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## WEALTH AND INEQUALITY IN 18TH-CENTURY KASTAMONU: ESTIMATIONS FOR THE MUSLIM MAJORITY

This paper introduces methods to estimate wealth levels and disparities among Muslim inhabitants of 18th-century Ottoman Kastamonu. Our sources in this pursuit are estate inventories of the deceased (sing. *tereke*) as recorded in Kastamonu court records (*sicils*), mainly in the first half of the 18th century (1712–60). By analyzing information provided by these sources through a variety of quantitative techniques, we measure levels of inequality among Muslims of Kastamonu and describe the relationship between economic privilege and social, political, religious, and occupational status as well as gender identity. Our work outlines the contours of economic stratification in 18th-century Kastamonu and reveals the relative positions of various social groups within this hierarchy.

Kastamonu was a middle- to small-sized town in north-central Anatolia. By the mid-18th century, Kastamonu subprovince (*sancak*), located on the Black Sea coast and part of the province (*eyalet*) of Anatolia, probably had a population of about 30,000 households. The town of Kastamonu—the legal and administrative center of the subprovince—had a population of about 4,000 households, including the inhabitants of its forty-one quarters and the villages located nearby.<sup>1</sup> Little information exists about the town's demographic composition during the period we are discussing, although we assume that its population was primarily Muslim and Turkish.<sup>2</sup> Heywood claims that the town remained relatively isolated during Ottoman times due to its distance from the military and courier road network.<sup>3</sup> Even though court records indicate local and regional trade networks in the area that involved wool, cotton cloth, and copperware, it is not clear to what extent these networks contributed to the town's economic welfare. Compared to other Anatolian urban centers such as Ankara, Bursa, and Kayseri, Kastamonu has not received much attention in modern scholarship. However, because the town's court records are quite complete relative to its size, they are well suited to the type of analysis presented here.

Like many subthemes of economic history, inequality and wealth distribution have not received much attention in Ottoman historiography. In this article, we propose different procedures to measure wealth and inequality levels in a particular historical setting.

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Furthermore, we introduce techniques that could help us glean economic information from noneconomic data, to a significant degree of precision. Although ours is not the first study to use *terekes* to explore relevant issues in the Ottoman provincial context,<sup>4</sup> the quantitative analysis that we introduce here distinguishes our research. As will become clear, one of our major concerns has been finding ways to pursue a meaningful dialogue with our sources. We accomplish this by engaging the parameters inherent to these documents while figuring out ways to overcome the limitations that they impose. The following section illustrates the specifics of this negotiation and presents an overview of the rest of the article.

#### PLAN OF THE ARTICLE AND METHODOLOGY

We begin with basic calculations of overall wealth levels and disparities among the Muslim population of early to middle 18th-century Kastamonu. Here, we offer observations on contemporary standards of living, calculate average levels in different wealth brackets, and provide a general discussion of wealth disparities. We then present our efforts in understanding wealth variations among different segments of the Muslim community—no easy task, because *terekes*, like other entries in Ottoman court records, contain little information about their subjects. In fact, what we find in these documents is limited to the full name of the deceased, including his or her father's name, honorary title (if he belonged to the military or religious establishment), religious epithets (signifying if he or she was a descendant of Prophet Muhammad or had made the pilgrimage to Mecca), village or quarter, names of legal heirs, and, occasionally, occupation. Following is the opening section of a typical *tereke* entry from Kastamonu *sicils*.

It has been determined that the estate of the late Elhac [pilgrim] Ahmed Efendi bin Abdurrahman Efendi from Kastamonu's Cemalağa quarter should be divided among his widowed wife, Aişe bint Mehmed; his son of legal age, Mehmed; his daughter of legal age, Havva; and his minor daughter, Kerime. What follows [below] is the inventory of the late Elhac Ahmed Efendi's estate, which has been legally divided [by the court] among his abovementioned heirs (recorded in 5 RII 1151 [23 July 1738]).

Most of the individuals encountered in *terekes* appeared in *sicils* only once, a fact that limits our knowledge of them to what we find in estate inventories. Hence, studying wealth disparities among different social groups depends on our ability to identify meaningful social categories *within* estate inventories. In our analysis, we adopt, at least initially, the following title-based categories as our main units of analysis:

- Religious titleholders: members of the religious/judicial establishment (men designated by the titles *efendi*, *molla*, *halife*, *şeyh*, *çelebi*, and *dede*)<sup>5</sup>
- Military titleholders: members of the military/administrative establishment (men designated by the titles *ağa*, *beşe*, *beğ*)<sup>6</sup>
- Men without titles: males not affiliated with the military or religious establishments

In addition to these title-based categories specific to men, we also make calculations for women, who held no military or religious titles.

We assume at this stage of our analysis that military titleholders, religious titleholders, and men without titles constituted relatively exclusive groupings and that these three

groups occupied different positions in the Ottoman provincial hierarchy.<sup>7</sup> Our calculations have helped us determine the extent to which these assumptions held true in early to middle 18th-century Kastamonu.

Any effort to analyze social or economic stratification in the Ottoman provincial context using honorific titles—especially for the 18th century, when affiliation with the military or religious establishments became less a marker of actual occupation and economic status—must proceed cautiously.<sup>8</sup> Nevertheless, no quantitative research to our knowledge has demonstrated the absence of any such relationship, even for the “postclassical” period.<sup>9</sup> The fact that clear class distinctions did not necessarily exist among men with different titles does not mean that title-based differentiations lacked any meaning relative to position in the social and economic hierarchy.

We stress again that the adoption of title-based categories as units of analysis is not a matter of choice on our part but a necessity due to the nature of information found in *tereke*s. We compensate for the limitations of these categories in several ways. First, we pinpoint wealth disparities *within* each title- and gender-based classification, in order to identify wealth variations among subgroups that constituted these categories. This procedure helps us determine the economic cohesiveness of our title- and gender-based clusters and their significance as tools of economic and social analysis.

Second, we identify the economic significance of nontitle- and nongender-based markers in *tereke*s. Our calculations first portray the relative economic positions of Muslim artisans and merchants in 18th-century Kastamonu regardless of their honorific titles.<sup>10</sup> We also seek to determine if religious designations such as *elhac* or *seyyid* (descendant of Muhammad), in addition to being explicit markers of religious privilege, can be taken as indicators of wealth. Our goal is to identify economic segmentations in 18th-century Kastamonu that cannot be detected through a title-based analysis.

Third and finally, we conduct a series of regression analyses to estimate the economic significance of each title as well as various religious and economic markers *in isolation from other titles and markers*. Having discovered, for example, that men (as compared to women), *efendis* (as compared to most other men), and pilgrims (as compared to nonpilgrims) were relatively prosperous, we attempt in this section to identify which of these signifiers can be taken as a more reliable indicator of the wealth of someone like Elhac Ahmed Efendi, mentioned previously. In addition to enabling us to overcome the limitations of a title- and gender-based analysis of economic prosperity and wealth variations, this exercise provides a practical apparatus for making realistic assumptions about economic position based on social, religious, and/or occupational affiliations.

Our observations and calculations in this article focus on the overall value of estates rather than their composition. Even though compositional variations in estates might illuminate how different segments of society acquired and maintained wealth, lack of space forces us to leave this important topic to another study.

#### DATA SET

Our findings are based on 778 estate inventories of Muslim adults from thirty-three court registers covering the forty-eight-year period from 1712 to 1760.<sup>11</sup> Prepared by a court,

an estate inventory provides information about the wealth possessed by an individual at the time of death and contains an itemized list and monetary appraisal of the cash, property, and debt left behind by the deceased, as well as names of heirs and their shares from the estate.<sup>12</sup>

To construct our data set, we processed the figures in estate inventories in the following manner. First, we calculated the net value of individual estates by deducting debts and outstanding obligations of the deceased from the monetary value of their assets.<sup>13</sup> Second, we deflated the net value of estates by the price index constructed by Süleyman Özmucur and Şevket Pamuk to eliminate the impact of inflation and currency depreciation for our period.<sup>14</sup> Because a majority of our price observations in the first part of the article are from circa 1745, we used 1740–49 as our base period. Third and finally, we trimmed our data set by removing estate inventories that had extremely high and low monetary values.<sup>15</sup> A trimming of 1 percent at both ends of our data pool left us with a total of 762 observations, upon which our calculations in the rest of this article are based.

Focusing on late 17th-century Sofia, Rossitsa Gradeva has recently discussed some limitations of *tereke*s as historical sources.<sup>16</sup> Many of these limitations also apply to the compilation studied here. For example, as in the Sofia documents, women and non-Muslims are underrepresented in Kastamonu inventories; according to our observations, inventories that belonged to women constitute about 26 percent,<sup>17</sup> and we identified only four inventories for non-Muslims.<sup>18</sup> Rural inventories also seem to be relatively few in number, although it is difficult to compare urban and rural estates, as many individuals held property both in town and in the countryside.

In addition to such discernable absences, there may be others that we cannot identify. Some legatees probably tried to avoid the court's involvement in the appraisal and division of estates because courts charged a fraction of the estate's overall value as "inheritance tax" (*resm-i kismet*) in addition to a number of lump-sum fees for its service.<sup>19</sup> The court's appraisal and division of estates was not always desired, especially when there was no dispute among heirs. Disagreement over shares of inheritance usually necessitated court preparation of the estate inventory.<sup>20</sup>

Another possibility is that heirs may have tried to conceal portions of their estates from court officials in order to reduce the "inheritance tax" portion of court fees. This could be a serious problem because we cannot guess the real magnitude of underrepresented estates. There is also the issue of the reliability of the court's monetary appraisal of estates. Because we lack information about real market prices of the majority of items listed in inventories and we cannot be sure about the motivations of court officials in preparing them—they may have inflated appraisals to increase their fees—it is impossible to be absolutely sure that *tereke*s represent the real worth of those individuals to whom they belonged. Finally, we assume that elderly individuals are overrepresented in our data, which the court compiled shortly after a death.

Such caveats, we hope, do not invalidate the analysis that follows. Despite their shortcomings, *tereke*s constitute a unique data source for the period under study. Indeed, for reconstructing the economic and social history of Ottoman provincial life before modern times, they remain invaluable.

PRELIMINARY ANALYSIS OF STANDARD OF LIVING  
AND WEALTH DISPARITIES*Standards of Living*

According to our data set, between 1712 and 1760 the average value of inherited estates was 759.2 *guruş* (in 1745 prices). Our observations indicate significant wealth variation. Estate values ranged from 10.4 *guruş* to 7,775.9 *guruş*, and our sample has a standard deviation of 1,092 *guruş*, that is, about 1.4 times the size of the average estate value.

What do these observations indicate about standard of living in 18th-century Kastamonu? Based on prices in the *sicils* of circa 1745, we can infer that the average estate was worth about 7,700 kilos of mutton, 14,500 kilos of beef, 2,500 kilos of olive oil, 6,500 kilos of rice, 90,000 loaves of bread, 3,000 kilos of Aleppine soap, 3,000 kilos of honey, 250 stirrups, 380 mattresses, or 30 silver clocks. The same sum of money could also have purchased two to three average-sized houses, five average-sized shops, thirty horses, 120 to 150 cows, or four adult male slaves.

Possible indicators of minimum requirements for survival in early to mid-18th-century Kastamonu are the *nafakas* reported in *sicils*. The term *nafaka* refers to the monetary allowance allocated by the court to divorced or widowed women from the assets of or inheritances from their ex- or late husbands to cover daily household expenses (including children and slaves) for food, clothing, and shelter. Based on fifteen separate observations between 1739 and 1748, *nafaka* rates for single adult women ranged from nine to twenty-one *akçes*, depending on their social and economic backgrounds. These amounts suggest a range of 3,184 to 7,434 *akçes*, or twenty-six to sixty-two *guruş* per (lunar) year. Based on these figures, we establish thirty *guruş* per year as the poverty line for a single adult female in early to mid-18th-century Kastamonu. Assuming that a single adult male required more food, he would have needed forty to fifty *guruş* per year for survival.<sup>21</sup>

Wealth is not income, and thus it is difficult to reach definitive conclusions about standards of living by comparing estate values to costs of living. Bearing this in mind, and assuming that those estates found in Kastamonu court records are generally indicative of economic conditions, we can surmise that poverty was not a pressing problem for most. Yet there are reasons to believe that poor estates are underrepresented in court records, compelling us to be cautious with our suppositions.

*Wealth Disparities—Preliminary Observations*

Table 1 divides our data into seven different wealth brackets. The first five rows divide 762 observations into 20-percentile groups (quintiles) according to size, from poorest to wealthiest. The last two rows provide information for the very wealthiest percentiles. Assuming that estates represented in court records correspond to the actual wealth of their owners, Table 1 depicts wealth disparities among Muslims in Kastamonu.

A significant portion of Kastamonu's poorest inhabitants owned estates worth more than the forty *guruş* per year poverty threshold for a single male adult. At the same time, average estate values among the bottom 40 percent of our observations were less

TABLE 1. *Wealth disparities in Kastamonu*

|             | Observations | Mean Estate Value<br>( <i>guruş</i> ) | Standard Deviation<br>( <i>guruş</i> ) | Range<br>( <i>guruş</i> ) | Coeff. of Variation | Percentage of Total Wealth Owned |
|-------------|--------------|---------------------------------------|--|---------------------------|---------------------|----------------------------------|
| Poorest 20% | 153          | 71.6                                  | 29.7                                   | 10.4–123.4                | 0.41                | 1.9                              |
| Second 20%  | 152          | 187.6                                 | 38.2                                   | 123.9–255.6               | 0.20                | 4.9                              |
| Third 20%   | 153          | 362                                   | 64.8                                   | 256.6–486.2               | 0.18                | 9.5                              |
| Fourth 20%  | 152          | 757.1                                 | 179.7                                  | 486.7–1094                | 0.24                | 19.8                             |
| Richest 20% | 152          | 2424.8                                | 1486.7                                 | 1100.5–7775.9             | 0.61                | 63.7                             |
| Richest 10% | 76           | 3441.7                                | 1518.5                                 | 1864–7775.9               | 0.44                | 45.2                             |
| Richest 5%  | 38           | 4534.9                                | 1443.7                                 | 3058.7–7775.9             | 0.32                | 29.7                             |

than the price of an average house in Kastamonu (284 *guruş*). At the other end of the spectrum, the wealthiest segments of our sample seem disproportionately wealthy: the mean estate value in the wealthiest quintile is more than three times the mean estate value of the fourth quintile, and the mean estate value in the fourth quintile is about twice the size of the third quintile, which is also about twice the size of the second one.

Overall, Table 1 provides evidence for significant wealth disparities in early to mid-18th-century Kastamonu. The mean estate value of the wealthiest quintile was about 34 times the value of the poorest quintile and 3.2 times the overall average.<sup>22</sup> We have calculated the Gini coefficient for our trimmed sample as 0.60326.<sup>23</sup> Although this is a large value compared to modern standards,<sup>24</sup> a comparison with Colette Establet, Jean-Paul Pascual, and André Raymond's calculations reveal that wealth disparities in Kastamonu were less pronounced than in contemporary Cairo and Damascus (Gini coefficients of 0.81 and 0.74, respectively).<sup>25</sup> The difference between our calculations and those of Establet, Pascual, and Raymond is partially due to our elimination of extreme outliers. Yet even with this taken into consideration, it appears that wealth disparity in Kastamonu was less severe than in the other two cities.<sup>26</sup>

How do our calculations compare to levels of inequality for non-Ottoman parts of the world in the 18th century? Economic historians of early-modern America and Britain have studied wealth distribution and inequality measures for various periods by using probate inventories, taxation figures, and other sources. According to recent estimations based on probate inventories, the Gini coefficient calculated for the net worth of free men and unmarried women in the late 18th-century United States is around 0.72, with major regional variations.<sup>27</sup> In contrast, based on the massive amount of wealth data found in fire-insurance policy registers from all over Britain circa 1780, John James calculated the Gini coefficient for British insurable wealth as 0.73.<sup>28</sup>

Also available for comparison are proportions of wealth owned by the wealthiest layers of the three societies. According to Table 1, the wealthiest 5, 10, and 20 percent of Muslim legators in Kastamonu owned about 30, 45, and 64 percent of the total wealth, respectively. According to Caroline Shammas's calculations, the wealthiest 5 and 20 percent of late 18th-century American adults owned, respectively, 63 and 95 percent of the wealth.<sup>29</sup> Finally, Peter Lindert's calculations based on probate inventories indicate

that the wealthiest 5 percent of adults in England and Wales held 87 percent of the total wealth, circa 1740.<sup>30</sup>

These calculations suggest that economic inequality within the Muslim community of 18th-century Kastamonu may have been relatively mild, but any comparison between our calculations and those from outside the Ottoman Empire should be taken with a grain of salt. Computations made in different contexts exploit distinct kinds of sources that define wealth and owners in incommensurable ways. Furthermore, methodologies to calculate various indices of wealth distribution and inequality vary widely. For example, British and American economic historians have devised ways to adjust their data for tendencies to underrepresent specific age and occupational groups. For this purpose they utilize multipliers, calculated through a comparison of their samples with external sources of information, such as individualized tax lists, which provide information for the entire population.<sup>31</sup> Because we do not have access to such external data, it is impossible to manipulate our sources in parallel ways.

#### WEALTH, STATUS, AND GENDER

##### *Gender- and Title-Based Variations*

Table 2 reveals significant differences between titleholders in general and men without titles.<sup>32</sup> Estates belonging to military and religious titleholders were, respectively, about 43 and 38 percent more valuable on average than those belonging to other men.<sup>33</sup> Thus, although religious and especially military estates were well represented in the wealthiest quintiles,<sup>34</sup> estates belonging to men without titles were more evenly distributed among different wealth brackets. Also significant is the difference between men and women: the mean value of estates owned by women was less than half that of estates owned by men without titles, and about one-third the mean value of estates owned by either religious or military titleholders.<sup>35</sup> Indeed, the majority (62 percent) of estates owned by women were counted among the poorest two quintiles in our sample.

It is also noteworthy that despite differences among averages, an appreciable level of variation existed within each title- and gender-based category. The coefficients of variation for different title-based categories, although smaller than the overall average (1.4) and thus demonstrating some degree of cohesiveness within each group, are not negligible and indicate that individuals from all economic levels were represented within each group. As much as 14 percent of military estates and the same percentage of religious ones were counted among the poorest quintile, indicating that military and religious status, although suggestive of economic prosperity, are not always reliable indicators of wealth.

##### *Wealth Variations within Title- and Gender-Based Categories*

Table 3 presents the Gini coefficients for our main categories. Although the Gini coefficients for each title- and gender-based category are lower than the overall estimate (0.60326), a significant level of inequality existed within each group, a finding that can also be surmised from our calculations of the coefficient of variation for each group (Table 2).<sup>36</sup>

TABLE 2. *Wealth indicators and distribution for Kastamonu*

|                        | Sample Size | Mean Estate Value ( <i>guruş</i> ) | Coeff. of Variation | Poorest 20% | 2nd 20%  | 3rd 20%  | 4th 20%  | Richest 20% | Richest 10% | Richest 5% |
|------------------------|-------------|------------------------------------|---------------------|-------------|----------|----------|----------|-------------|-------------|------------|
| Military titleholders  | 145         | 1081                               | 1.27                | 21 (14%)    | 21 (14%) | 25 (17%) | 36 (25%) | 42 (29%)    | 23 (16%)    | 16 (11%)   |
| Religious titleholders | 130         | 1044.5                             | 1.28                | 18 (14%)    | 20 (15%) | 16 (12%) | 35 (27%) | 41 (32%)    | 18 (14%)    | 8 (6%)     |
| Men w/o titles         | 288         | 754.7                              | 1.32                | 51 (18%)    | 51 (18%) | 72 (25%) | 55 (19%) | 59 (20%)    | 32 (11%)    | 12 (4%)    |
| Women                  | 199         | 344.8                              | 1.64                | 63 (32%)    | 60 (30%) | 40 (20%) | 26 (13%) | 10 (5%)     | 3 (2%)      | 2 (1%)     |

*Note:* The percentages in parentheses represent the share in the entire category.



TABLE 3. *Wealth inequalities within title- and gender-based categories*

|                         | Gini    |
|-------------------------|---------|
| Military title holders  | 0.58454 |
| Religious title holders | 0.55786 |
| Men without titles      | 0.57466 |
| Women                   | 0.55590 |

#### *Wealth Disparities among Military Titleholders*

According to Table 4, *ağas* were the wealthiest subcategory among military titleholders, whose estates were concentrated in the top wealth brackets. In contrast, states owned by other military titleholders were comparatively modest: the mean value of estates owned by *beğs* and *beşes* constituted only about 24 and 26 percent of the average estate owned by *ağas*, respectively, and were concentrated in the second, third, and fourth quintiles.<sup>37</sup> Variations in the size of estates owned by *beğs* and *beşes* were also more considerable compared to estates owned by *ağas*. Nevertheless, their coefficients of variation are noticeably smaller than the one for the entire sample (1.4) and thus indicative of a relative degree of economic cohesiveness among military subgroups.

#### *Wealth Disparities among Religious Titleholders*

Table 5 provides clues about wealth disparities within the religious establishment.<sup>38</sup> Among members of the religious establishment, *efendis* owned the most valuable estates. Their mean value was more than twice the average value of estates belonging to other members of the religious establishment. In addition, more than half of estates owned by *efendis* were among the wealthiest quintile of our observations. According to Kastamonu court records, *mollas* and *çelebis* were also wealthier than an average legator: the mean value of their estates was larger than the overall average, and the majority of their estates were among the top 40 percent of estates in our sample. Conversely, estates belonging to *şeyhs* and especially *dedes*—the two *tarikât*-affiliated groups—were among the poorest. This finding might indicate an ascetic orientation. It is also possible that they lived primarily off the revenues and property of their orders, rather than their own private wealth. If this was indeed the situation, the value of their estates cannot be seen as indicative of their (especially *şeyhs*'s) standard of living. In any case, the number of estates belonging to *şeyhs* and *dedes* is small (nine); these estates do not significantly influence averages for the whole group.

Significant variations existed within the religious establishment, although the Gini coefficient we have calculated for this group indicates that wealth inequality among its members was less pronounced than what we have observed for military titleholders. In fact, if we exclude the limited number of *şeyhs* and *dedes*, a distinct subgroup with worldviews presumably shaped by ascetic values, the Gini coefficient for the entire religious establishment becomes even lower (0.5201), indicative of the relative economic cohesiveness of this group.

TABLE 4. *Wealth indicators and distribution for military titleholders*

|      | Sample Size | Mean Estate Value<br>( <i>guruş</i> ) | Coeff. of Variation | Poorest 20% | 2nd 20%  | 3rd 20%  | 4th 20%  | Richest 20% | Richest 10% | Richest 5% |
|------|-------------|---------------------------------------|---------------------|-------------|----------|----------|----------|-------------|-------------|------------|
| Ağa  | 39          | 2371                                  | 0.79                | 1 (3%)      | 0 (0%)   | 3 (8%)   | 11 (28%) | 24 (62%)    | 16 (41%)    | 15 (38%)   |
| Beğ  | 17          | 575.2                                 | 1.14                | 3 (18%)     | 2 (12%)  | 5 (29%)  | 5 (29%)  | 2 (12%)     | 1 (6%)      | 0 (0%)     |
| Beşe | 89          | 612.3                                 | 1.09                | 17 (19%)    | 19 (21%) | 17 (19%) | 20 (22%) | 16 (18%)    | 6 (7%)      | 1 (1%)     |

*Note:* The percentages in parentheses represent the share in the entire category.

TABLE 5. *Wealth indicators and distribution for religious title holders*

|        | Sample Size | Mean Estate Value<br>( <i>guruş</i> ) | Coeff. of Variation | Poorest 20% | 2nd 20% | 3rd 20% | 4th 20%  | Richest 20% | Richest 10% | Richest 5% |
|--------|-------------|---------------------------------------|---------------------|-------------|---------|---------|----------|-------------|-------------|------------|
| Efendi | 42          | 1,662.7                               | 1.05                | 1 (2%)      | 4 (10%) | 4 (10%) | 11 (26%) | 22 (52%)    | 11 (26%)    | 6 (14%)    |
| Molla  | 21          | 814.1                                 | 0.99                | 3 (14%)     | 3 (14%) | 4 (19%) | 4 (19%)  | 7 (33%)     | 2 (10%)     | 0 (0%)     |
| Halife | 16          | 455.2                                 | 0.98                | 5 (31%)     | 3 (19%) | 1 (6%)  | 5 (31%)  | 2 (13%)     | 0 (0%)      | 0 (0%)     |
| Çelebi | 42          | 844.6                                 | 1.25                | 6 (14%)     | 7 (17%) | 5 (12%) | 14 (33%) | 10 (24%)    | 5 (12%)     | 2 (5%)     |
| Dede   | 4           | 115.2                                 | 0.77                | 2 (50%)     | 2 (50%) | 0 (0%)  | 0 (0%)   | 0 (0%)      | 0 (0%)      | 0 (0%)     |
| Şeyh   | 5           | 369.1                                 | 0.89                | 1 (20%)     | 1 (20%) | 2 (40%) | 1 (20%)  | 0 (0%)      | 0 (0%)      | 0 (0%)     |

*Note:* The percentages in parentheses represent the share in the entire category.

*Wealth Disparities among Women*

It is impossible to make similar calculations for women because religious and military titles were used only for men. There is, however, one title-like designation occasionally used for women from prestigious and well-known families: *hatun* (as in Aişe Hatun bint Mehmed Efendi).<sup>39</sup> In our sample, the mean value of estates owned by females with *hatun* attached to their names was 1085.6 *guruş*, with a standard deviation of 1851.9 *guruş* (based on nine observations; coefficient of variation: 1.7). If we remember that the mean estate value for women was 344.8 *guruş*, it becomes clear that *hatuns* were considerably wealthier than other women.<sup>40</sup>

## WEALTH DISPARITIES BEYOND GENDER- AND TITLE-BASED CATEGORIES

*Occupational Markers: Artisans and Merchants*

A small number of *tereke*s contain occupational information about legators, especially artisans and merchants.<sup>41</sup> This permits us to depict wealth disparities in Kastamonu independent of title-based categories.

Table 6 indicates that estates belonging to merchants and artisans varied significantly in size. The average value of estates owned by merchants was about 36 percent larger than the average owned by male legators in our entire sample (905.6 *guruş*), about 60 percent larger than those belonging to men whose occupations are unclear, and about twice the value of those owned by artisans. Although half of the merchant estates were among the wealthiest quintile of our sample, estates belonging to artisans were better represented in the third and fourth quintiles. This observation, as well as the average value of artisan-owned estates (578.8 *guruş*), suggests that artisans, in general, occupied the lower-middle segments of the economic hierarchy in Kastamonu.<sup>42</sup>

The coefficients of variation presented in Table 6 indicate that merchants and artisans were more economically homogeneous than the rest of the population. We estimated the Gini coefficient for merchants as 0.46, for artisans as 0.52, and for the rest of the male population as 0.62, which indicates that wealth inequality among artisans and especially merchants was relatively low.

*Religious Markers*

Finally, we analyze wealth disparities among individuals who gained significant socioreligious status within their community by claiming descent from Muhammad (*seyyid* for men, *şerife* for women) or making the pilgrimage to Mecca (*el hac* or *hacı* for men, *hace* or *haciye* for women). Neither qualified these individuals as members of the religious establishment; in fact, the epithets *el hac* and *seyyid* were frequently attached to individuals from all status groups, including the military establishment and people with no other title. What interests us is whether these epithets, in addition to their obvious socioreligious significance, can also be seen as indicators of economic status.

There are reasons to suspect that descent from Muhammad and pilgrimage carried economic value. For one, we know that descendants constituted an influential and revered status group with its own semi-independent leadership structure, networks of

TABLE 6. *Wealth indicators and distribution for artisans and merchants*

|           | Sample Size | Mean Estate Value ( <i>guruş</i> ) | Coeff. of Variation | Poorest 20% | 2nd 20%  | 3rd 20%  | 4th 20%  | Richest 20% | Richest 10% | Richest 5% |
|-----------|-------------|------------------------------------|---------------------|-------------|----------|----------|----------|-------------|-------------|------------|
| Artisans  | 121         | 578.8                              | 1.1                 | 22 (18%)    | 23 (19%) | 30 (25%) | 30 (25%) | 15 (12%)    | 6 (5%)      | 2 (2%)     |
| Merchants | 34          | 1229.6                             | 0.86                | 2 (6%)      | 3 (9%)   | 10 (29%) | 2 (6%)   | 17 (50%)    | 10 (30%)    | 3 (10%)    |

*Note:* The percentages in parentheses represent the share in the entire category.

socialization, and tax responsibilities.<sup>43</sup> It is possible that many supposed descendants of Muhammad were able to convert their social and religious capital into an economic asset at the local level.<sup>44</sup> Moreover, pilgrimage to Mecca was a significant financial commitment for individuals who lived far from the Hijaz, and the ability to afford such a trip may have been a sign of economic status.<sup>45</sup> For such reasons it makes sense to examine wealth disparities among those who had religious markers attached to their names and those who did not.

As is evident in Table 7, the marker *elhac* appears to be a good indicator of wealth among men: the average value of estates owned by male pilgrims was about 1.7 times the mean value of estates belonging to male legators in our sample (905.6 *guruş*) and about 2.8 times the mean value of those owned by men without religious markers. The average value of estates owned by male descendants of Muhammad, by contrast, was only slightly larger than the average value of the estates owned by men (a difference that is also statistically insignificant [ $t = 0.4$ ]) but about 1.9 times the average value of the estates owned by men who were not pilgrims or descendants of Muhammad. Furthermore, about 45 percent of estates owned by male pilgrims were among the wealthiest quintile, with more than a quarter of them (28 percent) among the wealthiest decile. Estates belonging to descendants were well represented among the most valuable estates in our sample, too, although a relatively large number of them, compared to those belonging to pilgrims, were also found among the poorest estates. Finally, the Gini coefficients calculated for male pilgrims (0.5) and male descendants of Muhammad (0.49) indicate that income inequality within these groups, as in the case of merchants and artisans, was less significant than what we have observed among religious and military titleholders as well as men without titles.

Our sample does not contain any observations about female pilgrims. As for female descendants of Muhammad, the mean estate value was 396.4 *guruş*, with a standard deviation of 405.2 *guruş* (eight observations; coefficient of variation: 1.02). This value, although larger than the average for the estates owned by other women, is not substantially so (and the difference between these values is statistically insignificant [ $t = 0.78$ ]). Hence, the epithet *şerife* should probably not be taken as an indicator of wealth in the context of early to mid-18th-century Kastamonu.

#### IDENTIFYING TRUE WEALTH INDICATORS: REGRESSION ANALYSIS

Our analysis has demonstrated that wealth in 18th-century Kastamonu was concentrated in the hands of specific titleholders, pilgrims, descendants of Muhammad, and merchants. The problem with this finding is that none of the social, religious, and economic categories examined above are exclusive of others. For example, there were many pilgrims and descendants of Muhammad among titleholders, and we cannot be sure, based on the techniques we have used so far, if the mean estate value among titleholders was high because of the presence of a large number of pilgrims or descendants among their ranks or vice versa. In what follows, we run a number of regressions to resolve this problem. In particular, we run the regression of estate values in logarithmic scale on the variables discussed above as well as on others that we have not taken into consideration so far.

TABLE 7. *Wealth indicators and distribution for pilgrims and descendants of Muhammad (men only)*

|                   | Sample Size | Mean Estate Value ( <i>gurus</i> ) | Coeff. of Variation | Poorest 20% | 2nd 20% | 3rd 20%  | 4th 20%  | Richest 20% | Richest 10% | Richest 5% |
|-------------------|-------------|------------------------------------|---------------------|-------------|---------|----------|----------|-------------|-------------|------------|
| Pilgrims          | 162         | 1502.4                             | 1.01                | 7 (4%)      | 10 (6%) | 28 (17%) | 44 (27%) | 73 (45%)    | 46 (28%)    | 23 (14%)   |
| Desc. of Muhammad | 28          | 996.5                              | 0.94                | 6 (21%)     | 3 (11%) | 1 (4%)   | 8 (29%)  | 10 (36%)    | 4 (14%)     | 1 (4%)     |

*Note:* The percentages in parentheses represent the share in the entire category.

TABLE 8. *Regression analysis of estate values (in log. scale) on select variables*

|   | Coefficient | Standard Error |
|---|-------------|----------------|
| Title-based categories  |             |                |
| Military titleholders (relative to individuals with no military titles)                   |             |                |
| Ağa   | 1.17974*    | 0.1962         |
| Beğ   | 0.04538     | 0.26091        |
| Beşe  | 0.25408***  | 0.13219        |
| Religious titleholders (relative to individuals with no religious titles)                 |             |                |
| Efendi  | 0.81131*    | 0.18793        |
| Molla   | 0.58701**   | 0.23597        |
| Halife  | -0.19887    | 0.2648         |
| Çelebi  | 0.4677*     | 0.16652        |
| Dede  | -1.08957**  | 0.51139        |
| Şeyh  | -0.76799*** | 0.46365        |
| Gender (relative to men)  |             |                |
| Women   | -0.33565*   | 0.11519        |
| Occupational markers (relative to individuals with no specific occupations)               |             |                |
| Artisans  | -0.02091    | 0.1116         |
| Merchants   | 0.33408     | 0.23749        |
| Religious markers (relative to individuals with no religious markers)                     |             |                |
| Pilgrims  | 1.00881*    | 0.10187        |
| Descendants of M.   | -0.08713    | 0.20605        |
| Father's titles (relative to individuals with fathers who had no titles)                  |             |                |
| Military  | 0.47089*    | 0.16085        |
| Religious   | 0.49898*    | 0.14056        |
| Father's religious markers <sup>a</sup> (relative to individuals with nonpilgrim fathers) |             |                |
| Father pilgrim  | 0.60732*    | 0.09973        |
| Constant  | 5.38663*    | 0.08755        |
| No. of observations = 762   |             |                |
| $R^2 = 0.3565$  |             |                |

Note: Significant at the \*1%, \*\*5%, and \*\*\*10% level.

<sup>a</sup> In our sample, fathers of all individuals who claimed descent from Muhammad are also identified as descendants of Muhammad.

Table 8 presents the economic significance of a series of social, religious, occupational, and generational factors in isolation from each other. The coefficients given for individual variables are indicative of the relative importance of each variable in relation to estate values, with all other variables kept constant.<sup>46</sup> Converting estate values to logarithmic scale makes interpretation of the regression in Table 8 easier. For example, holding occupation, religious status, father's titles, and father's religious markers constant, estates owned by *ağas* are estimated to have been 118 percent more valuable than estates owned by individuals outside the military establishment, and estates owned by *efendis*, *mollas*, and *çelebis* were about 81, 59, and 47 percent more valuable, respectively, than estates belonging to individuals outside the religious establishment.<sup>47</sup> In contrast, estates belonging to those outside the religious establishment were about 109 percent



more valuable than estates owned by *dedes* and about 77 percent more valuable than estates owned by *seyhs*. All these estimations are statistically significant at conventional levels.

One interesting finding of the Table 8 regression is the positive and statistically significant relationship between the title of *beşe* and estate values. If we recall that the mean value of estates owned by *beşes* was only marginally higher than the overall mean estate value in our sample and significantly lower than the average for estates owned by male legators, this result can be seen as corrective of the implications of our initial calculations regarding this title's economic significance. Furthermore, our estimations indicate that the predictive capacities of the titles *beğ* and *halife* with respect to wealth are not statistically significant, which means that we fail to reject the null hypotheses that no wealth variations existed between *beğs* and legators with no military titles, on the one hand, and between *halifes* and legators with no religious titles, on the other hand. Again, these observations contradict the implications of our previous calculations, which put the average value of estates owned by *beğs* and *halifes* at noticeably lower levels than the overall average and, in particular, the average value of estates owned by male legators.<sup>48</sup> Such findings demonstrate the superiority of regression analysis over simple arithmetic calculations in predicting the economic significance of noneconomic variables in *tereke*s.

According to Table 8, estates owned by women were about two-thirds the value of those owned by men, a finding that is statistically significant at a 1-percent level. Meanwhile, and although the signs of coefficients for artisans and merchants seem consistent with our previous findings, our analysis indicates that occupational characteristics bear no significant relationship to wealth as represented in estate values. This is an important finding, especially in the case of merchants because, as we observed earlier, they owned relatively large estates in early to mid-18th-century Kastamonu. The regression results indicate that in statistical terms, the nonoccupational characteristics of these individuals are stronger indicators of their relative wealth.

Our estimations also confirm that pilgrimage is a very strong indicator of wealth. Indeed, compared to individuals with no religious markers attached to their names, estates belonging to pilgrims were about twice as valuable. Conversely, alleged descent from Muhammad seems to have a negligible relationship to wealth—another important revelation regarding the (lack of) economic significance of this designation, which contradicts our previous findings.

To our knowledge, no study of Ottoman economic history has examined the influence of generational variables on wealth accumulation. This is why the size and statistical significance of coefficients for specific characteristics of legators' fathers are illuminating. Indeed, according to our calculations, father's title (both military and religious) and status as a pilgrim seem to be very powerful and statistically significant indicators of wealth.<sup>49</sup> As both can be seen as evidence for the previous generation's relative material prosperity, our findings suggest that considerable levels of wealth transferred across generations. According to Table 8, and all other variables constant, estates owned by legators who had titleholding fathers were about 48 to 50 percent more valuable than those belonging to legators with titleless fathers. Similarly, estates belonging to legators with pilgrim fathers were about 61 percent more valuable than estates owned by legators with nonpilgrim fathers.

TABLE 9. *Statistically significant coefficients in regressions for title- and gender-based subgroups*

|   | Titleholders |           |                    |            |
|---|--------------|-----------|--------------------|------------|
|   | Military     | Religious | Men without Titles | Women      |
| Occupational marker (relative to individuals with no specific occupations)                        |              |           |                    |            |
| Merchant  | —            | —         | 0.41617***         | —          |
| Religious marker (relative to individuals with no relig. markers)                                 |              |           |                    |            |
| Pilgrim   | 0.57255**    | 0.67911** | 1.29642*           | —          |
| Father's title (relative to individuals with fathers who had no titles)                           |              |           |                    |            |
| Military  | —            | —         | 1.56745**          | —          |
| Religious   | —            | 0.51571** | —                  | 0.37262*** |
| Father's relig. marker (relative to individuals with nonpilgrim fathers)                          |              |           |                    |            |
| Pilgrim   | 0.62401*     | 0.63503*  | 0.58835*           | 0.63116*   |
| Women's marker (relative to women who did not have markers)                                       |              |           |                    |            |
| Hatun   | —            | —         | —                  | 0.89234*   |
| Husband's title (relative to women without husbands or with husbands who had no titles)           |              |           |                    |            |
| Military  | —            | —         | —                  | 0.29479*** |
| Husband's relig. markers (relative to women without husbands or with husbands who had no markers) |              |           |                    |            |
| Pilgrim   | —            | —         | —                  | 0.43733*** |

*Note:* Significant at the \*1%, \*\*5%, and \*\*\*10% level. (—) The unavailability or statistical insignificance of a specific variable in a particular regression. The  $R^2$  values of the regressions for military titleholders, religious titleholders, individuals without titles, and women are 0.36, 0.34, 0.36, and 0.19, respectively. The number of observations for the same regressions are 145, 130, 288, and 199, respectively.

We also individually prepared separate regressions models for title- and gender-based subgroups. For lack of space, we present below only those variables that appear to be statistically significant in at least one of the four regression models.<sup>50</sup>

We can draw the following conclusions based on the information presented in Table 9.

- Pilgrimage and father's pilgrimage continue to be the most powerful and consistent indicators of wealth among men, for each title-based subgroup.<sup>51</sup> Father's pilgrimage is also a statistically significant sign of wealth for women, although the lack of female pilgrims in our sample prevents us from making any association for women between pilgrimage and wealth.
- Mercantile status seems to be a good indicator of wealth only for titleless men. Yet because we identified only four merchants among military and religious titleholders, it would be misleading to claim that mercantile activity was not a source for wealth for titleholders. At this point, we can claim only that we lack any evidence that it was.
- Although our calculations for the overall sample (Table 8) portray a powerful association between wealth and father's titles, Table 9 reveals that the strength and significance of this relationship varied across title- and gender-based subgroups. For women and religious titleholders, our models suggest a potent and statistically meaningful connection between the father's religious title and his descendant's wealth. Similarly, titleless legators with fathers who had military titles appear to have been substantially better off than other men without titles. Among military titleholders, however, there seems to be no statistically significant relationship between wealth and father's title.<sup>52</sup> As mentioned above, we tend to associate the statistically significant relationship between wealth and father's titles as one indicator of wealth transfer

across successive generations.<sup>53</sup> Hence, our findings might suggest that such transfers were particularly noteworthy among *ilmiye* families, as both sons and daughters with religious fathers appear to have been better off than their counterparts with nonreligious fathers, with other variables held constant.

We can also make the following observations specifically for female legators.

- The regression model for female legators does not contain a number of variables (such as titles and occupational markers) that we used in the regressions for male legators. Instead, we included other variables suitable and available for women. Compared to those for male legators, the regression model for women has a significantly lower  $R^2$  value, which indicates that we cannot explain wealth variations among women as well as we can for men.
- Nevertheless, our calculations confirm that the epithet *hatun* is a powerful and statistically significant indicator of wealth among women.
- Among husband's characteristics suggestive of a woman's wealth are, again, pilgrimage and military status, although the size and significance level of coefficients for these two variables are less pronounced compared to those for *hatun* and father's pilgrimage.

#### CONCLUSION

This article has proposed a variety of procedures to measure economic inequality in an Ottoman context. Except for the estimations of Establet, Pascual, and Raymond for Damascus and Cairo, this important topic has received little attention from Ottomanists. Hence, a main objective of this article has been to develop a quantitative methodology that can be utilized by other researchers to produce comparable results for different locations and periods. It is only through a collective and methodologically consistent effort that a relatively complete picture of regional wealth disparities all over the Ottoman Empire will merge.

Specifically for 18th-century Kastamonu, our analysis has revealed that inequality among different segments of the Muslim community was pronounced, although not extreme, relative to contemporary standards. Men from higher echelons of the military and religious establishments owned estates that were significantly more valuable than those owned by men from lower echelons, men who did not identify with these groups, and women. We also established that wealth disparities cut through title-based differentiations as well. Indeed, pilgrims, descendants of Muhammad, and merchants, regardless of their titles, owned estates that were more sizeable than those of the rest of the population.

It is precisely this revelation—that wealth disparities can be identified in a variety of ways and by utilizing a multiplicity of social, religious, occupational, and status-based categories—that led us to fine-tune our analysis and run a series of regressions to isolate the economic significance of a large number of variables. This procedure allows more reliable estimations concerning the economic characteristics of individuals with specific titles, markers, and epithets than those based merely on historians' impressions or simple arithmetic calculations.

The results of this exercise in our own context confirm that gender- and title-based variations, for the most part, were closely related to wealth disparities—although in ways not exactly analogous to our earlier findings (in particular for *beşes*, *beğs*, and *halifes*). Descent from Muhammad, in contrast, did not indicate wealth. Likewise, artisanal status

seemed to have a statistically negligible relationship to wealth for all groups, and commercial markers indicated wealth only among men without titles. Another noteworthy finding is that title-based generational variables (that is, father's titles) appeared to have a strong relationship with wealth for our entire sample, although the magnitude and statistical significance of this relationship fluctuated in the regressions run specifically for individual title- and gender-based subgroups.

Among the most reliable indicators of wealth for Muslim men were pilgrimage and father's pilgrimage. In fact, for early to middle 18th-century Kastamonu, these two are the only variables that we can reliably perceive as signifiers of wealth distinctions for each and every title-based subgroup. For Muslim women, in contrast, the epithet *hatun* and a father's status as a pilgrim appear to be the best indicators of wealth. Overall, and assuming that father's pilgrimage (just like father's titles) is indicative of the previous generation's relative prosperity, one important implication of our findings is that intergenerational wealth transfers played a major role in influencing wealth levels among Muslim men and women in 18th-century Kastamonu.

#### NOTES

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<sup>1</sup>Boğaç A. Ergene, *Local Court, Provincial Society and Justice in the Ottoman Empire: Legal Practice and Dispute Resolution in Çankırı and Kastamonu (1652–1744)* (Leiden: E. J. Brill, 2003).

<sup>2</sup>According to Colin Heywood, whose impressions are based on the accounts of 19th-century European travelers, the Christian inhabitants of the town (predominantly Greek Orthodox and some Armenian families) constituted about 7.5 to 15 percent of the population in the 19th century. Heywood, "Kastamonu," *Encyclopedia of Islam*, 2nd ed. (Leiden: E. J. Brill, 1960), 4:738. There is no reference to a Jewish community in Kastamonu court records or in the secondary literature.

<sup>3</sup>Ibid.

<sup>4</sup>See, among others, Ömer Lütfi Barkan, "Edirne Askeri Kassamı'na ait Tereke Defterleri (1545–1659)," *Belgeler*, III (1968): 1–479; André Raymond, *Artisans et commerçants au Caire au XVIII<sup>e</sup> siècle*, 2 vols. (Damascus: Institut français de Damas, 1973–74); Suraiya Faroqhi, *Men of Modest Substance: House Owners and House Property in Seventeenth-Century Ankara and Kayseri* (Cambridge: Cambridge University Press, 1987); Haim Gerber, *Economy and Society in an Ottoman City: Bursa, 1600–1700* (Jerusalem: Hebrew University of Jerusalem, 1988); Jean-Paul Pascual and Colette Establet, *Familles et fortunes à Damas: 450 foyers damascains en 1700* (Damascus: Institut français de Damas, 1994); and Rossitsa Gradeva, "Towards a Portrait of 'the Rich' in Ottoman Provincial Society: Sofia in the 1670s," in *Provincial Elite in the Ottoman Empire*, ed. Antonis Anastasopoulos (Rethymno, Crete: Crete University Press, 2005), 149–200.

<sup>5</sup>Other designations that indicate affiliation with the religious establishment accompanied these titles. *Efendi* was a title used for the most respected and higher-ranking members of the religious establishment. The names of virtually all *kadis*, *müdürrises*, muftis and other important members of the religious establishment were accompanied by this title. *Molla* was a title officially given to high-ranking judges and *medrese* teachers. In Kastamonu, however, and especially when it was not coupled with *efendi* (as in Molla Ahmed Efendi), this title frequently referred to *medrese* students and dropouts as well as individuals who had low-ranking religious and scribal positions in local *wakıfs*. *Halife* is a *tarikati* (mystical order) designation, yet in Kastamonu this title was frequently used for the lowest-ranked members of the religious establishment, most notably prayer leaders (imams) in neighborhood mosques. *Çelebi* was a generic title used for individuals who possessed some religious education or were affiliated with influential ulema families; for the other ways in which this title was used in different contexts, see Güçlü Tülüveli, "Honorific Titles in Ottoman Parlance: A Reevaluation,"

*International Journal of Turkish Studies* 11 (2005): 17–28. A *şeyh* was a head of a *tarikāt*, and the title *dede* was specifically used for senior dervishes. See Gustav Bayerle, *Pashas, Begs, and Effendis: A Historical Dictionary of Titles and Terms in the Ottoman Empire* (İstanbul: İsis, 1997).

<sup>6</sup>Other military designations, when used, always accompanied these three titles. According to Barkan, the titles *ağa*, *beğ*, and *beşe* do not reveal an individual's exact military status. That is, these terms do not indicate whether he belonged to the janissary corps, was a *timar* holder, or was identified with any other military subgroup: see his "Edirne Askeri Kassamı," 15–17. It is difficult to make an intragroup distinction based on military titles. It may be that an *ağa* had a higher ranking than a *beşe*, but it is problematic to make the same kind of distinction between a *beşe* and a *beğ*, given that these titles were sometimes used interchangeably in *sicils*: see Tülüveli, "Honorific Titles," 21–23.

<sup>7</sup>We have never encountered a military titleholder who is later identified by a religious title or vice versa. To the extent that we could determine, the use of titles for specific individuals remains constant. For example, an Ahmed Ağa bin Hasan is never called Ahmed bin Hasan in a different entry (one exception to this rule is when two religious titles, such as *molla* and *efendi*, are used simultaneously for the same individual; for such cases, see note 38).

<sup>8</sup>There were many *beşes*, if not *ağas* or *beğs*, among the ranks of Kastamonu's artisans during our period—a situation not unique to Kastamonu. In our context, the title *beşe* probably indicated membership in local janissary divisions: see Yi, *Guild Dynamics in Seventeenth-Century Istanbul: Fluidity and Leverage* (Leiden/Boston: E. J. Brill, 2004), 132–43; and André Raymond, *Cairo* (Cambridge, Mass.: Harvard University Press, 2000), 219.

<sup>9</sup>On social stratification and relative class positions for our period, see Abraham Marcus, *The Middle East on the Eve of Modernity: Aleppo in the Eighteenth Century* (New York: Columbia University Press, 1988), 66–76; Linda Schilcher, *Families in Politics: Damascene Factions and Estates of the Eighteenth and Nineteenth Centuries* (Wiesbaden, Germany: F. Steiner, 1985), 108–10; Karl Barbir, "Wealth, Privilege, and Family Structure," in *The Syrian Land in the Eighteenth and Nineteenth Century: The Common and the Specific in the Historical Experience*, ed. Thomas Philipp (Stuttgart, Germany: Franz Steiner Verlag, 1992), 179; and Ruth Roded, "Social Patterns among the Urban Elite in Syria in the Late Ottoman Period," in *Palestine in the Late Ottoman Period*, ed. David Kushner (Jerusalem: Yad Izhak Ben-Zvi, 1986), 147–52.

<sup>10</sup>We have information about the occupational characteristics of 167 artisans and merchants in our sample of 778 (22 percent). A majority of these individuals (131) were men without titles; the rest (18) belonged to the military establishment. Of these, 12 artisans and 2 merchants were *beşes*, 2 artisans were *beğs*, and 2 merchants were *ağas*. No religious titleholder was found within this group.

<sup>11</sup>For this study, we consulted the microfilm copies of Kastamonu court records at the National Library of Turkey in Ankara. This collection begins in 1684 and includes the 18th and 19th centuries. Some of the earliest registers, however, are in poor condition and lack many pages. Hence, we chose to start our research at a later date, when the quality of documentation improved.

<sup>12</sup>We did not include in our sample inventories those who died while visiting Kastamonu because these documents do not contain any information about their assets outside the town. We also excluded a handful of seemingly incomplete and redundant *tereke*s.

<sup>13</sup>It is arguable that some who died poor or in bankruptcy may have been considered wealthy at specific points in their lifetimes by their contemporaries. Our analysis does not attempt to identify these people or to separate them from others who left behind modest estates.

<sup>14</sup>Süleyman Özmucur and Şevket Pamuk, "Real Wages and the Standards of Living in the Ottoman Empire, 1469–1914," *The Journal of Economic History* 62 (2002): 293–321.

<sup>15</sup>The presence of extreme or unexpected values in any data set (and especially historical ones) may result from errors made during data recording and computation or directly inherited from sources. Trimming is a standard statistical procedure to eliminate the possibility of contamination caused by such errors.

<sup>16</sup>Gradeva, "The Rich," 152–63. Also see Establet and Pascal, *Familles et fortunes*, 31–32; and Dror Ze'evi, "The Use of Ottoman Shari'ah Court Records as a Source for Middle Eastern Social History: A Reappraisal," *Islamic Law and Society* 5 (1998): 43–45.

<sup>17</sup>On the problem of the underrepresentation of estates owned by women, see Jean-Paul Pascual and Colette Establet, "Women in Damascene Families around 1700," *Journal of the Economic and Social History of the Orient* 45 (2002): 302–303.

<sup>18</sup>We excluded these inventories from our sample due to concerns about their representative value.

<sup>19</sup>See Boğaç A. Ergene, "Costs of Court Usage in the Seventeenth- and Eighteenth-Century Ottoman Anatolia: Court Fees as Recorded in Estate Inventories," *Journal of Economic and Social History of the Orient* 45 (2002): 20–39.

<sup>20</sup>Poorer estates, in particular, may be underrepresented in our sample. There is evidence that legal fees and taxes extracted from poorer estates at the time of their assessment and division in court were disproportionately higher than those taken from wealthier estates in late 17th and early 18th-century Anatolia: see Ergene, "Costs of Court Use," and *idem.*, *Local Court*, chap. 5. This situation may have encouraged poorer parties to avoid court involvement in assessment and division of inherited estates. Overrepresentation of the wealthy in estate inventories is not peculiar to Ottoman sources; it also appears in early-modern U.S. and British inventories. See Peter H. Lindert, "Unequal English Wealth since 1670," *The Journal of Political Economy* 94 (1986), 1132; and Carole Shammas, "Constructing a Wealth Distribution from Probate Records," *Journal of Interdisciplinary History* 9 (1978), 297.

<sup>21</sup>Establet and Pascual indicate that a woman and a child would have needed 17 to 27 *guruş* and a man about 50 *guruş* per annum in early 18th-century Damascus for their most basic needs: *Familles et fortunes*, 126–27.

<sup>22</sup>The proportion of average income (not wealth) levels of the wealthiest 20 percent to the poorest 20 percent ranges from 3.4 (Japan) to 8.4 (United States) in the industrialized world. The same ratio ranges from 2.6 (Azerbaijan) to 8.3 (Georgia) in the former Eastern Bloc countries and from 4 (Rwanda) to 56.1 (Namibia) in the rest of the world. See *U.N. Human Development Report 2006* (New York: Palgrave Macmillan, 2006), 335–38.

<sup>23</sup>The coefficient of variation and the Gini coefficient are two different measures of statistical dispersion. Although some studies use the coefficient of variation as an indicator of wealth/income disparities, in this article, in line with the tendency prevalent in the scholarly literature, we use the Gini coefficient as the primary measure of wealth inequality, but the coefficient of variation is presented simply as a unit-free measure of variation. For reasons why the Gini coefficient is a better measure of inequality, see Frank Cowell, *Measuring Inequality* (London: Prentice–Hall, 1995), 25.

<sup>24</sup>Theoretically, the Gini coefficient could be any value between 0 and 1. It would be 0 if wealth were distributed absolutely equally and 1 if a single individual were to possess all wealth in a given society. The Gini coefficient ranges from 0.24 (Japan) to 0.41 (United States) in the industrialized world, from 0.19 (Azerbaijan) to 0.41 (Turkmenistan) in the former Eastern Bloc countries, and from 0.29 (Rwanda) to 0.74 (Namibia) in the rest of the world: see *U.N. Report*, 335–38.

<sup>25</sup>Colette Establet, Jean-Paul Pascual, and André Raymond, "La mesure de l'inégalité dans la société ottomane: utilisation de l'indice de Gini pour Le Caire et Damas vers 1700," *Journal of the Economic and Social History of the Orient* 37 (1994), 177, 180.

<sup>26</sup>The Gini coefficient for the untrimmed sample is 0.67053.

<sup>27</sup>Carole Shammas, "A New Look at Long-Term Trends in Wealth Inequality in the United States," *The American Historical Review* 98 (1993), 420. Shammas's findings correct earlier calculations, which tended to underestimate the Gini by as much as five-tenths of a point: see Jeffrey G. Williamson and Peter H. Lindert, *American Inequality: A Macroeconomic History* (New York: Academic Press, 1980), 38–30. For regional variations, see G. B. Warden, "Inequality and Instability in Eighteenth-Century Boston: A Reappraisal," *Journal of Interdisciplinary History* 6 (1976): 585–620; Gloria L. Main, "Inequality in Early America: The Evidence from Probate Records of Massachusetts and Maryland," *Journal of Interdisciplinary History* 7 (1977): 559–81; Alice H. Jones, "Wealth Estimates for the New England Colonies about 1770," *The Journal of Economic History* 32 (1972): 98–127; and Billy G. Smith, "Inequality in Late Colonial Philadelphia: A Note on Its Nature and Growth," *The William and Mary Quarterly* 41 (1984): 629–45. These studies indicate that there may have been as much as four-tenths of a point of difference among the Gini coefficients of the Middle Colonies (which ranges between 0.43 and 0.51 in different studies), New England (ranges between 0.55 and 0.61), and the South (0.83).

<sup>28</sup>John A. James, "Personal Wealth Distribution in Late Eighteenth-Century Britain," *The Economic History Review* 41 (1988), 551. The author does not discuss what, specifically, "insurable wealth" included. According to James's calculations, the Gini coefficients of different regions in Britain ranged from 0.5 (West Midlands) to 0.73 (Scotland); *ibid.*, 556.

<sup>29</sup>Shammas, "A New Look," 422.

<sup>30</sup>Lindert, "Unequal English Wealth," 1145.

<sup>31</sup>See Daniel S. Smith, "Underregistration and Bias in Probate Records: An Analysis of Data from Eighteenth-Century Hingham, Massachusetts," *The William and Mary Quarterly* 32 (1975): 100–10;

Shammas, "Constructing a Wealth Distribution," 297–307; and Peter H. Lindert, "An Algorithm for Probate Sampling," *Journal of Interdisciplinary History* 11 (1981): 649–68.

<sup>32</sup>To assess the strength of our comparative claims based on differences among mean estate values owned by specific groups, we performed *t* tests, which measure whether the differences between two averages are statistically meaningful. The *t* test is performed by dividing the difference between two averages by the standard error of the difference. Unless stated otherwise, all comparisons in our discussion based on the differences between specific averages are significant, at least at the 10-percent level.

<sup>33</sup>Wealth concentration among socially and politically privileged groups is not unique to the Ottoman context. Evidence for a strong relationship between wealth and social prominence in the 18th-century United States and Britain appears in James, "Personal Wealth Distribution"; Shammas, "Constructing a Wealth Distribution"; and Jones, "Wealth Estimates."

<sup>34</sup>Gradeva claims that in late 17th-century Sofia members of the religious establishment were less prosperous than members of the military: see Gradeva, "'The Rich,'" 173–74.

<sup>35</sup>According to Establet and Pascual's calculations, the mean value of estates owned by women in early 18th-century Damascus was about one-fifth that of estates owned by men: *Familles et fortunes*, 119. Legal restrictions on women's inheritance as well as the practice of transferring property ownership to male relatives before death are two factors that likely kept the value of women's estates at modest levels. On women transferring property to their kin, see Annalies Moors, *Women, Property and Islam: Palestinian Experiences, 1920–1990* (Cambridge: Cambridge University Press 1995), 48–76. Lindert's calculations indicate that the average net worth of women in mid 18th-century England was about half that of men's, a finding confirmed by James for late 18th-century Britain. Lindert, "Unequal English Wealth," 1135; and James, "Personal Wealth Distribution," 551. Jones claims that in Maryland and Massachusetts during the late 18th century "women . . . fell much more preponderantly than men in the lower wealth classes": see "Wealth Estimates," 126.

<sup>36</sup>The Gini coefficient is more sensitive to variations in the middle of the wealth distribution than the coefficient of variation, which attributes greater significance to variations in the lower and higher tails of the same distribution. As indicated above, we regard the Gini as the primary measure of inequality.

<sup>37</sup>According to Gradeva, *ağas* were among the wealthiest people in late 17th-century Sofia. *Beğs*, she claims, were significantly less wealthy: Gradeva, "'The Rich,'" 170–73.

<sup>38</sup>We have observed in a small number of cases that the title *efendi* could be coupled with *molla* and *şeyh*. When *molla* and *efendi* were used together in a legator's name (as in the case of Molla Mehmed Efendi bin Abdülcelil), we included his estate into the *efendi* sample. When *şeyh* and *efendi* were used together (as in the case of Şeyh Hüseyin Efendi bin Şeyh Hasan), the estate in question was included in the *şeyh* sample. We did this because occasionally those identified in one entry simultaneously as *molla* and *efendi* are also identified as *efendi* in different entries (but never as *molla* and never without a title). Similarly, some who are identified as *şeyh* and *efendi* in some entries are merely identified as *şeyh* in others.

<sup>39</sup>See Bayerle, *Pashas*, 78.

<sup>40</sup>However, the *t* test for this comparison could not confirm that the disparity was statistically significant ( $t = 1.02$ ).

<sup>41</sup>Those artisans whose specialization is explicitly identified in our sources include tanners, dyers, tailors, potters, bakers, shoemakers, jewelers, tinsmiths, coppersmiths, blacksmiths, candle makers, builders, and saddle makers. The occupations of some individuals not specifically identified in the *tereke*s as such were revealed by the contents of their estates; we include seventeen such individuals in our sample of artisans. Merchants are identified simply as "*tüccardan*" in *tereke*s.

<sup>42</sup>According to Gerber, the mean value of estates owned by merchants in late 17th-century Bursa was about four times that of estates owned by artisans: see Gerber, "Social and Economic Position of Women," 239–40. Establet and Pascual's calculations confirm the validity of this finding for 18th-century Damascus: *Familles et fortunes*, 128. In both contexts, the mean value of estates owned by artisans was significantly less (35 to 40 percent) than average-sized estates. In both Britain and the United States, merchants appear to have been among the wealthiest occupational groups during the 18th century. Artisans and craftsmen, in contrast, with a significant degree of wealth variations among specific trades, were largely clustered in middle to lower-middle wealth brackets. See especially James, "Personal Wealth Distribution," 551–52; Lindert, "An Algorithm," 663; Shammas, "Constructing a Wealth Distribution," 301; and Jones, "Wealth Estimates," 126.

<sup>43</sup>See Hülya Canbakal, "On the 'Nobility' of Provincial Notables," in *Provincial Elite*, 39–50.

<sup>44</sup>Indeed, according to Establet and Pascual, descendants of Muhammad were about three times as wealthy as the rest of the population in Damascus at the turn of the 17th century: see *Familles et fortunes*, 129.

<sup>45</sup>Suraiya Faroqhi, "Anatolian Townsmen as Pilgrims to Mecca: Some Evidence from the XVIth – XVIIth Centuries," in *Soliman le Magnifique et son temps, Recontres de l'École du Louvre*, ed. Gilles Veinstein (Paris: La Documentation Française, 1992), 309–25. Yet, according to Pascual and Establet, pilgrims in Damascus were not necessarily wealthier than their nonpilgrim counterparts: *Familles et fortunes*, 170–76.

<sup>46</sup>It must be emphasized that we do not assume, for the most part, a causal relationship between our "dependent" and "independent" variables in our regressions. Given the lack of exogenous instrumental variables in our sources, it is impossible to determine, for example, if one was wealthy because he was a pilgrim or if he was a pilgrim because he was wealthy. Instead, the regression analyses are conducted solely to estimate the magnitude and statistical significance of *associations* between estate values and specific variables. The only exception to this rule appears when we comment on the relationship between estate values and what we call "generational variables."

<sup>47</sup>We took men with no military titles as the reference base for military titleholders and men with no religious titles as the reference base for religious titleholders. This was done in order to avoid the problem of perfect collinearity.

<sup>48</sup>We also prepared a regression model in which we kept military and religious titles as two undifferentiated variables. In this analysis, comparing to those estates owned by men without titles, we estimate that estates belonging to military and religious titleholders were 41 percent and 34 percent more valuable, respectively. These estimations are statistically significant at the 1-percent significance level.

<sup>49</sup>Our sources rarely provide information on father's occupations; thus, these variables have not been included in the regressions analysis.

<sup>50</sup>Absent variables in Table 9 are those that are either unavailable or statistically insignificant in all four regressions. For example, artisanal status was not included in the regression model for women and was statistically insignificant in the other three regressions. Coefficients for individual military and religious titles are also excluded because comparable and consistent information exists in Table 8. Note that our regression models for military and religious titleholders confirmed the statistical significance of the differences between coefficients for *ağa* and two other military titles (*beğ*, *beşe*), on the one hand, and between coefficients for *efendi* and four other religious ones (*celebi*, *halife*, *şeyh*, *dede*), on the other hand. The difference between coefficients for *efendi* and *molla*, however, was statistically insignificant.

<sup>51</sup>As suggested by one of our referees, we also estimated a regression model in which pilgrimage and father's pilgrimage are interacted with dummy variables for titleholders, in order to find out whether the magnitude and significance of their relationship with wealth varied *across* these subgroups. Our estimations did not confirm the existence of such variations.

<sup>52</sup>That military and religious status were frequently inherited from fathers must have some bearing on coefficients for the father's title in regressions for military and religious titleholders. We assume that a degree of the relationship between wealth and the father's military/religious status is captured by coefficients for the legator's military/religious title. Our estimating a statistically significant coefficient for fathers with religious status in the regression for religious titleholders, despite this possible interaction, is noteworthy. This is also why it may not be a coincidence that the coefficient for fathers with military titles is quite sizable (1.57) in the regression for men without titles, given that no title variables were included in this model. It is a fact that the coefficient for fathers with religious status is insignificant in the same regression. No meaning should be attributed to this finding, however, as there are only two titleless men in our sample who had fathers with religious titles.

<sup>53</sup>Using a similar procedure to that outlined in note 51, we also explored whether the magnitude and statistical significance of the relationship between father's title and wealth varied *across* title-based subgroups. Our estimations did not provide any evidence to that effect.