ANNUAL MEETING OF THE AMERICAN HISTORICAL ASSOCIATION 'GLOBALIZING HISTORIOGRAPHY' – January 2-5, 2009

Session 110. Sunday January 4, 9-11 a.m.

Globalizing the historiography of state formation. Comparing trajectories of state formation: the role of values, sociopolitical institutions and demographic-ecological conditions

Was there a West-European trajectory of state formation? A comparison with the Ottoman Empire from a Dutch perspective.

by Wantje Fritschy – Vrije Universiteit Amsterdam

[NB FIRST DRAFT; REFERENCES YET INCOMPLETE]

Introduction

There is a remarkable difference in what might be called 'fiscal values' between the Bible and the Quran. In the Bible taxation - in whatever form it may be – is explicitly accepted as something inextricably bound up with the violence monopoly of a state. When interrogated if it was right for the Jewish people to pay taxes, Jesus Christ refused to denounce the military power of the Roman Empire that had to be financed by tributes of conquered people: he said that it was natural to give back to the Roman emperor coins bearing his portrait and that not only Romans, but also Jews had in their pockets.¹ Saint Paul, a Roman citizen, even wrote in one of his letters that magistrates should be seen as ministers of God, and that 'the magistrate does not bear the sword for nothing' and that 'it is for the same reason that you pay taxes'. He explicitly admonished the people to pay their due, 'taxes if it be taxes, customs if it be customs'.²

Not so in Islam. According to the Qur'an for Muslims only one tax is obligatory. This is the *zakat* on agricultural produce and on moveable property that is more than a year in one's possession. Islamic law even specifies the tariff: 10% on the former and 2,5% on the latter.³ The Qur'an explicitly stipulates for what kind of public expenditure the *zakat* may be used: the poor and needy, captives and debtors, wayfarers and those employed to collect and administer the receipts of the *zakat*.⁴ Religious scholars later added that it could also be used to equip volunteers for the *jihad* who lacked the financial means to equip themselves, but taxation was obviously not primarily connected to military expenditure. In a certain sense rather the reverse could be said to be true. Tribes who offered military assistance to the sultan might enjoy tax freedom. Taxation in Islam seems to have been primarily connected to social and religious purposes. A remarkable

¹ New Testament, Matthew XXII, 17-22.

² New Testament, Romans XIII, 4-8.

³ Encyclopedia of Islam (WebCD edition, Leiden 2003).

⁴ Qur'an, IX, 60.

difference between both worlds that seems to warrant the question if there might not be a relation with the failure of states in the 'world of Islam' to keep up militarily and economically with states in the Western European 'world of Christianity' after 1800.

Actual historical development makes this not very plausible however. One simple reason is, that from very early on the Arab conquerors decided to just use existing tax systems in conquered areas to obtain state revenue, and that in practice very soon also Muslim peasants had to pay land taxes in kind or in cash (*kharaj*), apart from the *zakat*, in order to enable the sultan to finance his armies. Moreover, despite the fact that 'ulama' from all Islamic law schools agreed that especially indirect urban taxes, *mukus* (sing. *maks*) - and foremost those that raised the price of foodstuffs for the poor - were forbidden according to the *shari*'a, Muslims had to pay them as well whenever they were levied in cities in the world of Islam.⁵ It seemed wise therefore to examine also other possible factors than this 'fiscal value' to explain differences between fiscal systems of Western Europe and the Middle East.

The most conspicuous difference in state finance between both these parts of the world, however, is the part played by domestic public debts to finance war expenditure. The failure to obtain loans at low rates of interest from the population to finance wars might be seen as a more plausible cause for the lack of military means to compete with European states than Islamic views on taxes. At first sight this seems to point to a fiscal value as well: the Qur'anic 'interest prohibition'. However, the interest prohibition had also been valid in Western-Europe during the Middle Ages. Why then would its de facto influence have disappeared from this part of the world and not from that of the world of Islam? The question seems the more justified as in private credit relations the prohibition was circumvented in the world of Islam as well, not only between merchants, but even in the case of the so called 'cash *vakifs*', public religious institutions (also called *waqfs*, awqaf or habous) whose funds consisted of cash money instead of real assets as in the case of other *vakifs*, and that depended on loans on interest for their revenue.⁶ Historians of the Ottoman Empire emphasize that more in general, especially since the reign of Suleiman, the Lawgiver, public affairs were regulated by the worldly *kanun*-law, and that the *shari* 'a was of practical value only in the field of family law.⁷ It seems reasonable therefore to question the *de facto* influence of the religious 'fiscal value' of the interest prohibition as well and to ask if there may not have been other factors to explain the absence of public loans to finance war expenditure in the 'world of Islam' than religion (or than religion alone).

This paper will try to analyze differences in fiscal systems between both parts of the world by exploring the hypothesis that these differences are, rather than to religious 'fiscal values', due to the fact that, contrary to those in the world of Islam, fiscal systems in Western Europe developed within a context of ecological conditions that did not hinder population growth and increasing population densities, and of political conditions that fostered the development of specific urban institutions that enhanced the possibilities for funding a public debt. This will be done by a comparison of the fiscal system of the

⁵ We know this already from the famous Geniza papers, found in Cairo and dating from the 10. century; see for this and further references Fritschy (2008).

⁶ Jennings (1973) Çiçakza (1996) ; Faroqhi in OEII 492: interest rates amounted between 10 and 20% and 'no secret was made of the fact that interest was demanded or paid'

⁷ Pamuk?

huge Ottoman Empire with that of the tiny Dutch Republic, and by arguing that the last can be seen as an - extreme - example of a West-European trajectory of state formation. After the comparison in the first section of this paper, the next two sections will offer an impression of the preceding trajectory of state formation in relation to geography and demography for both. The conclusion will relate the findings of the comparison to these preceding trajectories and discuss the relevance of the results for wider historical debates.

Of course comparisons like the one proposed in this contribution are a risky undertaking. I am a specialist of the history of Dutch public finance of the early modern period and my knowledge of fiscal history of other states is confined to what I found in and understood from a limited number of published studies. Nevertheless I think that taking the risk is worth the effort because it may stimulate global discussion with historians that are specialists on other parts of the world. In this way our insight in the variations in the trajectories of state formation on the globe we live on, may be fruitfully deepened in a way that would be barred, if we would not simply just *try* to make these big comparisons over long periods and big areas.

1. State finance in the Ottoman Empire and the Dutch Republic compared

a. Total revenue and expenditure

Is it possible, and does it make sense, to compare the amounts received and spent by the small the Dutch Republic and the big Ottoman Empire? To answer this question we first have to identify the kind of figures to be compared. In the Dutch Republic of the Seven United Provinces budgets for war expenditure were made on the central level, but war expenditure was in fact decentralized: about 60% of the amounts that had been agreed to had to be realized by Holland the most important of the seven provinces, much smaller percentages by each of the others according to a fixed distributive key. The provinces were fiscally autonomous. There were only some central sources of revenue in the Dutch Republic, of which customs revenue, earmarked for the navy, and to be received and spent by five admiralties in different places under (some) central control, was the most important. And there were only some central expenses for the central administration and for a - comparatively very small - central state debt.⁸ The provinces had their own provincial debts and collected their own taxes. This means that information on the amounts received in taxes and loans and on what was actually spent on the army and the navy is mainly available in the separate provincial administrations. The available data on public finance are now electronically accessible for most of the provinces.⁹ It has to be conceded that the archival material that has been preserved is not always homogeneous and far from complete.¹⁰ What is available, however, warrants the proposed comparison on behalf of an aggregation of the figures for provincial public finance.

For the Ottoman Empire Sahillioglu has offered information on the rich archival material on state finance, which is not very easily accessible, however, because it has been preserved in the form of series of *daily* accounts of state revenue and expenditure,

⁸ At the end of the eighteenth century he Generality debt was less than 3% of the sum of the debts of the provinces and the central administration (the 'Generality').

⁹ http://www.inghist.nl/Onderzoek/Projecten/GewestelijkeFinancien/Verzamelposten

¹⁰ http://www.inghist.nl/Onderzoek/Projecten/GewestelijkeFinancien/Verzamelposten

and of registers of *daily* totals. The amounts resulting from these registers have to be complemented by registers of sums which actually never entered or left the Imperial Treasury, but were nevertheless accounted for, because they were considered to be part of the imperial state finance.¹¹ Sahillioglu warns that there were sometimes even more separate accounts that should be added to have a complete picture. He also discusses in what sense the available figures represent the total yearly income and expenditure of the state and offers explanations for differences between the results per year from this source and some more easy accessible figures for imperial budgets. He moreover noticed that the figures in the daily accounts were used to prepare the provincial budgets.

Like in the Dutch Republic also in the Ottoman Empire an important part of what was received in the provinces of the empire was spent in the provinces themselves. From the tax revenue in Egypt at the end of the eighteenth century, for instance, 75% had to be spent on Egyptian expenditure, only 25% was at the disposal of the central treasury, and even this amount had become subject to an increasing burden of deductions to meet obligations imposed on the Porte in Egypt, so that by that time very little was sent to the Porte itself.¹² The Ottoman imperial budgets, however, include the revenues and expenditure in the provinces in Europe and Africa.

This does seem to make it acceptable to use these published imperial budget figures of the Ottoman Empire as the basis for a comparison with the Dutch Republic.¹³ Sahillioglu warns, however, that we know from the three budgets that have been published in detail (for the years 1527/8, 1660/61 and 1669/70) that they do not include state expenditure and state revenue from *timars*: sources of tax revenue handed over to individuals, mainly cavalries, in order to enable them to finance their tasks. The relative importance of the *timar* system declined after the sharp increase in tax farming since the end of the sixteenth century, which had been necessary to obtain cash to restructure and modernize the army: cavalries were increasingly replaced by large numbers of centrally paid infantries with guns.¹⁴ Pamuk and Karaman estimated in a recent, yet unpublished paper, that the share of *timar* and other indirect revenues – that had been more than 50% during the sixteenth century - may yet have been still 40% by the end of the eighteenth century. It should be added that this estimate includes troops sent by the provincial notables in response to the ad hoc (unscheduled) demands of the central government during periods of war in the 18th century.¹⁵ Following (a first draft of) their graphs¹⁶ my Graph 1 shows therefore not only the available figures for total imperial tax revenue converted in tons of silver¹⁷ for the available years, but also the same figures with 100%

¹⁶ I owe thanks to Sevket Pamuk for sending me the text of their paper with the graphs.

¹⁷ based on Pamuk in OEII.

¹¹ Sahilliogly (1999) 67, 71.

¹² Total revenue in the Imperial Treasury of the rich province of Egypt in 1798 was nearly 120 million para; Shaw 304-5. At a silver content of the para of 0.079 grams (Pamuk in OE II 958) this was 9.5 ton silver. In1671 it had been 95.8 million para. The silver content of the para was 0.73 in 1564 and 0.54 in 1685 (and is unknown for years in between). Egyptian total revenue at that time was therefore probably between 51.7 and 69.9 ton silver. Total revenue (incl timars) of the Ottoman Empire in 1669 had been 273 ton silver. ¹³ Inalcik in OEI, Cizakca (1996) and McGowan in OE II.

¹⁴ According to Goldstone (19?) 111n the number of timar calary fell from 87,000 in the 1560s to 8,000 in 1630 and that of janissaries + palace sipahis increased from 12,900 to 67,500; according to Darling (1996?) 46; the number of janissaries quadrupled between 1567 and 1569; see also Faroghi in OEII 434 ¹⁵ Friendly information by Sevket Pamuk per e-mail 30. November 2008.

added during the seventeenth and 70% added for the eighteenth century in an attempt to include *timars* and other missing elements of state finance.

Despite all the reservations that had to be made there needs to be no doubt at all as to the main conclusion that can be drawn from Graph 1. Especially during the eighteenth century, total tax revenue in the small Dutch Republic was not at all that different from the huge Ottoman Empire as might have been expected. There is no doubt at all that, measured in tons of silver, total tax revenue of the Ottoman Empire became even lower than that of the Dutch Republic in the course of the eighteenth century. This despite the fact that population in the Dutch Republic was not more than about 1.5 million in 1600 and about 2.1 million in 1800, while that of the Ottoman Empire has been estimated at about 30 million in about 1500 and somewhere between 25 and 34 million in 1800. This implies of course at the same time a considerable difference between both states in the amount of tax revenue realized per head of the population (see Graph 2). Another conclusion from Graph 1 is that tax revenue in the Ottoman Empire decreased, at least in tons of silver, despite some indications for economic growth in the course of the eighteenth century, ¹⁸ while in the Dutch Republic it increased despite the fact that population growth had started to stagnate.

Specialists like McGowan and Inalcik have already emphasized how relatively small public expenditure in the Ottoman Empire was in comparison also with other European states, especially during the eighteenth century.¹⁹ By the middle of the eighteenth century total public expenditure of the British state for instance had become about twice as high as of that of the Dutch state, and thus also of that of the Ottoman Empire. The first results of new research by Pamuk and Karaman confirm this picture.²⁰ Pamuk moreover estimates that not only the amount in tax revenue per head, but also the amount as a percentage of national income, was at the end of the eighteenth century much lower than in Western European states: about 3% compared to about 10% in states like Britain and the Dutch Republic.²¹

b. A comparison of the composition of public expenditure

What about the composition of state expenditure? Graph 3a shows this for the province of Holland. Table 1 gives the percentages for the budget of 1669/70 in the Ottoman Empire, the only data I found published as to this point until now.

war expenditure excl. navy	56,5%
navy	6,5%
the sultan and his palaces	29,5%
government (divan and subordinate offices)	1%
construction projects	2%

Table 1. Composition of state expenditure Ottoman Empire in 1669/70

¹⁸ Genç 1987

¹⁹ OEII p. 714.

²⁰ Presentation by Pamuk in Utrecht November 2008.

²¹ Pamuk; Fritschy (1991) This average percentage per head does not preclude of course that the tax burden on an individual peasant or ordinary town inhabitant could be higher.

inhabitants of Medina and hajj	0,5%
gifts and salaries for personnel of mosques and	
mausolea and gratifications	4%
	100%

Source: S. Faroqhi, 'Finances', in: Social and economic history of the Ottoman Empire Part II (Cambridge 1997) 541.

It is of course important to note that this was a year of peace for the Ottoman Empire and that the percentages for war will have been (much) higher in war years, which makes the comparison not very convincing. Some data I found about the number of soldiers that both states could put in the field are perhaps more interesting. The highest number for the Dutch Republic during its history was about 120,000 men during the War of Spanish Succession between 1701 and 1713. In the second half of the eighteenth century it decline to on average about 45,000.²² During the first half of the seventeenth century it had been on average about 40,000, in the second half on average about 60,000, but sometimes more than 100,000. For the Ottoman Empire I found an estimate for the seventeenth century of about 60,000-100,000 men,²³ and a very specific figure from the 1669/70 budget of 98,342 men.²⁴ The main difference with the Dutch Republic is that the Ottoman Empire could already dispose of an army of about that size at the end of the 15. century,²⁵ when the Dutch Republic even not yet existed. Graph 3b offers in addition an impression of the proportion of the navy of war expenditure in the Dutch Republic since the end of the seventeenth century. It will not come as a surprise that this proportion was higher than the percentage mentioned for the Ottoman Empire for 1669/70. Nevertheless it should be noted that the Ottoman navy was rebuilt after the defeat in the Battle of Lepanto in 1571 and had soon proved to be able to conquer Cyprus and Tunisia. Also the Ottoman-Venetian War of 1648-1669 still ended with an Ottoman victory and the completion of the conquest of Crete.

Another point to be noticed in table 1 is the relatively high percentage for the sultan and his palaces, although this percentage will of course have been lower in war years. As to this point a comparison with a big kingdom like France instead of the modest Dutch Republic is of course more appropriate. Soraya Faroqhi made this comparison and she mentions for France in 1788:

- 26% on current military expenditure
- > 50% on interest payments.
- 6% for king and court
- the rest, about 15%, for civilian administration.²⁶

1528

117,987 costs in salaries 307.28 mill. akça = 57% of tot. rev.

1500-1700 60 à 100,000

²² Zwitzer (1991) 175-6.

²³ In a book review of RHOADS MURPHEY. Warfare and History New Brunswick, New Jersey: Rutgers University Press, 199 on Ottoman warfare 1500-1700. Journal of Near Eastern Studies, Vol. 61, No. 4, (Oct., 2002), pp. 296-297

²⁴ Faroqhi in OEII 541.

²⁵ Number of men in the Ottoman army (Inalcik, Murphey)

^{1473 103,500}

²⁶ Faroqhi OE II (1997) 542.

This confirms the impression that the amount spent on the sultan and his palaces was high indeed in comparison with public expenditure in Western European states.

The main difference with Western Europe as to the composition of state expenditure, however, is of course the proportion of tax revenue spent on debt service. In Holland this increased from about 10% at the end of the sixteenth century to about 50% at the end of the seventeenth century, to even much more than 50%, sometimes more than 70%, in the eighteenth century (Graph 4). For the Ottoman Empire it could be argued on the one hand that this percentage was zero because there was no long term debt. On the other hand, however, Genç has suggested that the introduction of lifelong tax farms, that had existed in rural Egypt already for a long time,²⁷ and that were adopted in the other parts of the empire since 1695 under the name of *malikane*-system, can be seen as a 'form of internal borrowing'.²⁸

Farming of taxes (*iltizam*) had become the dominant form of tax revenue since the end of the sixteenth century, when it gradually began to replace the *timar*-system. Now under the new *malikane*-system only a relatively rather small and fixed amount in money had to be paid each year to the state by investors in tax farms as its share in the tax revenue $(mal)^{29}$, this in exchange for a proportionately very large advancement to the state (*muaccele*).³⁰. The bidding during the auctions of the tax farms was since then on the *muacceles*, which is of course an important difference from the system of bidding on the amount of the *mal* that had prevailed until then, and that was also in use in Western Europe. Another important novelty of the *malikane* system was that the tax farmer kept the right to collect his tax until his death, which made the investment in a malikane somehow comparable to an investment in a life annuity. A difference remained however that in Western Europe the yearly interests on life annuities were paid for by taxes collected by the government, while the investors in *malikanes* had to organize the collection of the tax themselves. They had moreover to be careful not to overexploit the tax source in order to avoid decreasing returns on their investment, which was of course one of the strengths of the new system. Yet another difference was that, contrary to a life annuity, a malikane could be sold, albeit under the condition that a tax of 10% of the original *muaccele* was paid to the state.³¹ A last difference was that it was possible to buy shares in several different *malikanes* and in this way spread the risk of decreasing profits.

After 1774 the state decided to start to change the *malikane*-system in the *esham*-system starting with the malikanes with the highest profits. Now the *muacceles* became much more similar to life-annuities, because under this system it was the state that collected the tax, and that paid the investors out of its tax revenue during their lifetime yearly a fixed percentage (decreasing from 20% to about 15%) of the amount of the

²⁷ Cizakça 1996) 163.

²⁸ Genç 1987

²⁹ Under the new malikane-system the state agreed to receive amounts of only about 40% or even only about 20% of gross tax revenue; see the examples of same representaive malikanes in the Appendix to Genç 1987

 $^{^{30}}$ The muaccele was generally more than 4x the mal and sometimes even 14x, 16x or 18x the mal in the examples published by Genç (1987) 360-373. In the example published by Cizakça (1996) 181 however it was only 2.2x the mal in 1759 and the profit rate may have been no less than 115%.

³¹ Cizakça (1996) 160.

(shares in the) *muacceles* they had bought. The amounts of the *muacceles* again increased considerably under this new system in comparison to the *malikane*-system.³²

For a comparison with the proportion of state finance needed for interest payments in the Dutch Republic we would need to know, thus, the sum of the amounts in tax revenue left to all the still living *malikane*-and *esham*-buyers as their profit, as a percentage of total tax revenue in the empire. I found a possibility to try to determine this percentage only for 1800, when the total amount invested in *muacceles* was 12,461,079 grush according to Çizakça and the total amount invested in the esham system 12,595,000 grush, while total public revenue in the Ottoman Empire at that moment was about 25 million grush.³³ According to Genç the profit rate on investments in malikanes at that time was about 17%.³⁴ If we suppose that the profit rate on *eshams* was about the same, this would mean that the state at that time had to leave each year an amount of [17% * (12,641,079 + 12,595,000) =] 4,290,133 grush of the amount in taxes raised in the empire to the *malikane*-and *esham*-owners.³⁵ This would mean that the percentage of total tax revenue of the state that had to be left each year to them in return for their investment in *muacceles* and *eshams* was about [4,290,133 : (25,000,000 + 4,290,133)=] 15% of total tax revenue at the end of the eighteenth century. This percentage must have been (much) lower before, because the malikane-system only started in 1695. Only since then there had been an increasing conversion of tax farms into lifelong malikane farms, the rate of increase probably depending on the need of the state for the extra income from the *muacceles*.³⁶

Thus, also if we accept the reasonable suggestion that the *malikane* system, and the subsequent *esham*-system, should be seen as a form of internal borrowing, the amount in tax revenue that had to be left to *malikane* and *esham* holders as a percentage of tax revenue is much smaller than what had to be paid in interest to lenders to the state as a percentage of tax revenue in Holland. Of course the phenomenon that in Holland

³² The tobacco farm of Istanbul published by Cizakca (1996) 181 (see note ... above) was the first malikane to be changed to an esham. While in 1759 its muaccele had been less than 250,000 grush, the mal nearly 111,000 and profit probably about nearly 280,000 grush, in 1775 it supplied the government with a muaccele of no less than 2 million grush; 400,000 per year of its revenue was now needed to pay the 160 share holders a fixed return of 20% on their investment. These two millions were badly needed because the Empire had to pay 7.5 million war compensation to Russia. One could argue that in a sense this could be considered as the sale of life annuity at an interest rate of only 5.5%, because the state had to accept the loss of a mal of only 111,000. But in comparison with the examples published by Genç this seems to have been a very exceptional malikane.

³³ Cizakça (1996).

³⁴ Genç 1987

³⁵ Cizakça (1996) 185. I found however yet another, regrettably very widely diverging, estimate in the same study of Cizakça. On p.166 he states 'that we are fairly sure that the state received 3-4 million grush from the malikanesystem towards the end of the eighteenth century'. He estimates that this was 24% of gross tax revenue of the malikanes and that this would imply that the state had to leave at that time amounts in profits of about 10.5 million grush to the malikanecis and their money-lenders and subcontractors (still excluding an estimated 15% = 2.5 million on expenses for the actual tax collection). This would imply a percentage of [13 : (25 + 13)=] 27%. I wonder however if the 3-4 million for the state from the malikane-system might not have included the amount in muacceles sold during that year? The estimate I used in the text does seem more trustworthy. Note, however, that my argument as to the differences between Ottoman and Western European state finance would still be valid (although somewhat less strongly so) if I had used the estimate in this footnote.

³⁶ According to McGowan(?)150-300 farms per year were converted.

sometimes more than 70% of tax revenue had to be spent on interest payments is an extreme example of the role played by public debts in state finance in Western Europe. But also in Britain this percentage increased from 24% at the beginning of the eighteenth to about 60% at the beginning of the nineteenth century, as O'Brien shows,³⁷ and the percentage for France of more than 50% has been mentioned already.

In addition to this it is interesting to notice that France's capable Finance Minister Necker in his famous Compte Rendu au Roi of 1781 was at the same time very critical of the state loans by means of expensive life annuities that had been practiced by his predecessor, although their rate of return on this life-annuities of 12% was much lower than that on *eshams* in the Ottoman Empire.³⁸ Graph 5 shows that also in Holland the importance of life annuities in the public debt was small and decreasing to negligible in the course of the eighteenth century. Although in Holland the interest on life annuities was even only 9% or less, this was still considered as a very expensive form of borrowing, despite the fact that in this form of state debt the capital sum was automatically redeemed after the death of the lender. In general the opinion had become that it was in the interest of the state to prefer redeemable forms of debt at much lower rates of interest. Even in France obligations on the Hotel de Ville de Paris formed a much larger part of the French state debt than advancements by the tax farmers to the government or than the sale of life annuities. These forms of borrowing were only resorted to in situations of emergency when the credit of the state was no longer strong enough to borrow on the normal conditions. In the Dutch Republic no advance payments at all were required from tax farmers. In other countries advance payments were often a condition but as a rule the amounts were relatively very small as compared to what became the situation in the OE during the *malikane*-system.

The strength of Dutch credit was a result of the fact that the cities had agreed to provincial taxation as the security for provincial loans, and that tax receivers were allowed to give interest payments always first priority because, contrary to all other forms of public expenditure, they could be paid out without any further specific payment-order. The centralized provincial administration of the many taxes enabled Holland's provincial government to an efficient monitoring of the results of the tax system.³⁹ By a combination of continuously raising tax revenue, despite stagnating population and economy in the eighteenth century, and drastically curtailing war expenditure, Holland remained able to sustain the high proportion of interest payments in state finance and even adopt a policy of debt redemption, until the Naval War with Britain of 1780-84. For the Ottoman Empire it can be noted that the data in Graph 1 combined with those in Graph 6 suggest that the 'financial revolution' of the *malikane*-system was for a long time a fairly succesful solution to the financial problems that had dominated the preceding century as well, but that the esham-system did not really succeed in solving the financial problems resulting from the war with Russia of 1768-1774.

c. A comparison of the composition of public revenue

Yet another difference between both states was the composition of public revenue. Firstly, the high percentage in interest payments in the Dutch Republic implies of course

³⁷ see the contribution of O'Brien

³⁸ Necker, Compte Rendu au Roi (1781)

³⁹ Fritschy in Gelderblom (2009)

a high proportion of income by means of loans, the more so, because interest rates in the Dutch Republic were very low. Genç calculated that the (gross) *malikane*-profits as a percentage of the *muacceles* must have been about 30-35% at the start of the eighteenth century and then gradually declined to about 20-15% at the end, while interest rates in Holland during the eighteenth century varied between only 2.5 and 5%.⁴⁰ This means that the revenue per year from the *muacceles* in the Ottoman Empire must have been considerably much lower than that from loans in the Dutch Republic.

One might wonder at this point if a simple reason for the absence in the Ottoman Enmpire of something comparable to the revenue from loans during the seventeenth century was perhaps not the result of a lack of necessity.⁴¹ Graph 6 shows that it is rather improbable that this was the case, at least not during the seventeenth century, when the empire was plagued by the inability of the government to pay the army and by the resulting revolts of soldiers. This graph also shows another remarkable difference with most Western European states: during the sixteenth century state revenues were supposed to exceed expenditure in order to fill the sultan's treasury. This 'inner treasury' functioned as a reserve bank for the main current treasury.⁴² The graph shows that this treasury probably was quite able to fulfill this task, if necessary, during most of the sixteenth century, thanks to the successful expansion policy of the empire since the fifteenth century that continuously increased its number of taxpayers. The Dutch state had still to come into existence at that time by its revolt against the big Spanish empire at the end of the sixteenth century, and at the time could apply only, with some success, to foreign monarchs for subsidies and loans. Domestic loans as a means of financing war expenditure became important in Holland only in the seventeenth century.⁴³ The Ottoman budget deficits in the seventeenth century shown in Graph indicate that a similar source of money would have been very useful for the Ottoman Empire as well and that the lack of it can definitely not be explained by a lack of necessity. The question why they did not adopt the same system of public finance as states in Western Europe will be further addressed in the next paragraphs.

A second difference in the composition of state revenue is the part played by indirect taxation in tax revenue. The available evidence suggests that in the Ottoman Empire this has never been more than about 10-20%, of which moreover by far the largest part resulted from customs and only about a quarter from 'urban taxes' on internal trade, production and consumption.⁴⁴ In his chapter on public finance in the Ottoman Empire during the eighteenth century McGowan concluded already that 'the old tendency

⁴⁰ Perhaps it should be added that only a small part of this profit actually accrued to the malikaneci; according to Cizaça's estimate about 24% of gross revenue went to the state, 30% to the malikaneci, 14% to the sarrafs who had lent them the money to enable them to pay the muaccele, 17% to profits for subcontractors and 15% to expenses for the actual tax collectors(Cizakça (1996) 166); this would mean that about 40% [30% : (30% + 14% + 17% + 15%)] of gross profits went to the malekaneci, which would mean that the net rate of return on the muaccele for them declined from about 13% [40% x (about 30 or 35%)] at the start of the 18. century to only 7% [40% x (about 20 or 15%)] at the end.

⁴¹ P. Vries, 'Governing growth: a comparative analysis of the role of the state in he rise of the West', *Journal of World History* 13, 1(2002) 67-138, 99, suggested 'that most sultans (...) were not short of money' to explain the low proportion of indirect taxation.

⁴² Inalcik in OEI 77-8

⁴³ Fritschy (2003)

⁴⁴ Fritschy (2008) table

to tax the countryside and favor the towns always prevailed'.⁴⁵ Even in a province like Egypt, with large cities as Cairo and Alexandria, in the eighteenth century only 7% of state revenue was the result of urban taxes on merchants and artisans; 67% came from land taxes, 8% from customs dues, 17% from miscellaneous revenue.⁴⁶

In the Dutch Republic the percentage of indirect 'urban' taxes was in 1700 on average about at least 40%⁴⁷ excluding customs revenue (see Graph 7). This had decreased to about 5 or 6% of total tax revenue in the Dutch Republic at the end of the eighteenth century, while for instance in 1648 it was still about 15%. Elsewhere I have argued already that this high percentage of indirect taxation in total tax revenue also applies to other European states like Spain, France and Britain. It should be noted that it is moreover closely related to the part played by loan financing, because revenues from urban indirect taxation were everywhere considered as a relatively reliable security by investors in state debt.⁴⁸

A last well-known difference in the tax systems of both states that perhaps should not be left unmentioned is that there was a special tax for Jews and Christians in the Ottoman Empire, the *cizye*. According to McGowan this tax provided 42.5% of central government revenues at the beginning of the eighteenth century in the Ottoman Empire and 40% in 1740.⁴⁹ For this difference between both systems of state finance the only explanation is definitely the Islamic character of the Ottoman state. It legitimized this differential taxation by allowing other 'People of the Book' to live according to their own laws, but nevertheless enjoy full protection in the 'House of Islam', on the condition that they paid this special tax. For the other points mentioned, however, especially the low overall level of taxation, the small part played by (alternatives for) loan financing and the small part played by indirect taxes, I will argue in the next sections that knowledge of the historical 'path' taken by the trajectories of state formation in both these parts of the world can contribute more to our understanding of these differences than religion (or than religion alone), especially if we compare the role of demography, geography and the development of urban institutions in state formation in the preceding centuries. I will start with the Netherlands to illustrate this and proceed in section 3 with the Ottoman Empire.

2. Demography, urbanization and state formation in the Netherlands before the seventeenth century

Around 1000 three centuries of population growth started in the western part of the area that would become the state of the Dutch Republic after 1572. This forced to an enlargement of the agricultural acreage to feed the population.⁵⁰ In the wet parts of this area this was realized by digging ditches and delving peat, in the higher dune and sand

⁴⁵ McGowan OEII 711.

⁴⁶ McGowan OEII539.

⁴⁷ About 50% in Holland the most urbanized of the provinces, about 35% in the other provinces). It was still about at least 35% in Holland at the end of the eighteenth century (or even 45% if the revenue of a tax on bonds that was in fact an interest reduction would not be counted in total tax revenue).

⁴⁸ Fritschy (2008).

⁴⁹ McGowan OE II 711: he offers no further references.

⁵⁰ Speet (2004)

areas by chopping forests.⁵¹ There are indications that these activities were coordinated from early on by local authorities appointed by the count of Holland, descendant of a vassal of one of the great-great-grandsons of Charlemagne or by the bishop of Utrecht, both formally vassals of the emperor of the Holy Roman Empire, but in practice autonomous lords in their areas.⁵² A remarkable aspect of the reclamation process was that cultivated areas were sold to the cultivators instead of holding them as part of domain property within a context of feudal serfdom. There are moreover traces of early monetization of the resulting property relations. Count and bishop kept the jurisdiction over the area as well as the right to levy duties and they maintained the authority to enforce the maintenance of the hydraulic works.

Peat became the main source of fuel in the western parts of the Netherlands and the cultivation of the peat bogs caused a lowering of the surface level, after which the soil became increasingly too wet for grain cultivation. Husbandry started to replace arable farming in the wet areas already in the thirteenth century.⁵³ This made it necessary to go in search for bread grains in other regions to be exchanged for fish and textiles and dairy products. The cheapest and easiest way of transport in these areas was of course water transport, either over rivers or, increasingly, over sea. In a feudal situation in which arable land became increasingly scarce it became moreover as important for lords to have access to financial means for personal wealth as to possess much land, to be able to govern the area. In Flanders counts consciously furthered the foundation of cities in the twelfth century to be able to profit from their economic dynamics.⁵⁴ Increasing commerce increased their revenue from tolls, a seignorial prerogative already in Carolingian times. They formulated city privileges and appointed the officials to administer justice and levy taxes, in the cities as well as in the countryside, activities that of course are core aspects of the process of 'state' formation.

For Flanders in the southern part of the Netherlands sources indicate that technical improvements in agriculture were indeed the result of demographic growth and not the other way round.⁵⁵ Demography forced to the founding of cities, land reclamation and grain imports. Those ready to reclaim lands were offered very attractive advantages: less corvees, or abolition of corvees, or replacement of corvees by taxes. 'State builders' must have realized very soon that good property and lease rights for farmers were a better guarantee to increase production than a continuance of feudal relations. According to the Belgian medieval historian Milis the coherence of this part of Northwestern Europe was due to common interests enforced from geographical circumstances. At the same time it was unavoidable that this went together with conflicts and violence, because identical interests of competing partners had to be realized in a limited area.

The seigniories in the Netherlands often grew from fortified commercial centers between which military confrontations occurred.⁵⁶ Besides these interregional conflicts there was always also a tension between the ambitions of a count and that of the cities in his territories, individual cities as well as collectivities. For Holland contacts between the

⁵¹ Speet (2004) 23-25.

⁵² Van Bavel (2009) land reclamation campaigns from the eleventh until thirteenth century were organized and promoted by the count of Holland

⁵³ Van Dam (2002?) 'Peat bogs'; Speet (2004) 26; Van Tielhof.

⁵⁴ Milis 22

⁵⁵ Milis 26

⁵⁶ Milis in Geschiedenis van de Nederlanden eds. J. Blom E. Lamberts (s.a. 1995?) 21

count and collectivities of some villages and cities have been documented since 1289. In 1299 Jan II of Hainaut, who had become count of Holland after the death of count Floris V, had to confirm existing privileges of the cities in Holland to consolidate his power. Nevertheless both count and cities had a common interest in the maintenance of peace and order and the banning of vendettas between clans.⁵⁷ In the thirteenth century, Amsterdam, although granted some privileges and a certain amount of self-government, not only did not yet have the right, but neither the financial means to build fortifications to defend itself against the ambitions of the bishop's city Utrecht.⁵⁸

Urbanization was impressive already around 1300, especially in Flanders with six cities with more than about 30,000 inhabitants due to a high degree of industrialization.⁵⁹ Since 1280 the Flemish count could force the city governments to keep books on city finances.⁶⁰ On the other hand however a tradition came into existence since 1312 that new counts and dukes of regions in the Netherlands always had to confirm the privileges of the cities in the region. In Flanders the three biggest cities were responsible for about half the tax revenue of the county.⁶¹ Rich citizens bought land in the countryside and stimulated the use of production increasing technology and profit increasing land use. City demand caused an increase in international trade especially over sea-routes that became of more importance than the old trade routes over land. The period around 1300 was characterized by intensified internal and external competition between new 'statebuilders' such as the counts of Flanders, Holland and Hainaut. Also bigger states like France and England were involved in this interstate competition.⁶² The king of England for instance wanted to prevent that a coalition of France, Avesnes and Holland would control the commercially important entrance to the river Schelde.

Increasing commerce and urban wealth enabled lords to appeal to other forms of financial support than domanial revenue and taxation alone to finance war faring: in 1345 cities in Holland sold life annuities for Count William IV of Holland and Henegouwen to enable him to wage war against the city of Utrecht and the East-Frisians on security of revenues and lands of his domain property.⁶³ The debts of counts to cities played an important role in the increase in urban power.⁶⁴ This new development in financing government expenditure, first for urban purposes, but subsequently exploited by rulers on higher government levels in their negotiations with towns, was not restricted to Holland. Tracy found the earliest sales of *rentes viagères* in cities in Northern France already in the thirteenth century. The commercial town of Brugge had a capital debt amounting to

⁵⁷ Milis 32.

⁵⁸ Speet (2004) 57.

⁵⁹ Blockmans 48.

 $^{^{60}}$ [In 1302 however the city government of Gent reintroduced a tax on consumption goods that had been abolished by the new king Philip the Fair. This ushered into a revolt during which the count supported the common people united in crafts guilds, the king of France the nobility and urban patricians. An unprofessional army of 11,000 infanterists defeated an army of more than 7,000 trained cavalerists. The result was that in many cities in Flanders, but also in northern cities like Dordrecht and Utrecht the crafts guilds got a say in the city governments. This period of autonomous city republics remained in the collective memory and was referred to in the years of the revolt of the Netherlands against the Spanish king after 1572. (Blockmans 50-2⁶⁰]

⁶¹ Blockmans 57.

⁶² Blockmans in Gesch. van Ned. J. Blom en E. Lambert eds. (1995?) 46-8

⁶³ Dagvaarten Holland I (1987) 39-40. Dagvaarten Holland I (1987) 90-91.

⁶⁴ Blockmans 53.

more than six times the city's annual income already by 1283. French and Netherlandish speaking towns increasingly made use of this new means of credit and the same can be said for south German and Spanish towns.⁶⁵ [

Some theologians condemned the borrowing of money in this way as usury. More commonly however canonists and theologians accepted the argument, that a life annuity was not a loan, since the buyer had no expectation of receiving his capital back.⁶⁶ It has been found that already in the Carolingian era monasteries did not hesitate to sell life annuities to finance projects.⁶⁷ To explain the start and the success of the sale of life annuities by cities in the thirteenth century Tracy assumed also a connection to the need for loans for the Crusades, a 'holy' purpose. To explain why the sale of life annuities developed in these parts of Europe and not in others, as for instance southern France, he pointed to four developments: royal ordinances that offered some assurance against fluctuations in the value of coins, the need for cities to roll over short term in long term debt, the willingness of wealthy investors - often commercial moneylenders - to offer assistance in realizing this; 'last but not least' he mentions the establishing by royal jurists in this part of Europe of the principle that urban communes were one of the few forms of association privileged by the king to act as 'moral persons', and therefore capable of owning property and swearing oaths.⁶⁸ This made it possible for them to be debtors as a 'corporate body', which greatly increased the legal security of creditors.

Italian commercial city-states like Genua and Venice city governments were even already borrowing in the twelfth century. In the case of Genua this seems also to have started with a loan for the (semi-)religious purpose of support for a crusade. Genua did not sell life-annuities, however, but succeeded in acquiring amounts of money from consortia of merchant-bankers in exchange for the control of some taxes. These so called 'compere' became the basis for Genua's permanent long term debt, although in some cases the fiscal rights were alienated only for a specified number of years after which the amount borrowed was considered to be redeemed. The format of these loans was therefore perhaps still influenced by the medieval interest prohibition, and the acceptance of the first loan was perhaps seen as only legitimated by the 'holy' purpose for which it was used. Already in 1172 Venice's government did not wish to abandon fiscal sovereignty to the city's creditors, however. It preferred *forced* loans from its wealthy citizens to help mobilize a fleet against the Byzantine emperor against the promise of repayment. No mention is made of interest payments as to these first loans. A source from 1207 however mentions forced loans at interest rates of 4, 2 or 3%. These were, contrary to what was promised, not retired in the course of time, but happened to form the start of an increasing long term debt, due to the financial burdens of f.i. the war with Genua.

Tracy emphasizes that it had been the same developments that converged to make long term urban debt a possibility in 13th century France, that were present in 12th century Italy. In Italy however it could be rather the city government itself that was considered trustworthy, instead of a juridical guarantee offered by a king, as there was no doubt that the city-'state' had the power to rule and to effectuate financial policies in the interest of

⁶⁵ Tracy Urban Public Debts (2003)16-17

⁶⁶ oral communication in Prato in 2007; see also Tracy (2003) 15

⁶⁷ Milis? or Blockmans?

⁶⁸ Tracy (2003) 20

the wealthy creditors of the city. In Catalonia in Spain cities had also preferred to sell life annuities as well as heritable perpetual annuities to provide the king with money already in the fourteenth century above increased taxation.⁶⁹ The contracts between the king and the communities stipulated that the local authorities themselves were authorized to collect the taxes out of which the interests on the annuities had to be paid. The same would later happen in Holland in the sixteenth century when Charles V convinced its six biggest cities to negotiate large amounts in loans on their common credit.⁷⁰

On the one hand all these developments show how population pressure and interregional competition were important factors in urbanization and state formation in this part of the world. However, on the other hand it has to be conceded, that in the end the decisive aggrandizement of territories in the Netherlands have been also the result of diplomacy, marriages and inheritance or even sale of territories, rather than only of military struggle, notably in the case of the Burgundian 'state' that developed since 1383 and its Habsburgian successor since 1477.

A financial survey made in 1445 showed how important especially the commercially developed parts of their territory, with a high proportion of indirect taxation, were for the revenues of this state, despite the fact that the cities tended to oppose the ambition of the dukes of Burgundy to centralize government and finance in their territory.⁷¹ The only way for the Burgundians as well as for the Habsburgian rulers to get the financial means for military expenditure was by a rough distributive key that established the proportion that each of the regions had to contribute. The amount to be paid was collected however under regional control, and amounts above the normal amount to be spent for military purposes had to be negotiated with representatives of the cities and the nobility and the clergy of the different regions, - convened collectively since 1464 and called the States General since 1477. The attempt in 1447 to have a centralized tax on salt, comparable to that of the French king and to the tax on wool, that was such an important source of revenue for the English king, failed because again the cities did not comply.⁷² The ruler was powerful enough to force cities like Bruges and Gent by military means to pay heavy fines as a punishment for revolts, but not to realize a regular centralized tax system in his territory.

Cities that revolted against their lord did not yet receive the support of other cities, because as Blockmans argues, the peace and support for the development of international trade that could be guaranteed by a strong monarchical state will often have been perceived as an advantage for the development of commerce, so vital to enable rich and powerful citizens to continue their wealthy life styles.⁷³ But when some cities in the Northern Netherlands started to combine against their monarch, as would become the case in the Dutch Revolt, they proved to be able to generate enough financial means to found eventually even an independent republic.

Population growth, which in some instances, like in Holland, was combined with specific ecological constraints, made urbanization, as well as commercialization over sea, on the one hand an urgent necessity. On the other hand commercialization made it

⁶⁹ Snachez Martines in Urban Public Debts (2003) 37, 42.

⁷⁰ Tracy, Fin. Rev.

⁷¹ They were able for instance to oppose a count of hearths in order to prepare centralized taxation.

⁷² Blockmans (1995?) 78

⁷³ Blockmans (1995?) 81-83.

possible, not only to sustain increasing population densities in this part of the world - ca. 1500 there were on average 72 inhabitants per km² in Flanders, 63 per km² in Holland⁷⁴ -, but even to increase substantially the wealth not only of the upper classes of urban societies, but also of a broad stratum of the middle classes.

During the fourteenth century the period of three centuries of population growth had come to an end. There were obvious signs of overpopulation,⁷⁵ while at the same time interstate competition, and because of this also fiscal pressure, fiercely increased. A considerable population decline of about one third due to the plague during the fourteenth century did not diminish war faring however. It had made the remaining part of the population wealthier than before and the decline in labor supply stimulated laborsaving devices like for instance the use of bigger ships in commerce to sustain this wealth. In Holland, higher wages in the cities, and the decreased suitability of the land for grain growing due to peat delving for fuel, stimulated further urbanization despite population decrease. At the same time in the countryside the importance of the coordination of expensive collective arrangements for water management increased.

Population started to grow again in the fifteenth century and around the middle of the sixteenth century had again become the same size as in about 1300. In the 1530s famines have been documented, but in general commerce and industry increased.⁷⁶ A remarkable development in the Habsburg Netherlands was that accumulation of land by wealthy town dwellers took on enormous proportions.⁷⁷ The commercialization of agriculture was facilitated in the Habsburg Netherlands by a greater clarity concerning the rights of tenants and owner.⁷⁸ Systematic land registrations started in the end of the 15. century that would enable authorities to check tax declarations or to tax transfers.

To sum up: rulers in this part of the world had increasingly become dependent on cities to be able to finance wars, and cities were dependent on rulers to maintain peace and to increase commerce and wealth or to defend them against competitors in other neighboring states. A very important development in the financial relationship between cities and rulers had been the start of the sale of annuities by cities to finance increases in war expenditure that could not be financed by means of the existing fiscal system. In Northwestern Europe there are indications that towns needed a special permit for selling annuities⁷⁹, but in practice many towns felt free to do so, although attempts to contain this urban autonomy were made as well by the Burgundian as by Habsburg authorities.⁸⁰ The confidence of investors in the reliability of interest payments on this public debt was founded on the one hand in the legal status of cities as a 'corporate body' with rather autonomous city governments responsible for the economic welfare of the cities, and on the other hand in the systems of urban public finance generated by these city governments. As long as cities grew larger and richer either through population growth or growing economic welfare, revenues from indirect urban taxes grew automatically and

 ⁷⁴ Blockmans (1995?) 85.
⁷⁵ Blockmans in Gesch. v;. Ned. (1995?) 45

⁷⁶ Blockmans 100-102.

⁷⁷ The Dutch historian van Bavel, a specialist in the history of property relations, found that in Holland in 1620 60% of the land was owned by cities; Bavel (2009) vóór p. 169?

⁷⁸ Bavel 169-170.

⁷⁹ F.i. in Leyden; see Marsilje (1985) 285.

⁸⁰ 1473-77 and 1481-92; Van Schaik (2003) 110; referring to Van Schaik (1993) 262-266.

formed a secure fund for loans. Monarchs in this part of the world could negotiate with city governments to tap these attractive financial possibilities for their wars.

The possibility to negotiate loans on the security of revenue from indirect taxes that increased automatically with increasing population and increasing wealth, offered state finance possibly an even more powerful leverage than the possibilities to increase tax revenues by means of proposals to representatives of cities and nobility in the Estates.⁸¹

3. Demography, urbanization and state formation, in the Ottoman Empire before the seventeenth century

How different was the pre-history of state formation in the area of the world in which the Ottoman Empire developed. The Ottoman state, originating in nomadic tribes from Central Asia, started to come into existence around 1300 in Asia Minor. In Western Anatolia population pressure in 1260-1400 led to nomadic migration.⁸² In this part of the world, with population densities that were much lower than those in Western Europe, geographical and climatological conditions did not stimulate to increase agricultural productivity inside the available territory to feed an increasing population. Instead rulers primarily strove to expand their territory to include more tax payers. Inalcik, author of Part I of the authoritative *An economic and social history of the Ottoman Empire 1300-1914* (Cambridge 1997) emphasizes that this dynamic conquest policy, and the resulting predominance of the military class, followed in the tradition of earlier Islamic empires, and subsequently influenced its historical existence for six centuries.⁸³

The main effect of population pressure in this part of the world was not an inward movement directed at an intensification of land use, but an outward expansionist movement. This outward movement was not seawards to increase commerce oversea but land inwards to occupy new territories. Occupied territory could be given in usufruct to warriors but remained in the possession of the ruler. The revenue system of the new rulers for war faring would be based on the land. Military commanders received the right to collect taxes on a certain piece of territory – first called *iqta* ', later in the period of the Ottoman empire *timar* – sufficient to maintain themselves and the soldiers under their command. Although *timars* became often hereditary in fact, they always could be - and often were - withdrawn by the sultan. For his personal upkeep the sultan had the revenues of taxing international trade, of which the caravan trade overland was probably the most important part.

Already well before the Ottoman Empire the bulk of the lands was state owned and this would continue to be the case. The exceptions were lands used for horticulture around the cities and land permanently handed over as a source of revenue to *vakfs*, i.e. religious and charitable institutions. In conquered regions where feudalism had prevailed, it was wiped out: territories in the Balkans were integrated in the *timar* system. Local

⁸¹ A similar point will be argued by P. O'Brien in his paper for this session. He doubts the importance of the Glorious Revolution for the strength of British public finance and argues as well that the development of indirect taxation (that already started in 1the 1640s) was probably more important.

⁸² Inalcik in OEI 29.

⁸³ Inalcik OEI 11

lords could become *timar*holders under strict state control.⁸⁴ Inalcik emphasizes that the state abolished personal services which the local lord or *sipahi* could easily abuse. For the peasants this meant that many corvees and other feudal obligations were simply abolished, although some feudal labour services were also converted into cash tax.⁸⁵ Taxation was now regulated by laws issued from the central government and the population got the right to appeal to the sultan against local abuses and injustices.⁸⁶

Specialisation, productivity growth and trade were not absent in the Middle East and North Africa. However, as has been expounded by Mitterauer, due to ecological factors, agricultural developments were very different from those in Western-Europe. The latter concerned arable farming and cattle breeding, the former however mainly horticulture; the latter needing iron axes to cut down forests and iron ploughs to till the ground; the former consisting of the sheer introduction of new exotic plants and crops, that in this part of the world only needed water to grow, but immediately ceased to grow in case of droughts or damage to irrigation works. He argues that the implication of these differences is that the medieval agricultural revolution in North-Western Europe had far more lasting positive influence on agricultural production and more forward and backward linkages. He also points to the difference in cattle: oxen were draught animals that stimulated the use of wagons with wheels, that could be technologically improved; camels were pack animals that could not be technologically improved. The same point can be made of course about camels and ships. Transport on the land trade-routes dominant in the world of Islam was by means of camels, transport on waterways by means of ships that could be technologically improved.⁸⁷ It is self evident that these kinds of economic differences had consequences for differences in tax structure as for instance to the importance of indirect taxation.

. For the Ottomans wealth was expected to derive from new tax resources in the lands annexed by conquest, not by maximizing income by an intensification of agriculture, industries and commerce through new technologies. Until about 1585 this fiscal policy had been extremely successful. The great expansion of the central treasury enabled sultan Bayezid II (1481-1512) not only to increase the army and provide it with handguns, but also to build warships of a size never seen before on the Mediterranean. There was no impulse however in this part of the world to try to participate in the starting Atlantic trade. This contrasts with the development of a navy in the Dutch Republic that started with initiatives of merchants that needed protection and the financing of which started with taxes on the ships. When the Arsenal started to build large ships between 1450 and 1500 forests in the vicinity of the coast provided all that was needed. By the 17. century it had become necessary to tap resources much further inland. This required the construction of roads usable for heavy cart traffic and labor had to be provided by the villagers. Villagers paid their taxes in raw hemp. Because of population decline the government had to scale down the amount to be delivered by 33%.⁸⁸ In Western Europe especially in the case of the Netherlands, but before that also in the cases of Genoa and Venice - the interdependent development of urbanization and international commerce

⁸⁴ InalcikOEI 15

⁸⁵ Inalcik OEI 150.

⁸⁶ Inalcik OEI 17.

⁸⁷ Mitterauer (2004) 17-40.

⁸⁸ Faroqhi OE II 465

over *sea*, primarily induced urban *merchants* to find the means to protect this commerce. Only later on this task was taken over by institutions of the state.

The characteristics of urbanization that accompanied the spread of Islam were in general very different from that in Western Europe. After 1500 the percentage of people living in cities of more than 10,000 inhabitants, although much lower than in the extremely urbanized province of Holland, was probably on average not much lower than in Western Europe as can be seen in table 2.

Table 2. Population in cities > 10.000 (000s and % of total population)										
	Holland		Dutch	NW Europe		Europe		N-Africa &		
			Republic	2				Midd.East		
1500	80	29%		552	7%	3,441	6%	?	>7%?	
1800	400	52%	26%	3,895	15%	12,218	10%	> 3,000	10-20%	

Table 2. Population in cities > 10.000 ('000s and % of total population)

Sources: J. de Vries, *European Urbanization 1500-1800*, 30-36; A.v.d. Woude, in: AGN 5, 102-168, 139; McGowan in OE II(?)

However because there were some very big cities like Istanbul and Cairo, there were much less small cities. When Mehmed II had conquered Istanbul in 1453 it was a city of about 30,000-50,000.⁸⁹ In about 1550 this had become about 400,000.⁹⁰ During the seventeenth century Cairo also had probably about 400,000 inhabitants. Amsterdam, by far the biggest city in the Dutch Republic, had only about 200,000 at the end of the eighteenth century. Of course the wealth of important cities, like Istanbul, Alexandria or Aleppo, was at least partly related not only to caravan trade over land, but also to commerce across the Mediterranean Sea. But even in these cities merchants never became the dominant social class. Military and religious elites involved in the government apparatus were always richer and more influential. Merchants moreover especially in Istanbul often functioned in a command economy organized by the state to ensure the provisioning of the city.

New cities, however, were often established not near a river of a sea, but as reinforced places with a garrison on the borders between nomadic and settled areas to control conquered territory, and to protect the long distance overland trade with camel caravans. The territory in which the warriors spread, remained one, however, in which population densities were much smaller than in Western Europe. Land was much less scarce than in Northwestern Europe. Turkish settlements took either place in Byzantine castle cities or military centers were established around the fortresses in the newly conquered areas, particularly on the frontiers. With the conquest of new territories, they developed into ordinary settlements, but could continue to keep their military character.⁹¹ Cities were included in the *timar*system of revenue-raising and agriculture remained always by far the most important source of government revenue also in urbanized areas.⁹²

⁸⁹ Inalcik OEI 32.

⁹⁰ Inalcik OE I 18.

⁹¹ Acun 265

⁹² Acun 259

The development of urbanism in this part of the world was in general more determined by the centralized Ottoman state system than by autonomous commercial developments. A remarkable aspect of urbanization in this part of the world is the phenomenon of forced migration.⁹³ Mehmed II (1451-1481) imported individuals with experience and professional skills to Istanbul to bring about an economic revival. This repopulation of Istanbul through forced migration was in no way an isolated phenomenon only designed to build up the newly conquered capital. Also in other cases professionals were systematically transferred to develop urbanization in newly acquired territories. It was an overall policy throughout his reign of thirty years as a means of sedentarization and urbanization, and to protect caravan routes in unpopulated areas.⁹⁴ It was no coincidence that big cities were established inland on the caravan routes providing transport and communication all over the empire. The caravan network supported the long distance trade, while the establishment of regional markets aided the regional trade. Around these regional markets, cities of various sizes were developed and hierarchical urban networks were formed.⁹⁵

No doubt pull factors in the form of employment possibilities, especially in big cities, were a factor in urban growth in the Ottoman Empire as well as in Western Europe. However, contrary to Western Europe migration of peasants to a city like Istanbul was probably even more the result of the inability of the Ottoman government to provide enough security against brigandage or oppression by military men or tax farmers in the huge and sparsely populated territory in the countryside. Peasant flight in the Ottoman Empire was in any case not the result of a commercialization of agriculture that reduced employment possibilities in the countryside, while at the same time increasing the demand for urban manufactures in the countryside. To this can be added that contrary to the situation in Western Europe peasants in the Ottoman Empire also had the option to flight from the insecure open plains to forests or mountains to escape physical or fiscal oppression.

Another aspect of the role of the state in urbanization was the fact that the necessity to protect international trade over *land* induced *rulers* in the Ottoman Empire to organize urban fortified settlement along the caravan roads to protect commerce. Moreover in the Ottoman Empire welfare arrangements were not only the result of initiatives of religious brotherhoods in cities, or of individuals bequeathing their property to *vakfs*, charity institutions. They could also be part of central bureaucratic attempts at urbanization. Especially along the caravan roads complexes of soupkitchens and hospitals and other facilities (*kiilliyes*) were founded by the state in cooperation with sheikhs of religious brotherhoods, in an attempt to induce a nomadic population to settlement. The expenditure on infrastructure and welfare demands that these urban settlements required were financed from tax revenues from the lands that were handed over to *waqfs*.⁹⁶ In cities in Western Europe the organization of welfare arrangements for the urban poor was always the result of initiative of urban groups or of urban government.

Inalcik emphasizes that the sixteenth century was one of population growth and the extension of arable land 'through the introduction of more efficient techniques,

⁹³ Acun 263 ; NB also examples in Leo Africanus for Morocco in the 16. century.

⁹⁴ Acun 262-3.

⁹⁵ Acun 264-5.

⁹⁶ Hayashi 195

stimulus of the market, surplus labor by immigration or natural growth and more efficient public security and state protection'. At the same time however he mentions that according to the register of 1572 still only 60% of the cultivable lands in the fertile Cilicia flood plain were converted into regular agricultural exploitations, the rest was still cultivated only on a temporary basis by nomadic groups. In 70% of the settled places the village did not exceed 20 households.⁹⁷ Despite population growth during the sixteenth century deserted villages remained a pressing problem for the state nearly everywhere in the Ottoman empire: 'since the peasants did not own the land and as there were always other lands available, flight from their tract was frequently resorted to.⁹⁸ Peasants abandoned their villages to set up new ones on inaccessible sites. Reasons for peasant flight were on the one hand social and political conditions: attacks by passing troops, brigand bands or caravans or simply flight to avoid tax registration or tax collection. After the terror of the Celali bands in 1596-1610 the government took drastic measures to ensure the return of peasants to the abandoned villages in Anatolia.⁹⁹

Other reasons for peasant flight were exhaustion of the land, desertification, earth quakes and epidemics, a combination of possible disasters that continuously had much more rayaging effects in this part of the world than in Western Europe throughout the whole period discussed in this paper. The plague was one of the major impediments to urban growth, says Faroqhi in a paragraph on 'plagues, famines and earthquakes'.¹⁰⁰ Its spread can often be traced to ships and caravans arriving from Istanbul. Harvest failures, she adds, have been less systematically investigated, and more studies should also be done on earthquakes. While evidence concerning population decline in the towns is ambiguous, for the countryside it is fairly well documented. Tax revenues of many villages in 1640-50 constituted a fraction of their late 16. century levels. Many peasants fled to cities where epidemics and malnutrition took their toll. Many villages simply disappeared only their names remained.

Table 3. offers a comparison of population densities about 1600 in the Ottoman Empire an Western Europe.

Table 3. Population density estimates of the Ottoman Empire and European countries, c. 1600 (persons per square mile)

Low Countries	112
Italy	97
France	86
Britain	56
Ottoman Empire in Europe	41
Ottoman Empire in Asia Minor (Turkey today)	20

Source: Inalcik in OE I 31

Table 4 summarizes differences in overall demographic developments between both parts of the world.

 ⁹⁷ Inalcik OEI 161.
⁹⁸ Inalcik OEI 165.

⁹⁹ Inalcik OE I 32.

¹⁰⁰ Faroqhi OE II 441.

Table 4. Population estimates for (areas in) Europe and North-Africa and the Middle East in 1500 and 1800 (000s)

	Nether-	Eng- land & Wales		Medi- terran. Europe	-	Moroc- co	& Leba-	ne &	0	Ott. Emp.
1500	900	2,600	16,400	18,300	61,600	5,000	1,500	500	15,000?	30,000
1800	2,100	9,200	27,000	31,200	123,000	3,000	1,500	500	13 à 15,000?	

Sources: R. Jones and C. McEvedy, *Atlas of World Population*, New York, 1979; J. Brignon a.o., *Histoire du Maroc*, Paris, 1967, 263; Ch. Issawi, *An Economic History of the Middle East and North Africa*, London, 1982, 93 (15.-19. century fluctuations without clear trends; 1800 about 34 mill.; D. Quataert, *The Ottoman Empire 1700-1922*, cit. p.114 (Ottoman Empire 1800 25-32 mill., of which 10-11 mill. in Europe, 11 in Asia, 3 in N-Afr; according to Pamuk (2004): half in Europe).

Of course population figures for these ages can never be very exact. Nevertheless I think that these two table offers strong indications that the force of population pressure will have been much less in the world of Islam than in Western Europe between 1500 and 1800.

The conclusion to be drawn is that the intense interference of the state with the process of urbanization was driven by a realistic concern of insufficient autonomous concentrated settlement because of a lack of the kind of population pressure that forced people in Europe to concentrate in cities and try to find a living in trade and commerce.¹⁰¹ The result of this was that cities in this part of the world became very different from the (semi)-autonomous communes in Western Europe. Cities in the Ottoman Empire were mostly governed by centrally appointed officials, although in provinces far away from the center like Egypt, Algeria and Tunis local groups had a chance to become rather influential. But there was no institutional development towards the city as a 'corporate body', a political entity separate from monarchical power. Islamic cities in the Middle East and North Africa were often centered round a mosque, a public bath house and a sug, but for the rest they were mainly a collection of separate quarters that often separated ethnic and religious groups, with few common institutions. One building especially that was always missing was a town hall, the natural heart of so many Western European cities. The three main city officials the *amir* for military affairs, the *muhtassib* for economic affairs and the *aadi* for juridical affairs did never constitute a city government. Economic and social tasks in the cities were either fulfilled by a scattered number of waqfs, charity institutions, used by the rich to circumvent the inheritance laws in Islam, or, if necessary, by the central state. There was no urban public finance, no urban taxes to finance urban public expenditure. Even when persons from the local upper class succeeded in being appointed as the city's *qadi*, *amir* or *muhtassib* for a longer period, as

¹⁰¹ Vries (2002) 112 also mentions the possible importance of population density to explain differences between 'the West and the rest', but he does not the discuss the implications for the character of urbanization.

was increasingly the case in provinces like Egypt, they did not constitute a city government eager to protect trade against the fiscal greedyness of the state as the main source of their own wealth. Their wealth was on the contrary the result of their relation with the central government (and of their personal abilities to cheat), because they had the right to levy the taxes partly to be transferred to Istanbul and partly for their personal income.¹⁰²

Military imperialism together with fiscalism formed the basis of the Ottoman process of state formation¹⁰³ and urbanism was largely a politically driven phenomenon. When the wars with Iran between 1578 and 1639 had ruined Ottoman state finance the Ottoman Empire displayed much adaptability to address its financial problems.¹⁰⁴ However, the characteristics of urbanization in the preceding centuries, which had been unavoidably determined by intensive state interference because of low population densities, had not offered them the possibilities to tap the wealth of cities in the same ways as this had become possible in Western Europe. Cities knew no strong nearly autonomous commercial elites, they did not offer investment possibilities in state loans, secured by the political influence of cities. At the same time attempts to just resume the former policy of expansion of the empire after the successful Koprulu reforms of the 1660s were definitely thwarted in 1683 at Vienna. Wars were no longer profit producing businesses¹⁰⁵ as they had been under Suleiman the Magnificent.

Conclusion

The argument of this paper can be summarized as follows. If we look from a Dutch perspective to the Ottoman trajectory of state formation in terms of the characteristics of its state finance, we cannot fail to be struck by the relatively low overall level of its state revenue and expenditure in comparison with the small Dutch Republic especially in the eighteenth century. Another remarkable difference is the relatively small importance of indirect taxation in the Ottoman Empire, despite a level of urbanization that was probably, at least on average, not much lower than that in Western Europe as a whole. A last, better known difference was the absence in the Ottoman Empire of loan financing, that was a very important component of state finance in the Dutch case. Even if we accept the suggestion that the *muacceles* of the Ottoman *malikane-* and *esham*-system can be seen as an alternative for loans, their relative quantitative importance did not match the importance of loans and interest payments in Dutch state finance, nor that of Western European states. It has been argued that an explanation for these phenomena can be found in differences in demography and geography, and in the resulting patterns of urbanization in the preceding centuries, rather than in a difference in 'fiscal values'.

In Europe population pressure led to intensive agriculture and to systematic efforts for mercantile gains from foreign trade across the oceans by relatively small-sized state structures fiercely in rivalry against each other.¹⁰⁶ In the Ottoman Empire, however,

¹⁰² Shaw (1962)

¹⁰³ (whose formulation is this?)

¹⁰⁴ Darling, Pamuk..

¹⁰⁵ Faroqhi's formulation?

¹⁰⁶The point was made already by Inalcik OE I 50-51[°].

population growth led to increased nomadism, territorial expansion and the establishment of one big empire, as it had done already at the start of the spread of Islam when tribes from the Arabian peninsula, united by a new belief in one superior God, entered the Fertile Crescent. It did not result in ambitious forms of expansion over sea, in any case not in attempts to cross the Atlantic. There was no urgent need to find alternative routes to the rich trades of the Far East, as there was direct access to the existing flourishing trade routes over land. Population growth in the Ottoman Empire did neither lead to an urgent need to stimulate exports to enable the import of basic necessities. Agricultural development consisted of simple expansion of the areal under cultivation and diversification of horticulture rather than of specialization and intensification of land use with forward and backward linkages to the rest of the economy. In other words, in comparison with Europe this part of the world, despite some population growth in the sixteenth century, remained characterized by a lack of 'population pressure' and by different geographical characteristics and a resulting different character of economic development until 1800 (and beyond). Until the end of the sixteenth century there was no land scarcity in this part of the world and no urgent necessity to increase the monetarization of fiscal revenue. Land remained the most important source of state revenue and it remained in the possession of the ruler. The main concern of the ruler was to retain enough tax payers on his territory. Until about the 1580s a fiscal policy of striving for territorial expansion to expand the number of taxpayers to realize a revenue surplus was largely successful.

These factors alone are not yet sufficient to explain the low level of state finance, the low proportion of indirect taxes and the absence of a public debt in the seventeenth and eighteenth century. What they do explain, however, are differences in the character of urbanization and the resulting urban institutions, which precluded developments in state finance comparable to Western Europe. Whereas in Western Europe population pressure led to an autonomous drive to urbanization and commercialization, in the Ottoman Empire lack of population pressure made urbanism much more to a state driven affair. The result was that, while many cities in Western Europe came to be dominated by commercial elites, and by a situation of interdependency between cities and monarchs, Ottoman cities came to be dominated by military and bureaucratic elites, dependent for their wealth on their access to state revenue, first within the *timar*-system, later increasingly by their involvement in tax farming. The resulting absence of city governments and of urban systems of public finance can explain very well why the Ottoman Empire followed a different trajectory of state formation as to its system of state finance than Western Europe. There was enough wealth in the Ottoman cities among the commercial classes to allow since the end of the sixteenth century the development of the institution of tax farming that often required pre-financing by private financiers. The lack of cities as a 'corporate body', however, blocked the trajectory to public credit by means of city governments whose control over – automatically increasing - urban tax revenues from mainly indirect taxes, offered the security for the interest payments on investments in public debt made by citizens, as was the case in Western Europe.

There is an ongoing debate on the concept of 'the Islamic city', in which it has already been extensively argued that it is doubtful if religion or religious law resulting in different institutions, are the main factors that make cities in the 'world of Islam' different from cities in Western Europe, and if not rather geography and history account for common characteristics.¹⁰⁷ Some authors have tried to argue in the context of this debate that the lack of urban autonomy in the Ottoman Empire is not as absolute as other authors have thought, for instance because local intermediaries between a city and the central government did exist.¹⁰⁸ On the occasion of the accession to the throne of a new sultan, complaints against the existence of illegal indirect taxes were indeed often voiced and often even, temporarily, acknowledged.¹⁰⁹ As far as I know the point has never been made in this debate, however, until now, that cities never would or could be consulted as a 'corporate body' about issues of state revenue. Not only a *suq*, a mosque and a public bath, are characteristics common to all cities in the 'world of Islam'. Perhaps even more characteristic was the ubiquitous absence of such a thing as a town hall, as it was found in most European cities at the time. What is especially important to understand the differences in state formation, is the lack of something that could be called 'urban public finance' in cities in this part of the world, the levving of urban taxes for urban purposes by means of an urban government. ¹¹⁰ It was this characteristic that meant that the sultan could never make use of what in Western-European fiscal history is called 'urban credit', although he might succeed in getting ever larger advancements on tax revenue from merchants and financiers by means of tax farming. This, probably more than the interest prohibition, precluded a development from urban credit to state credit in this part of the world, and by implication the development of a domestic state debt. This constituted a serious brake on the increase on military expenditure in the Ottoman Empire as compared to the developments in state finance in Western Europe.

Apart from the debate on the concept of 'the Islamic city', the role of religion as well as that of 'preceding historical trajectories' have also more recently been discussed by several authors to explain differences between the development of Western Europe and the 'world of Islam'. In the last part of my conclusion I will yet try to evaluate my approach in the light of their results.

Çosgel, in a recent article on Ottoman public finance, prefers a theoretical to a historical approach.¹¹¹ His interest is, however, mainly confined to explaining regional diversity within the Ottoman tax system, which he does by applying transaction cost economics. In this way he is able to conclude 'that it does not seem that the Islamic legal system introduced rigidities into the Ottoman tax system'.¹¹² That he can avoid the - what he calls - 'narrow historical approach'¹¹³ of historians like Inalcik, results from the fact that, in contrast with Inalcik, he does not display much interest in the wider comparison with Western Europe.

Kuran on the contrary did not hesitate, in an interesting and important article, to emphasize 'Middle Eastern institutions, including ones rooted in the region's dominant

¹⁰⁷ Kisaichi, 'The Maghrib', in: *Islamic Urban Studies. Historical Review and* Perspectives M. Haneda and T. Miura eds. (London/New York 1994) 42.

¹⁰⁸ Kisaichi 38.

¹⁰⁹ Fritschy (2008)

¹¹⁰ to be found in *Islamic Urban Studies. Historical Review and* Perspectives M. Haneda and T. Miura eds. (London/New York 1994)

¹¹¹ M. Cosgel, 'Efficiency and continuity in public finance', Journal of Middle East Studies 37(2005) 567-

¹¹² Cosgel (2005) 581.

¹¹³ ibidem 567.

religion' to explain 'why the Middle East is economically underdeveloped'.¹¹⁴ One of the three institutions he had in mind was, that Islamic law provides no room for corporations. This echoes Tracy's emphasis on the development of cities into a 'corporate body', which greatly increased the legal security of creditors. As we have seen, however, the lack of this development in Italian cities did not preclude the development of public debts. The sheer existence of urban public finance and city governments dominated by a commercial class that also had a private interest in the possibilities of investing in an interest bearing debt was sufficient. As to the waqf-system 'which locked vast resources into organizations likely to become dysfunctional over time', this may have impeded institutional developments necessary for economic growth, but I do not think that it is of relevance to explain the absence of a funded public debt. His important third point about the Islamic inheritance system that limited the concentration of wealth, might however on first sight indeed be interpreted as a serious impedement for investing in public debts. Yet the inheritance law was obviously no obstacle to invest in shares in the muacceles in the malikane- and eshamsystems. Cizakça mentions moreover that the owner was allowed to sell the shares to his children if a transfer tax of 10% was paid. Although it has to be conceded that in the Dutch Republic inheritances to children were not taxed, and that even the tariff for collateral inheritances was only 2.5%, I doubt, nevertheless if this makes it probable that Islamic inheritance law can be seen as a better explanation for the absence of a funded public debt than the explanation offered in this paper.

My emphasis on the explanatory value of 'trajectories of state formation' preceding the sixteenth century to explain different developments in Western Europe and 'the world of Islam' seems to be more seriously undermined by a recent brilliant article by Acemoglu, Johnson and Robinson.¹¹⁵ They established a statistical relationship between the potential for Atlantic trade and post-1500 economic development 'that weighed against theories linking the rise of Western Europe to the continuation of pre-1500 trends'.¹¹⁶ In their reasoning the great divergence between Western Europe and other parts of the world is almost entirely accounted for by the growth of nations with access to the Atlantic Ocean and the institutional changes induced by the development of Atlantic trade after 1500. They argued as well that, contrary to what I have suggested in this paper, interstate competition was not an important factor in the process of state building, because there is no correlation with the number of years that states were at war. To this point I can only say that I doubt if the number of years at war is in this case a good enough indicator. Intensity of war faring - that could perhaps be measured for instance by amounts in war expenditure - might be a better indicator. As to the 'pre-1500 trends' they researched these turned out to be more specifically 'having been part of the Roman Empire' and 'the influence of Protestantism'. This seems to leave yet some room for my suggestion that differences in urban institutions, especially the absence of the development of urban public finance, as a result of continuously low population densities that induced strong state interference with urban development, may yet have been an important explanation for differences in the trajectory of state formation between the West and 'the world of Islam'. It is interesting to note moreover, that they added that the

¹¹⁴ T. Kuran, 'Why the Middle East is economically underdeveloped: historical mechanisms of institutional stagnation', Journla of Economic Perspectives 18, 3 (2004) 71-90.

 ¹¹⁵ Acemoglu c.s. *American Economic Review* 95,3 (2005) 546-579.
¹¹⁶ Acemoglu e.a. (2005) 561, 557, 558

tendency for their post-1500 institutional changes to emerge should have been much stronger in societies with existing checks on royal power than in countries with absolutist regimes and monarchy-controlled state monopolies. This is of course in line with the line of argument developed in this contribution.

I have argued already elsewhere, that I do not think that the development of the malikane- and esham-systems can be explained from increasing financial and economic integration with Europe as Pamuk has suggested.¹¹⁷ By suggesting that the Ottoman system of state finance could be improved by just accepting characteristics of Western European systems, he implicitly seems to deny the importance of demographic and geographic differences that hampered a transition to a Western European system of state finance. I found Cizaçka's analysis of the development of malikane and esham, focusing on the 'risk-averseness' of the Ottoman state, much more convincing. Rather than an imitation of what was happening in Europe – or to be more precise, what was, as we have seen, in fact not happening in Europe – the malikane and esham systems can be seen as a rational 'risk-averse' response to continuously much lower population densities than in Western Europe and the resulting lack of the development of autonomous urban institutions, allowing the development of a funded state debt at low rates of interest. According to me the tragedy of states in the 'world of Islam' is that, when they really made the step to debt financing, that this had to be a step towards a foreign instead of a domestic debt,¹¹⁸ and that this would subsequently be a main cause for the loss of their independence. But that is another story.

[LIST OF REFERENCES STILL TO BE ADDED!]

[GRAPHS TO BE CHANGED FROM COLOR TO BLACK AND WHITE AND SOURCES TO BE ADDED!]

¹¹⁷ Pamuk (2004) Fritschy (2008).

¹¹⁸ Cizakça (1996) 187-189 sketches how the esham developed into bonds during the first half of the nineteenth century. As these bonds could be used to pay tax obligations I think that they did not have the character of long term funded debt.



Graph 1. Total tax revenue in the Ottoman Empire and the Dutch Republic in tons of silver (1608-1794)

Graph 2. Tax revenue in grams of silver per head in the Ottoman Empire and the Dutch Republic (1608-1794)





Graph 3a. Composition of public expenditure Holland 1575-1794 (percentages)

Graph 3b. Composition war expenditure (estimates based on Holland army = 60%, Holland navy = 75%, customs revenue admiralties) (000 glds)





Graph 4. Interest payments Holland as % of total tax revenue (1575-1794)

Graph 5. Composition of interest payments on different forms of loan revenue in Holland 1726-1794





Graph 6. Difference between state revenue and state expenditure in % of state revenue in the Ottoman Empire (excl. timars)

Graph 7. Composition public revenue Holland 1572-1794 (partly estimates)





Graph 1b. Tax revenue in Holland, 1572-1795 in glds (9-year moving averages for every tenth year)