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Cliometrics Rehabilitated: Inequalities of Wealth and Income in Ottoman Economy as Reflected in Cadastral Surveys

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Summary

Since decades, the use of cliometrics in Ottoman economic history, particularly in the realm of rural economy of the "classical age" had acquired a dubious, if not bad reputation. Some early studies were discarded as not reliable, or leading to dead ends, mainly because the data from the *tapu tahrir*s had been taken for granted. Such a criticism is partly right, yet its main flaw consists in limiting its tenets to purely negative remarks. Here I intend to demonstrate that much more can be done thru developing a more positive approach.

Key words: Ottoman Balkans, cadastral registers, statistics

1. Introduction

Undeservedly, cliometrics have since long time become a "notorious" angle of investigating Ottoman history, particularly in the realm of the rural economic life. Apart from the seminal work of Bruce McGowan (McGowan, 1969), a relatively limited number of articles or books dealing exclusively with such topics had appeared. On the other side, many authors had here and there to come to terms with questions of kinds of crops, food consumption per capita, productivity of the fields or animal husbandry and the like. The problem of how to proceed with the tapu tahrir figures had always been connected with defterology, another subspecies of Ottoman studies. Since the figures and itemization of dues in the surveys could not be taken at the face value, soon a belief became widespread that "counting the grains" was a futile and misleading business (Alexander (1999) is the best example of this criticism).

Yet the straightforward rejection amounts to neglecting lots of precious information and insights. First, let us not forget that the *tapu tahrir*s were tailored according to the imperatives of assignment of prebends. Given the fast-growing num-

ber of *sipahi*s, it could easily happen that late surveys reflect better the composition of the agricultural product than the early ones, in contrast with the otherwise well-founded thesis about the greatest value of the first set of records. Next, the bureaucracy in general was doing its very best to create rounded-up figures which might considerably help the distribution. Thus, the researcher has often the impression that the per capita product per unit was close to the social minimum (Milanovic, 2006). In cases when low totals were recorded we must be particularly careful, because this does not necessarily mean that the villagers were starving. Livestock, mills or waged labor might lay behind. So, reading between the lines becomes unavoidable. One striking example: In the last *tapu tahrir* for Bosnia those who had half a farm or less (*bennak*) had to pay the full amount of *resm-i çift*. This in turn strongly suggests that their crop output was not subject to taxation. Otherwise the complete ruin would follow. And so on. The usefulness of such records is far from being exhausted. It seems that labyrinths of meanings are waiting to be explained. Now, instead of food production in the strict sense, here I intend to focus on a hitherto completely neglected, yet important item among the list of dues to be paid to the prebend-holder, that is, the so-called "fines". At the first glance, this "curious" tax might seem unrelated either to the size of the taxpaying population, or to any of the items from the list of dues. Yet I hope to be able to demonstrate exactly the opposite. Just to say that while most of the items of taxation display a uniform picture, pointing to the joint work of the whole village, the *badihava* dues do not. Moreover, they were not a late invention, appearing already in the 15th century records. In general, it seems that a rule is emerging, at least as a working hypothesis: if the bulk of the tax burden, referring to well-balanced tithes and/or to main cash dues (itemized or as a lump sum) was relatively low, the *badihava* part was relatively higher, and vice versa. This is the picture we can get while dealing with Ottoman Balkans. To the contrary, where the dues in kind were dependent on the *qasm* rates (i.e., outside the realm of the *miri* land), it was the opposite: the *badihava* was almost uniform, pretty well correlated with the number of tax units Moačanin (2016). Last but not least, I am trying to demonstrate what some other items in the tax lists which seem to be of minor importance, can teach us in a way similar to that of the "fines."

2. Areas & sources

- Bosna
- Sirem
- Pojega
- Çernik
- Belgrad nahiyesi

- The town of Osijek/Ösek
- Tapu Tahrirs 1560 – 1595; for Osijek the Seyahatname plus some archival and other documents (BN Turc 242)

Here I have investigated the cadastral record material from the *sancak*s of Sirem, Semendire, Pojega and Bosna (Sirem and Bosna entirely). The data for Sirem are detailed, because they mention all the components of the *badihava* by name. For Bosnia, Semendire and Pojega the parts of this tax are usually not visible. One major shortcoming is the synchronistic character of the sources, i. e., no comparison from one year to another was possible. The reason for it was the circumstance that the records before and after ca. 1570 are less reliable, and not from the same, or almost the same year (McGowan, 1983; Handžić & al., 2000; Šabanović, 1964; Sršan, 2001; BN Turc 242).[1] I have tried to deal with all the settlements in Sirem and Bosna, excluding only those that were paying the lump sum (*maktu*). Occasionaly a mistake or omission had probably happened, but the sample size was quite large, entailing no substantial damage to the whole picture.

In the case of Osijek, I have tried to show how the wax tax and market dues, along with the *badihava* figures can help in estimating totals of the tax units, that is the size of the town.

3. Wealth and Income

- **Wealth** is related to the mass of property
- It disregards the role of labor
- Includes inheritance
- **The income** is the sum of what is acquired from all sources
- Wealth was more likely the tax basis in the Middle Danube region, while for Bosnia it was rather the income, such as grain production

4. The place and nature of "fines" (*badihava*) in rural economy

- Belonging to the *rüsum-i örfiyye*; not "true" fines; a link between the *niyabet* and actual penalties can be made visible
- ***Intended to procure the indemnity to the sipahi when no transgressions occur***
- If based upon wealth, ***movable property*** was intended
- Basic rates increased or decreased depending on the size of the village and the volume of individual wealth or collective income
- Partially a lump sum, usually consisting of a half, one, or more basic rates. One "normal" basic rate was mostly equal, or close to the amount taken in

[1] The last survey for the sancak Bosna mirrors the situation from the early nineties of the 16th century, if not even from the sixties.

a single "real" case: for the *cürm ü cinayet* it was 60 *akçe*s, thus matching the lower rate of the *resm-i çift bozan* in Sirem (its part referring to the loss of the tithe; the rest was for the *ispence*). The medians, or the most frequent values, indicate more or less the amount of the respective *rüsum*, such as 45 *akçe*s for *arusane* (bride – tax), 15 for *fiçı* (wine casks), etc. Villages were burdened with amounts corresponding to less than one basic rate, one, one to two, two to three and 3 +. The total of all components for Sirem was 258, for Bosnia 198 *akçe*s. In Bosnia all the items were coalesced into one single tax.

5. Components

Simple *niyabet*, corresponding to *cürm ü cinayet* and subsuming all other items (Semendire, Bosnia). The heading in the record might be expanded by *arusane* and sometimes *deştibani/polaçina* (rangers fee), but only as bookkeeping convention

- All items enumerated, including *fiçı* and *tapu* (Sirem, Pojega), and actually affecting the total
- Separate itemization is more likely in better-off areas, the simple *niyabet* in less fortunate regions and on *serbestsiz timar*s

6. Methods of analysis

- Analysis carried on the level of whole settlement
- Clearly discernible values (*hane* totals) compared with the simple *niyabet*, or, if possible, with every particular *badihava* component
- Investigated functions: determination (RSQ or R2)
- Pearson (linear correlation)
- Linest (regression coefficient)
- Gini coefficient, represented by the Lorenz curve

Using the simple statistical analysis I am going to try to check the opinions about the unrelatedness of the "fines" to other items of the taxation in the *tapu tahrirs*. This means establishing the coefficients of linear correlation (Pearson) and determination (RSQ or R^2) between the "fines" and the number of fiscal units or the size of the respective items of taxation. Thus, if "households" are x, and the *badihava* is y, the RSQ of .5 says that the amount of the fines strongly *depends* on the number of *hane*s for 50%, while for the other half it is something else, or an unknown factor. As for Pearson, if the "fines" are compared with the rest of the total of the *sipahi*'s income from a given village, and the result is, e.g., .8, the strong connectedness between the two magnitudes is indicated. Sometimes the coefficient of regression (linest) is needed, because it shows what happens with the dependent variable if the independent one augments by one. In Sirem one fiscal unit more means an increase by 14 *akçe*s in the villages, and in towns it is 33. In Bosnian villages the result is 3, respectively 15.

7. Results

7.1. Bosnia (sancak), sample size: 950 ordinary villages ; households to "fines"

- **RSQ** hane/bh **0,172492** (hasıl/bh 0,41718)
- **Pearson** hane/bh **0,415322** (hasıl/bh 0,645894)
- **Linest 3**
- **Gini 0,47** hane/bh (hasıl/bh 0,48)
- The relatively poor determination coefficient and modest correlation between the *hane* total and the amount of the *badihava* points toward relatively *high* inequality of income. Yet this does not imply that in some places "lucrative" non-agrarian activities had been particularly strong: to the contrary, this is the consequence of the high proportion of non-resident Muslim *tapu* holders, often *askeri*s and town dwellers among which inequalities were a more prominent feature. In addition, almost the half of the Muslims in the record had the *bennak* status. Perhaps the most numerous part of them were descendants of early converts, now engaged in waged labor for the well-to-do coreligionists. Characteristically, in case of non-Muslim *tapu*-holders both the RSQ and Pearson have higher values, while the supposed inequality of income is less expressed. This might cast some light on the particularities of the spread of Islam as well. Finally, if the grain produce per village as reflecting the income is taken as unit of comparison instead of households, the resulting similarity between the two countings allows for the hypothesis that the number of *hane*s in the record does not match well the number of actual households. Thus, it might have been "adjusted" to the volume of the production village by village. The distribution of the *timar* and *zeamet* holdings might also have had some influence.

7.2. Sirem, sample size: 385 ordinary villages; households to "fines"

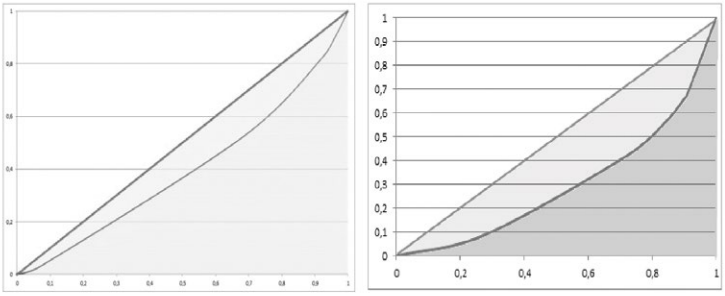
- RSQ 0,528361
- Pearson 0,726885
- **Linest 14**
- **Gini 0,196** (but for the *cürm ü cinayet* only = 0,395; cf. Çernik 0,33)
- The closer the *badihava* is connected with *hane* totals, the higher seems the "equality" of wealth. Since the agrarian output was relatively high, there was enough place for non-agrarian activities (wagoneering, river transport, house crafts) to be taxated in a uniform way with quite an even distribution of all the components of the *badihava*. The possible reason could be a rather "smooth" transition from the half - Vlach status to the ordinary *reaya*s, as well as the important role of the province in supplying the marching armies

and garrisons in the Danubian plain. The situation in the Belgrade *nahiye* was almost the same.

7.3. Towns: households to "fines"

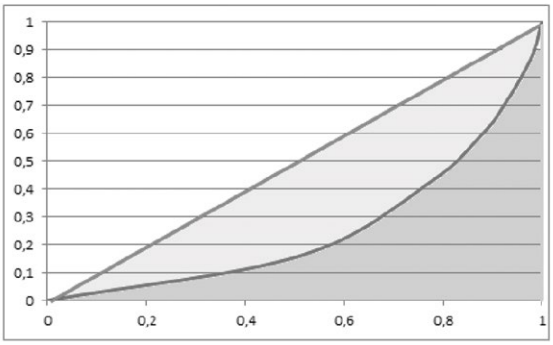
- Bosnia: 0,38. The *ihtisab* was occasionally taken together with *niyabet*, thus making one single tax
- Relatively low Gini caused by the *muafiyet* for large towns. Massive wage labor dominant, few big entrepreneurs. Linest: 15
- Sirem and Pojega: 0,5
- No *muafiyet* like in Bosnia. Linest: 33
- Belgrade: 0,65 (with surrounding villages 0,54)
- Important role of non-agrarian activities, no *muafiyet*. Possibly the *ihtisab* was playing a role similar to the *niyabet*

Gini Sirem villages 1568: the inequality increases by ca. 100% (to 0,395) for cürm ü cinayet only

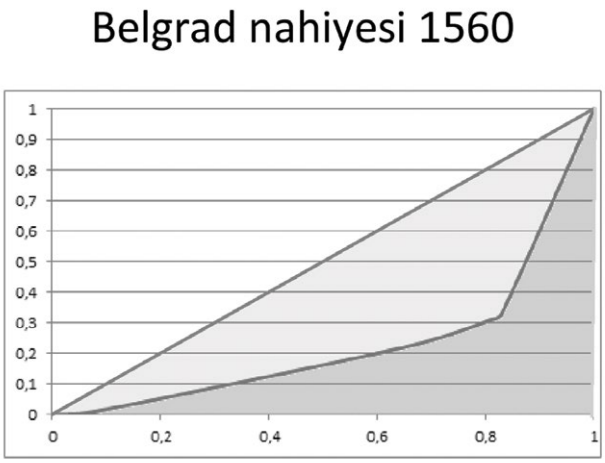


Arusane and *deştibani* were imposed onto *hane*s rather mechanically; the result for *hane* to *fiçı* ratio was closer to the actual state (0,27).

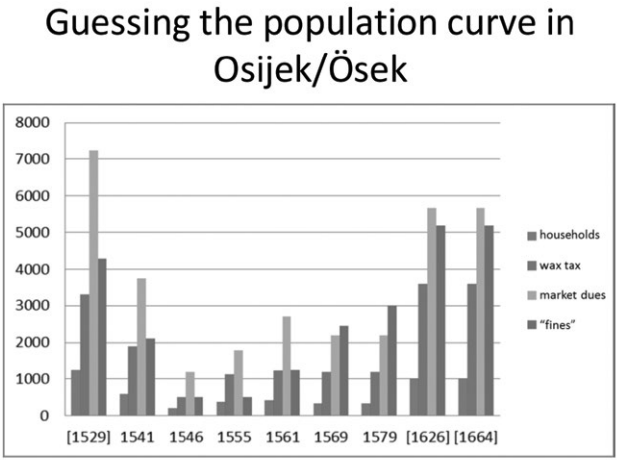
Bosnia villages ca. 1590



High Gini for villages indicates the possibility of disregarding all items other than *cinayet*, while the *badihava* tax basis was found in the number and size of the *çift*s, thus being closer to the income from the fields than to wealth.



Without villages the inequality would be even more expressed!



For some years the real number of households is not certain, particularly for the period before 1550-es, when no Muslim individuals appear in the database. At the very beginning (1529) we have an estimation mentioning some 3000 soldiers (Laszowski, 1914: 150-153). This is probably not exaggerated, because they must have been singles, while the surface of the town could suit well this number. Considering the requirements of space and food supplies, on the graph these soldiers are represented *as if* their number were lesser by nearly 60 percent, which would approximately correspond to a size of somewhat more than thousand *fictitious* households. Although it is not sure that around 1530 the taxes on wax (*şemhane*), public

order (*ihtisab*) and the *badihava* were collected at all, they are represented as if they have existed, using the coefficient of regression (linest), counting back on the basis of later data and proportions. The same is true for the *badihava* for 1541, because it does not figure in the *icmal* for that year. Finally, linest, this time counting forward, was applied for 1626 and 1664 when we have reports of narrative sources (BN Turc, Evliya Çelebi).

The state monopoly tax on wax for candles was determinated by the size of the population, yet in 1565 and 1579 it was mentioned only for the whole kaza. Therefore, I had, out of caution, to subtract about 54% from the given figure (the difference between the population of Osijek and some smaller places in the judicial district) to arrive to the acceptable values.

Together with the "fines" another tax shows similar characteristics. This is the *ihtisab* or market dues, also related to the size of the town. Its amounts closely follow the population curve. Just like the *badihava*, in the *tahrir*s it was representing a lump sum, probably the locally conditioned basic rate, the actual incidence of transgressions against the order in town or at the marketplace notwithstanding.

As for the *badihava*, in the case of Osijek it was impossible to use the respective data in order to arrive at an insight into the inequalities of wealth, because here various components of different nature (both constant and varying) were coalesced.

So, both the *ihtisab* and *badihava* might increase while the actual population was decreasing, yet not dramatically. This was due to the oscillations in number of town dwellers according to professional and social stratification.

8. Conclusion

It is a commonplace in the writings on the Ottoman social and economic history that the "fines," which the tax records are calling *badihava* or *niyabet*, do not display any meaningful connection with any of the other known figures, in particular with the number of fiscal units. This misconception was due to the overcriticism of "too much statistics", with the "no statistics" approach as a consequence. Yet the use of more traditional historical criticism can help to soften the pessimistic view. Moreover, statistics may help to discover how the *badihava* offers good insight into the inequalities of wealth among the *reaya*s subject to the *miri* land regime.

Let us repeat the main research question: whether the tools of statistics can allow a shift from comparing individuals to contrasting collectivities, such as whole villages and groups of towns? The answer proved as positive.

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