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Wealth inequalities in cities of the Polish-Lithuanian Commonwealth and their changes during the Seventeenth Century. Sources and methods of measure

Today, the Gini coefficient is a popular tool, keenly used to describe inequalities in statistical dispersion. The aim of statistical study of concentration is to determine whether the sum of values is distributed evenly among the entities comprising the collective in question.[1] The study should concern income or both movable assets and fixed property of the taxpayers. However, in the case of tax registers from the pre-industrial era we have no information on the above whatsoever. We can, using indirect methods, sketch a model of wealth concentration in the city as municipal councils used to draw from their own assessment of individual taxpayers' material status when fixing rates of the two types of taxes.[2]

Municipal tax registers (so called *szos*) were drawn up in the form of books; the data is organised by names of streets. Next, the name and surname or only the surname of each taxpayer is provided; in most cases, the register also includes additional information, like the profession or whether the taxpayer was an owner or a tenant of a building. Taxes were paid by both citizens of towns (who owned real estate) and tenants, most of whom formed part of the transient population, or were people who could not afford to assume citizenship. Most taxpayers are men. Actual amounts paid were provided in a column next to the taxpayers' names.[3]

The Gini coefficient value ranges from 0 to 1. Extreme values do not exist in reality, as 0 indicates thoroughly equal distribution of the funds between individuals, which means that all members of a given community have the same income or wealth at their disposal. Value 1 stands for an extremely unequal distribution whereby one person possesses the entire income or wealth. In reality, values below 0.2 are considered as lacking concentration, 0.2-0.4 as weak concentration, 0.4-0.6 as medium concentration, 0.6-0.8 as strong concentration, and 0.8 as very strong concentration.[4] In 2013, Bulgaria had the highest Gini coefficient among the coun-

[1] M. KOPCZYŃSKI, *Podstawy statystyki. Podręcznik dla humanistów*, Warsaw 2005, pp. 55-59.

[2] Research problems and the limits of the tax register are developed in: K. WAGNER, *Tax Registers as a Tool for the Analysis of Wealth Inequalities in Selected Towns of the Polish-Lithuanian Commonwealth in the 17th Century and the Beginning of the 18th Century. Overview and Research Problems*, in "Codrul Cosminului", 23, 2016 n. 1, pp. 7-18.

[3] K. WAGNER, *Potop a Wielka Wojna Północna w Warszawie w świetle rejestrów podatkowych - przyczynek do porównania dwóch szwedzkich okupacji* [The Deluge and the Great Northern War in Warsaw in light of tax registers], in "Saeculum Christianum", 20, 2013, pp. 109-119.

[4] M. KOPCZYŃSKI, *Podstawy statystyki*, cit., p. 58. It is worth noting that the value of Gini coefficient calculated based on wealth is typically higher than the value calculated based on income.

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tries of the European Union – 0.354, while Iceland boasted the lowest – 0.242. Poland was positioned between Croatia and Luxembourg with the value of 0.307, i.e. slightly higher than the EU average (0.305).[5]

This paper's goal is to determine whether the Gini coefficient value indeed refers to the communities who are at a threshold of economic growth, and what is the correlation between the value of the coefficient and the town or city's economic situation. Also, it is worthwhile to ponder the question: is there any correlation – noted by both Jan Luiten van Zanden and Guido Alfani[6] – whereby the larger the town/city, the more visible the inequalities. Finally, how do the towns/cities of the Polish-Lithuanian Commonwealth compare to those in Western Europe.

Tab. 1. **Concentration of wealth in Kraków 1635-1702. The Gini coefficient**

Year	Gini
1635	0.72
1653	0.68
1692	0.58
1702	0.78

Source: author's own study based on ARCHIWUM NARODOWE W KRAKOWIE (ANK), AmK 2607, 2623, 2717, 2649.

Throughout the entire period in question, the Gini coefficient in Krakow was high – it oscillated between 0.58 and 0.78. These are not rare values – we know of cases of cities where the index reached as high as 0.8 in late Middle Ages or in the Modern Era.[7] In reality, it indicates great discrepancies within the local community, especially in the first half of the century when the city's economic development was driven by political factors, e.g. presence of the royal court there. Back then, 5% of the community paid almost 51% tax, while 10% of the most affluent residents paid 64%. Thus the "bottom", i.e. the poorest 5% paid less than 0.2% while 10% paid 0.4% of the basic tax imposed on the entire town.

In the years 1653 and 1692 the inequalities were being erased – in the mid-century the index fell to 0.67 and towards its end to 0.58. Therefore, the basic municipal tax was distributed a tad more evenly, which was reflected in the city's material structure – in the subsequent years, the poorest 5% paid tax 0.6% and 1%,

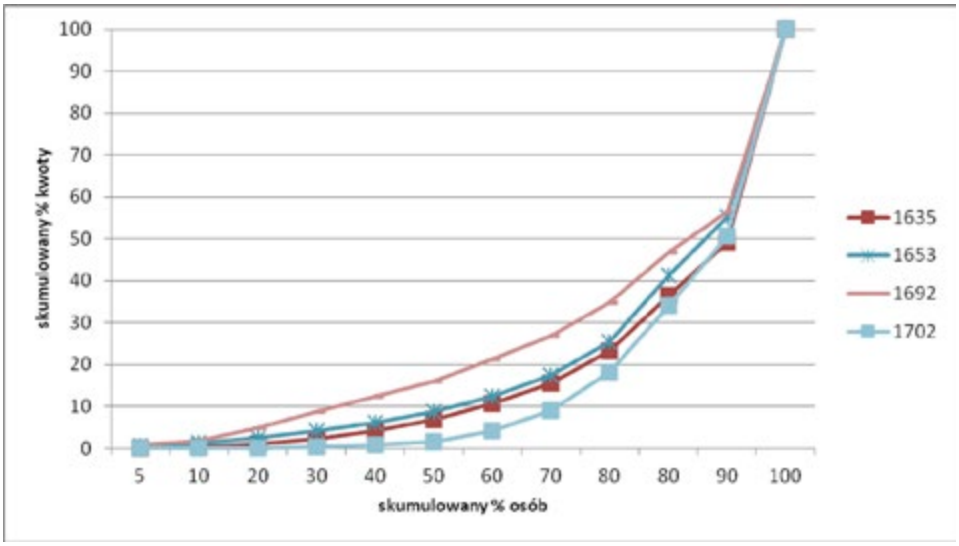
[5] European study of income and living conditions (EU-SILC) in 2013. A note prepared for the press conference held on 23 December 2014, GUS http://stat.gov.pl/download/gfx/portalinformacyjny/pl/defaultaktualnosci/5486/7/5/1/euro_badanie_dochodow_i_warunkow_zycia_-eu-silc-_w_2013.pdf [access: 14/03/2016]

[6] J.L. VAN ZANDEN, *Tracing the beginning of the Kuznets curve: western Europe during the early modern period*, in "Economic History Review", 48, 1995, n. 4, pp. 643-664; G. ALFANI, *Economic Inequality in Northwestern Italy: A Long-Term View (Fourteenth to Eighteenth Centuries)*, in "The Journal of Economic History", 75, 2015, n. 4, pp. 1058-1096; IDEM, *Plague and distribution of property: Ivrea, Northen Italy 1630*, "Population studies", 64, 2010, n. 1, pp. 61-75.

[7] J.L. VAN ZANDEN, *Tracing the beginning*, cit., p. 648-649, 651; G. ALFANI, *Economic Inequality in Northern Italy*, cit., pp. 1069-1072; IDEM., *Plague and distribution of property*, cit., p. 63.

while 10% – 1.2% and 1.9% respectively. At the same time, participation of the most affluent group decreased (the top 5% paid on average 44% of the municipal tax while the upper 10% between 53% and 59%).

Graph 1. **Kraków. The Lorenz Curve**



Source: author's own study based on ANK, AmK 2607, 2623, 2717, 2649.

Reducing the level of participation of the most affluent group in the overall sum of tax, including decreasing the Gini coefficient in 1653, corresponds with the conclusions of Guido Alfani in reference to the towns of Northern Italy. Alfani noted that events such as epidemics, or any other negative phenomena in the history of a town, trigger a decrease in the Gini coefficient, due to the rise in mortality of the wealthier residents; therefore, it called for a more even distribution of financial benefits among a larger group of tax payers.[8]

Yet another possibility that needs to be considered is a fact that wealthy residents were capable of leaving the area under threat and moving to a safe place. The space they had left behind was then filled by far less affluent newcomers from other towns (from the country or from abroad) who sought employment and possibilities to make progress in larger towns. In such cases, two scenarios were feasible: a large volume of newcomers triggered a stagnation in the town's development, or – in case of engaging in economic activities – the newcomers could join the financial elite of a given town.[9] It is worth noting that a decrease in the Gini coefficient was

[8] G. ALFANI, *Plague and distribution of property*, cit., p. 63.

[9] IDEM, *Wealth inequalities and population dynamics in Early Modern Northern Italy*, in "Journal of Interdisciplinary History", 40, 2010, n. 4, pp. 531-536, 539, 545; IDEM, *Prima della curva di Kuznets: stabilità e mutamentonella conzentrazione di ricchezza e proprietà in Età Moderna*, in *Ricchezza, Valore, Proprietà in*

not noticeable in the year when the calamity occurred but more often in the following year. This phenomenon is easily discernible in the case of Kraków, where a decrease in the Gini coefficient in 1653 and next in 1692 was a result of the epidemics, the flood, and ultimately of the Swedish occupation.

Return to wealth concentration at the hands of a small group was noted in Kraków in the early eighteenth century. Here, the disproportion was high: 5% of the most affluent residents paid slightly over 49% of tax, 10% paid as much as 66%, while 5% and 10% of the most impoverished residents paid 0.02% and 0.04% respectively. This was by all means an exceptional situation – the tax register belongs to the registry of the Swedish contribution, which in reality means that in order to ensure the tax was paid in the specified period of time to the occupying force, its largest part was imposed on the most affluent group of the city residents. Simultaneously, in such exceptional cases of levying the tax, the municipal councils had a tendency to protect the most impoverished residents at the expense of the local patriciate.[10]

Tab. 2. **Occupational structure among the 20% of payers of the highest municipal tax in Kraków in the years 1635-1692**

Category	1635			1653			1692		
	first 5%	**second 5%**	**10%**	**first 5%**	**second 5%**	**10%**	**first 5%**	**second 5%**	**10%**
Crafts	10	14	38	3	4	7	3	7	21
Petty trade	3	13	15	1	2	2	5	4	6
Merchants	25	7	3	3	3	3	10	6	7
Services	1	5	2	1	2	4	1	-	-
Free professions and clerks	1	3	3	6	4	5	-	-	-
Women	3	6	8	3	2	3	1	3	.
Other	32	27	81	23	23	54	1	1	8
TOTAL	**75**	**75**	**150**	**40**	**40**	**78**	**21**	**21**	**42**

Source: author's own study based on ANK, AmK 2607, 2623, 2717.

Etàpreindustriale (1450-1850), G. ALFANI, M. BARBOT eds.,Venice 2009, pp. 143-167; IDEM, *Plague and distribution of property*, cit., p. 71.

[10] Hence for example 40% of the Kraków community in 1702 paid 0.7% of the tax contributions, while the ceiling of 1% was exceeded by mere half of the residents (1.6%). The table provided omits the year 1702 due to the exceptionally low percent of noting occupation of the tax payers by the person managing the resister, and due to problems with identifying specific individuals. The way in which the tax register was produced – little annotations on the occupations, lack of differentiating into tenants and house owners, as well as lack of information on the types of housing – all these suggest the necessity of speedy collection of tax and not paying much attention to the formal side of the process.

Occupational structure of the most affluent residents is a crucial element of the analysis. Table 1 presents the volume of specific occupational groups among 20% of people paying the highest tax for the city. Splitting the first decile into two groups aims at more detailed analysis of the occupational structure of the wealthiest residents in the successive years. According to the table, the most numerous groups, both in the first half of the seventeenth century and towards its end, were merchants who constituted between 1/3 and a half of all 5% of the most affluent residents. They were followed by artisans who dominated between 10% and 20% of the wealthiest residents – throughout the entire period covered by the study they constituted between ¼ and a half of payers of municipal tax within this group. The lowest number of merchants and artisans was noted in 1653, namely between the crises that beset the city, when it seems fairly likely that the representatives of these groups had left the city. In such periods, the participation of free professions and clerks rose within the wealthiest groups. Presence of women (and often of the clergy, too) in the group of taxpayers on whom the highest sum was imposed may suggest that they had inherited money, e.g. from their deceased husbands or relatives. This phenomenon was also observed in the towns and cities in Northern Italy.[11]

According to Alfani's study, "the plague effect" is short-lived. Following a crisis, stratification should revert to the state from before the calamity, with those who had left the city in the face of danger returning. At the period of stabilization, the issues of inheritance from the deceased were explained, as it usually meant a significant betterment of their material status. Finally, new arrivals would settle in the cities, often affluent ones; they would purchase abandoned properties and invest money in launching their professional careers. That in turn resulted in the repeated increase in the affluence of the small group of citizens, and thus a return to the state of things as they had been prior to the crisis.[12]

Tab. 3. **Concentration of wealth in Warsaw 1655-1704. The Gini coefficient**

Year	Gini
1655	0.642
1656	0.575
1702	0.662
1703	0.664
1704	0.573

Source: author's own study based on AGAD, WE 832, 834, 836, 838, 1431.

Alfani's observation concerns only towns and cities whose economic development was unhindered, and the only crisis to recover from was the problem of epi-

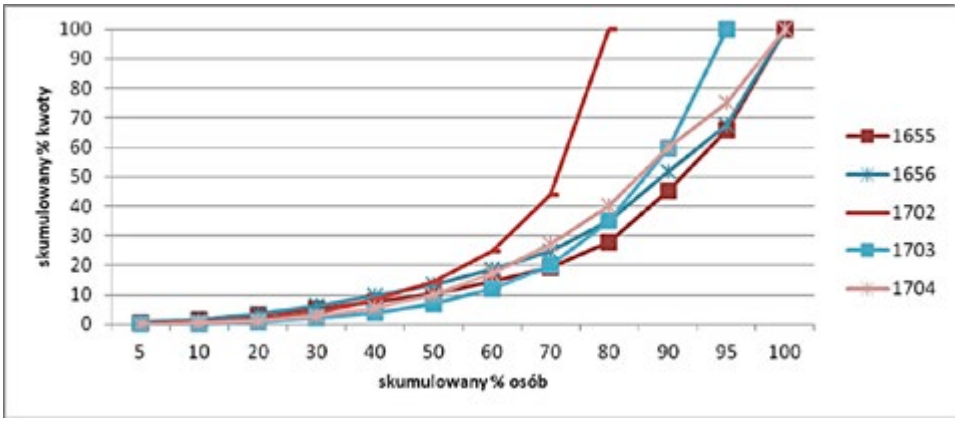
[11] G. ALFANI, *Plague and distribution of property*, cit., pp. 64-67, 70; IDEM, *Wealth inequalities and population dynamics*, cit., p. 546.

[12] IDEM, *Plague and distribution of property*, cit., pp. 64-67.

demics or, e.g. a temporary military conflict.[13] In the case of seventeenth-century Kraków these observations are not as relevant as they are in the case of Warsaw. From among all the towns under analysis only Warsaw demonstrated permanent tendency for development, momentarily curbed by singular events.

In Warsaw, similarly to Kraków, we can observe a huge disproportion between the 5% and 10% groups of the wealthiest and the poorest residents. In 1655, i.e. in the first year of the occupation, the wealthiest group paid 55% of the municipal tax, while 10% of the most impoverished group only 1.3%. In the second year of the occupation a minimal decrease of the concentration index was noted – even though 5% of the wealthiest residents continued to pay almost 1/3 of the tax, the remaining tax was distributed more evenly, e.g. in 1655 groups between 50% and 70% paid respectively 2.7%, 3.9% and 4.9%; one year later the values grew to 3,8%, 5.2% and 6.4%. Interestingly, the taxes imposed on the most impoverished residents remained unchanged for the duration of these two years (5% paid 0.6% tax, and 10% approximately 1.5%).

Graph 2. **Warsaw. The Lorenz Curve**



Source: author's own study based on ARCHIWUM GŁÓWNE AKT DAWNYCH W WARSZAWIE (AGAD), WE 832, 834, 836, 838, 1431.

Following the Second Northern War Warsaw's political and economic situation became stable. Almost fifty years after this military conflict had ended another war broke out, and yet again it affected the city's situation. However, contribution registers from the years 1702-1704 demonstrate that a tendency of momentary decrease and next return to the large concentration of wealth that had been noted in Italian towns is also present in the king's residence – the city of Warsaw. This is particularly visible in 1704 when the index fell by almost 0.1. The situation was similar in the

[13] *Ibid.*, p. 70.

second year of the Swedish occupation of Warsaw, at the time of the so-called Deluge, when the concentration levels fell as well.

Tab. 4. **Occupational structure of 10% of payers of the highest municipal tax in Warsaw in the years 1665-1702**

Category	1655		1702		total
	first 5%	second 5%	first 5%	second 5%	
Artisans	4	3	4	4	15
Petty trade	-	1	-	1	2
Merchants	5	2	11	4	22
Services	2	1	1	2	6
Free professions and clerks	8	7	19	9	43
Foreigners	-	-	1	-	1
Women	3	4	1	-	8
Other	2	7	24	42	75
TOTAL	24	25	61	62	172

Source: author's own study based on AGAD, WE 832, 834, 836, 838, 1431.

Interestingly, the analysis of the occupational structure of Warsaw residents revealed that people with free professions and clerks dominated at the time. They were then followed by merchants and artisans. Surely, this is due to the specific nature of Warsaw as the city where the monarch, the nobility and magnates who served various state functions resided, as well as to the activities of municipal authorities.

It was somehow different in the case of seventeenth-century Lwów. Here the Gini coefficient had a growing tendency, meaning an increase in the concentration of wealth at the hands of a very small group of people. The distribution of tax in the first half of the century was exceptionally even, especially for the Modern era.

Tab. 5. **Concentration of wealth in Lwów 1636-1702. The Gini coefficient**

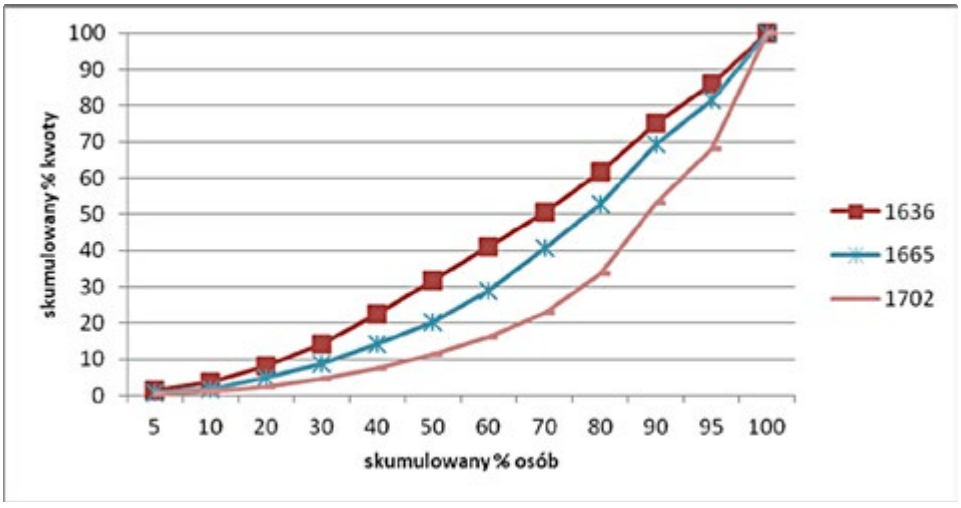
Year	Gini
1636	0.286
1665	0.418
1702	0.604

Source: author's own study based on CENTRALNYJ DERŻAWNYJ ARCHIW UKRAINI U LWOWIE (CDIAUL), AmLw, f. 52, op. 2, nr 777, 782, 795.

The wealthiest 5% of the community paid less than 14% of tax, and 10% mere 25% of the municipal tax, which is low when compared with Warsaw or Kraków. At the same time, the poorest residents paid relatively high taxes – 1.4% of tax for 5% of the community and 3.5% for 10%. That means that the value of tax was evenly distributed among all the residents of the city. It would be wrong to conclude from this that seventeenth-century Lwów did not have a financial elite; it was rather due to the conscious policy of the municipal authorities with regard to tax. It was not until the political upheavals in the seventeenth century that the municipal council was forced to reach for the rich men's pocket, which soon resulted in a prompt rise of the index.

In 1665, i.e. following the crisis of the mid-seventeenth century, the participation of more affluent residents in tax issues increased (10% of the wealthiest residents paid 31% of the tax) with the simultaneous decrease of tax amount paid by 5% and 10% of the poorest residents (decrease to 0,7% and 1,7% respectively). One can observe a minimal rise in wealth concentration, and consequently a rise of the Gini coefficient, as well as a tendency to protect the less affluent group of residents from excessive exploitation, similarly to Warsaw and Łódź.

Graph 3. **Lwów. The Lorenz Curve**



Source: author's own study based on CDIAUL, AmLw, f. 52, op. 2, nr 777, 782, 795.

A shift in wealth concentration happened in the early eighteenth century. The Gini coefficient rose to 0.604 and 10% of the most affluent residents paid almost 47% of tax. This is the only city where such a change occurred. The question arises: can we explain this change by the renewal of Lwów's trade relations with the towns of right-bank Ukraine and Podolia after these territories had been regained in 1699. It seems striking that in the first period under scrutiny, in 1636, i.e. at the time

when the trade was uninterrupted, the income inequalities in Lwów were very low. Therefore, the atypical results seem to reflect a specific Polish fiscal policy rather than changes in the economic situation. Such thesis is confirmed by yet another observation – the concentration index from 1702 is close to those achieved by Warsaw and Kraków, while the earlier indices could be compared with those of Poznań and Lublin.

Tab. 6. **Occupational structure amongst 20% of payers of the highest tax according to municipal tax registers from Lwów in the years 1636-1702**

	1636			1665			1702			Total
	first 5%	**seeond 5%**	**next 10%**	**first 5%**	**second 5%**	**next 10%**	**First 5%**	**second 5%**	**next 10%**	
Craft	5	4	5	3	2	2	-	2	9	32
Petty trade	-	-	-	-	-	-	-	-	-	-
merchants	2	1	4	2	4	3	2	-	3	21
services	1	1	2	-	-	-	-	-	1	5
Free profession and clarks	-	-	-	2	-	4	6	4	5	21
foreigners	1	3	5	-	-	-	2	3	3	17
women	3	2	3	2	3	2	-	1	3	19
other	23	20	48	9	11	26	12	11	18	178
TOTAL	**35**	**31**	**67**	**18**	**20**	**37**	**22**	**21**	**42**	**293**

Source: author's own study based on CDIAUL, AmLw, f. 52, op. 2, nr 777, 782, 795.

In Lwów, similar to seventeenth-century Kraków, merchants and artisans led the group of the most affluent residents. Due to the high percentage of unidentified persons – located in the 'other' category – it is impossible to sketch a reliable cross-section of the occupation structure of the wealthiest group.

Distribution of municipal tax in Poznań and Lublin was exceptionally even and remained on the level of ca 0.4 for the entire period under analysis, therefore these two cities will be discussed together.

Tab. 7. **Wealth concentration in Poznań (1626-1702) and Lublin (1627-1670). The Gini coefficient**

Poznań		Lublin	
year	**Gini**	**year**	**Gini**
1626	0.378	1627	0.379
1651	0.367	1654	0.382
1675	0.387	1670	0.397
1702	0.358		

Source: author's own study based on ARCHIWUM PAŃSTWOWE W POZNANIU (APP), AmP I 1759, I 1765, I 1844, I 1851; ARCHIWUM PAŃSTWOWE W LUBLINIE (APL), AmL 272, 278, 293.

The structure of wealth distribution in the two cities in all periods is exceptionally even and reminiscent of the values typical of contemporary European cities. The participation of 5% of the poorest residents in taxes ranges between 0.5% and 1%, and the wealthiest between 12% and 20%. Wealth distribution in these two cities is similar to the Dutch province of Overijssel in the mid-eighteenth century. Jan Luiten van Zanden noted a significant disproportion there between the three larger Hanseatic towns – Deventer, Kampen and Zwolle – and the regions of Twente, Salland and Vollenhove. The three larger towns reached the level 0.64 of the Gini coefficient, which in the Modern era is typical of larger towns where differences in wealth were more pronounced that in the more homogenous rural areas.

Tab. 8. **Wealth inequalities in the province Overijssel (the Netherlands) in 1750**

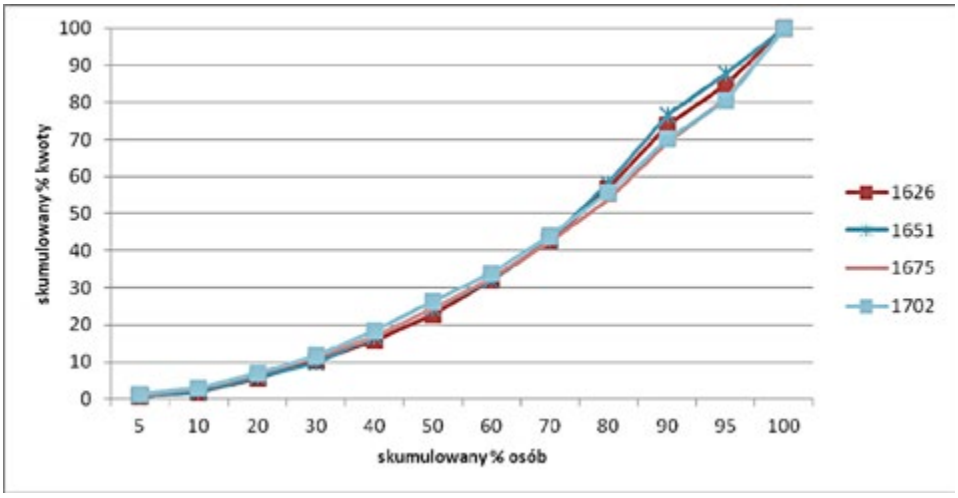
Region	**Gini**
Deventer	0.62
Kampen	0.54
Zwolle	0.67
total	0.64
Twente (total)	**0.36**
Town	0.45
Wise	0.32
Salland (total)	**0.39**
town	0.39
Wise	0.39
Vollenhove (total)	**0.36**
town	0.44
Wise	0.32
TOTAL FOR THE PROVINCE	**0.49**

Source: J.L. VAN ZANDEN, *Tracing the beginning*, cit., p. 648.

Salland, a region to the east of the German-Dutch border, is closest to Poznań and Lublin. There is no difference between small towns and villages of the region; moreover, an average income per one house in the towns of the region was slightly

lower than in the villages there.[14] Similar values were achieved by other Dutch villages already in the sixteenth century – in 1561 it reached 0.35 and in 1732 – 0.38. Similarly low differentiation was noted for the other less urbanized regions.

Graf 5. **Poznań. The Lorenz Curve**



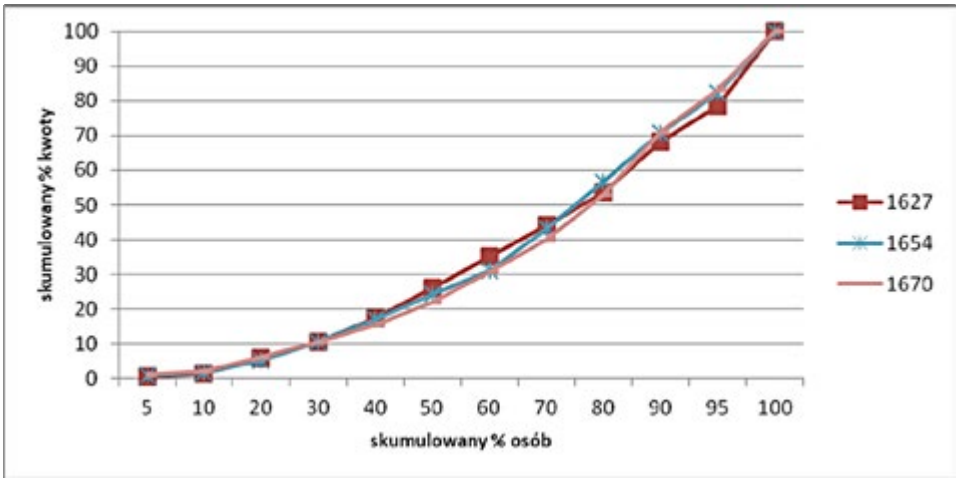
Source: author's own study based on APP, AmP I 1759, I 1765, I 1844, I 1851.

Poznań and Lublin reached similar values of the index and wealth concentration, which is clearly illustrated by the enclosed charts. In the case of both cities the lines practically concur, which testifies to the fact that the distribution of wealth structure is almost unchanged. It is worth noting that, even if Poznań or Lublin was no different from Warsaw and Lwów with regard to the number of families paying the municipal tax, the index and wealth concentration values have little in common with the value typical for large towns/cities, but are comparable with values typical for the aforementioned rural areas in Western Europe.

What conclusions can we draw from all the collected data? From among the five cities under analysis, only two – Kraków and Warsaw – have indices typical of large cities, boasting wealth concentration typical of such cities. High values are not specific for these two centres. The Gini coefficient for Amsterdam between 1561 and 1808 ranged between 0.57 and 0.61, for the three largest towns of the Overijssel province it equalled 0.64, and for the towns in Northern Italy it ranged between 0.65 and as high as 0.85.

[14] J.L. VAN ZANDEN, *Tracing the beginning*, cit., p. 648, 653.

Graph 6. **Lublin. The Lorenz Curve**



Yet another characteristic of large towns or cities – linked directly to the high value of the Gini coefficient – are the financial elites who paid the highest tax. In both above mentioned cities the participation of 5% of the most affluent residents ranged between 35% and 50% of the sum assigned for the entire town. Taxpayers represented mainly trade-related professions, followed by the representatives of less-prestigious artisanry.

Let us recap: a certain Italian scholar studied the effects of elementary crises on the economic development of cities and on wealth concentration and indicated an additional factor which must be considered while analysing the idea of a big-city. Guido Alfani was of an opinion that, aside from the high concentration factor, large cities can be characterized by a brief decrease of the Gini coefficient in the situation of a crisis (e.g. epidemics); the coefficient continues to grow after the situation is stable again. This is the case of Warsaw which coped far better with the singular – and brief – crises thanks to the city's systematic development. The impulse for development stemmed from the fact that the city served a political function – it was here that the *sejm* was located, as well as kings' residence and the homes of magnates and the nobility. Political factors allowed for the economic development of the city, and in the case of crisis they enabled a speedy recovery.

According to the register of contributions of 1702, the effect of the damages incurred by the Swedish Deluge on wealth inequalities was minimal. If we were to analyse the register of 1702 only for Kraków, we would be eager to draw similar conclusions. However, the situation there in 1692 was altogether different – a much more even wealth structure and a more evened-out wealth distribution was noted back then. It seems that in the face of a threat posed by the Swedish occupying force, Kraków municipal authorities decided to impose a higher tax on the more affluent group of residents in order to protect the impoverished taxpayers. Such practice, driven by the need for a speedy and smooth tax collection, and paying the war tax in order to eliminate any prospective negative effects of the occupation in

the city. In the case of seventeenth-century Kraków we can see a slow evening out of the wealth structure, which in all likelihood could be explained by losing its representative function as the king's residence and by a slower pace of coping with the political or economic crises.

Lublin and Poznań belong to yet another group of towns which boasted a flat wealth structure, discernibly distinct from the big-city one. Perhaps it could be attributed to the aforementioned fact of economic stagnation in these towns, dating back to the period prior to the destruction of the mid-seventeenth century (Poznań) and the difficult process of reconstruction following the mid-seventeenth century crisis, which is evident by the small numbers of newcomers arriving to settle there.[15] Finally, the impulse to enliven the municipal economy (such as the presence of the royal court in the case of Warsaw) was lacking.

Lwów can be positioned somewhere between these two groups – it does not fit the pattern for it gained impetus for the development in the early eighteenth century, following the period of the seventeenth-century stagnation. It is difficult to tell whether these are the effects of the peace treaty signed in Karlowice and of regaining control over right-bank Ukraine with Podolia and Kamenets Podolski, or perhaps this is simply due to the changes in repartition of tax by the municipal council. Further study of wealth inequalities in the eighteenth century is necessary to determine whether the tendency for financial dominance of a small group of burghers was maintained throughout the entire century.

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Summing up the first section, we must stress that the big-city status in seventeenth-century Polish-Lithuanian Commonwealth could be described by three factors: significant wealth inequality measured by the Gini coefficient, the type of housing development and the number of tenants. Indices typical of seventeenth-century big cities reached high values, therefore urban communities comprised a small group of financial elites. This was certainly the case of Warsaw, and partially of Kraków, too: these cities reached values comparable with e.g. Amsterdam in the seventeenth and eighteenth century. In Poznań and Lublin, wealth stratification was scarce, whereas Lwów did not fit the model – it did boast big wealth stratification but no earlier than the early eighteenth century.

Despite the mid-seventeenth century crisis, the entire period in question may be characterized by a consistent rise in the number of masonry buildings, which is contrary to the general view promoted in literature and pointing to the deep crisis following the Swedish Deluge which thwarted the construction process. Quite often the departure of residents from towns and cities, and stagnation that followed are linked to the above-mentioned crisis; meanwhile, tax registers indicate that indeed there was a migration movement, mainly on the part of tenants, but in the case of big-cities such as Warsaw or Kraków, the increase happened as soon as the situation was stabilized.

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[15] J. DE VRIES, *The Economic Crisis of the Seventeeth Century after Fifty Years*, in "Journal of Interdisciplinary History", 40, 2009, n. 2, pp. 151-194.

Following the analysis of these three factors, we are left with a group of cities with big-city characteristics (Warsaw, Kraków) as well as a duo which lacks the traits of a big-city (Poznań, Lublin) and finally Lwów which is placed somewhere in between these two groups, being decidedly different from both. Unfortunately, the number of taxpayers from different ethnic groups are limited in the source (not everybody paid taxes), so we cannot conclude about the impact of those groups. This topic needs to develop separately.