

# Progressive Taxation, Inequality, Social Mobility and Growth in Late Medieval Paris

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Public finances and their interaction with political institutions have emerged as an important causal factor in the recent growth literature. This paper explores a unique source – the *tailles* levied on Paris by Philip the Fair. The method according to which direct taxation took place in the commune of Paris during the commercial revolution is consistent with a community responsibility system an institution that facilitated exchange, enhanced the enforcement of property rights and contributed to the cohesive action of the community in face of attempts of ruler to infringe on it rights. Quantitative evidence presented here supports this hypothesis – on the one hand they portray Paris as a well integrated and cosmopolitan city – the largest in the medieval West and with the highest relative growth rates. On the other hand, they show that the system of public finance outlined, actually functioned as predicted – the rich carried the burden of the poor and the assessment of taxes was done in an efficient and fair way. It is tempting to correlate, in a causal way, the remarkable institutional setting with the economic growth we witness.

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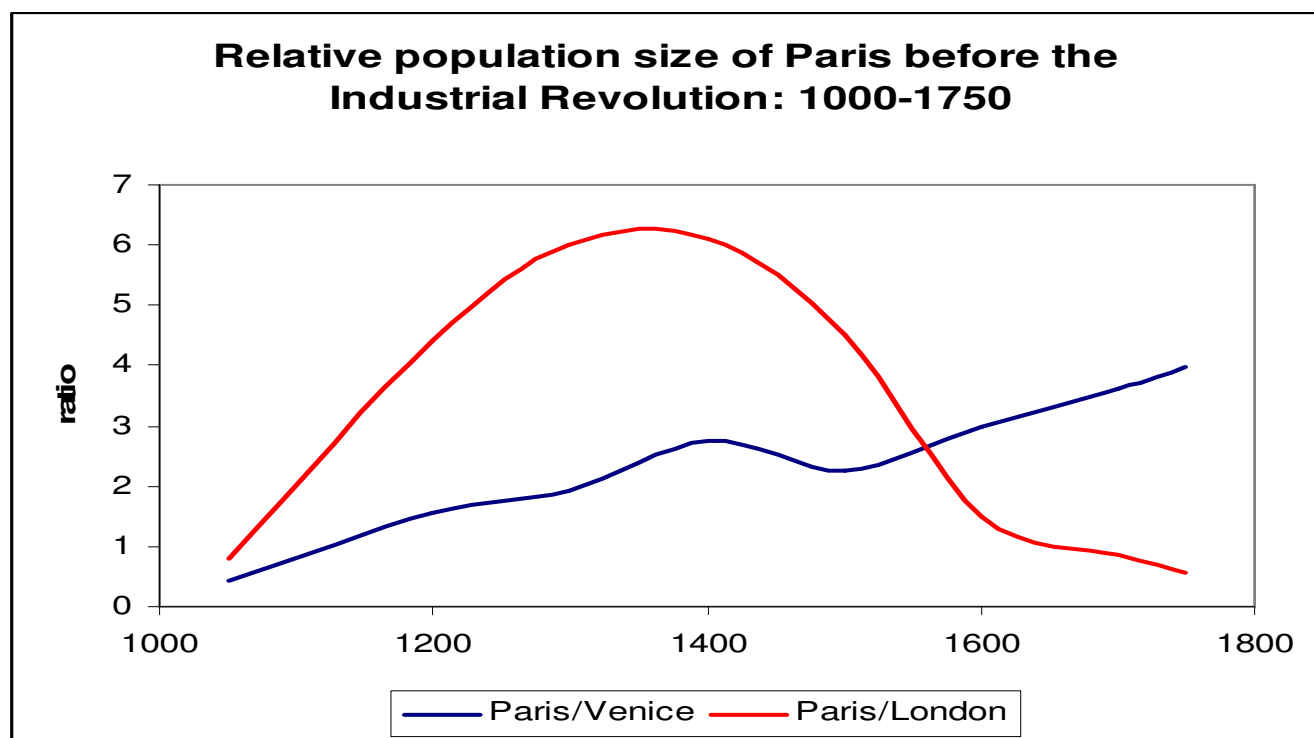
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## **Introduction**

Public finances and their interaction with political institutions have emerged as an important causal factor in recent growth literature. North and Weingast, (1989) stressed the constraints on government that foster commitment and the resulting access to cheaper sovereign borrowing. Epstein, (2000) and O'Brien (2001) put more emphasis on the development of administration and its ability to tax efficiently. In particular, some recent papers have attempted to focus more narrowly on the growth of cities (De Long and Shleifer, 1993 and Stasavage (2007)), suggesting that free cities experienced more growth (borrowed at lower rates) than those cities under princely rule.

Data on population of major European cities (Bairoch et Al, 1988) place Paris at the top of the list in Europe from the thirteenth to the end of the seventeenth century. While a capital of a large kingdom, it was significantly larger than any free Italian city state. Figure 1 shows the relative population size of Paris compared with Venice – the most populous Italian city state and London- its historical rival. One can see that population growth in Paris was much faster than that of London and Venice until 1400. The period of rapid growth lasted from 1000 to 1300 when Paris reached a population size of six times that of London. The corresponding annual population growth rates were 1% until 1200 and 0.6% during the thirteenth century. This remarkable growth can be attributed to some extent to the growth of the king's bureaucracy, however, by 1300, the size of the French court was still very small by later standards.

Figure 1



This remarkable economic expansion of a princely city merits an explanation. In their paper, De Long and Shleifer (1993) classify French cities as free cities<sup>1</sup>. They acknowledge that this is a disputable classification, that to some extent helps them derive their desired result that free cities grew faster than those controlled by an absolute monarch. Stasavage (2007) classifies French cities as state controlled cities after 1400, acknowledging that before 1400 representative assemblies had more power in France. This paper attempts to provide one explanation for the economic success of some French cities in general and Paris in particular in the period termed the commercial revolution. I will also attempt to provide a possible explanation for the slowdown in economic growth in the fourteenth century. My main argument is that in matters of

<sup>1</sup> De Long Shleifer (1993), p. 13.

taxation, the relationship between the French crown and the merchant elites of the cities allowed the city a large measure of autonomy. In particular the most important tax – the *taille* was levied by the city in a way that could be described as progressive.

This paper makes use of the tax roles of the *tailles* levied by Philip the Fair between 1292 and 1313 in order to finance his war in Flanders. These tax roles yield a number of interesting findings for the Parisian society which I expand in a companion paper. Here I briefly describe the main findings and try to relate them to the issue of the city's public finances political economy.

Few previous studies have made use of tax assessment data to infer about income or wealth distribution in early modern Europe. The most important study is of the famous Florentine *catasto* of 1427. (Herlihy (1967) and Herlihy Klapisch (1978)), which is available in machine readable form. French data have been, on the other hand, little explored. Favier (1970), has utilized tax roles from Paris for the years 1421, 1423 and 1438 to provide a comprehensive analysis of occupations and wealth. The data include only the wealthy citizens comprising in total about 2,400 people. The tax rolls analyzed in this paper have been studied by Bourlet (1992) mainly for the purpose of an antroponomic study and Herlihy (1995) who analyzed the 1292 and 1313 tax rolls and briefly addressed issues related to immigration, occupations and gender differences. However, probably owing to his premature death, Herlihy did not provide more than few summary statistics and did not computerize the data set.

The paper is organized as follows: we begin, in Section II by describing the data source used in this paper, in section III we provide a preliminary analysis of the taxation principle and its potential (theoretical) outcomes. Section IV provides main summary statistics that provide a

glimpse into of the society and economy of Paris and try to relate them to the method of taxation. Section V concludes.

## **II. The Parisian *Tailles* of Philip the Fair – the source.**

Our data is extracted from the tax rolls of the *Taille* imposed by Philip the Fair on Paris in 1292. There are seven existent rolls: 1292, 1296,7,8,9, 1300 and 1313. The first six correspond to the same imposition totaling 100,000 *livres parisis* to paid in installments. The last tax roll, of 1313, was earmarked to pay for the knighting of the prince, the future king Louis X. The tax was levied on the citizens of Paris and excluded the privileged tax exempt classes of the nobility, clergy, students and professors. Who was classified a citizen – 'burgher' is open to debate according to Duby () only those that enjoyed the privileges of citizens that were related to residency requirements paid these taxes. The tax rolls differ in coverage, (Table 1) the first - 1292 - being the largest, including all segments of the taxable population: The rich (*gros*) the poor (*menus*), the Jews (which were expelled in 1305) and the Lombards (Italians). The tax roll of 1296 is missing the tax roll of the poor. All the subsequent tax roles did not include some of the neighborhoods outside the city walls. The tax role of 1313, which records the lowest amount of tax payers, has fewer parishes included in it than the previous tax rolls.

The tax rolls are essentially a list of tax payers recorded according to residency. Besides the tax payer's name we often find information about his or her occupation and place of origin. Separate lists were drawn for Jews, Italian bankers (Lombard) and the dead. Sometimes the poor appeared in a separate list, again according to place of residence. The tax rolls of 1292 (Geraud, 1837) ,

1296, 1297 and 1313 (Michaelsson, 1951, 1958 and 1962) were extracted from the archives and are available in printed form. The remaining rolls – those of 1298, 1299 and 1300 are available only in their original manuscript form and are in the process of being entered manually into the database.

The classification of tax payers according to occupation and origin was done with help of the indices compiled by Geraud and Michaelson and by using contemporary geographical dictionaries<sup>2</sup>. Furthermore, all occupations were classified into three capital and three skill categories: Skill: a) unskilled, b) skilled and c) skilled and general education. Capital: a) no capital, b) circulating capital, c) productive capital. Occupations were also divided into major categories and major industries. Finally, for some observations we have an exact status identification: masters apprentices and day labor. The data also allow for the use of record linking, as many tax payers and their offspring or spouses appear in the various years. Once completed, it will be possible to update some of the identifiers that appear in one tax roll but not in others. More importantly it will also us to conduct a dynamic study of the evolution, over a generation, of wealth and status.

For comparison, we also applied a similar procedure to a smaller dataset based on tax rolls from London for 1292 and 1319, published by Ekwall (1951), which to our best knowledge has not been utilized by economic historians either.<sup>3</sup>

Table 1 lists the number of tax payers in the printed sources, which are already included in our database.

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<sup>2</sup> Places of origin that were not readily identified were coded separately.

<sup>3</sup> Ekwall's data are not fully compiled as of yet, only summary statistics are reported in this version.

**Table 1**

Number of tax payers in Parisian tax rolls

Year	Number of persons
1292	14566
1296	5703
1297	9930
1313	6352
Total	36551

**III. The Parisian *Tailles* of Philip the Fair – the method of taxation**

The institutional details of the *tailles* studied in this paper are unfortunately shrouded in secrecy. The documents provide some indirect clues as to the taxation method, but no direct explicit evidence. The reason for the lack of information on the taxation procedure is in itself evidence to the autonomy of the city's public finances. According to Descimon (1989), who analyzed a similar Parisian tax roll of 1571, the Parisian city government kept these tax rolls secret from the crown and carefully guarded the detailed information about their tax payers. Descimon suggests that tax rolls were burnt after the taxes were delivered.

Nevertheless, from tax rolls that survived in other cities over the early modern period – scholars have been able to generalize the principles of this tax. The following account is based on the summary provided by Wolfe(1972) in appendix G to his book. The *tailles* were taxes raised by the cities of France in response from demands from the king. According to the history of the

*tailles* studied here, it was the city of Paris who chose to commute a sales tax (*aide*) into the *taille*. The city negotiated with the crown on the amount to be delivered and the crown left it to the city's government to assess and collect the tax.

It appears that this taxation mechanism was mutually advantageous for the bourgeoisie and the crown. The crown was assured a given revenue which reduced fiscal uncertainty and minimized on collection costs, whereas the city maintained its public finance independence. The small scale of the king's bureaucracy and his limited political and military powers, resulted in a preference for farming out tax collection – the *taille* was no exception. The main difference between the tax farm and the *taille*, was in the motivation: the city opted for this arrangement to protect its independence, rather than to maximize profit<sup>4</sup>. The high degree of fiscal autonomy of the city suggests that, at least for the period until the late sixteenth century, France can not be characterized as an absolute monarchy. Moreover, the ability of the city to deliver taxes at a low cost to the crown turned the *taille* into a coercion constraining institution (CCI – Greif, 2005). It limited the power of the crown by deterring it from abusing the city's property rights, because the city's retaliation (not delivering the *taille*) would be very costly to a crown with limited tax collection capacity. The *taille* also fulfilled an essential feature of CCI's, according to Greif (2005), which is the bargaining that is an integral part of the institution.

On the downside, from a macroeconomic point of view – the *taille* was an unfavorable pro-cyclical fiscal mechanism: during an economic recession, in order to deliver the pre-agreed tax payment, tax rates had to be increased, whereas during an economic boom, tax rates were lowered.

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<sup>4</sup> One potentially profitable motive was to use fiscal independence to issue low interest debt in the form of rents – Luchaire (1911).



The *tailles* in France were divided into two sorts – the *taille reele* and the *taille personnelle*. The former was a property tax often called '*fougae*' - hearth tax - and was levied mainly in the *midi* and the south of France. The latter was a tax on personal wealth that included also moveable wealth and income, it was levied in the north of France. The Paris *tailles* were therefore, a tax on all wealth and income from labor and capital.

The most important feature of *taille personnelle* was what Wolfe terms an "impot de repartition." Recall that the city negotiated a lump sum tax to be delivered to the king – it therefore turned the tax allocation and collection process into a zero-sum game, whereby a tax payer who evaded taxation by either falsely declaring his taxable wealth and/or income, or by not paying his assessed tax, fell as a burden on other tax payers<sup>5</sup>. Unlike modern taxes, where the government sets tax rates and is therefore, the residual claimant of the tax assessment and collection process, the medieval monarchy made sure that taxpayers internalize the costs of tax evasion.

The zero-sum game property of this taxation scheme, is a perfectly consistent with a self reinforcing community responsibility system (CRS) which characterized many medieval institutions (Greif (2005)). Extending Greif's analysis from merchants to the city's citizens at large, the CRS enabled merchants (citizens) to learn the communal and personal identities of their (otherwise unknown) partners in taxation. Indeed, an important feature of the tax roles was the detailed collection of personal information on the tax payers by their peers. The nature of the *taille* instituted a measure of joint liability of all the citizens to fulfill the contract with the crown. The community, through its courts, would enforce the contract and discipline those that attempted to violate it. Indeed, the community would in effect operate a multilateral punishing strategy.

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<sup>5</sup> I intend to provide a more formal model of this game in future versions of this paper.

The *taille* system, then, provided an institutional dynamism that according to Greif (2005) is likely to contribute to economic growth. It prevented the crown from acquiring coercive power which it might then have used to abuse the city's property rights and it solidified the community by fostering a CRS which increased the level of solidarity and community responsibility of the city's merchants. This situation was different than in the 'free' cities of northern Italy – in those cities, the merchant elites controlled the city and contract enforcement through impersonal exchange emerged and dominated. CRS mechanisms, there, were less effective and remained, at best, at the guild level bringing about, perhaps, less solidarity than in French cities.

An essential feature of CRS highlighted by Grief (1993), is the social underpinning of these institutions. In, the by now, classic example of the Maghribi traders, the religious and family relationships provided the glue that bonded the institution, which was otherwise based on economic incentives. In a similar way, the zero-sum game property of the *taille*, made the use of a CRS natural from an economic point of view. However, to lower the costs of creating and maintaining this CRS – the commune adopted a number of measures that made compliance with the contract (with the crown), information gathering and enforcement much cheaper or self-enforcing. This was done by adopting two principles; the first, highlighted by Wolfe (1972) was the principle that in taxes based on repartition "Le fort portent le faible." – the wealthy must carry the poor. Because the total tax to be delivered to the crown was fixed, any shortfall, due to negative income shocks to the taxpayer, was borne by those more fortunate. This principle may be characterized as a 'progressive' taxation scheme and helped to solidify the community.

The second principle was that all citizens had to pay (participate) in this game. Everyone had to pay – the city elites, the poor and the dead. The records of the Paris *taille* show that in 1297 –

4350 poor taxpayers paid less than five percent of the total tax. Imagine the costs of assessing and collecting taxes from these poor individuals. The wealthy taxpayers could have easily absorbed their share at a relatively low cost. At the other end – we found that all the Parisian political elite (*prevot de marchands, echevins, elus*, etc...) are all accounted for in the tax rolls – they did not exempt themselves or their families.

Finally, the adoption of a wealth and income tax, with some progressive provisions (to be outlined below) in itself helps to solidify the community. After all, the elites could have issued debt (to themselves) to pay the crown and choose to levy and collect indirect taxes to pay for the loans. These regressive measures were taken in Florence, for example and in other Italian city states. While no doubt contributing to the development of financial markets, they served to polarize the communes and may have, a la Greif (2005), negatively affected long term growth.

The successful implementation of the principles outlined above depended on the city's government ability to a) allocate the tax burden in a way consistent with the progressive principle, b) to extract the information necessary on each taxpayer and c) to enforce the collection of the tax. The first stage involved the setting of tax rates to ensure the city can provide the requested lump sum tax within the taxation principles. The second stage involved dividing the city into smaller fiscal units whereby information and collection costs were minimized.

We know very little about the first stage and the information historians have is derived from a few rare examples which survived – none from Paris. The actual tax schedules used in these tax rolls are unknown and could have varied between the various years. Similar *tailles* were usually levied according to the following principle: the very poor paid a poll tax, the very wealthy, above

a certain (variable) cutoff paid a proportional wealth tax that normally ranged from one to ten percent. Most tax payers paid a proportional income tax<sup>6</sup>. As we show later, it is reasonable to deduce from the data that taxation of the poor was indeed a poll tax and for higher incomes it was proportional to wealth or capital. For the purpose of the analysis of inequality the medieval principle of proportionality is accepted throughout this paper. The assessment unit was probably the hearth (Favier, 1970).

The extraction of information and enforcement of collection was achieved by dividing the city into parishes (some parishes further divided into wards). To ensure that the principles that operated at the city level would also carry through at lower levels, in particular the invocation of a CRS, the lump sum levied on the city was divided into quotas for each parish. The division was probably the outcome of a bargaining process at the city council level. The bargaining process was constrained by the zero-sum game constraint which ensured that a multilateral reputation system operated to ensure a fair allocation based on ability to pay (to be modeled). Once an allocation was arrived at – each Parish was faced with the task of assessing and collecting the tax

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The fact the rolls are constructed according to residence – by the taxpayer's address, alludes to the way the assessment was conducted – a house to house search. Since the property of the zero sum game prevailed for every parish and ward, it was in the best interest of neighbors to make sure that assessors had as much information as could possibly be obtained (given that the assessed knew that, they had an incentive to truthfully report their wealth and income). In the congested living conditions of the medieval city there was little opportunity to hide.

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<sup>6</sup> Boutaric (1861) p. 261. Desportes (1977)

<sup>7</sup> See discussions in Farr (1989) and Desportes(1977) for Dijon and Reims respectively.

The inclusion of the lists of dead taxpayers in the rolls highlights the nature of the process: Since the planning of the tax assessment was based on living taxpayers, a taxpayer that died during the tax year could not be readily absolved. If the dead taxpayers were to be dropped from the list, their burden would have to have been picked by surviving ones. Since death rates were not very low – a provision for collecting taxes from the survivors of deceased taxpayers had to be formulated.

### **III. Paris in the Heyday of the Commercial Revolution**

#### **1. Parishes, wealth and taxpayers**

The Parisian tax rolls allow us to construct some summary statistics for Paris at the turn of the 13<sup>th</sup> century<sup>8</sup>. The major question facing historians (recently, Favier, (1970) and Herlihy (1995)) was how large was the city's population? The estimates range from 60,000 to 210,000. The most recent estimate by Herlihy(1995) tends to support the larger estimate, which places Paris at the top of the list of European cities in the middle ages. The city was divided into 24 Parishes and some parishes were divided into wards (*queste*). In the 1292 tax roll, which is the most comprehensive we counted 382 streets and alleys. The 1292 tax roll was used by Geraud (1837) to construct a map of Paris during the reign of Philip the Fair (Map 1).

Table 2 lists the Parishes of Paris and shows large variations in income (as measured by average tax) and population<sup>9</sup>. The city was roughly divided along income lines: the *rive droite*, had higher incomes than the *rive gauche*, and the center had larger incomes than neighborhoods

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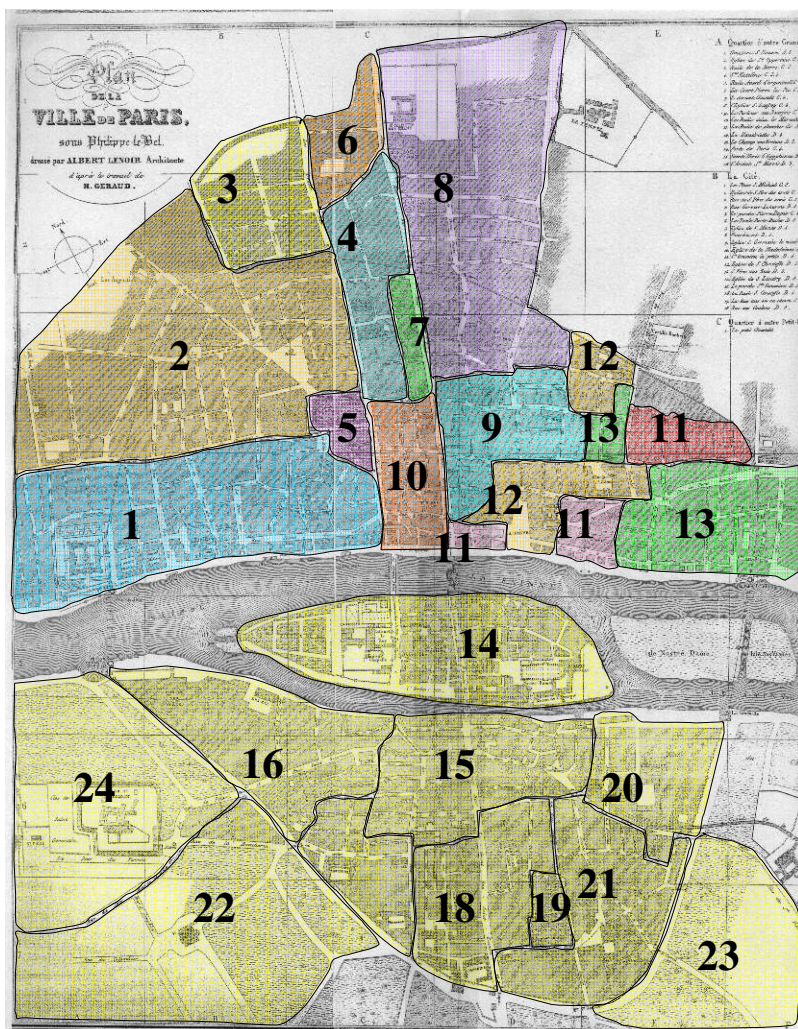
<sup>8</sup> Partial data were already presented by Herlihy(1995) and in Geraud (1837).

<sup>9</sup> Since the tax was proportional and excluded the poorest citizens, the selection bias produces a positive correlation between average tax and population size, for given area taxed.

outside the walls of the city<sup>10</sup>. As today, the commercial center was on the *rive droite* and the university and the major monasteries and abbeys were on the *left bank*. Since students, faculty and clergy were exempt from taxation, the population of taxpayers is significantly lower on the *left bank*.

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<sup>10</sup> Even in parishes that spanned across the walls, such as St. Germain Le' Auxerrois, the wards outside the walls had a significantly lower wealth than central wards (9s compared with the average of 21s).



Map 1

Paris during the reign of Philip the Fair – division to parishes based on the records of the *Taille*

Legend:

1. St. Germain L'auxerrois 2. St. Eustache 3. St. Sauver 4. St. Leu – St Gille
5. St Innocent – St, Opportune 6. St. Laurent 7. St. Josse 8. St. Nicolas des champ 9. St. Merri
10. St. Jacques de la boucherie 11. St. Gervais 12. St. Jean 13. St. Pol 14. La Cite 15. St. Séverin
16. St. André des arts 17. St. Cosme 18. St. Benoît 19. St. Hilaire 20. St. Nicolas de Chardonnay 21.
- Ste Geneviève 22. Notre Dame des champs 23. St. Marcel 24. St. Germain des Près

Table 2

## Wealth and taxed population size - Parisian parishes

Parish	Location	Number of hearths	Average tax per capita (solidous parisis)	Maximum tax
St. Germain L'auxerrois	rive droite, center	2328	19.3	800
St. Eustache	rive droite, center	1306	17.7	1100
St. Sauver	Rive droite, outside wall	230	6.1	58
St. Leu – St Gille	rive droite,, outside wall	437	8.8	440
St Innocent – St, Opportune	rive droite, center	82	11.9	140
St. Laurent	rive droite, outside wall	213	7.6	70
St. Josse	rive droite, center	73	11.6	90
St. Nicolas des champs	Rive droite, outside wall	844	10.3	1080
St. Merri	rive droite, center	1426	13.2	290
St. Jacques de la boucherie	rive droite, center	1429	24.2	1080
St. Gervais	rive droite, center	938	14.3	480
St. Jean	rive droite, center	807	22.4	1650
St. Pol	rive droite, center and outside wall.	913	8.9	200
La Cite	Center	1208	19.6	1880
St. Séverin	rive gauche, center	664	9.8	200
St. André des arts	rive gauche, center	146	6.5	80
St. Cosme	rive gauche, center	59	7.3	50
St. Benoît	rive gauche, center	219	14.4	200
St. Hilaire	rive gauche, center	20	8.0	18
St. Nicolas de Chardonay	rive gauche, center	79	5.7	58
Ste Geneviève	rive gauche,center	405	8.4	120
Notre Dame des champs	rive gauche,outside wall	62	5.5	40
St. Marcel	rive gauche,outside wall	231	4.0	120
St. Germain des Près	rive gauche,outside wall	383	12.2	300



## **2. The evolution of tax returns over time**

How did wealth assessment evolve over time? In table 3 we provide average tax payment in the various samples. Since the samples are not of even size, the average tax based on the wealthiest 5,000 tax payers is provided. The evidence presented lends support to the behavior according to the dictum that the wealthy carry the poor. From 1292 to 1296 the poorest tax payers were dropped. The category of people paying 1 penny was eliminated. In 1313 the same tax burden was shared amongst fewer tax payers raising the average tax burden significantly. There is little variation in the average tax paid by the 'top 5,000' because the exemptions for the poor did not affect the tax burden significantly owing to the initial very small total contribution of the poor to the tax base. Nevertheless, it is known that grain prices were high around 1313 and the period was one of economic hardships (monetary disorder), the fact that the average tax for the 'top 5000' increased by ten percent underscores the rising relative burden of these taxpayers because their assessments increased in a bad year. (Jordan, 1996). We can therefore conclude that the data support the notion that taxation was progressive.

Table 3

Average tax and total tax receipts: 1292-1313				
Year	Number of persons	Average tax <i>Soldi parisis</i>	Average based on Top 100 <i>Soldi parisis</i>	Total tax receipts <i>Livre parisis</i>
1292	14566	16.9	43.9	12286.8
1292*	12080	20.1		
1296**	9771	21.2	39.2	9958.2
1297	9930	20.9	38.3	10372.1
1313***	6352	34.1	41.3	10393.6

Notes: \* the 1292 *taille* included more than 2000 poor who paid 1 penny, dropping from the calculation to make the 1292 more comparable with those that followed raises the average to the level of subsequent *tailles*. \*\* the 1296 *taille* is missing the poor. The totals from the poor of 1297 were added to the 1296 totals. \*\*\* In 1313 the *livre parisis* was debased by 30 percent. The sums reported were deflated from the originals: 44.2, 53.7, and 13511.7 respectively.

### 3. Occupations and Industries

An interesting feature of the tax rolls is that they list the occupations of about 6500 people. Those excluded from the list are, on the one hand, the very poor and on the other hand the elite, which was listed by surname or nickname rather than by occupation. This allows us to form a tentative profile of the occupation structure of Paris in the late middle ages<sup>11</sup>. Table 4 presents the distribution of occupations by economic sector in terms of their relative size and income.

<sup>11</sup> The record linking process, which will link people across the years will allow us to identify more occupations than we have in the tax roll of 1297. Farr and Descimon report similar percentages for Dijon and Paris (1571) respectively.

**Table 4**

## Occupational structure – Paris 1297

Occupation	Population	share	average tax
arts & crafts	2465	0.37	11.4
Trade and finance	2283	0.34	18.7
Professionals	512	0.08	12.5
Labor	495	0.07	7.7
Services	434	0.06	14.2
Army and clergy	223	0.03	16.5
Other	142	0.02	13.6
Total classified	6654	0.66	14.1
Total unclassified	3362	0.33	34.1
Unclassified poor	1245	0.12	
Classified rich (top decile)	416	0.04	127
Unclassified rich (top decile)	470	0.04	137

It can be readily seen that the largest sectors were the medieval industrial sector and trade – the heart of the medieval urban economy. The wealth ranking follows the conventional view that merchants and the financial sector had the greatest wealth (and income) and dominated all other occupations. Those engaged in security, and belonged to the city militia or local police force and the clergy (mainly secular that was not exempt from taxation) which represented the traditional higher income feudal sectors ranked second to the merchants. They were followed by a. the service sector, comprised of personal services and the hotel and restaurant sector, b. the professional sector and c. free labor – mainly in construction. The distribution reported for 1297 is very similar for other years in our sample.

An interesting exercise would be to try and map the occupation structure to the various city neighborhoods. Since we do not have a complete breakdown of the occupations we have to be

cautious in interpreting the data. Table 5 reports the ratio of merchants to artisans in all the parishes and reports various highlights from breakdown of the occupations by parishes (which are too numerous to show). The data confirm the assertion made above that the occupations of the more affluent citizens were not reported. The coverage ratio (population with known occupation divided by total population in the parish) is higher in the poorer neighborhoods. From the relatively high coverage ratio in the neighborhoods on the *left bank*, and assuming that artisans were less likely not to be included (owing to their relatively low income), it appears that most of the artisanal activity took place on the *right bank*. We also note that in some of the low population parishes of the left bank we can find relatively high concentrations of labor and clergy (though these are small numbers).

Table 5  
Occupations and residences – Paris 1297

Parish	Average tax (solidous parisis)	Coverage	Ratio of merchants to artisans	Special occupation Characteristics
St. Germain L'auxerrois	21.3	63%	0.65	
St. Eustache	18.7	57%	1.19	
St. Sauver	6.0	60%	0.63	
St. Leu – St Gille	8.9	80%	1.14	
St Innocent – St, Opportune	13.2	71%	1.3	
St. Laurent	7.5	57%	1.16	
St. Josse	11.9	87%	0.83	Services 13%; Military 7%
St. Nicolas des champs	10.4	59%	0.63	
St. Merri	13.9	65%	0.82	
St. Jacques de la boucherie	27.1	60%	0.67	
St. Gervais	14.3	58%	0.76	
St. Jean	22.4	69%	1,09	
St. Pol	9.1	59%	0.77	
La Cite	21.4	76%	1.05	Services 12%
St. Séverin	6.5	78%	1.48	
St. André des arts	6.5	70%	1.42	Services 15%
St. Cosme	7.7	82%	1.71	Clergy 23%
St. Benoît	14.6	85%	2.25	
St. Hilaire	8.3	81%	0.64	Labor 11%
St. Nicolas de Chardonay	5.7	77%	1.71	Labor 16%
Ste Geneviève	8.5	80%	1.38	
Notre Dame des champs	5.4	26%	1.2	
St. Marcel	4.4	63%	3.45	

Note: Coverage is the ratio of listed occupation to total Parish population.

#### 4. Paris a cosmopolitan metropolis in decline?

It is evident from the tax rolls that the Parisian economy attracted many migrants and foreigners. Unlike the privileges received by foreign nationals in other commercial centers (notably in the East), foreigners residing in Paris were not exempt from the *taille* and our records indicate that a few hundred of foreigners were recorded as having paid the *taille*. Their inclusion in the regular *taille* lists, with the exception of the Jews and Italian Bankers, suggests that they were an integral part of the commune of Paris – a feature that could have made Paris an attractive destination for foreign migration.

Table 6

Contributions of foreign born residents to the *tailles*

	Number of foreigners	Share of foreigners in tax receipts	Average tax
1292	884	17%	47.2
1296	419	16%	75.8
1297	591	14%	48.8
1313	357	6%	44.7

In table 6 we can see that foreigners accounted for roughly 6% of the taxpayers and contributed between 14 and 17 percent of total tax receipts until 1313. In 1313 we see a marked decline in the number of foreigners and in their relative tax contributions. Earlier we showed that the smaller tax rolls of 1296 and 1313 are the result of the economic crisis prevailing at those years. In these years, the tax burden shifted to the more affluent. Thus, in 1296 we see that though their numbers drop by more than a half, foreigners contribute, roughly the same share of the *taille* as they did in 1292. However, in 1313 we observe an opposite trend of a decline in numbers *and* wealth of foreigners. Analysis of the tax records indicates that most of the drop can be explained

by the expulsion of the Jews in 1305 (though they already disappear from the tax records in 1297) and the large decline in the numbers of wealthy Italians.

It is tempting to contribute the decline in the lure of Paris for foreigners to the general economic decline of the 1310s, which was accompanied by monetary disorders (debasements). This was hardly an attractive economic environment for foreign merchants and bankers. Moreover, Phillip the Fair engaged in campaigns against the Jews and Templars – the bankers and money lenders of the time – which probably frightened Italian bankers out of Paris – potentially the next victims on the crown list.

While highly suggestive, this evidence suggests that economic crisis and institutional disorder - infringing on the property rights of minorities and bankers drove out some of the wealthiest tax payers out of Paris. By 1313, Paris seems to have lost its lure.<sup>12</sup> This finding supports claims that relative economic decline in Western Europe set in before the Black Death of 1346/8.

Where did foreigners reside? Did they concentrate in one or two parishes or were they dispersed between neighborhoods? Table 7 presents the distribution of foreigners in the various parishes, listed in order of declining wealth, compared with the distribution of the native population. With the exception of the Jews, all foreigners were dispersed in the various neighborhoods, according to their wealth. However, foreigners tended to concentrate in the more affluent parishes. For example, 9.9 percent of taxpayers lived in the wealthiest parish of St. Jacques de la boucherie, whereas it was home to almost 20 percent of the Italian community of Paris. Almost half of all Italians resided in the three wealthiest parishes. Half of the Flemish and Germans in the top four parishes and the English and Scots in the top five parishes. This phenomenon is different from

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<sup>12</sup> Herlihy () shows that not only did foreigners leave Paris, but that immigration to Paris from the south of France also decline by 1313. These tests will be performed once all the data set is complete.

the traditional tendency of foreign merchants to live in enclaves or communes such as those that prevailed in the Levant. Paris was indeed a cosmopolitan city where foreigners could reside next door to the local population without the need to resort to living in closed quarters to protect themselves. The exception to this rule was the Jews who congregated in only two parishes<sup>13</sup>. Finally, the large concentration of Italians and Jews in the parish of St. Merri suggests that this Parish was the home of money lenders.

Table 7

## Residences of foreigners in Paris - 1292

Parish	Share of total population	Share of Germans	Share of English	Share of Flemish	Share of Italians	Share of Scots	Share of Jews
St. Jacques de la boucherie	9.9%	15.8%	11.7%	13.5%	19.8%	10.2%	
St. Jean	5.6%	8.8%	4.3%	7.7%	3.6%	1.7%	17.1%
La Cite	8.3%	9.6%	12.7%	4.8%	26.3%	13.6%	
St. Germain L'auxerrois	16.1%	13.2%	11.3%	24.0%	3.6%	20.3%	
St. Eustache	9.0%	8.8%	10.7%	5.8%	9.0%	18.6%	
St. Benoît	1.5%	1.8%	2.3%	1.9%		1.7%	
St. Gervais	6.5%	1.8%	5.3%	6.7%	2.4%	3.4%	
St. Merri	9.8%	5.3%	8.7%	5.8%	16.8%	3.4%	82.9%
St Innocent – St, Opportune	0.6%	1.8%	0.7%				
St. Germain des Près	2.6%		2.0%	2.9%	6.0%		
St. Josse	0.5%		1.3%	1.0%	0.6%		
St. Nicolas des champs	5.8%	1.8%	6.7%	1.9%	5.4%	6.8%	
St. Pol	6.3%	4.4%	7.0%	7.7%	8.4%		
St. Leu – St Gille	3.0%	1.8%	1.7%	2.9%	1.8%	1.7%	
Ste Geneviève	2.8%	3.5%	4.3%	3.8%	0.6%	3.4%	
St. Hilaire	0.1%			1.0%			
St. Cosme	0.4%		0.3%				
St. Laurent	1.5%		1.3%	1.9%			
St. Séverin	4.6%	14.0%	6.0%	5.8%	1.2%	6.8%	
St. André des arts	1.0%	7.0%	1.3%	1.0%			
St. Sauver	1.6%		0.3%		0.6%	8.5%	
St. Nicolas de Chardonay	0.5%			1.0%			
Notre Dame des champs	0.4%		0.3%				
St. Marcel	1.6%	0.9%	1.7%	1.9%			

<sup>13</sup> The heart of the Jewish community is, to date, in the Marais – their place of residence in the middle ages.



## **IV Measures of inequality**

### **1. An overview**

The findings reported by Van Zanden (1995) point to a very high measure of inequality during the Renaissance and the early modern period. The Parisian tax rolls extend these findings to a much earlier period. Table 9 provides Gini inequality coefficients for the four Parisian *tailles* analyzed in this paper and two, previously unused, contemporary tax lists from London and more recent data on Florence and Zwolle taken from Van Zanden (1995).

The similarity of the statistics reported over such a long period suggests that very high inequality prevailed in European cities for centuries. Moreover, this similarity seems to be independent of geographical location, time or average income. Pre-industrial urban economies were all characterized by high polarity: few very rich citizens, a small affluent class and large masses of relatively poor, but nevertheless taxable, citizens. Since we know that the tax lists from London and Florence were based on wealth assessment – the similarity, albeit somewhat lower, gini's from Paris suggests that the top tail of the Paris tax distribution, as we argued above, was indeed based on wealth rather than income.

Table 9  
Comparative inequality measures: 1292-1750

City	Year	Number of hearths	Gini coefficient	Top 1%	Top 5%
Paris	1292	14509	0.75	26	52
Paris	1296	5661	0.61	17	38
Paris	1297	9916	0.69	20	44
Paris	1313	6108	0.79	25	55
London	1292	791	0.70	15	43
London	1319	1600	0.76	34	57
Florence	1427	10000	0.79	27	67
Zwolle	1750	2438	0.67	?	?

A feature that emerges from the data presented in Table 9 is that smaller samples, from the same city, were usually associated with lower (tax payments) inequality. This is owing to the decision by city authorities to exempt the poor and shift the burden to the rich. While taxation was proportional with respect to wealth, the truncation of the tax assessments for citizens with lower wealth is in effect progressive, a surprising result in light of tendencies by many historians to highlight class struggle and unfair taxation of the poor<sup>14</sup>. Therefore, though we do not have wealth data, before-tax inequality may have risen in crisis years and after-tax inequality may have declined.

Another feature that emerges from the comparison over time is that inequality increased during periods of economic crisis. A comparison of the wealth distribution in 1292 and 1313 shows an

<sup>14</sup> I intend to analyze the urban self-taxation mechanism in detail in future work.

increase in inequality despite the exemption made for the poor. One may argue that this result is due to the fact that we are measuring taxes rather than wealth. If the same tax burden is shared among fewer taxpayers, average tax payment will increase. Therefore, the higher tax burden on the rich may be erroneously interpreted as an increase in wealth inequality. On the other hand, it can be argued that the tax burden is shared among a more equal group of tax payers than before. The experience of 1292, 1296, and 1297, shows that the second effect dominated the wealth distribution in Paris, namely, that the truncation of the tax distribution from below, lowered inequality. Coupled with higher inequality measures from London (1319), it is tempting to conclude that the recession of the 1310s brought about by bad harvests, was much more severe than that of the mid 1290s and increased inequality through the prolonged recessionary effect of rising wheat prices on the less affluent taxpayers.

## **2. Measures of inequality within and between groups**

An interesting question is whether the high inequality as captured by the Gini coefficient is the outcome of inequality between social groups or does inequality prevail even within subgroups of the population. In this subsection we break the population of taxpayers into subgroups along gender, occupation, origin and occupational attributes such as skill and the possession of capital.

### **a. Gender**

The tax rolls contain large numbers of women heads of households who paid taxes. While there was a large contingent of chambermaids (248 in the entire data), women were involved in almost all the sectors of the urban economy (Herlihy(1995)). Table 10 shows that women comprised about 15% of the taxpayers. In 1296 and 1297 there seems to be a very narrow gender gap in

terms of wealth (compared with 20% in the U.S today). Herlihy (1995) claims that in many respects, Paris of the end of the 13<sup>th</sup> century was open to women on a scale unmatched in the centuries that followed. Inequality among the sexes is practically identical, reinforcing the claim that with the exception of a relatively small wealth gap, no gender bias emerges in their respective wealth distributions. Again, the difference between the recessions of 1296 and 1313 is instructive: in both years the relatively poor were exempt from taxation and women's share among taxpayers declined suggesting that they were overrepresented in the low tail of the wealth distribution. Nevertheless, in 1313 not only their share drops but the gender gap widens, suggesting as we observed above, that the recession of 1313 was qualitatively different from that of 1296 – it was probably much more severe.

Table 10

## The gender gap – Paris: 1292-1313

	Women			Men			Gender gap
	Average tax	Share in population	Gini	Average tax	Share in population	Gini	
1292	13.7	16%	0.75	17.5	84%	0.75	28%
1296	32	13%	0.57	35.6	87%	0.61	11%
1297	18.8	15%	0.66	21.2	85%	0.70	13%
1313	35	12%	0.79	44.8	88%	0.79	28%

## **b. Country of origin**

How did the various nationals fare in terms of their income distributions? Were migrants a more homogenous group than native French? Table 11 presents inequality measures for taxpayers from larger contingents of foreign nationals in Paris. It shows that there were substantial differences in inequality among the group of various origins. The Flemish were the least equal of all foreigners followed by the Italians, Jews, English, Germans and Scots. Are these differences indicative of income distributions at the home country or are they unique to the sample of foreigners in Paris? Van Zanden (1995) shows that areas with low urbanization rates had lower inequality. Therefore, that the Flemish appear at the top of our list is not surprising as it was probably the most densely populated urban region of Europe, followed by the Italian City states. Germany, England and surely Scotland were much more rural. Our comparison with London in Table 9 allows us to confirm that inequality in London resembled that of the English in Paris<sup>15</sup>. If indeed inequality is related to high urbanization rates and economic growth, then observing the income distributions of foreigners may allow us to infer about their home country's relative rates of urbanization and economic growth.

Taken as a whole, inequality of wealth among foreigners was larger than that of French born population. However, as can be seen in Table 11, these differences in inequality are explained by high inequality between these groups, while the within group inequality is lower than that of the native population. Therefore, the population of foreigners in Paris was less unequal than the general population. This result is not surprising since the foreigner's communities did not include the very poor. Nevertheless, a finding of a large measure of inequality between the groups

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<sup>15</sup> Note however, that London was the largest urban center and therefore had slightly higher inequality than the English in our sample.

supports the claim, made above, that foreigners' wealth distributions were distinct and resembled the income distribution at their respective home countries and can be used to infer about differences in inequality between regions in Europe at the end of the 13<sup>th</sup> century.

Table 11

Between and within inequality measures by country of origin

	1292	1296	1297	1313
Italians	0.73	0.62	0.68	0.69
Flemish	0.81	0.64	0.70	0.85
Germans	0.69	0.54	0.64	0.61
English	0.66	0.57	0.62	0.75
Scots	0.56	0.31	0.57	0.73
Jews	0.65	0.63		
Total sample	0.75	0.61	0.69	0.79
Theil's measure of inequality	1.72	1.06	1.54	1.76
With group inequality	1.1	0.70	0.86	1.44
Between group inequality	0.61	0.36	0.68	0.32
Theil's measure of inequality – total sample	1.37	0.81	1.07	1.48

An interesting insight that can be gleaned from Table 11 is that Jews had a relatively unequal wealth distribution, in fact it was quite close to that of the Italians. If this finding is representative of other Jewish communities' wealth distributions, then the popular belief that Jewish communities were more homogenous and egalitarian than the rest of the population is not borne by our data.

### c. Place of residence

In the previous section we saw that the city of Paris was divided into parishes of unequal wealth. Can the place of residence of citizens explain the overall inequality in Paris? The picture that

emerges from table 12 is consistent with our earlier findings (and those of Van Zanden(1995)), that inequality is positively correlated with average income and negatively correlated with the size of population in the subgroup. Moreover, almost all the inequality is explained by inequality within the parishes rather than between them. This finding suggests that most parishes shared the same features of the Parisian income distribution and, with the exception of the tiny Parish of St. Hilaire, were not homogenous communities in their own right. We can not identify an exclusive neighborhood that included only the very rich or only the very poor.

#### **d. Occupational inequality**

As we saw earlier, the various occupations differed in income and in numbers. Unlike preceding decompositions of the Parisian society into subgroups, we tread on less secure grounds when we attempt to analyze inequality within and between occupations because only a subset of the population was identified according to their occupation. As a result, we are focusing on the lower (on average) wealth part of the distribution and we should bear in mind this caveat as we attempt to interpret the results.

Table 12

Between and within inequality measures by parish of residence -1292

Parish	Number of hearths	Average tax	Gini
St. Jacques de la boucherie	1429	27.1	0.78
St. Jean	807	22.4	0.81
La Cite	1208	21.4	0.76
St. Germain L'auxerrois	2328	21.3	0.75
St. Eustache	1306	18.7	0.71
St. Benoît	219	14.6	0.72
St. Gervais	938	14.3	0.72
St. Merri	1426	13.9	0.76
St Innocent – St, Opportune	82	13.2	0.64
St. Germain des Près	383	12.5	0.61
St. Josse	73	11.9	0.62
St. Nicolas des champs	844	10.4	0.70
St. Pol	913	9.1	0.69
St. Leu – St Gille	437	8.9	0.72
Ste Geneviève	405	8.5	0.60
St. Hilaire	20	8.3	0.41
St. Cosme	59	7.7	0.60
St. Laurent	213	7.5	0.52
St. Séverin	664	6.5	0.68
St. André des arts	146	6.5	0.63
St. Sauver	230	6	0.55
St. Nicolas de Chardonay	79	5.7	0.61
Notre Dame des champs	62	5.4	0.51
St. Marcel	231	4.4	0.62
Theil's measure of inequality	1.37		
With group inequality	1.26		
Between group inequality	0.11		
Theil's measure of inequality – total sample	1.37		



Table 13 confirms our findings from previous sub-categories, namely, that higher wealth is associated with higher inequality. However, upon closer inspection we can see that the differences in wealth distribution are quite small when compared to differences in average tax. In fact, among those classified in our sample, all the inequality is explained by inequality within subgroups. Bearing the selection bias in mind, this result is quite surprising as traditional accounts of the period suggest that the non-entrepreneurial urban classes were more homogenous than the mercantile elites. Assuming that the non-classified individuals belonged to the mercantile elite would widen the wealth and inequality gap between them and the rest of society.<sup>16</sup> Nevertheless, by modern standards, even the more egalitarian groups had very high measures of inequality.

Table 13

## Between and within inequality measures by occupations -1297

Occupation	Population	Average tax	Gini	Top 1%	Top 10%
arts & crafts	2465	11.4	0.61	0.15	0.50
Trade and finance	2283	18.7	0.66	0.18	0.54
Professionals	512	12.5	0.57	0.16	0.49
Labor	495	7.7	0.60	0.19	0.49
Services	434	14.2	0.60	0.22	0.52
Army and clergy	223	16.5	0.60	0.13	0.48
Theil's measure of inequality	0.87				
Within group inequality	0.84				
Between group inequality	0.03				
Theil's measure of inequality – non classified	1.06	34.1	0.71		

<sup>16</sup> Assuming that all the non-classified are merchants we obtain a Gini coefficient of 0.81 (compared with 0.66 for classified merchants) and 0.60 for the rest of the occupations.

Since there is little difference in inequality between occupations, broadly defined, we turn to examine two additional measures related to the labor market. We break taxpayers with reported occupations into three skill and capital categories groups (as described above). Table 14 presents the breakdown according to skills. The most noticeable difference is the general education (reading, math skills and professional education) wealth premium, while the premium for artisanal education, mainly through the guild system is not very large when compared with the unskilled<sup>17</sup>. Again, the higher income category has a higher inequality measure, nevertheless, we can account for most of the inequality by the inequality within each category.

Table 14

## Between and within inequality measures by skill -1297

Skill	Average		Gini	Top 1%	Top
	Population	tax			10%
Artisans	3724	8.9	0.65	16	55
General Education	1578	15.5	0.77	21	60
Unskilled	1340	7.1	0.64	11	52
<hr/>					
Theil's measure of inequality	1.18				
Within group inequality	1.14				
Between group inequality	0.04				

In Table 15 we present the breakdown according to the capital required in the profession recorded by the tax assessors. We notice that merchants, with circulating capital enjoyed higher average wealth than those who owned productive equipment – mainly crafts' guild members. The inequality ranking adheres to the general rule of higher inequality and higher average earnings. But the differences in this category are smaller than any other breakdown of taxpayers

<sup>17</sup> Note that the skill and capital variables were derived from the occupations and not from the actual characteristics of the taxpayers.

with known occupations. As before, if we assume that those unidentified are the wealthy merchants – the premium gaps described here can only increase.

Table 15

## Between and within inequality measures by capital -1297

Capital	Population	Average	Gini	Top 1%	Top
		tax			10%
Circulating	2282	18.7	0.66	0.18	0.54
Productive	2004	13.2	0.62	0.17	0.54
No capital	2268	10.4	0.60	0.16	0.54
Theil's measure of inequality	0.87				
Within group inequality	0.84				
Between group inequality	0.03				

We can estimate the relative importance of skill and capital by calculating the wealth premium associated with skill and capital. The premium for general human capital over artisanal skills is 75 percent while the premium for circulating capital (cash) over productive capital is only 40 percent. The premium of skill over unskilled and productive capital over no capital is 25 percent. In medieval Paris, as today, human capital seemed to command a premium over all other sorts of capital.

#### e. Was Paris really so unequal?

Since the evidence from the large categories we used above, each holding dozens if not hundreds of different occupations, all point in the same direction, we attempted to take a closer look at some of the widespread professions and occupations chosen on the basis of their number of observations.

Table 16 provides the details of the average tax and Gini inequality coefficients for twenty major occupations. The picture that emerges from this detailed analysis is different than the one we obtained above. While shopkeepers (retail and wholesale) represent the general level of inequality we found earlier, the more specific professions exhibit substantially lower degrees of inequality.

The classical occupations often used in early modern wage comparisons are construction and weaving. These two professions have a similar average tax assessment and inequality measures. Nevertheless, even in these occupations inequality is relatively high by modern standards. It seems that guild regulations had a smaller effect than presumed. Guild and professional regulation that was thought to have created obstacles in the labor and goods markets seems to have played a minor role in Paris in the middle ages. True, inequality in the guild controlled occupations was lower than in the unregulated mercantile sectors (see the relatively low inequality measure for bakers), but was very high by modern standards. The high variance in wealth among guild controlled occupation casts serious doubts on attempts to use a small sample of wages from these sectors in international and historical comparisons.

The division by professions also shows that a substantial part of total inequality can be explained by inequality between the various professions. We may conclude that Paris was divided between three classes of occupations: 1. the mercantile and financial sector which was very unequal and accounted for the polarized nature of the income distribution. 2. artisans and professionals who also exhibited a large measure of inequality within and between professions. It seems that guilds and regulations may be responsible for smaller inequality than that of the unregulated financial sector, nevertheless, even guild controlled sectors exhibited large scope for inequality and

Table 16

Between and within inequality measures by selected professions

Profession	1292			1297		
	N	Average tax	Gini	N	Average tax	Gini
All Paris		16.9	0.75		20.9	0.69
Shop keepers	70	28.4	0.76	73	28.8	0.59
Bakers	61	19.4	0.54	131	17.6	0.47
Taverniers	89	16.9	0.46	400	24.0	0.52
Goldsmiths	118	9.2	0.54	192	26.4	0.68
Barbers	148	8.9	0.65	111	10.4	0.56
Barrel makers	70	8.2	0.62	78	10.5	0.49
Masons	96	7.4	0.62	77	8.0	0.45
Weavers	84	7.2	0.61	163	8.6	0.54
Shoemakers	227	7.2	0.54	244	9.5	0.53
Sergeants	97	7.1	0.53	134	12.3	0.48
Belt makers	77	7.0	0.57	87	9.3	0.47
Candle makers	78	6.6	0.60	66	9.3	0.55
Peddlers	118	6.1	0.58	114	8.2	0.51
Tailors	125	5.7	0.56	125	7.7	0.55
Grocers	122	5.4	0.59	198	5.8	0.46
Apprentices	325	5.1	0.55	93	8.3	0.52
Carpenter – constructions	95	4.9	0.48	86	7.7	0.47
Furriers	210	4.6	0.60	223	10.4	0.64
Chambermaids	190	2.8	0.39	45	4.8	0.51
Sandal makers	135	2.3	0.34	122	3.6	0.35
Theil's measure of inequality	0.85			0.73		
Within group inequality	0.68			0.58		
Between group inequality	0.17			0.15		

differential compensation. 3. unskilled labor (chambermaids are a good example) that was relatively poor and relatively equal.

#### **V. The wealthy elite – from bankers to drapers.**

The wealthy top percentile of the tax payers' distribution was selected from all the rolls we studied. This allows us to construct a more detailed and linked data set for this group. The top percentile was made up of individuals and companies. The companies were mainly engaged in banking and were mainly Italian. Table 17 shows the descriptive statistics of the wealthy top percentile in Paris. We can note that although average taxes went up from 1292 onwards (Table 3) the tax paid by the very wealthy declined from 1292 to 1297. Furthermore, we note that the highest tax payment was borne out by a company between 1292 to 1297 (The banking firm of Gandoulfe from Lombardy in 1292 and 1296 and Ace of Lombardy in 1297) and an individual in 1313, Wasselin of Ghent who was a draper. We also note the decline of the number of companies from 1292 (44) to 1313 (8) which reflects to a large extent the capital flight of the Italian Bankers following defaults on his debts by Philip the Fair and his liquidation of the Templar order in 1307.

The very wealthy lived on the *rive droite*, largely in the Parishes of St. Germain L'Auxerrois, and St. Jacques, the richest of all lived in the cite. Table 18 shows where wealth was concentrated in Paris. In accordance with the picture we portrayed above, the very wealthy were dispersed in a number of neighborhoods, rather than congregating together in one of them.

With the exception of the Italians, the very wealthy were largely French (Table 19). Although the wealthiest were Italian and Flemish It is again, interesting to note the steady decline of the Italian population (and its wealth) from 1292 to 1313.

Table 17  
The wealthy top percentile, Paris 1292-1313  
Individuals and companies: Average tax and maximum tax payment

	<b>Year</b>	<b>N</b>	<b>Mean</b>	<b>Max</b>
<b>Total</b>	1292	166	372	2290
<b>Individuals</b>		122	358	1880
<b>Companies</b>		44	411	2290
<b>Total</b>	1296	148	360	2850
<b>Individuals</b>		128	314	1650
<b>Companies</b>		20	650	2850
<b>Total</b>	1297	146	348	1090
<b>Individuals</b>		118	302	960
<b>Companies</b>		28	543	1090
<b>Total</b>	1313	144	535	2308
<b>Individuals</b>		136	540	2308
<b>Companies</b>		8	459	923

The profession of the very rich changed from Bankers to Drapers, with the disappearance of Bankers from Paris (table 20). While Paris of the second half of the thirteenth century could boast a large number of Italian banks who engaged in financial intermediation and provided liquidity for the Parisian merchant community, the measures taken by Philip the Fair transformed Paris (France) into a lesser developed economy. Though closer ties with Flanders, following a series of wars, helped Paris become a center for trade in textiles, the absence of banks is striking.

Table 18  
Place of residence of the wealthy percentile, Paris 1292-1313  
Average tax and maximum tax payment

Parish	1292			1297			1313		
	N	Mean	Max	N	Mean	Max	N	Mean	Max
St. Germain L'auxerrois	30	324	800	31	323	880	24	709	3000
St. Eustache	13	368	550	10	224	300	15	590	1050
St. Sauver							1	400	400
St. Leu – St Gille	2	320	440				3	430	480
St Innocent – St, Opportune				4	340	380	4	802	1800
St. Laurent									
St. Josse				1	200	200	2	900	900
St. Nicolas des champs	5	444	1080	3	285	300	8	690	1800
St. Merri	15	407	2290	18	357	980	16	630	1200
St. Jacques de la boucherie	37	378	1080	38	390	1090	41	695	1800
St. Gervais	12	264	480	6	308	490	7	870	1500
St. Jean	15	478	1650	12	365	800	4	765	900
St. Pol	3	200	200	2	200	200	1	450	450
La Cite	17	488	1880	19	468	1090	18	782	2700
St. Séverin	1	200	200						
St. André des arts									
St. Cosme									
St. Benoît	1	200	200	1	200	200			
St. Hilaire									
St. Nicolas de Chardonay									
Ste Geneviève				1	300	300			
Notre Dame des champs									
St. Marcel									
St. Germain des Près	1	300	300						



The effect was to raise increase the prosperity of money changers and goldsmiths who took over some the operations of the Italian bankers. Since the city was committed to raising the same amount of taxes, 10,000 *livres*, in 1313, the disappearance of the Italian bankers probably increased the tax burden on the remaining elite. Thus, we can see that the tax assessments of the remaining occupations rise dramatically in 1313, which does not necessarily mean that these wealthy tax payers were economically better off.

Table 19  
Country of origin of the wealthy percentile, Paris 1292-1313  
Average tax and maximum tax payment

Country	1292			1296			1297			1313		
	N	Mean	Max	N	Mean	Max	N	Mean	Max	N	Mean	Max
<b>France</b>	31	276	520	27	286	690	28	266	700	36	658	1800
<b>Germany</b>	1	200	200	1	220	220	1	250	250			
<b>England</b>	1	200	200	1	440	440				1	450	450
<b>Flemish</b>	3	940	1650	3	576	800	3	576	880	3	1640	3000
<b>Italian</b>	44	463	2290	35	441	1650	29	529	1090	1	360	360
<b>Jews</b>	1	200	200	3	266	300						

Table 20  
 Professions of the wealthy percentile, Paris 1297-1313  
 Average tax and maximum tax payment

Professions	1297			1313		
	N	Mean	Max	N	Mean	Max
<b>Banker</b>	29	529	1090	3	269	308
<b>Draper</b>	7	342	490	19	708	2308
<b>Merchant</b>	9	264	300	5	628	1385
<b>Goldsmith</b>	6	263	332	2	738	1154
<b>Inn Keeper</b>	4	270	380	3	554	923
<b>Spice dealer</b>	4	247	300	8	493	1385
<b>Money changer</b>	1	200	200	5	427	577
<b>Doctor</b>	1	250	250	0		

The pooling of the data allows to look at the dynamics of the population of the top percentile of tax payers. Table 21 shows the evolution of the very wealthy. From the 166 wealthiest residents of Paris listed in 1292 only 74 (45%) appeared in subsequent rolls, and only 12 survived the entire period. However, those that survived to 1296 and 1297 were on average wealthier than those that did not survive and were wealthier, on average, than newcomers in 1296 and 1297. However, the relative standing of the very wealthy changed from 1292 to 1296 and 1297. The Spearman correlation value is low and insignificant which means that there was a lot of wealth mobility in this group of the very rich over the period 1292 – 1296/7. In 1296 over 50% of the very rich were *nouveau riche*. Note that the new comers had smaller fortunes than incumbents. Moving from 1296 to 1297, the turnover is much smaller – only 25% newcomers. In a year, the ranking among the very rich changed much less than over the four year period from 1292 to 1296. We find a significant, although not very high, Spearman correlation value. Finally, in 1313 the

landscape of the elite changed completely – the Italians of course left, but even among the locals, the turnover was high – 80% of the rich were newcomers. However, the pattern that we observed earlier that the incumbents, have on average, higher incomes prevails. It is interesting to note that those that survived the years and made it to 1313 more than doubled their wealth from there initial assessments. To conclude, we can see that the elites were very unstable and changed substantially over a generation. Nevertheless, those that persisted over time increased their wealth and ranking very nicely.

Table 21  
 Transition matrix of the wealthy percentile, Paris 1292-1313  
 Average tax and maximum tax payment

Year		Transitions	N	Mean	Max	Spearman correlation
<b>1292</b>	<b>Total</b>		166	372	2290	
	<b>One time mention</b>		92	356	1880	
	<b>Repeat mention</b>		74	393	2290	
	<b>Continue to</b>	1296	67	404	2290	0.167
		1297	58	403	2290	0.147
1313		12	286	480	0	
<b>1296</b>	<b>Total</b>		148	360	2850	
	<b>One time mention</b>		40	342	770	
	<b>Repeat mention</b>		108	367	2850	
	<b>New comers</b>		76	294	930	
	<b>From</b>	1292	67	413	2290	0.167
		1297	96	359	2850	0.369**
		1313	17	256	360	-0.208
<b>1297</b>	<b>Total</b>		146	348	1090	
	<b>One time mention</b>		43	370	1090	
	<b>Repeat mention</b>		103	340	1090	
	<b>New comers</b>		38	350	1090	
	<b>From</b>	1292	58	363	960	0.147
		1296	96	343	1090	0.369**
1313		20	267	490	0.388	
<b>1313</b>	<b>Total</b>		144	535	2308	
	<b>New Comers</b>		120	512	2308	
	<b>From</b>	1292	12	479	1385	0
		1296	17	651	1962	-0.208
1297		20	625	1962	0.388	

## Conclusions

In this paper we outlined the method according which direct taxation took place in the commune of Paris during the commercial revolution. The features of the tax system are consistent with a community responsibility system. According to the theory and qualitative empirical evidence advanced by Greif (2005), the CRS was an institution that facilitated exchange and enhanced the enforcement of property rights, it also contributed to the cohesive action of the community in face of attempts of ruler to infringe on it rights. Quantitative evidence from the Paris tax rolls lends support to this hypothesis – on the one hand they portray Paris as a well integrated and cosmopolitan city – the largest in the medieval West and with the highest relative growth rates. On the other hand, they show that the system of public finance outlined, actually functioned as predicted – the rich carried the burden of the poor and the assessment of taxes was done in an efficient and fair way. It is tempting to correlate, in a causal way, the remarkable institutional setting with the economic growth we witness. The tax roll may suggest an explanation for the relative decline of the city. The infringement of the crown on the property rights of the Jews, Templers and Italian bankers – who disappear for the tax rolls in 1313 may have brought about a decline of the city as a financial center and may have thwarted financial intermediation to the detriment of economic growth. Given that the *taille* system was a coercion constraining institution, the crown, preferred to infringe on the property rights of those that could not retaliate.

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