rational relationship, which brings us full-circle to the same critical question--how valid, then, is a study of agricultural productivity based on the *qasim* tax rates?

47 BA, TT 493, pp. 103-178. Note that the few cases here of uninhabited villages were nevertheless counted as villages. Also, in the rare case where several *mezra'as* were recorded together in one *mezra'a* entry, these were counted only as a single *mezra'a*. For the issue of the role played by the *mezra'a* in agricultural production, see Margaret L. Venzke, "The Question of Declining Cereals' Production in the Sixteenth Century: A Sounding on the Problem-Solving Capacity of the Ottoman Cadastres," *Turks, Hungarians and Kipchaks: A Festschrift in Honor of Tibor Halasi-Kun*, vol. 8 of *Journal of Turkish Studies* (1984), pp. 261-64.

48 *Historical Geography*, pp. 64-65 and 77-78. See also McGowan, "Food Supply and Taxation," pp. 177-79.

The situation regarding the *qasim* tax rates becomes even more confusing when one descends to the 'micro-level, 'i.e., looking at individual villages. Let one present a few examples, from this micro-level, of the incongruous situations encountered for the *nahiyes* of 'Amaq and Manbij that might bedevil any analysis of agricultural productivity. The following examples are noted for 'Amaq. Two villages, Kafr Farhâ and 'Anadân, produced the same amount of wheat and barley, and they were taxed at the same rate for these crops. Kafr Farhâ produced that same amount with 52 cultivators, 'Anadân with only 29 cultivators.⁴⁹ Similarly, another village of 26 cultivators, Sârimiya, produced three times as much wheat and barley as the village of Kafr Lâtash, which had only one fewer cultivator; these villages were subject to the same *qasim* rate, one-sixth.⁵⁰ For another two villages that had the same tax rate, one-sixth, the seventeen cultivators of Mastaba produced 270 *mekkûk* of wheat and barley, while the thirty cultivators of Mezra'a-i Kafr Lâtash, also known as Kafr 'Âyâ, who represented almost twice the number of cultivators of the former, produced less wheat and barley (only 240 *mekkûk*).⁵¹ For another two villages, Qarâfi Kabîr and Qarâfi şaghîr, each having the same number of cultivators (twelve), the latter produced 30 *mekkûk* of wheat and barley, while the former produced seven times that amount, yet these villages were being taxed at the same rate, one-sixth.⁵² The evidence for such 'incongruities' can go on-and-on. Despite some differences in the types of crops being grown in the foregoing villages, wheat and barley were still the primary crops for all, and therefore, such differences can not entirely account for the disparities seen in the production-levels of these primary cereals.

Similar anomalies can also be seen for Manbij. The village of Tulaylî, for example, which had only one cultivator, who had two *chift* (farm), produced half as much wheat and barley as the village of Hawâ with its sixteen cultivators: the former produced 140 *mekkûk* versus the 280 *mekkûk* of the latter. Both villages produced wheat and barley exclusively and were subject to the same tax rate, one-seventh.⁵³ For another two villages, having the same tax rate of one-eighth, Shuwayhâ and

49 BA, TT 493, pp. 596 and 597, resp. Kafr Farhâ, however, did produce more 'summer' (*sayfî*) and garden crops. It also produced chickpeas and broad beans, which were not seen for 'Anadân.

50 BA, TT 493, pp. 597 and 598, resp. In the vicinity of Kafr Lâtash, there was an enclosure of nets, or weir, for fishing (*dalyan*), which, most likely, diverted some of the attention of this village away from agriculture (*ibid.*, p. 598), but surely this was not a full-time activity.

51 BA, TT 493, pp. 598-99 and 598, resp. The latter village was more heavily involved in summer-crop (*sayfî*) production than the former.

52 BA, TT 493, pp. 602 and 603, resp. Here there are no significant differences in crop specialization in the two villages.

53 BA, TT 493, p. 248.

Yâzlı Fakhâr, the former with its six cultivators produced more wheat and barley (656 *mekkûk*) than the latter, which had three times as many cultivators, eighteen who produced only 560 *mekkûk* of wheat and barley.⁵⁴

As one last example for Manbij, although many more examples could be presented, we turn to two villages that had a widely divergent number of cultivators: Kâfî Qirân with its sole cultivator and Tâsh Atân with its seventy-eight cultivators. Each village was subject to the same tax rate, one-eighth, and each produced wheat and barley exclusively. That one cultivator of Kâfî Qirân produced virtually twice as much wheat and barley as Tâsh Atân's seventy-eight cultivators, i.e., 200 *mekkûk* versus 104 *mekkûk*!⁵⁵ How can we possibly explain such disparities between the number of cultivators and their agricultural output? There is no obvious answer. Where a village had no cultivators at all or only a few, we assume, again, that this land was being cultivated from the outside, hence explaining some of the disparity. This, however, is not likely to be the entire explanation. Even if it were, given that we often do not know the entire labor activity of a village, i.e., the other village or *mezra'a* lands that it might have been cultivating in addition to its own fields, the very concept of 'village production' is imprecise, it is often not ascertainable, and it is also subject to increasing distortion the greater the number of 'dependent' *mezra'as*, etc. that a village was cultivating.

We might seek, at this point, to broaden our focus in hopes of gaining more insight into how we should interpret the situations that have been identified for 'Amaq and Manbij. It might also be useful to re-consider our basic assumption that the low population density of 'Amaq and Manbij was largely responsible for their low *qasim* rates, by comparing their situation with that of a district having a relatively high population density. Accordingly, the district of Jabal Sim'an, previously referred to, would appear to be a suitable candidate for comparison. Jabal Sim'an is further recommended because of its use of the same *mekkûk* measure, the "Halabî *mekkûk*," for its cereal crops. On the basis of the 43 *qasim* villages of Jabal Sim'an, in the fifth *tahrir*, that were found suitable for comparison, it was confirmed that, indeed, these villages were more heavily populated, quite considerably so: the average number of cultivators per village was 67, to be compared with the average of 23.5 for 'Amaq and 18 for Manbij. Jabal Sim'an also had a higher ratio of *qasim* - village to wheat-and-barley-yield (in *mekkûk*): 1:343, to be compared

54 BA, TT 493, p. 264.

55 BA, TT 493, p. 278. That one cultivator of the former village was a "Yürük" (nomad).

with 1:234 for 'Amaq and 1:286 for Manbij. So far, so good. Jabal Sim'an's higher *qasim* rates would thus appear to make sense. However, if we were to compare Jabal Sim'an's ratio of cultivator to wheat-and-barley-yield, 1:5, with the ratios for 'Amaq and Manbij, 1:10 and 1:16, respectively, to our surprise, we find that the average cultivator of Jabal Sim'an was producing less wheat and barley than the cultivators of 'Amaq and Manbij.⁵⁶ Therefore, we have no grounds to conclude that low population density, *per se*, was a primary factor in explaining low tax rates, although it might well be. High population density can be compatible with both higher tax rates and low per-cultivator yields, as Jabal Sim'an's situation demonstrates. Statistics can be 'manipulated' in so many ways, producing, in turn, a variety of results. Let us beware not to manipulate the statistics in such a way as to produce the expected or desired results!

To attempt some explanation of Jabal Sim'an's low per-cultivator wheat-and-barley yields, it must be noted, again, that a significant number of *mezra'as* were being cultivated in Jabal Sim'an, two-and-a-half times the number of its villages. We must take this *mezra'a* production into consideration, in this case especially, but perhaps also in all studies of agricultural productivity. The *mezra'as* are a 'wild-card' that may have a significant bearing on the question of agricultural productivity. The inclusion of *mezra'as*, in a study, will force us to focus such studies on the 'agricultural tax yields,' not *crop* yields, since the yields for the *mezra'as*, which were often recorded as a single, lump-sum cash payment, rarely offer any possibility not only for determining the crops actually grown, but consequently, for computing crop yields, too. In the case of Jabal Sim'an, it is quite likely that the cultivation of *mezra'as*, together with the greater variety of crops being grown in certain areas of this *nahiye* as a result of irrigation (note, for example, that the cultivation of garden produce is more labor-intensive), goes a long way toward explaining the seemingly low ratio of cultivator to wheat-and-barley-yield seen there. It is also likely that other factors were involved that may not be directly related to agriculture. We can not discount the role of tradition, and we must also consider the possibility of successful negotiation of tax rates, by the cultivators themselves, with provincial authorities.⁵⁷ In the discussion shortly to follow, it will be seen that a particular fiscal

56 The statistics presented for Jabal Sim'an were compiled from the data given for this *nahiye* in BA, TF 493, pp. 103-178. Note that four *qasim* villages were excluded from the analysis either because of incomplete data, being uninhabited, or of use of a variant *mekkük*. The statistics for 'Amaq and Manbij are found on Table 3, above, in the text. The statistics for Jabal Sim'an were compiled in the same manner as the statistics for 'Amaq and Manbij.

57 For an example of such negotiation, see the text, below.

policy might also be a factor in the determination of *qasim* tax rates. Last, we must recognize the possibility that the recorded estimates of tax yield, which we would assume to be based on the given *qasim* tax rates, may simply have been 'unscientifically' determined, in the first place, because of errors, sloppiness, or bias on the part of state officials involved, or because of misrepresentation by the cultivators themselves, in addition to the above-named factors. The presence of even several of these factors might mean that there was no rational relationship between expected yields and *qasim* tax rates. If we acknowledge, then, that several, if not more, factors not directly related to agricultural productivity played a role in determining *qasim* tax rates, we would have to conclude that the *qasim* rate, at best, bear only a rough relationship to agricultural productivity, actual or potential.

Given this conclusion, we might wish to seek refuge in the more tangible concept of 'agricultural production.' Indeed, up to this point, we have maintained a distinction of sorts between 'agricultural productivity,' the avowed focus of this study, and agricultural production. The first term is broader and less tangible, encompassing the aspects of potential productivity and of 'expected yields' (as opposed to actual yields), while the second represents the 'actual,' i.e., what is actually being produced regardless of productivity potential. As far as the data of the *tahrirs* is concerned, this distinction is a specious one. Given the irregular and frequently-long intervals between *tahrirs*, and the other problems that have thus far been identified, the *tahrirs*, and the other problems that have thus far been identified, the *tahrirs* are no more an accurate indicator for actual agricultural production than for the more intangible concept of productivity. The Ottoman *tahrirs* are simply an imperfect gauge, whether for agricultural productivity or actual agricultural production.

In *tahrir* research, a sound methodology is of critical importance for the validity of the results to be obtained. The micro-level of the *tahrirs*, i.e., the individual village or other fiscal unit, holds particular dangers for research. The examples, presented above, for the districts of 'Amaq and Manbij have demonstrated just how incongruous the findings for an individual village can be. This should constitute a warning to us of the inherent potential for distortion that the micro-level holds. Obviously this situation argues for a broad data base to militate against the distortions caused by the single anomolous case. Certainly, at the very minimum, the whole of a *nahiye* must be considered for any comparative analysis, whether based on a probe through time or not. Even a border, *sanjaq*-wide focus, however, would, by no means, eliminate the poten-

tial problems that the *tahrirs* can pose for research; in fact, it would create problems of its own!

In an earlier study of wheat and barley production (not productivity), undertaken by this author for the *Sanjaq* of Aleppo in the 16th century, limited, however, to the *Nahiye* of Jabal Sim'an, one of the more prosperous and protected of Aleppo's *nahiyes*, in the first five Ottoman *tahrirs*, the findings of a decline, over time, in the primary cereals production, which was occurring against the backdrop of an increasing rural population, did appear to ring with some credibility. These findings broadly mirrored what Braudel identified as being the fundamental characteristics of the Mediterranean basin in the 'long 16th century': a significant increase in population that only began to slow down some time after 1550, but not without first putting pressure on the available cereal supplies.⁵⁸ It could not be conclusively demonstrated that the near-doubling of Jabal Sim'an's population in the 16th century had actually exerted a pressure on the existing food supplies, especially since the population of the city of Aleppo, situated in the neighborhood of this *nahiye*, actually declined during this period. The findings, however, of a decline in the wheat and barley yields of these villages at the same time as there occurred a significant increase in the number of *mezra'as* under cultivation, in addition to a steady, if not slightly greater, utilization of the *mezra'a* sites long in use, did appear to support a conclusion that a certain population pressure was indeed being felt.⁵⁹

Despite the apparent validity of these findings, they were potentially 'vulnerable' on one point, which centered on the study's control sample. Among the first requirements of the investigation was to identify the villages that were consistently recorded in all five tax registers being used; fifty-three villages were identified. These villages, next, had to be narrowed down to the *qasim* villages, since it is only for this assessment that agricultural production can be computed. Here a serious problem was encountered. So few villages were found to have been taxed by the *qasim* method of assessment in the earliest two *tahrirs*. At most, nine villages could be identified in one of the two registers, or in both, that had some continuity, however limited, with the later three registers. Con-

58 *The Mediterranean*, vol. 1, pp. 326-32, 394-98, 402-412, 570-76, 584-85, 591-94, 604, and 606. Note that Braudel's evidence for this population increase is most abundant and reliable for the urban centers.

59 Venzke, "Declining Cereals' Production," pp. 253-54, 256-59, and 261-64. Note that the population decline seen for the city of Aleppo in the 16th century goes against the trend that Braudel identified for the Mediterranean. When the city of Aleppo's population is studied over the course of the 16th and 17th centuries, however, growth is seen (see André Raymond, "The Population of Aleppo in the Sixteenth and Seventeenth Centuries according to Ottoman Census Documents," *International Journal of Middle East Studies* 16:4 (November 1984), pp. 447-60).

sequently, of necessity, the 'case' for a decline in wheat and barley production had to rely on a very small sample at the critical 'baseline' of the time sequence. One or two anomalous cases in such a small sample could seriously misrepresent the baseline, and consequently skew the results. Moreover, there were no grounds for thinking that those nine villages were representative of Jabal Sim'an as a whole. Despite these concerns, one had no recourse but to use this very small sample. In contrast, for the later three registers, twenty-nine *qasim* villages were found to have been consistently recorded.⁶⁰ These obviously constitute a much more respectable and credible sample. Nevertheless, they can not make up for the deficiency at the other end of the time sequence. Consequently, one would have to acknowledge that the findings for a decline in the production of the primary cereals in Jabal Sim'an are far-more reliable for a 'starting-point' represented by the third *tahrir*, dated ca. 943/1536-37, than for an earlier baseline. In short, the smaller the sample, the less credibility the findings command and the greater the likelihood of their being called into question.

In no way would the author place much confidence, if any, in the results obtained for only a few villages, or a single village, tracked over a period of time.⁶¹ Optimally, one entire *nahiye* should constitute the *minimal* unit for any comparative study, whether for a comparison over a period of time or with other areas. We might also note that those results obtained for Jabal Sim'an, however valid they might be, can not automatically be assumed to be valid for the *Sanjaq* of Aleppo as a whole. The validity of the results found for Jabal Sim'an can, indeed, be tested by conducting further probes, based on other *nahiyes* of the *Sanjaq*. 'Expansion of focus' is the constant call of *tahrir* research.

This brings us to the central problem regarding the use of the *tahrirs* for research. The peculiarities that the *tahrirs* pose for research today argue, contradictorily, for both an in-depth and expansive surface-survey approach. Without the in-depth probe, i.e., the singling out of a *nahiye*, or whatever the case, and looking at it village-by-village over a period of time, the fundamental characteristics and peculiarities of the district can not be identified, and therefore, the groundwork necessary for a comparative study will not have been laid. Without this groundwork,

60 Venzke, "Declining Cereals' Production," pp. 255-56 and 258-59. Note that, within the nine-village sample for the earliest two *tahrirs*, there were two cases that might be regarded as being anomalous: the village of Haritân saw a dramatic, more-than 200-per-cent increase in its wheat and barley production between the first and fifth Aleppo *tahrirs*, while the village of Bâb al-Nis saw a significant decline in its cereal production--a 79-per-cent decline between the first and third *tahrirs* (*ibid.*, p. 259).

61 Cf. the similar opinion and concern expressed by Heywood, in "Critical Studies," pp. 331-36.

no valid, reliable study can result. On the other side of the ledger, however, on what basis can one single out one *nahiye* for examination? Did it have lower tax rates, or lower agricultural production, for example, and if so, in relation to what? Obviously, one first has to determine the salient characteristics of the *sanjaq* as a whole in order to distinguish, however preliminarily, the 'apparently' distinctive characteristics of a particular *nahiye*. For example, how else could the author have known that 'Amaq and Manbij were low tax-paying districts of the *sanjaq* of Aleppo'? Finally, one last consideration that argues most cogently for the 'expanded' focus is quite simply the fact that findings for a broader data sample command greater validity and respect than those drawn from some narrow 'neighborhood,' which may reflect peculiarities that are entirely its own. That one neighborhood may, very well, be able to speak for a broader area. However, in the absence of solid data to support such a claim, one is simply 'whistling in the wind!'⁶²

In short, *tahrir* research, as it should properly be conducted for a major comparative study, can be inexorably demanding. Optimally, a preliminary survey of a broad area, such as a *sanjaq*, should first be undertaken in order to obtain a sense of the 'lie of the land,' with the ulterior objective to identify the focus for an initial probe. The researcher must next probe deeply, preferably through several *tahrirs*, and directly confront the peculiarities that are to be found in the data of the probe(s). There is ever the danger of drowning in the details. Before reaching that point, the researcher must extricate him or herself in order, not only to determine the findings at hand, but also to begin to see the broader picture and the implications of the data. The more probes that can be made, the clearer the outline to emerge and the better the foundation for comparative analysis. In the case of a study considering more than one *sanjaq*, a team-effort would be most welcome, but it can only be successful with an extraordinary degree of cooperation and communication.

The Effect of Fiscal Policy on Qasim Tax Rates

Qasim tax rates might also be affected by fiscal policy. This was found to be the case for quite a few of the *vaqf* and *mülk* villages of the

⁶² The methodologically creative (especially for the period of its publication) and justifiably admired study of M.A. Cook (*Population Pressure in Rural Anatolia*) is nevertheless vulnerable on this question of 'representativeness.' On what evidence can we be assured that the 'parts' of the three *sanjaqs* that comprised his focus were representative of the whole of that great and diverse expanse of territory known as Anatolia? The author himself, to his credit, makes no such claims, noting also that he was guided in the selection of these three areas by the relative completeness of their *tahrir* series (*ibid.*, p. 10 and n. 1, p. 10).

Sanjaq of Aleppo that were affected by a policy change introduced in the fourth *tahrir* at mid-century. Before addressing this policy change, let one first note that, by Mid-century, Aleppo's *vaqf* and *mülk* regime had come to bear a fairly marked resemblance to the *mâlikâne-dîvânî vaqf* and *mülk* regime that was widespread in Anatolia in the 16th century, as well as earlier. The basic feature of the Anatolian *mâlikâne-dîvânî* regime was the division of revenue, within the same village or *mezra'a*, between the holders of *vaqf* (mortmain) and *mülk* (freehold) on the one side, and the state or its officials, i.e., the military-administrative elite, on the other side. Thanks to Irene Beldiceanu-Steinherr's pioneering work on this particular *vaqf* and *mülk* regime, we can now identify this regime with the Anatolian Seljuq State (1075-1277) in its later period, where the regime is seen to date back at least to the mid-13th century, if not earlier.⁶³ In truth, we do not know how the regime, or system, might have operated in its original form, since we are only viewing it, for the first time, some two centuries later, as it is revealed to us in the Ottoman *tahrirs*. We might expect that the regime underwent changes over time and that the Ottomans themselves introduced changes to it. Since the regime's distinctive revenue-division characteristic may be seen for other Islamic political administrations, for example, that of the Mamluks in Egypt and Syria,⁶⁴ we can not identify a truly unique characteristic for the *mâlikâne-dîvânî* regime outside of its nomenclature, where '*mâlikâne*' denoted the revenue share of *vaqf/mülk* and '*dîvânî*' the share of the state and its representatives.

Notwithstanding our very incomplete understanding of this special regime, many of Aleppo's *vaqf* and *mülk* villages and *mezra'as* came to reflect, not only the 'divided-revenue' characteristic seen in Anatolia, but also its range of revenue-apportionment seen in this time period. The most distinctive characteristic of Aleppo's *mâlikâne-dîvânî* regime entailed the practice of taxing the agricultural yield, in effect, twice: the revenue from one assessment would go to *vaqf/mülk* (sometimes, the state would also receive a share of this revenue), while the state and its representatives received the revenue from the second assessment, with no

63 "Fiscalité," pp. 241-48. For studies of the *mâlikâne-dîvânî* system, see *ibid.*, pp. 241-67 and 295-300; Nicoara Beldiceanu and Irène Beldiceanu-Steinherr, "Qaraman," pp. 69-70; Ömer Lütfi Barkan, "Türk-İslâm Toprak Hukuku Tatbikinin Osmanlı İmparatorluğunda Aldığı Şekiller: I. Mâlikâne-Dîvânî Sistemi," *Türk Hukuk ve İktisat Tarihi Mecmuası* 2 (1932-39), pp. 119-84; and Margaret L. Venzke, "Aleppo's Mâlikâne-Dîvânî System," *Journal of the American Oriental Society* 106: 3 (1986), pp. 451-69.

64 This is quite clearly manifested for Mamluk Egypt in the magisterial compilation of landholders by Heinz Halm, in his *Ägypten nach den mamlukischen Lehensregistern*, 2 vols. (Wiesbaden, 1979 and 1982). The similar division of revenue-holding seen in Ottoman Syria, from its earliest period, must, at least in part, reflect the preceding Mamluk situation in the view of the author.

intrusion here from *vaqf/mülk*.⁶⁵ In the *Sanjaq* of Aleppo, the nomenclature distinctive to the Anatolian regime, "*mâlikâne*" and "*dîvânî*", was not in use. On the contrary, the *vaqf/mülk* revenue share had no special designation outside of "*hâsil*" (here: revenue) in the late registers, while the state's revenue share was specifically designated as the "tithe" (*öshr*). Creating much confusion is the fact that, in Anatolia's *mâlikâne-dîvânî* regime, "*öshr*" designated the revenue share of *vaqf/mülk*, not that of the state as seen for Aleppo's *mâlikâne-dîvânî* regime. This practice of two, apparently independent, assessments on the agricultural yield in Aleppo appears to have been a practice of some time-standing. However, as the result of a fiscal policy introduced into the *Sanjaq* of Aleppo at mid-century, i.e., beginning with the fourth *tahrir*, the Ottoman administration increased the tax rates for the tithe, with the result that the state or its representatives would now receive more revenue through the tithe. This change significantly increased the tithe revenues, bringing them much closer, in magnitude, to the revenues being obtained through the first, non-tithe agricultural assessment.⁶⁶ Clearly this was a fiscal measure that was intended to produce more revenue for the state. It is noteworthy that no such fiscal measure was introduced into the *vaqf* and *mülk* regime of the Province of Damascus in this period.⁶⁷ Consequently, the *vaqf* and *mülk* regimes of Aleppo and Damascus can not be considered to be entirely comparable, which might possibly pose problems for any comparative analysis.

What is particularly relevant here to this issue of the validity of the *qasim* tax rates as an indicator of agricultural productivity is that this tithe fiscal policy affected the *qasim* tax rates, too. Specifically, it caused the lowering of the *qasim* tax rates for the non-tithe assessment, whose revenues were being received by *vaqf* and *mülk*, at the same time as the tithe tax rates, whose revenue beneficiaries were the state and its officials, were being raised; the tithe rates are not known, since they were not recorded in the *tahrir* entries.⁶⁸ The effect of this policy, which, no doubt, also speaks to its intent, can easily be appreciated if we were to

65 For an identification of Aleppo's *vaqf-mülk* situation with that of Anatolia's *mâlikâne-dîvânî* system, see Venzke, "Aleppo's *Mâlikâne-Dîvânî* System," pp. 457-60.

66 For further discussion of this fiscal policy, see Venzke, "Special Use of the Tithe," pp. 257-303. Barkan also observed the encroachment of the state on the interests of *vaqf* and *mülk* where the *mâlikâne-dîvânî* system was, or had been, in place in Anatolia, in his "Mâlikâne-Dîvânî Sistemi," pp. 135, 136, and 141-42. See also the mention of this phenomenon in a Diyarbekir *qanunname*, below, in the text.

67 This conclusion is based on the author's examination of the relevant *mufassal* registers for Damascus, BA, TT 263/383, dated ca. 955/1548-49, and TT 474/543, dated ca. 977/1569-70.

68 This tithe revenue was the product either of the *qasim* method of assessment or the *maqtû'-deymûs*, depending upon which assessment was designated for the first agricultural levy; the method of assessment used for the tithe is not actually indicated in the *tahrir* entries. Where the tithe is the

imagine the agricultural revenues of *mâlikâne-dîvânî* villages as constituting an economic revenue pie whose size has remained relatively unchanged over a long period of time, because tax revenues had not increased. As a result of this new fiscal policy, the pie, while remaining unchanged in size, was nevertheless being cut in a different manner: the state was being 'served up' a larger portion of the pie, while *vaqf* and *mülk* were receiving a correspondingly smaller portion of it. Actually, this was a clever administrative policy, because it resulted in the state obtaining more revenue for itself, through the tithe, while not increasing the overall tax burden on the village or *mezra'a*. The state achieved this revenue increase simply by effecting a redistribution of the revenue of the existing pie at the expense of *vaqf* and *mülk*. Here we clearly see Ottoman administration manipulating the *qasim* tax rates as a matter of fiscal policy, and therefore, in this instance, the *qasim* rates can not be considered to represent a direct indicator of agricultural productivity.

The effects of this fiscal policy can easily be tabulated. Table 4. below, reveals its effects, as illustrated for selected villages of the Aleppo *nahiyes* of Jabal Sim'an and Sarmin. It presents, for these villages, their total agricultural revenue, which is also broken down into its component first agricultural assessment (i.e., "1st levy") and the tithe assessment, as recorded in the third, fourth, and fifth *tahrirs*. In looking at the columns under the heading "ca. 1536-37" (the date of the third *tahrir*), which represents the baseline period, before the policy was introduced, two points should be noted: one, the tithe revenues at this time represented rather modest sums in comparison with the total agricultural revenue being collected from these villages; and two, the *qasim* tax rates were the higher rates for Aleppo, rates of one-fifth and one-fourth. A change regarding these two points will be seen in the fourth *tahrir*, and sometimes also in the later *tahrirs*. This change, quite simply, took the form of a rather substantial revenue-increase in the tithe from mid-century on, at the same

product of the *qasim* assessment (again, this is not actually indicated), not only is the *qasim* tax rate for the tithe not given, but, in addition, any attempts at mathematical computation to determine this tax rate do not result in a simple fraction. In sum, one can not determine what the tithe tax rate was in these cases; on the question of these tithe tax rates, see Venzke, "Special Use of the Tithe," pp. 273-79.

In contrast, the Aleppo *qanunname* of the fifth *tahrir* clearly states how the tithe revenues were being computed in the situation where the *maqtû'-deymûs* assessment was in use. In these cases, the non-tithe and tithe revenues were apportioned from a single agricultural levy, which was determined by the *maqtû'-deymûs* assessment, according to a 60:40 ratio, resp. (BA, TT 493, p. 14; also reproduced by Barkan, in *Kanunlar*, provs. nos. 16 and 17, p. 210; these provisions are discussed by Venzke, in "Special Use of the Tithe," pp. 295-97). Note that there was also a second type tithe in the *Sanjaq* of Aleppo, which represented a tax directly levied on *vaqf/mülk*; in the case of this type tithe, the tax rate can easily be deduced. For a discussion of this type tithe in Aleppo, see Venzke, "Special Use of the Tithe," pp. 304-315.

time as the *qasim* tax rates for the non-tithe assessment were being lowered, to the modest rates of one-eighth and one-seventh. In the *maqtû'-deymûs* villages of Table 4 (these villages are identified by the absence of a *qasim* tax rate), the tithe revenues similarly saw an increase in the later *tahrirs*, while the non-tithe revenues declined. In sum, the *qasim* tax rates may not indicate what the researcher, *prima facie*, would believe them to indicate. These tax rates must be studied and understood within their immediate context. The lower *qasim* rates seen for the tithe villages of Aleppo in the later *tahrirs*--rates of one-eighth and one-seventh--are roughly the equivalent of the earlier rates of one-fifth and one-fourth, when the effect of the tithe tax-rate increase, in the later registers, is taken into account. Again, the researcher must beware!

The Aleppo *qanunname* of the fourth *tahrir* offers an explanation, which is not, however, altogether credible, for this new policy affecting the tithe. Indeed, the Ottoman administration went to some pains to justify the revenue loss that this policy inflicted on *vaqf* and *mülk*.⁶⁹ This particular use of the tithe in the *Sanjaq* of Aleppo, actually in the Province of Aleppo, would appear not to have been a mere 'local' phenomenon. There are indications of a similar manipulation of *qasim* tax rates, and likewise to the detriment of the interests of *vaqf* and *mülk*, in certain Anatolian *qanunnames* found in Ö.L. Barkan's *Kanunlar*. For example, the Diyarbekir *qanunname* dated 947/1540-41, in attempting to explain why villages that used to pay one-half of their agricultural revenue to *vaqf* now pay only one-quarter to *vaqf*,⁷⁰ would appear to identify a similar administrative initiative to gain more revenue for the state at the expense of *vaqf* and *mülk*. It appears not unlikely that this policy was applied over a wide area. Regardless of its extent, wherever the policy was introduced, it represents a factor that must be taken into consideration in any study that uses the *qasim* tax rates. Certainly, too, this most interesting tithe issue merits further investigation in its own right.

69 BA, TT 454, pp. 6-8. It should be noted that, at the same time as the administration raised the tithe tax rates, in the fourth *tahrir*, to benefit the state and its representatives, it also imposed the tithe, elsewhere, as a tax requirement for the first time. This last tithe measure became known as the "new tithe" (*'ösh-i jedîd*), and it became the source of local controversy. For this "new tithe" measure, see Venzke, "Provincial Taxation," Ph. D. diss., pp. 470-542; BA, TT 454, pp. 6 and 9 (of the *qanunname*)p and TT 493, pp. 12-13 (of the *qanunname*), also reproduced by Barkan, in *Kanunlar*, prov. no. 14, p. 209.

70 Prov. no. 23, reproduced by Barkan, in *Kanunlar*, p. 135. Note that this provision, like others treating this matter, is extremely difficult to understand.

TABLE 4.--The Ottoman Policy, Introduced at Mid-Century, That Effects a Re-Division of Agricultural Revenues in Favor of the State's Tithe Revenue, as Illustrated for Selected Villages of the Aleppo *Nahiyes* of Jabal Sim'an and Sarmin in Successive *Tahrirs* of the 16th Century

	1570-71		ca.1551-52 [Policy Change]				ca. 1536-37 [Baseline]					
	Q. Levy	Ist	Tithe (2)	Total (1 & 2)	Q. Levy	Ist	Tithe (2)	Total (1 & 2)	Q. Levy	Ist	Tithe (2)	Total (1 & 2)
Jabal Sim'an												
'Ajil		9300	6200	15500		9300	6200	15500		14000	1500	15500
Bahfīs		24000	--	24000		14400	9600	24000		24000	--	24000
Hawar	1/7	6960	5200	12160	1/7	4987	3815	8802	1/5	10000	2640	12640
al-Gharbiya												
Jibrīn	1/7	16500	--	16500	1/7	11995	4815	16810	1/4	17000	--	17000
al-Kasb												
Nayrab	1/7	12240	9200	21440	1/7	8655	6670	15325	1/5	19200	2000	21200
Halab												
Qabtān		12000	8000	20000		12000	8000	20000		18000	2000	20000
al-Jabal												
Sarmin												
Bamāghūn		18000	--	18000		10800	7200	18000		16500	--	16500
Barhīsā	1/5	24000	--	24000	1/8	14200	10000	24200	1/5	25000	--	25000
Idlīb		27000	18000	45000		27000	18000	45000		37000	5000	42000
al-Kubrā												
Kafr	1/5	13603	--	13603		14000	--	14000		10500	--	10500
Hanjār												
Kafr Jālis		20000	--	20000		12000	8000	20000		20000	--	20000
Kafryā		18000	--	18000		10800	7200	18000		18000	--	18000

SOURCE: For Jabal Sim'an, BA, TT 493, pp. 103-178; BA, TT 454, pp. 94-158; and BA, TT 397, pp. 84-127. For Sarmin, BA, TT 493, pp. 332-440; BA, TT 454, pp. 298-379; and BA, TT 379, pp. 678-736.

NOTE: Note that the third Aleppo *tahrir*, dated ca. 1536-37, serves as the baseline, by which the later changes made to the tithe can be seen. A 'blank' under the "Q." (for '*Qasim* Assessment') Column indicates the *Maqtûl/Deymûs* assessment. Note also that the *qasim* tax rates, above, govern only the revenue of the "1st levy"; the tithe revenue, in the *qasim* situation, is obtained as the result of a second agricultural levy. However, in the *maqtû-deymûs* situation, the tithe represents an apportionment of

the total agricultural revenue that is obtained from a single assessment, with one part of the revenue going to the tithe and the other part going to the "1st levy." Finally, note that the tithe, in the above cases, represents the type tithe that is achieved as a result of a second agricultural levy or of an apportionment from the total revenue. It is *not* the other type tithe seen in Aleppo that represents a direct assessment on *vaqf* and *mülk*.

The Maqtû'-Deymûs Method of Agricultural Assessment

The *maqtû'-deymûs* method of assessment offered an alternative to the use of the *qasim* assessment in Ottoman Syria of the 16th century. As an assessment based on the cultivated area, not on the agricultural harvests, it offers no possibility for determining total agricultural yields, nor does it provide a 'clear indicator' for agricultural productivity, as the *qasim* tax rates reputedly, though often mistakenly, are believed to do. (In light of the previous discussion, we have come to realize that neither is the *qasim* tax rate itself such a clear, unambiguous indicator of productivity.) Despite these shortcomings, the *maqtû'-deymûs* method of assessment should be considered in any study of agricultural productivity, because it offers another perspective on the issue.

A casual examination of the *maqtû'-deymûs* villages of the *Sanjaq* of Aleppo in the fifth *tahrir* leaves one with the impression that quite a few of the most productive villages were those in which this assessment was being applied; for the incidence of this assessment, see Map 1, above.⁷¹

71 This impression of the *maqtû'-deymûs* villages is reinforced particularly by the identification of the highest incidence of such villages with the greater Sarmin market area, which can be identified by the *nahiyes* that applied the Sarmin *mekkûk*, and, to a lesser extent, with the greater Hârîm market area, which can be identified by the *nahiyes* that applied the 'Hârîm' *mekkûk* (for a percentage-breakdown of *maqtû'-deymûs* villages in the *Sanjaq* of Aleppo, by *nahiye*, see Table 1, in Venzke, "Provincial Taxation," Ph. D. diss., pp. 190-92; and, for these *mekkûk* areas, see Map 2, below in the text.)

The Aleppo *tahrirs* offer seemingly contradictory evidence on this question of the *maqtû'-deymûs* assessment's relationship to agricultural prosperity. The *qanunnames* indicate that, for villages and *mezra'as* subject to the *maqtû'*-assessment in the past, the administration re-affirmed this *maqtû'* status for some of these cases, with revenue increases in the fourth and fifth *tahrirs*, while it recognized for other cases the status of *qasim* or their having become "*hâlî*" (uninhabited). It is also indicated that, for certain villages [and *mezra'as*] "on the verge of ruin, and no longer able to support the *deymûs*, "these would now be recorded for the *qasim* assessment ("deymûsa mütehammil olmayub harâbe müşrif olmuş"; BA, TT 493, p. 8, also reproduced by Barkan, in *Kanunlar*, prov. no. 2, p. 206; this same provision is also found, with substantially the same language, in the earlier *qanunnames*, TK 3, p. 1-b, and BA, TT 454, p. 2). The meaning of the entire provision is not altogether clear. It implies, at the very least, that the *qasim* assessment was the administration's choice for the revival of villages and *mezra'as*. There is also the suggestion that the *maqtû'-deymûs* assessment was responsible for the ruin of villages and *mezra'as*, but this may be no more than administrative polemic; note that the terms *maqtû'* and *deymûs* are being used somewhat indiscriminately in these *qanunnames*. Overall, it appears that the *maqtû'-deymûs* assessment was losing ground to the *qasim* assessment, by administrative choice.

In contrast to this administrative favoring of the *qasim* assessment, there is some evidence that the villagers themselves may have preferred the *maqtû'-deymûs* assessment. This evidence is found in

This prompts the question of whether these villages were, coincidentally, just naturally more productive, or was the method of assessment in some way responsible for their greater productivity? This is a question that clearly merits investigation. We know that the *maqtû'-deymûs* assessment entailed the collection of taxes twice a year, whereas the *qasim* assessment entailed three tax-collection periods.⁷² Therefore, it is possible that the 'apparent' greater prosperity of the *maqtû'-deymûs* villages, if indeed this is confirmed through further investigation, stemmed, in some part, from the greater freedom they enjoyed from tax collectors.

It is also one's impression that the tax obligations of Aleppo's *maqtû'-deymûs* villages, in the later *tahrirs*, changed less over time than the obligations of *qasim* villages, for which significant fluctuations can sometimes be seen.⁷³ How this should be interpreted is not clear, but it might be seen as offering some confirmation of the fact that the *maqtû'-deymûs* method of assessment was less directly tied to actual conditions of agricultural productivity. For the purposes of the present inquiry, it would serve as a further illustration of the point that the numbers found in the *tahrirs* must be interpreted with great caution. Finally, it is clear from the Aleppo *tahrirs* that the *maqtû'-deymûs* assessment enjoyed a greater prevalence in the early *tahrirs*.⁷⁴ Why it lost some favor over the

notices, in the second Aleppo *tahrir*, indicating that villagers had come forward (seemingly on their own initiative) and had agreed to pay their total tax obligation as a specified *deymûs* sum (here meaning a cash sum), to be paid in two installments, although the question of installments is not always addressed. For examples of such notices, see BA, TT 146, pp. 331-32, 522, 560, 561, 566-67, 624-25, 642, 940-43, 988, 1021, 1022, 1057-58, 1066-67; and BA, TT 1040, pp. 766-68, 772-73, 813, 817-18, 818, 820-21, 823-24, 825-26, 859, 877, and 883. It is not clear how we should interpret these notices. The *deymûs* that is being agreed to perhaps indicates 'cash payment' alone, without any reference to method of assessment. What might have been attractive to these villagers was the fact that the *maqtû'-deymûs* assessment entailed only two yearly payments, as opposed to the three required for the *qasim* assessment (for this issue, see below in the text). Also, transportation costs to markets may have been a factor here; note that many of the cited notices were for villages situated in more outlying areas. These cases leave us with the impression that the administration and the peasant-cultivators favored different methods of assessment, at least in these cases.

⁷² The *qanunname* of the fifth Aleppo *tahrir*, BA, TT 493, pp. 10-11; also reproduced by Barkan, in *Kanunlar*, prov. no. 10, p. 208. Note that the twice-per-year collection-period is indicated specifically for the 'cash *deymûs*.'

⁷³ For some indication of this, see Table 4, above in the text, where the total agricultural tax obligations of the *maqtû'-deymûs* villages are seen to have remained largely unchanged from the third to the fifth *tahrirs*.

⁷⁴ This greater prevalence in the early *tahrirs* is demonstrated for the *nahiyes* of Jabal Sim'an and Sarmin, on Table 5, p. 278, in Venzke, "Provincial Taxation," Ph. D. diss. This should not be interpreted as indicating the presence of a more extensive cash economy in the early 16th century, because, at that time, the *maqtû'-deymûs* revenues were frequently being computed and paid in kind. By the time of the fifth *tahrir* for Aleppo, there was a general decline in the number of *maqtû'-deymûs* villages. Then, only nineteen per cent of Aleppo's villages (and towns), representing 192 villages out of a total number of 1008, were subject to the *maqtû'-deymûs* assessment, as compared to the 76 per cent subject to the *qasim* assessment; no method of tax assessment was indicated for the remaining 5 per cent of the villages, many of which were in decline. For these statistics, see *ibid.*, Table 1, pp. 190-92

course of the century, like so very much else regarding this assessment, is simply not known. What is clear is that, the greater the incidence of the *maqtû'-deymûs* assessment, the fewer the opportunities for calculating agricultural yields and conducting comparative analyses based on such yields.

THE QUESTION OF A MULTITUDE OF MEASURES

Last, but certainly not least, among the issues that might pose complications for a study of agricultural productivity are the great variety of agricultural weights and measures of capacity seen for the Ottoman Empire. Again, this question of weights and measures goes to the heart of the issue of the 'coordinating mechanisms' that yet remain very much needed before comparative research into the question of agricultural productivity can be successfully undertaken. (It might be noted that such research would naturally prefer for comparisons to be made on the basis of 'in-kind' measures, rather than of their cash equivalences, since the latter is clearly a step removed from the actual yields.) Certainly the plethora of measures that existed can present major problems for any comparative study involving different regions of the Empire. Less well-appreciated perhaps is the fact that different measures for the same crop might also be present within even the same *sanjaq*, as well as what appears to be variations within a single measure, both further complicating the task of comparative study.

In the discussion to follow, we will leave altogether outside of consideration the measures that were used for the minor cereal grains, forage crops, and legumes, for which the individual measure tended to exhibit an even greater variability, and address only the measures used for the primary cereals, wheat and barley, in the *Sanjaq* of Aleppo in the 16th century. The later Aleppo *tahrirs* offer little information on the wheat and barley measures, and the surviving *qanunnames* (found for the third, fourth, fifth, and sixth *tahrirs*) do not address the subject at all.⁷⁵ There-

⁷⁵ From the earliest extant Aleppo *qanunname* on, TK 3 (a copy of this *tahrir* is also found in the Başbakanlık Archives, İstanbul, catalogued as TT 397; however, its *qanunname* has not survived), 2 pp. unnumbered, found at the beginning of the register following its honorific introduction; BA, TT 454, pp. 2-10; BA, TT 493, pp. 8-15 (the last is also reproduced by Barkan, in *Kanunlar*, pp. 206-210); and BA, TT 610, pp. 4-11 (significant pagination problems occur here; this *qanunname* represents an almost-verbatim version of the *qanunname* of TT 493).

It is noteworthy that, for the *Sanjaq* of Tripoli, where the *mekkûk* measure for the primary cereal grains was also in use, the *qanunname* of the first Ottoman *tahrir* does give some indication of the value of the three different *mekkûks* in use there. The most widespread *mekkûk*, the so-named "Tarâbulûs *mekkûk*" (Tripoli *mekkûk*), was the equivalent of ten İstanbul *kile*. Another *mekkûk* had the value of 1.5 Tarâbulûs *mekkûk*, while the third *mekkûk* measure was the equivalent of two

fore, the researcher must dig for information. A cursory examination of the Aleppo *tahrirs* will reveal that two basic measures of capacity were being used for the primary cereal grains in the 16th century. The more prevalent was denoted simply by a *mim* () in the later registers. From the earliest Aleppo *tahrirs* (the first two), where this measure is spelled out, one understands that this is the *mekkûk* measure, rather than the *menn* or the *mudd*, which were also measures seen historically for Syria.⁷⁶ But, which *mekkûk* measure is this? W. Hinz identified several different *mekkûk*-measures for Syria and Iraq in the Middle Ages.⁷⁷ Therefore, we are confronted with the problem of having to choose from among several possibilities.

A limitation on our focus at this point might be useful. If we examine the wheat and barley measures as they are revealed in the fifth Alep-

Tarâbulûs *mekkûk* (BA, TT 68, p. 5; another part of this *qanunname* has also been reproduced by Barkan, in *Kanunlar*, pp. 551-52). The first and third-mentioned *mekkûks* seen for Tripoli are also identified in a later Tripoli *qanunname*, found in the *tahrir* TK 203, dated 954/1547-48, a fragment of which Barkan has reproduced in *Kanunlar*, as prov. no. 11, p. 215. For the value of the İstanbul *kile*, i.e., as 20 *oqqa* = 25.656 kg. for wheat, which would give the one Tripoli *mekkûk*, above, a weight of ca. 257 kg., see Hinz, *Islamische Masse*, p. 41; and İnalcık, "Ottoman Metrology," n. 55, p. 330 and p. 333. For the significant variation in the *kile* that the Ottoman administration allowed in their European provinces, see İnalcık, "Ottoman Metrology," pp. 330-34.

For the *Sanjaq* of Damascus in the 16th century, another measure for the primary cereal grains was in use—the *ghirâra*. Although this measure is mentioned in the two extant *qanunnames* of this period, no corresponding value for it was given (BA, TT 263, pp. 6 and 9, also reproduced by Barkan, in *Kanunlar*, pp. 223 and 225; and, the same provisions in BA, TT 474, pp. 15 and 19). For the *ghirâra* measure in pre-Ottoman Syria and Palestine, see Hinz, *Islamische Masse*, pp. 37-38; Bernard Lewis, *Notes and Documents from the Turkish Archives: A Contribution to the History of the Jews in the Ottoman Empire*, Oriental Notes and Studies, no. 3 (Jerusalem, 1952), p. 17; and *idem*, "Jaffa in the 16th Century, According to the Ottoman Tahrir Registers," *Necati Lugal Armağam* (Ankara, 1968), n. 5, p. 437. Mamluk sources equate the *ghirâra* of Damascus with approximately 2.5 *mekkûk* of Tripoli, but which Tripoli *mekkûk* would this be? The *ghirâra*'s approximate weight and capacity in the Mamluk period were, according to Lewis, a little more than 200 kg., of wheat presumably, and somewhat more than 250 litres (*Notes and Documents*, p. 17); this is also confirmed by Hinz (*Islamische Masse*, p. 38).

Mamluk sources also equate the *ghirâra* of Damascus with approximately 2.5 *mekkûk* of Aleppo (Hinz, *Islamische Masse*, p. 45), which would appear, then, to recognize the same measure for these particular Aleppo and Tripoli *mekkûks*, but one should treat this equating of the two *mekkûks* with great caution. The Tripoli *mekkûk* in the Ottoman period, valued at 10 İstanbul *kile* = more than 250 kg., would appear to have had a considerably greater weight than that attributed to it in the Mamluk period. It should be pointed out, however, that the Damascus *ghirâra* would appear to equate correctly with 'two-and-a-half-times' the weight of that "Aleppo *mekkûk*," of the Mamluk period, valued at 81 kg. for wheat (for this *mekkûk*, see n. 77, below).

⁷⁶ For the *menn* and *mudd*, weight and volume measures, resp., in historic Syria, see Hinz, *Islamische Masse*, pp. 16 and 46; and Muhsin D. Yusuf, *Economic Survey of Syria during the Tenth and Eleventh Centuries* (Berlin, 1985), pp. 230 and 231.

⁷⁷ *Islamische Masse*, pp. 44-45. In the 14th and 15th centuries, 2.5 Aleppo *mekkûk*, on the average, corresponded to one Damascus *ghirâra*, making one Aleppo *mekkûk* worth 81.75 kg. of wheat. Earlier, in the 12th century, one Aleppo *mekkûk* was said to equal 19 *sunbul* of Shayzar (a town in central Syria located northwest of Hamah), which represented approximately 61 kg. of wheat. *Ibid.*, pp. 44-45 and 37-38. The *sunbul* measure (to be discussed below in the text), the second of the two primary cereal grain measures seen for the *Sanjaq* of Aleppo in the 16th century, was seen for the Hatay districts, in the western part of the *Sanjaq*, located north of Shayzar. The *mekkûk* and *sunbul* measures, in the *Sanjaq* of Aleppo, quite clearly predated the Ottoman conquest.

po *tahrir*, where a greater standardization in the use of weights and measures is seen, we can identify two great zones for these measures. The larger zone, the *mekkûk* zone, lay east of the Orontes River (al-'Âsî). Within this zone, five *mekkûk* sub-zones can be distinguished, based on the different cash-valuations seen for their respective *mekkûks*. Rarely is it indicated in this Aleppo *tahrir* which *mekkûk* type was in use. Therefore, the different *mekkûk* types and their areas of application can only be established by the researcher calculating the per-*mekkûk*-of-wheat-and-barley cash equivalences for every village and *mezra'a* where the *mekkûk* measure was being used. Certainly the computer, but even the hand-calculator, can be most useful in this task. In the end, it was found that a large degree of correspondence existed in this *tahrir* between *mekkûk* type and *nahiye*; one *nahiye* tended to apply the same *mekkûk* type, with some exceptions. Such a degree of correspondence between *mekkûk* type and *nahiye* simply did not exist in the early registers.

The most prominent *mekkûk* types found for the *Sanjaq* of Aleppo in the fifth *tahrir* were the "Halabî" ('Aleppo') and "Sarmînî" *mekkûks*, named, one would assume, after the two great market centers of this eastern *mekkûk* zone, the city of Aleppo and the town of Sarmin.⁷⁸ The Halabî *mekkûk* was applied in an extensive, contiguous area representing the easternmost part of this zone, plus in the non-contiguous *Nahiye* of 'Amaq, to the west. This Halabî *mekkûk* sub-zone encompassed seven *nahiyes*: Jabal Sim'ân, Mattakh, Jabbûl, Bâb, Manbij, 'Amaq, and likely Khalaqa.⁷⁹ The Halabî *mekkûk* was also applied occasionally in the *Nahiye* of Sarmîn.⁸⁰ The Sarmînî *mekkûk* was also found to have been applied in a contiguous area, as represented by four *nahiyes*: Sarmîn, Jabal Sammâq, Jabal Banî 'Alîm, and Zâwiya.⁸¹ This area was, in general, a

78 An indication of the variety and importance of the market activity of Aleppo and Sarmin can be gleaned from their tax-revenue lists (*muqâta'ât*), in BA, TT 493, pp. 98-101 and 338, resp. Aleppo towered over all towns of northern Syria in terms of its market activity.

79 BA, TT 493, pp. 103-78, 179-93, 194-213, 214-38, 240-93, 596-617 and 562-71, in the order in which the *nahiyes* are given in the text, above. Because tax requirements in Khalaqa were here expressed as a cash payment, no information on grain measures was available. This tendency toward cash payment was also true for the earlier *tahrirs*, and therefore, one can not be certain which measure was being applied in this district. In the first *tahrir*, one finds two villages where the Halabî *mekkûk* was named as being in use (BA, TT 93, pp. 419 and 421). In the third *tahrir*, there was only one *qasim* village, which does appear to have used the Aleppo *mekkûk*, to judge from the given cash valuation, BA, TT 397, pp. 552-58. On this slim evidence, then, rests the presumption that Khalaqa was part of the Halabî *mekkûk* zone. If this would prove to be incorrect, then Khalaqa would, most likely, be part of the Hârîm *mekkûk* zone.

80 There it is seen for only two villages in the fifth *tahrir*, BA, TT 493, pp. 366 and 426-27. It was more prevalent in this district in the earlier *tahrirs*. For example, in the first *tahrir*, it was seen in seven villages, BA, TT 93, pp. 510-11, 513, 516-17, 534, 534-35, 543-45, and 548-49.

81 BA, TT 493, pp. 332-440, 442-69, 470-80, and 482-503, given in the order in which these *nahiyes* appear in the text, above.

thriving agricultural and market area in the 16th century.

For Aleppo's remaining three *mekkûk* sub-zones in the fifth *tahrir*, the *mekkûk*-type was nowhere named, but it would appear that different *mekkûks* were in use to judge from their different cash equivalences, although these differences might also be attributable to differences in the quality of the grain. Let us assume that these differences point to differences in the *mekkûk* measure itself. Accordingly, in the *Nahiye* of Râwandân (or Ravende, in Turkey today), a different *mekkûk* type was encountered; we might call it the 'Râwandân' *mekkûk*.⁸² Similarly, in the *Nahiye* of Rûj, yet another *mekkûk* type was seen; let us call it the 'Rûj' *mekkûk*.⁸³ For the last *mekkûk* sub-zone, we might designate the *mekkûk*-type there in use as the 'Hârîm' *mekkûk*; a "Hârîmî *mekkûk*" was actually named in the early registers. This so-called Hârîm *mekkûk* was applied in a contiguous area, consisting of the *nahiyes* of Hârîm Jabal A'lâ, and Jabal Barîsha, and possibly Khalaqa, if the last is not correctly identified with the Halabî *mekkûk* zone.⁸⁴ These *mekkûk* sub-zones of the *Sanjaq* of Aleppo are represented on Map 2, below, which, for each *nahiye*, presents the predominant measure there in use, which was not necessarily the only measure in use. It can easily be appreciated how the existence of five *mekkûk* sub-zones can complicate a comparative study limited even to this *Sanjaq*. Yet greater difficulties would be encountered were a comparative analysis extended to other *sanjaqs*, where completely different measures might have been in use, such as the *ghirâra* measure seen for the cereal grains in the neighboring *Sanjaq* of Damascus.⁸⁵

The magnitude of the capacity-difference existing between the afore-given *mekkûk* measures must also be recognized. The greatest difference found was between the Halabî and Sarmînî *mekkûks*. The Halabî *mekkûk* for wheat, in the fifth *tahrir*, was valued at 130 *aqche*, while the Sarmînî *mekkûk* for wheat commanded 300 *aqche*, over twice as much. Note, again, that we have to rely here upon the *aqche*-value of a particular *mekkûk*, because nowhere in the Aleppo *tahrirs* is the weight/capacity-value of the *mekkûk* expressed. Similarly, the Halabî *mekkûk* for barley was valued at 70 *aqche*, while the Sarmînî *mekkûk* for barley commanded 150 *aqche*, again, more than twice as much. If we look more closely at Aleppo's *mekkûk* sub-zones, we can see that the smaller-volume *mekkûks* were found in the eastern part of the *Sanjaq*,

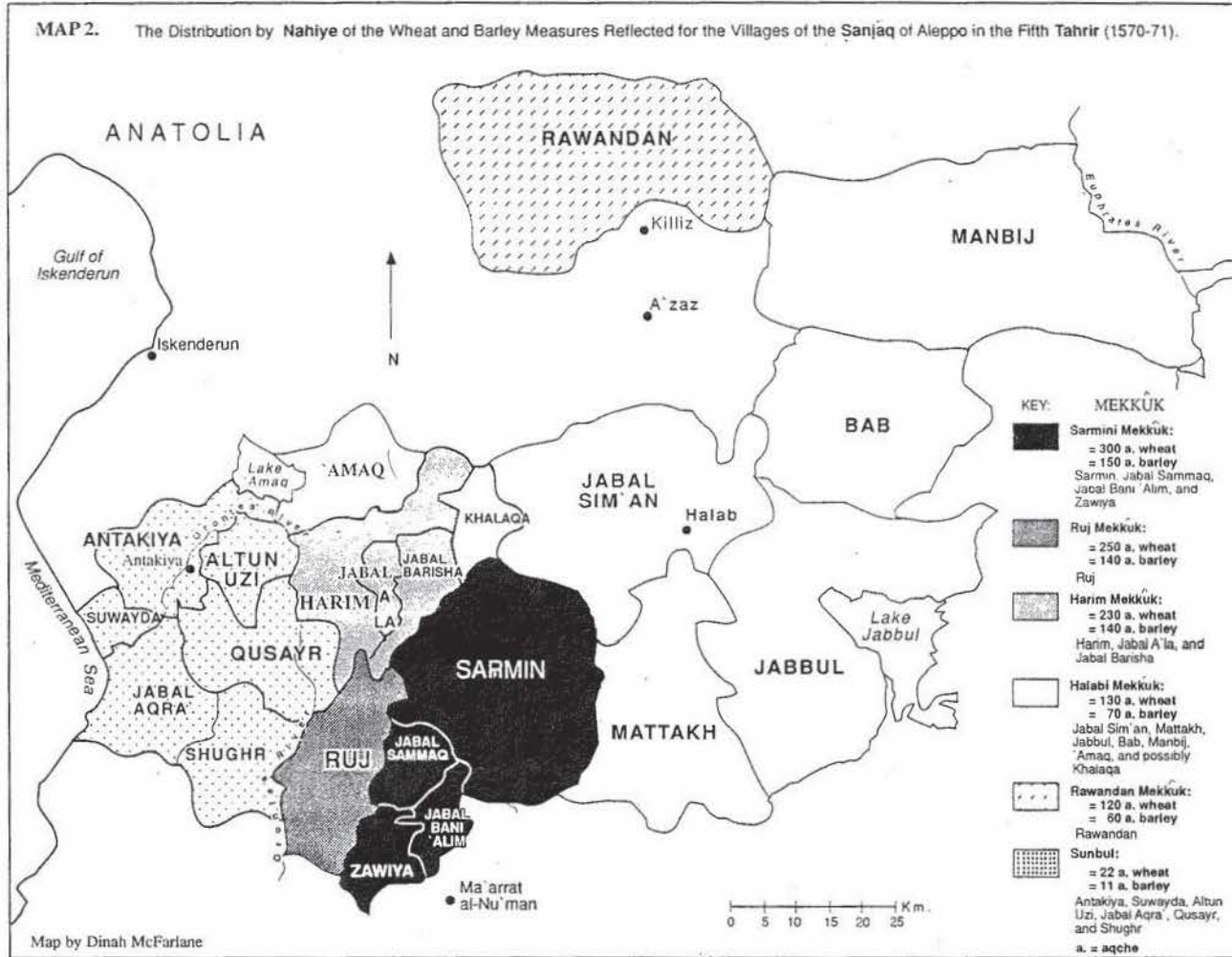
82 BA, TT 493, pp. 294-330.

83 BA, TT 493, pp. 504-531.

84 BA, TT 493, pp. 536-61, 572-82, and 583-95, in the order in which the *nahiyes* are named in the text, above. For discussion of the "Hârîmî *mekkûk*" of the early Aleppo *tahrirs*, see n. 90, below.

85 For the value of the *ghirâra* measure, see n. 75, above.

MAP 2. The Distribution by Nahiye of the Wheat and Barley Measures Reflected for the Villages of the Sanjaq of Aleppo in the Fifth Tahrir (1570-71).



where they were represented by the Halabî and 'Râwandân' *mekkûks* (the latter was valued at 120 *aqche* for wheat and 60 *aqche* for barley). Further west, we see the larger-volume *mekkûks*, as represented by the Sarmînî, Rûj, and Hârîm *mekkûks*. The 'Rûj' and 'Hârîm' *mekkûks* were valued at 250 and 230 *aqche* for wheat, respectively, while both were valued at the same 140 *aqche* for barley. Again, refer to Map 2 for these locations.

We should perhaps reconsider our prior assumption that the different cash-valuations seen for the *mekkûk* did, in fact, denote different-size capacity-measures. Given the rather small difference existing between the cash-valuation for wheat of our so-named Rûj and Hârîm *mekkûks*, and the fact that no difference is seen in the valuation of their barley, raises the possibility that these were the same-volume measure, for which the difference in the wheat-cash-valuation was attributable to differences in the quality of the wheat being grown. It is even possible that this 'same-volume' measure was actually the Sarmînî *mekkûk*, or a variation on it, since the cash-valuation differences between these three *mekkûks* are not very great. Similarly, our so-named Râwandân *mekkûk* may actually represent a variation on the standard Halabî *mekkûk*. If this speculation were to prove correct, then the *Sanjaq* of Aleppo would be characterized by only two *mekkûk* zones in the fifth *tahrir*--the Halabî and Sarmînî. Regardless of the case, it is of great interest that, not only did there exist, at the very least, two *mekkûk* sub-zones, but these zones also reflected a truly significant capacity difference--more than twofold, to judge from their cash valuations. To what do we attribute the significant difference seen in these two *mekkûks*? Simply to custom? Was crop quality not a factor? Certainly minor cash-valuation differences in the *mekkûk* might be attributable to crop quality. Or, does it reflect differences in productivity? It is true that the areas in which the smaller Halabî and 'Râwandân' *mekkûks* were in use normally experience less rainfall than the areas further west.⁸⁶

Aleppo's second zone, in the fifth *tahrir*, for the wheat and barley measures would appear to be that of the *sunbul*, which represented a considerably smaller-volume measure than the *mekkûk*. The *sunbul* zone, which was also far-less extensive than the *mekkûk* zone, lay north

⁸⁶ We have no reason to think that there was a conscious policy on the part of Ottoman administration to apply here different capacity measures in an attempt to 'equalize' the revenues being received by the provincial cavalry or Ottoman officials in the *Sanjaq*, as the administration was known to do, on occasion, when local cereal prices varied sharply from place to place (see n. 91, below), because, in the higher-volume Sarmînî *mekkûk* zone, tax requirements tended to be paid in cash, while they were, more frequently, being paid in kind in the smaller-volume Halabî *mekkûk* zone, just the opposite of what an administrative intervention would have provided.

and west of the Orontes River, where it was seen as a uniform zone. Actually, this zone can largely be identified today with Turkey's Hatay Province, excepting its southernmost area, which remained part of Syria after the cession, by France, of the Hatay to Turkey in 1939. In the six *nahiyes* where the *sunbul* was being applied--Antâkiya, Suwayda (today, Samandağı,) Altûn Ūzî, Jabal Aqra', Qusayr (part of which lay east of the Orontes River), and Shugr--, it was valued uniformly at 22 *aqche* for wheat and 11 *aqche* for barley.⁸⁷ This *sunbul* zone is shown on Map 2, above. The great disparity existing between the *sunbul* and *mekkûk* measures makes difficult any attempted comparative analysis of the productivity of the primary cereals limited to the *Sanjaq* of Aleppo alone, and certainly, the problem is compounded by the apparent capacity-differences seen within the *mekkûk* measure itself.

On top of the problems that have thus far been identified on the basis of only one Aleppo *tahrir*, the fifth, one would also have to contend with the fact that, in the earliest Aleppo *tahrirs*, there was less correlation of a particular measure with one *nahiye*; several measures might be

87 BA, TT 493, pp. 633-59, 660-71, 672-704, 705-34, 736-805, and 806-57, given in the order in which these *nahiyes* appear in the text, above. The 1:19, "Aleppo-mekkûk" to *sunbul*, ratio seen for Syria in the 12th century, which gave the *sunbul* the value of 3.206 kg. *vis-à-vis* an "Aleppo mekkûk" valued at ca. 61 kg. of wheat (Hinz, *Islamische Masse*, pp. 44 and 51), is not seen reflected between any one of the five *mekkûk* types and the *sunbul* seen for the *Sanjaq* of Aleppo in the 16th century, to judge from their given cash equivalences. The ratio existing between the "Halabî mekkûk" and the *sunbul*, in the 16th century, ranged between 1:6 and 1:5 for wheat, and between 1:7.5 and 1:5 for barley, based on their cash equivalences in tax registers three through five (for these ratios, see Table 5, below in the text). Obviously the "Sarmîni mekkûk" would more closely approximate the '1:19 ratio.' The "Sarmîni mekkûk" : *sunbul* ratios, as reflected by their cash equivalences in registers three through five, ranged between 1:10 and 1:13.6 for wheat and 1:12. and 1:15 for barley (see Table 5, below).

Despite this closer approximation based on the Sarmîni mekkûk, we should perhaps reconsider whether the identification of the *sunbul* here is a correct identification. It is possible that the "*shinik*," a larger-volume measure than the *sunbul*, which, as half the value of the *kile*, = 12.828 kg. (see İnalcık, "Ottoman Metrology," p. 324, n. 55, p. 330 and p. 333), should be read for "*sunbul*"; the problematical terminal letters of words written in the *siyâqat* script, in the *tahrirs*, can admit the possibility of confusion between the letters *kef* and *lâm*.

There is, however, evidence that would appear to go against this "*shinik*" identification. The author found two cases where what appeared to be the "*sunbul*" measure was being used as if it were a sub-unit of the *mekkûk* to express, in both cases where what appeared to be the "*sunbul*" measure was being used as if it were a sub-unit of the *mekkûk* to express, in both cases, the barley tax requirement. These cases were found for districts on the northern periphery of the *Sanjaq* of Aleppo: one for a village of A'zaz in the first *tahrir*, the other for a village of Manbij in the fifth *tahrir*. For both cases, the ratio between the *mekkûk* and the "*sunbul*," specifically, for the "A'zâzi" mekkûk valued at 144 and 100 *aqche* for wheat and barley, and the "Aleppo" mekkûk valued at 130 and 70 *aqche*, resp., was ca. 1:16, which comes close to approximating the ratio of 1:19 found in the 12th century. In the first case, *sunbul* appeared as "*shunbul*," while the word appeared without dots in the second case (BA, TT 93, pp. 240-41, and TT 493, p. 288).

Note that the northern districts, above, are located quite some distance from central Syria, where the *sunbul* was found in the Middle Ages. Is this the same "*sunbul*" as that seen for the Hatay districts, which are situated much closer to central Syria, in the same period? If so, then, we would appear to be seeing significant capacity-differences in the same basic measure. What the Hatay districts and the two northern districts had in common was a strong tribal element among their population, which was still very much in evidence in the 16th century. Or, are we seeing two entirely different measures? These questions can not be answered.

seen, in use, in the same *nahiye*. This situation persisted until the third *tahrir*, dated *circa* 1536-37, i.e., twenty years after the Ottoman conquest, when the volume measures were applied more uniformly by *nahiye*. At this time, the *sunbul* measure made its first appearance, where it was found to be applied uniformly in the aforementioned Hatay *nahiyes* situated west of the Orontes River, at a cash valuation of 20 *aqche* for wheat and 8 *aqche* for barley. The contemporary Halabî *mekkûk*, valued at either 110 *aqche* for wheat and 60 *aqche* for barley, or 100 *aqche* for wheat and 60 *aqche* (sometimes also 50 and 40 *aqche*, but the latter is rare) for barley,⁸⁸ enjoyed a greater area of application than it was to have in the fifth *tahrir*. In addition to the seven *nahiyes* identified with the Aleppo *mekkûk* in the fifth *tahrir*, Râwandân, Zâwiya, and Jabal Banî 'Alîm (these last two *nahiyes*, however, each had only one *qasim* village, and hence, only one example of the measure) also applied this *mekkûk*; and, it was also seen in the 'mixed- *mekkûk*' districts of Hârîm, Jabal Barîsha, Jabal A'lâ, and Sarmîn.⁸⁹ A second *mekkûk* zone, represented by the larger-volume Sarmînî *mekkûk*, valued at 200 *aqche* for wheat and 100 *aqche* (sometimes also 120 *aqche*) for barley,⁹⁰ can be identified for the districts of Jabal Sammâq (seen for its one *qasim* village) and Rûj, and for the 'mixed- *mekkûk*' districts of Sarmîn, Jabal Barîsha, Jabal A'lâ, and Hârîm.

H. İncalcık has observed that it was Ottoman administrative policy to achieve a standardization of weights and measures within a *sanjaq*, often by extending a local measure to the whole *sanjaq* and defining it in terms of an official Ottoman equivalent, although such standardization was not always achieved.⁹¹ Despite the greater standardization that was being achieved in the *Sanjaq* of Aleppo in the later *tahrirs*, the very fact that the collective villages of a *nahiye* often did not enjoy a basic continuity with one particular measure, from the earliest to the latest *tahrirs*,

88 For examples of the 'named' Halabî *mekkûk*, with its cash values, see BA, TT 397, pp. 495, 513, 531, 687, 694, 707, and 713.

89 The Aleppo *mekkûk* was also seen in five other *nahiyes* that were no longer recorded as part of the *Sanjaq* of Aleppo in the fifth *tahrir*. These are Dar Basâk, Baghrâz, Masyâf, Kafr Tâb, and Shayzar.

90 For an example of a 'named' Sarmînî *mekkûk*, together with its cash value, see BA, TT 397, p. 594. This *mekkûk* is more frequently named in the later *tahrirs*. It must be noted that there are a few cases for the *nahiyes* of Hârîm and Jabal Barîsha where a "Hârîmî *mekkûk*," valued at either 200 or 180 *aqche* for wheat and 100 *aqche* for barley, is named (*ibid.*, pp. 496, 497, and 522). We suspect that this is the same *mekkûk* as the Sarmînî.

91 "Ottoman Metrology," pp. 329-34. İncalcık also noted that the Ottoman policy of 'fixed prices' (*s. narh*) was closely interrelated with the question of weights and measures. The Ottoman state recognized that flexibility in this matter of standardization could also be in its own best interest. Accordingly, the state might allow large-volume measures to be used in areas of low grain prices when the tax requirements were being collected in kind, rather than to attempt to 'equalize' revenues by raising grain prices (*ibid.*, pp. 333-34).

raises significant problems for a study of agricultural productivity. There exists for the *Sanjâq* of Aleppo the additional problem that the first *tahrir* for the Hatay *nahiyes* appears not to have survived.⁹² Therefore, this gap in the record exercises a further limitation on comparative analysis.

Let the following examples for the *Sanjâq* of Aleppo illustrate the inconsistencies that one might encounter for the wheat and barley measures in the *tahrirs*. First, the Halabî *mekkûk* was seen over a wide area of the *Sanjâq* in the first *tahrir*. For the *Nahiye* of Jabal Sim'ân, where it was consistently applied, and for the *Nahiye* of Sarmin, where it was sometimes found, its cash valuation remained uniformly at 120 *aqche* for wheat and either 100 or 96 *aqche* for barley. We find, however, other cash valuations for the Halabî *mekkûk* elsewhere in the *Sanjaq* at this time; recognize that, identification of these cases rested on those 'few' instances where the *mekkûk* type was actually named. For example, we see a Halabî *mekkûk* for wheat, valued at 144 *aqche*, in the *nahiyes* of Harîm and Jabal Barîsha,⁹³ while elsewhere in Jabal Barîsha, it is seen valued at 120 *aqche* for wheat.⁹⁴ It is seen valued at 148 *aqche* for wheat in the *Nahiye* of Khalaqa.⁹⁵ Are we seeing, in these examples, the same Halabî *mekkûk* that was present in Jabal Sim'ân and Sarmîn? If so, then the differences in cash valuation might appear to be attributable to differences in grain quality. Or, are we seeing minor variations in capacity for the same *mekkûk* measure? Recognize that, adding to this confused picture, is the existence of a contemporary "A'zâzi *mekkûk*," valued at 144 *aqche* for wheat.⁹⁶ Is this not the same measure as the Halabî *mekkûk* of the same valuation for wheat? In contrast, the Sarmînî *mekkûk* appears to have enjoyed a more uniform cash valuation. For example, where it is named, in the first *tahrir*, in the *Nahiye* of Rûj,⁹⁷ it had the same cash valuation of 300 *aqche* for wheat and 200 *aqche* for barley as seen for the measure in the *Nahiye* of Sarmîn. In sum, we learn from these examples that the same-named measure may connote various cash valuations in the same time period. And conversely, it also appears that the 'same-volume measure' may have been called by different names, depending upon the location. This may signify no more than local pride; why should the inhabitants of the A'zaz region choose to call their *mekkûk* the Halabî, when they might call it the A'zâzi? It is also easy to appreciate how such confusion might have arisen, quite naturally, out of

⁹² The author has not been able to find these districts in any of the other early Ottoman *tahrirs*.

⁹³ BA TT 93, pp. 384-85 and 436.

⁹⁴ BA, TT 93, p. 442.

⁹⁵ BA, TT 93, p. 419.

⁹⁶ This is seen for the town of A'zaz, BA, TT 93, p. 204.

⁹⁷ BA, TT 93, p. 445.

the inquiries, made by Ottoman officials conducting a cadastral survey, to local inhabitants regarding the weights and measures in use in their area.

Similarly, it can be seen that the 'unnamed' *mekkûk*, which is the usual situation encountered in the Aleppo *tahrirs*, can vary significantly, in terms of its cash valuation, within even the same *nahiye*, in this first Aleppo *tahrir*. For example, in the small *Nahiye* of Jabal Barîsha, the unnamed *mekkûk* for wheat might be valued at a high of 288 *aqche*, or 240 *aqche*. Also in this district, the Halabî *mekkûk* was in use, valued at 144 or 120 *aqche* for wheat.⁹⁸ In the *Nahiye* of 'Amaq, the unnamed *mekkûk* for wheat also ranged widely in its cash valuation, from a high of 288 *aqche* to 210, 144, 124, and 120 *aqche*.⁹⁹ We are seeing here quite a significant range of variation.

To present another example of the inconsistency encountered for the volume measures in the *Sanjaq* of Aleppo, the *sunbul* measure was in use in the Hatay *Nahiye* of Shughr in the third, fourth, and fifth *tahrirs*, while the *mekkûk* measure was in use in the second *tahrir*.¹⁰⁰ It would be interesting to know what measure had been applied in Shughr in the first *tahrir*.

We have previously noted that, in the fifth *tahrir*, Hârîm and its neighboring *nahiyes* applied the same *mekkûk* measure--what we have designated as the 'Hârîm' *mekkûk*--, which appears to represent yet another *mekkûk* type. There is actually a *mekkûk* designated as the "Hârîmî" in the earliest Aleppo *tahrir*, where it is seen occasionally in the neighboring *nahiyes* of Hârîm and Jabal A'lâ, with a variable cash valuation for wheat of 300 or 288 *aqche*.¹⁰¹ At a 300-*aqche* valuation for wheat, the one Hârîmî *mekkûk* would appear to be the same measure as the contemporary Sarmînî *mekkûk* (see Table 5, below). It is interesting to find that, in the town of Hârîm itself, the "Qusayrî *mekkûk*," with a cash valuation of 288 *aqche* for wheat, the same valuation seen for the

98 BA, TT 93, pp. 436; 441; 436, 437, 443; and 442, resp. The same range of rates, excepting the 144 *aqche* rate, is also seen for the small *Nahiye* of Jabal A'lâ (ibid., pp. 425-35, *passim*).

99 BA, TT 93, pp. 345-81, *passim*.

100 From the second *tahrir* on, BA, TT 1040, pp. 384-459; TT 397, pp. 434-68; TT 454, pp. 625-26, 655, 656, 656-57, 661, 669-70, 670, 744, and 751-52 (the citations from this last *tahrir* reflect villages and towns of the Hatay *nahiyes* that showed some artisanal or market activity, as well as use of the *sunbul* measure, because the author, in this case, did not consult systematically the data for the *Nahiye* of Shughr, in this register); and TT 493, pp. 806-857. The *mekkûk* applied in Shughr in the second *tahrir* had a valuation of 352 *aqche* for wheat and 128 *aqche* for barley. This represents a cash-valuation for wheat that was 76 per cent greater than that seen for the contemporary Sarmînî *mekkûk*. Which *mekkûk* is this one? Since this *mekkûk*, would appear to represent a larger volume than the Sarmînî *mekkûk*, to judge from its greater cash valuation, this *mekkûk* would come closer to approximating the 'one-Aleppo-*mekkûk*-to-19-*sunbul*' ratio identified as present in Syria in the 12th century (for this ratio, see nn. 77 and 87, above).

101 BA, TT 93, pp. 401 and 431.

102 BA, TT 93, p. 384. Altogether in the *Nahiye* of Hârîm, three different *mekkûks* are named in this first *tahrir*: the Qusayrî, Halabî, and Hârîmî, with cash valuations for wheat of 288, 144, and 300 *aqche*, resp. (ibid., pp. 384, 385, and 401).

second of the Hârîmî *mekkûks* above, was in use.¹⁰² This *mekkûk* apparently takes its name from the neighboring *Nahiye* of Qusayr, or from one of its villages, Qal'at al-Qusayr; this district was part of the Hatay area, which was not recorded with the *Sanjaq* of Aleppo in this *tahrir*. Were these Hârîmî and Qusayrî *mekkûk* truly different measures? In short, was there actually a Hârîmî *mekkûk*, or was this *mekkûk* not masquerading for the Qusayrî and Sarmînî *mekkûks*?

If one were to follow the trail of the *mekkûk* type applied for wheat, successively, in the town of Harim, it would be found that, first, the Qusayrî *mekkûk*, at a cash valuation of 288 *aqche*, was in use, next, what appears to be the "Misrî" (this was, very likely, mis-written or mis-read for "Qusayrî") *mekkûk*, at a 200-*aqche* valuation, was seen, followed, in the third *tahrir*, by the Hârîmî *mekkûk*, at a 200-*aqche* valuation.¹⁰³ These 200-*aqche* valuations for wheat were also seen for the Sarmînî *mekkûk* in the same time period. However this particular greater-volume *mekkûk* measure in the *Nahiye* of Hârîm was being designated in the first three *tahrirs*, it either closely followed or else actually reflected the same cash-valuation seen for the contemporary Sarmînî *mekkûk*. In the fourth and fifth *tahrirs*, however, the *mekkûk* in use in the town of Hârîm was not named, but, at cash valuations for wheat of 210 and 230 *aqche*, respectively,¹⁰⁴ it fell behind the contemporary valuations for the Sarmînî *mekkûk* (for these, see Table 5, below); for this reason, the author chose to maintain the distinction of a separate 'Hârîm' *mekkûk*, although this may not actually be the case. What is clear is that a greater variety of *mekkûks* were in use in the early *tahrirs*, and frequently within the same *nahiye*, and therefore, there was often no basic continuity of one *mekkûk* type with the same area over time; certainly, continuity should never be assumed. Similarly, we have seen that one can not trust that the 'named' *mekkûk* had the same cash valuation, from place to place, in the same time period. The discontinuity, inconsistencies, and simply the problems identified for Aleppo's measures seriously deter undertaking a comparative analysis of crop productivity or production, whatever the territorial or time focus, based on the in-kind tax requirements expressed in terms of these measures.

Given this situation, it would be wise to take another approach, namely to base such an analysis on the given cash equivalences, in which terms Ottoman tax requirements on the cereal grains were also expressed.

103 BA, TT 93, p. 384; TT 146, p. 1002; and TT 397, p. 496.

104 BA, TT 454, p. 466 and TT 493, p. 536. It is interesting to note that, in all five *tahrirs*, the wheat obligation for the town of Hârîm remained the same, at twenty *mekkûk*, regardless of *mekkûk* type!

We can, *a priori*, anticipate problems with this approach, too. Obviously, devaluation and the debasement of the *aqche* must be taken into account, as well as price inflation. These factors did not become acutely important until the late 16th century, when the full force of the "price revolution" convulsed the Empire, but, even so, we are still lacking a reliable evidential record that plots these factors over the course of the century. A more fundamental objection, again, is that this approach is, quite simply, one step further removed from the reality of actual agricultural yields. Another shortcoming of this approach is that it completely obscures the differences in crop quality that might have occurred, which, in turn, may have been responsible for the different cash valuations seen for the same measure. Yet another factor that needs to be considered is the fact that Ottoman administration did make periodic changes in the cash-valuations of both the *mekkûk* and the *sunbul* measures, in the *Sanjaq* of Aleppo, over the course of the 16th century. This is a factor that can easily be documented. Table 5, below, sets out these changes, for the Halabî and Sarmînî *mekkûks*, which became the leading *mekkûk* measures for the *Sanjaq* of Aleppo in the later *tahrirs*, if not earlier, as these *mekkûks* appeared in the *nahiyes* of Jabal Sim'ân and Sarmîn, and for the *sunbul* measure, which was applied consistently in the Hatay districts from the time of the third *tahrir*, and at uniform cash valuations.

As Table 5 demonstrates, the *aqche*-valuation per measure tended to change with each *tahrir*. Therefore, for any comparative analysis focused over a period of time, it is imperative to determine, first, the changes that occurred in the *aqche*-valuation per measure with each new *tahrir*. Increases in the *aqche*-valuation of a measure in a later *tahrir*, for example, might lead one to believe, mistakenly, that higher yields had occurred, when, in fact, this may not have been the case. In other words, higher agricultural revenues were possible simply because of such increases. Our task, then, is to distinguish the actual increases (or decreases) in productivity or production from the 'apparent' increases (or decreases), which were caused solely because of changes made in the cash-valuation of a measure. We also need to gain some further perspective on this issue and ask ourselves what these changes in cash-valuation actually reflect. Do they reflect a fluctuation in prices, and we might note, again, that the price history of the Ottoman economy remains yet to be written, or do they reflect anticipated changes in the level of agricultural production, or some other factor?

TABLE 5.-- The Changing Cash Valuation (in *Aqche*) of the Halabî and Sarmînî *Mekkûks* and of the *Sunbul* as Reflected for the *Nahiyes* of Jabal Sim'ân, Sarmîn, and Shughr, Resp., in the First Five Aleppo *Tahrirs*

	(1570-71)	(1551-52)	(1536-37)	(1526-27)	1519-20
<i>Mekkûk</i>					
<i>Halabî:</i>					
Wheat	130	110 (also 120)	110,100	120,100	120
Barley	70	55 (also 60)	60,50,40	60,50	100,96
<i>Sarmînî:</i>					
Wheat	300	250	200	200	300
Barley	150	150	120,100	100	200
<i>Sunbul:</i>					
Wheat	22	20	20	--	--
Barley	11	10	8	--	--

SOURCE: BA, TT, 493, TT 454, TT 397, TT 146 and 1040 (these are companion volumes; the *Nahiye* of Jabal Sim'an is found in the former, while the *nahiyes* of Sarmin and Shughr are found in the latter), and TT 93, starting with the latest *tahrir*.

NOTE: Note that these cash valuations are based on the data for the three *nahiyes*-- Jabal Sim'an, Sarmin, and Shughr--that served as a control group for the first five Ottoman *tahrirs*, plus the market and artisanal towns and villages of the *Sanjaq*. Note that Shughr was not recorded with the *Sanjaq* of Aleppo in the first *tahrir*, and that it employed the *mekkûk* measure in the second *tahrir*.

From this table, we see confirmation of the fact that different cash-valuations might occur for the same *mekkûk* measure within even one *nahiye*, in the same time period, particularly in the case of barley. One should note that, in the *tahrirs*, when and where the measure type is actually named, it is usually named only for the wheat measure. We surely can assume that the same measure was being used for the barley as well. It is noteworthy that the cash valuation for barley was considerably lower than that for wheat.

It started out, in the first *tahrir*, having its strongest valuation *vis-à-vis* wheat, but that valuation fell to about-half the value of wheat in the second *tahrir*. This valuation of barley at about-half wheat's value was maintained in the later *tahrirs* (see Table 5 and Map 2), and the valua-

tion itself reflects a long-held Islamic practice.¹⁰⁵ Moreover, wheat has always held pride of place in Syria's agriculture, as it does today, with barley being of secondary importance.¹⁰⁶ Finally, barley has traditionally been cultivated in Syria as a fodder crop,¹⁰⁷ which accounts for its 'secondary status.'

The general trend that can be discerned for the cash-valuations of the wheat and barley measures in the *Sanjaq* of Aleppo is that these measures started out with a relatively high cash-valuation in the first *tahrir*, then, they dipped to a lower valuation in the next two *tahrirs*, and finally, in the fifth *tahrir*, the valuations either equalled or exceeded the valuations of the first *tahrir*, while the valuations for barley still lagged behind those seen in the first *tahrir*, despite having increased. The increases in cash-valuations seen at this time are an interesting phenomenon, because they do not mirror what we know of the contemporary price history of the Ottoman Empire, where prices inched up slowly, but steadily, over the course of the century, only to jump dramatically after the major debasement and devaluation of the *aqche* between 1584-86.¹⁰⁸

Why the higher cash-valuations for the early period of Ottoman rule in Syria? This might reflect, simply, Ottoman expectations concerning the agricultural bounty of newly-conquered Syria, which may, very well, have been 'inflated expectations' in view of the economic devastation that

105 Cahen, "Kharâdj," pp. 1031-32, for the issue of *ta'sîr*.

106 W. B. Fisher, *The Middle East: A Physical, Social, and Regional Geography*, 5th ed., rev. (London and New York, 1963), pp. 416-17; and Hamidé, *Alep*, p. 277.

107 The English physician Alexander Russell, writing of the Aleppo region in the 18th century, noted that horses were everywhere being fed barley (*The Natural History of Aleppo*, 2 vols., 2nd ed., rev. [London, 1794], vol. 1, p. 74). A. -R. Hamidé notes of the Aleppo region in the 1950s that barley was reserved for the feeding of oxen and other livestock. However, in his noting that it was no longer being mixed with wheat in the making of bread (*Alep*, p. 278), he appears to 'leave room' for some use of barley for human consumption in the past.

108 Barkan, "Price Revolution," pp. 8-17, and particularly Table 2, p. 11 and Graph 1, p. 15, for the dramatic inflation beginning in the 1580s. The author has no specific information on the local price history of the Aleppo region at this time, but there is some scant evidence of the devaluation of the silver *aqche* locally. The evidence suggests that, while the gold coin (*altun*) of Aleppo held steady at about 3.45 gr. of weight from the year 926/1519-20 to 974/1566-67 and to 982/1574-75 (Artuk and Artuk, *Islâmî Sikkeler*, pp. 514, 535, and 547), the *aqche* steadily lost its exchange value. If the revenue recorded for the salt works (*memlaha*) of the Aleppo *Nahiye* of Jabbûl can serve as a guide in this matter, that revenue was recorded as 10,000 *altun* or 500,000 *aqche* in the earliest *tahrir*, dated ca. 926/1519-20 (here, 1 *altun* = 50 *aqche*; confirmation of this exchange rate, where, however, the gold coin is designated as the *eshref*, is seen elsewhere in this register, BA, TT 93, p. 33); and, in successive registers, where it was recorded only in *aqche*, that revenue was 600,000, 600,000, 700,000, and 160,000 *aqche* in the fifth *tahrir*, dated 978/1570-71 (this last revenue figure no longer can bear any relationship to the exchange rate) (BA, TT 93, p. 114; TT 146, p. 127; TT 397, p. 77; TT 454, p. 173; and TT 493, p. 195). There is an indication, in the fifth Aleppo *tahrir*, that the *altun* may have been valued at 80 *aqche* at that time (see TT 493, the notes for the villages of Nayrab and Kafr Lâtâ, pp. 344 and 472). The earliest Damascus *tahrir*, dated ca. 932/1525-26, values the *altun* at 52 *aqche* (TT 430, pp. 456-57). Cf. the *altun/aqche* exchange rates in Barkan, "Price Revolution," pp. 12-15, and n. 2, pp. 17-18.

Syria was said to have suffered in the late Mamluk period.¹⁰⁹ It also might reflect actual crop productivity to some degree, although we might hesitate to credit the very early Ottoman period with higher yields than those achieved later on in the 16th century, considering the aforesaid economic devastation. Yet, wheat production in Jabal Sim'ân did show a clear decline at mid-century,¹¹⁰ if the statistics of the *tahrirs* are a credible guide. Nevertheless, we must maintain some degree of suspicion regarding these 'apparently' higher production levels seen for Aleppo in the early Ottoman *tahrirs*. Suspicion, once felt, enjoys no easy containment. It obviously casts some shadow over all of the statistics provided by the Ottoman *tahrirs*, even statistics we believe to be more credible, such as those from the time of the third Aleppo *tahrir* (ca. 1536-37) forward. But, on what basis do we believe these later statistics to be more credible, outside of the little interior evidence that we might garner from the registers in question and the supposition that it takes some time for a new administration to 'get its feet on the ground'? In the author's previous investigation into Jabal Sim'ân's wheat production, some correlation was found to exist between the given cash valuation of the *mekkûk* and the level of agricultural revenue being generated, and this is perfectly reasonable. No correlation with actual agricultural production, however, was found. When Jabal Sim'an showed a relatively strong wheat production in the third *tahrir*, the cash-valuation for a *mekkûk* of wheat was lower than previously; in the next *tahrir*, where wheat production showed a decline, the cash-valuation for the *mekkûk* had remained basically the same.¹¹¹

109 Indications of political misrule, economic oppression, and natural disasters affecting Syria can be gleaned from the chronicle of Muhammad ibn Ahmad ibn Iyâs, *Journal d'un bourgeois du Caire: chronique d'ibn Iyâs*, trans. Gaston Wiet, 2 vols. (Paris, 1955-60), as, for example, in vol. 1 (1955), pp. 12-13, 14-15, 21, 68-70, 133, 228, 331, 371-72, 378-79, 398, 413-14, 415, 18, and 427-28. The Ottomans themselves gave notice of economic devastation, at least in the region of Tripoli, when they drew up the first *tahrir* for the *Sanjaq* of Tripoli. In the *qamunname* of this first register, they indicated that the *Vilâyet* (Province) of Tripoli had formerly had 3,000 "köy ve qarye" (villages), but most of these had fallen into a state of ruin because of the great incidence of oppression and *bid'at* ('innovation'; this frequently appears as the 'whipping boy' of upright Islamic administration; whether it is to be taken literally is another question), resulting in only 800 villages surviving as living villages 'at present' (BA, TT 68, p. 6; also reproduced by Barkan, in *Kamunlar*, prov. no. 9, p. 552, but a part of the provision is here missing). This 800-village count is confirmed by the author's count of 784 populated and 41 unpopulated villages, for a village total of 825, for the *Sanjaq* in this register. Consequently, it would also appear that Ottoman administration intended, in this notice, the '*Sanjaq*' of Tripoli, as opposed to the Province of Tripoli, which would have included other *sanjaqs*.

110 Venzke, "Declining Cereals' Production," pp. 251-64, *passim*.

111 *Ibid.*, pp. 255-60.

CONCLUSION

In conclusion, the cornucopian data offering of the Ottoman *tahrirs* is, for the researcher, both the epicure's delight and the ascetic's dyspepsia. There is so much data to feast on, but what should be, then, an unquestioned pleasure can also become a burden and discomfort, given the inconsistencies, shortcomings, and occasional idiosyncracies posed by the data. It is quite possible that the promise of the *tahrirs* can not be fully realized. But, this is the challenge, which should be accepted. To recognize the difficulties that the *tahrirs* can pose, however, by no means invalidates this source, which, within its limitations, is extraordinarily rich, depending upon the care, effort, and methodology taken with the data. At the same time, it needs to be acknowledged that the quality of the *tahrirs* does vary, and sometimes quite greatly. The *tahrirs* conducted for areas of the Ottoman Empire that were frontier and remained frontier or that were conquered after the 16th century may, very well, have been less carefully executed, resulting in their data being far-less reliable.¹¹² In such cases, extreme caution needs to be exercised. And, the earliest Ottoman *tahrirs*, because of their age and their representing the first attempts at surveying new areas and at introducing Ottoman administration, often at a time when administrative practices were themselves in a formative stage, may also be less reliable, although of great interest nevertheless. But, these cases are surely not in the majority.

What can be said, generally, about the *tahrirs* is that their very existence, the volume of their data, and the long 'tahrir-series' that survive for quite a few areas of the Ottoman Empire create a 'double-burden' for the researcher. The first burden is that one can not easily speculate on population or crop production patterns (or whatever else that lies within

¹¹² In examining the rural economy of Ottoman Podolia, in a *tahrir* for Kamanice dated 1681, one such example of a late conquest of a frontier area, which, moreover, was not held for long, D. Kolodziejczyk discovered that the given tax and population statistics had a certain 'utopian' quality. He concluded, contradictorily it might seem, that this *tahrir* was nevertheless a reliable economic source within certain limitations ("*Defter-i Mufassal* of Kamanice [1681] as an Economic Source for Agricultural Production in the 17th-Century Ukraine," *Osmanlı Araştırmaları/The Journal of Ottoman Studies*, XIII (1993), pp. 91-98.

the purview of the *tahrirs*) for areas of the Ottoman Empire in the 15th and 16th centuries knowing that the evidence for at least some degree of proof or refutation of such speculation exists in the *tahrirs*. In short, how can one justify speculation in the face of a body of evidence that beckons to be exploited? The second burden posed by the *tahrirs* is that they do not offer up their evidence easily. They are, quite simply, very difficult to exploit in a fundamental way.

Again, as an overall conclusion, the author has serious reservations about a 'team-effort' exploitation of the *tahrirs*, because of the many difficulties that the *tahrirs* can pose, of which some have been revealed here in this study. Although these difficulties do not pose permanent, impenetrable barriers, they do represent some degree of barrier nevertheless. They do not foreclose the possibility of a systematic team investigation of a sweeping area, but they complicate the success of such an undertaking. In contrast, the more fruitful avenue to scholarly success and reliable results, the author believes, lies with the long-existing individual inquiry into one particular area over a period of time, with, however, one significant difference. That difference is that there needs to be a greater coordination between researchers working on such projects and of the results they obtain. The computer program, developed under the auspices of Professors W.-D. Hütteroth and Nejat Göyünç to facilitate a more coordinated exploitation of the data offering of the Ottoman *tahrirs*, represents a significant step in this direction. Other means for a yet-greater coordination need to be considered.

These efforts notwithstanding, the Ottoman *tahrir defterleri* pose particular problems for and place limitations on research. As it has been demonstrated in this present inquiry, the Ottoman *tahrir defterleri* appear to be a rather imperfect vehicle for determining agricultural productivity. But, reservations aside, there is much to be gleaned from a careful exploitation of the Ottoman *tahrir defterleri*. Indeed, the basic foundation for an economic history of the Ottoman Empire in the 15th and 16th centuries and a history of its land/taxation system, and the administration of it, rest squarely on the Ottoman *tahrir defterleri*. We need to proceed with this source, but with caution.

