# Incomes, Inequality and Social Mobility in Late Medieval Paris

Nathan Sussman*

Hebrew University and the University of Western Ontario

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Rising inequality in recent decades in the U.S. and other developed economies has again focused attention on the relationship between inequality and growth, and the relationship between inequality and heterogeneity in abilities. This paper is a preliminary report based on the analysis of data extracted from the tax returns (the *taille*) imposed by Philip the Fair from 1292 to 1313 on the Parisian middle class. The major finding reported in this paper is that inequality in Paris in the heyday of the Commercial Revolution was very high – a Gini coefficient of 0.7. The medieval Gini coefficient is larger than values recorded for Latin American. Inequality was general and was not confined to one sector or the other. As theory would predict, this inequality was reflected also in large skill and ability premiums and was higher in the high return occupations. Inequality was also very high in skilled occupations controlled by craft guilds such as weaving or construction. I also focus on the very wealthy and show that the elite were very socially mobile. Studying death rates of tax payers accounted for in the tax rolls, I find the death rate to be comparable with that 19th century Europe. The overall picture that emerges is that the Parisian economy of the late middle ages provided ample incentives for the acquisition of human capital and rewarded ability and skill, and in that respect was closer into the information age economy of today.

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## Introduction

Rising inequality in recent decades in the U.S. and other developed economies has again focused attention on the relationship between inequality and growth, and the relationship between inequality and heterogeneity in abilities[1]. The stylized relationship between inequality and growth was conceptualized by what is called, the "Kuznets Curve" (Kuznets, 1955). The curve has an inverted U-shape that suggests that in early stages of economic development, as income increases, inequality rises because workers move from low productivity and higher inequality traditional occupations to the higher productivity and lower inequality industry. Rising inequality in advanced countries today on the one hand, and declining inequality in developing (especially Eastern European) economies on the other hand, seem to have refuted the simple Kuznets hypothesis.

Recent attempts at reconciling the failure of the simple Kuznets hypothesis to fit the data have tended to focus on differences in skill and ability in the process of economic growth. Galor and Tsiddon (1997) suggest that the in the process of economic growth, there emerges a transitory difference in wages of skilled versus unskilled labor. Owen and Weil (1998) suggest that capital market constraints may lead to differences in education that affect income distribution. Finally, recent models, such as Galor and Moav (2000), emphasize the role of ability in generating inequality. They argue, that in a period of technological innovation the return to ability increases and leads to higher inequality. Moreover, inequality may contribute to economic growth by providing incentives to acquire education.

[1] See Gottschalk (1997), Bresnahan (1999) and Galor Moav (2000)

The common factor underlying recent explanations of inequality is related to the rising importance of human capital in the production process in developed economies. The rise of human capital is considered in the new growth literature as a recent phenomenon – which followed the age of the classical industrial production function which was based on capital and standardized labor inputs.

The findings and theoretical developments in the recent growth literature will not surprise students of the early modern European economy. The Commercial Revolution of the middle ages (1000-1350) was a period of rapid economic and demographic growth. It was characterized by urbanization and high degree of labor mobility. New industries and occupations sprouted and market institutions emerged. In many respects, the profound economic change brought about during the Commercial Revolution resembles the information technology revolution, to which the growth literature refers.

The heart of the Commercial Revolution was the medieval city – a vibrant urban economy which was comprised of economic sectors that characterize modern contemporary cities: a large service sector from banks to hotels and restaurants, a large retail sector, small industry employing skilled workers and sometimes educational institutes and state bureaucracy. Like any city it also attracted many migrants, vagabonds and criminals. Though growth theories refer mainly to the post Industrial Revolution age, sometimes characterizing the early modern period as one of stagnation, the Commercial Revolution offers a fertile ground to test growth theories on the one hand and to employ them to understand the complex economic interactions of the period on the other hand. Economic historians analyzed, almost exclusively, inequality in the 19$^{th}$ and 20$^{th}$ centuries, mainly relating to the debate of the standard of living during around the industrial

revolution. [2] A comparative view is provided on Brenner, Kaeble and Thomas (1991), More recently Van Zanden (1995) provides a comparative analysis, with a focus on Holland, that extends back to the 15th century. He shows that over a very long period (1427 to the 19th century) inequality in large cities was very high, suggesting that there existed a Kuznets 'super curve', whereby in pre-modern Europe growth was associated with rising inequality.

This paper is a preliminary report based on the analysis of data extracted from the tax returns (the *taille*) imposed by Philip the Fair from 1292 to 1313 on the Parisian middle class. The major finding reported in this paper is that inequality in Paris in the heyday of the Commercial Revolution was very high – a Gini coefficient of 0.7. The medieval Gini coefficient is larger than values recorded for Latin American countries such as Brazil with 0.61[3]. Inequality was general and was not confined to one sector or the other. As theory would predict, this inequality was reflected also in large skill and ability premiums and was higher in the high return occupations. Inequality was also very high in skilled occupations controlled by craft guilds such as weaving or construction. The picture that emerges is that the Parisian economy of the late middle ages provided ample incentives for the acquisition of human capital and rewarded ability and skill.

Few pervious 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

[2] Lindert and Williamson (1983) and Williamson (1988) for the Industrial revolution and Jackson (1994) who challenged Lindert and Williamson.
[3] World Bank, World development indicators, 2002.

total about 2,400 people. The tax rolls analyzed in this paper have been studied by Bourlet (1992) mainly for the purpose of an antroponominic 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 summary statistics that provide a glimpse into of the society and economy of Paris. In Section IV we analyze inequality measures, Section V concludes.

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

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 artisans and entrepreneurs and excluded the nobility, clergy, students and professors, and the very poor. 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 smaller samples do not include the very poor and some neighborhoods outside the walls of the city.

Table 1

Number of tax payers in Parisian tax rolls

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

The tax was administered by the burghers themselves. The city was divided to Parishes and wards (*queste* )and for the most part, tax payers were listed according to residence. Each parish and each *queste* had a person responsible for the collection of the tax of his jurisdiction. It can be argued that this procedure produced a fair allocation of the tax burden – as it resolved information asymmetries and moral hazard problems[4]. The actual tax schedules are not known. 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, while most of the tax payers paid a proportional income tax[5]. 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

[4] To be further developed in future work.
[5] Boutaric (1861) p. 261.

the hearth (Favier, 1970) and it was based on its wealth, as the notion of income (flow) was not developed at the time.

The data was extracted from four published registers : Geraud (1837) for 1292, and Michaelsson (1951, 1958 and 1962) for 1313, 1292 and 1297 respectively. The data include the address of the tax payer, his name and sometimes his occupation and/or his place of origin. If not stated explicitly, some of the surnames can also be used to identify and occupation or origin. Finally we have the tax payer's tax assessment.

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[6]. 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 allos us to conduct a dynamic study of the evolution, over a generation, of wealth and status.

[6] Places of origin that were not readily identified were coded separately.

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. [7]

[7] Ekwall's data are not fully compiled as of yet, only summary statistics are reported in this version.

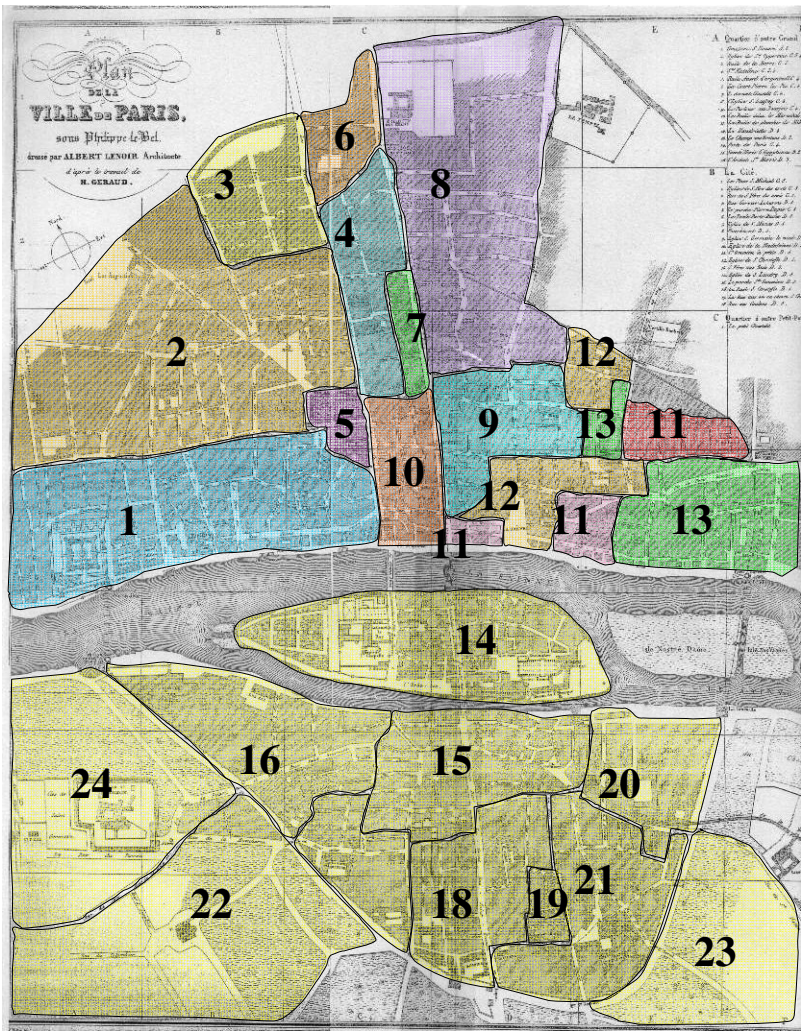
## III. Paris in the Heyday of the Commercial Revolution

### 1. Parishes, wealth and taxpayers

The Parisian tax rolls allow us to construct some summary statistics for Paris at the turn of the 13th century[8]. 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[9]. 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 outside the walls of the city[10]. 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.*

[8] Partial data were already presented by Herlihy(1995) and in Geraud (1837).
[9] 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.
[10] 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 Chardonnay | 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. It is quite clear that the amount collected each year was similar and the burden was divided among the citizens in a method which gave exemptions to the poor (who, in any case provided little in terms of the total tax). The 'top 5,000' paid a similar tax (on average) and it is likely that years with fewer taxpayers, were probably bad years – with high food prices. It is known that from 1293-1295 grain prices were high and again around 1313 (Jordan, 1996).

Table 3

Average tax and total tax receipts: 1292-1313

| Year | Average tax | Average based on Top 5000 | Total tax receipts *Livre parisis* |
|---|---|---|---|
| 1292 | 16.9 | 43.9 | 12286.8 |
| 1296 | 35.2 | 39.2 | 9958.2 |
| 1297 | 20.9 | 38.3 | 10372.1 |
| 1313 | 34.1 | 41.3 | 10393.6 |

Note: 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[11]. Table 4 presents the distribution of occupations by economic sector in terms of their relative size and income.

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 |

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.

[11] 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.

It is interesting to note that the average wealth of those whose occupations were listed was substantially lower than of those whose occupations were not listed. As the listing of occupations was probably used to identify taxpayers, rather than provide a census of occupations, it seems natural that the identity of the wealthiest citizens was known by other means.

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 Chardonnay | 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*.

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 Templers – 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.[12] 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 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

[12] 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.

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[13]. 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 Chardonnay | 0.5% | | | 1.0% | | | |
| Notre Dame des champs | 0.4% | | 0.3% | | | | |
| St. Marcel | 1.6% | 0.9% | 1.7% | 1.9% | | | |

[13] The heart of the Jewish community is, to date, in the Marais – their place of residence in the middle ages.

**5. Foreigners' wealth and European wealth distribution.**

All European regions were represented in the Parisian tax roles, but the most prominent ones were the Italian city states, the Flemish, English, Scots, Germans and Jews (until 1296). The average tax assessment of the various nationals (at least for the larger groups) allows us to attempt to construct the European wealth distribution.

One may assume that migrants self select and therefore are not a random sample of their country of origin's income distribution. We refer to two simple models that may account for the presence of foreigners in the city of Paris. The first suggests that these foreigners were migrants and the other that these were agents of international trading and banking firms. The migration model (see Hatton and Williamson (1998)) assumes that migration is influenced by a positive wage gap between host and country of origin and demographic (Malthusian) pressures associated with economic growth. In either case, the expected wealth, after migration, is greater or equal to what it could have been at home. The international firm's agent model suggests that these agents would probably represent the wealth distribution of their counterparts at the home country[14].

Table 8 shows the rankings of the largest groups of foreigners in Paris and the average for the entire French population. When compared with the entire French distribution is seems that the Germans, English and Scots would fit the Hatton Williamson (1988) model; their average wealth is equal or lower than the French average. These nationals probably migrated to Paris to better themselves which suggests that these areas were less affluent than Paris[15]. The comparison of the number of taxpayers in 1296 (which did not include the poorer taxpayers) with 1297 allows to

[14] From the Datini and Medici bank accounts (De Roover (1948, 1966)), it is plausible to suggest that junior partners and managers were usually sent to foreign offices of the firm.
[15] Jews of English origin were also the less affluent of their brethren.

estimate the share of poor taxpayers among the foreigners'. We can see that the decline in taxpayers is correlated with our priors about the relative wealth distribution of the foreigners. The Scots, which were the poorest declined by two thirds in 1296, the English by 60 percent, and the Germans only by 40 percent.

Table 8

Analysis of Foreign Residents' Income – according to Parisian *tailles*

| | | 1292 | 1296 | 1297 | 1313 |
|---|---|---|---|---|---|
| Italians | N | 197 | 116 | 101 | 43 |
| | Average tax | 150.5 | 180.7 | 194.7 | 65.7 |
| | Max Tax | 2290 | 1650 | 1090 | 450 |
| Flemish | N | 107 | 51 | 98 | 64 |
| | Average tax | 47.7 | 71.1 | 33.6 | 121.6 |
| | Max Tax | 1650 | 800 | 800 | 3000 |
| Germans | N | 115 | 47 | 77 | 38 |
| | Average tax | 18.2 | 31.0 | 19.9 | 22.7 |
| | Max Tax | 200 | 220 | 250 | 180 |
| English | N | 306 | 92 | 218 | 154 |
| | Average tax | 8.3 | 29.8 | 11.8 | 19.9 |
| | Max Tax | 200 | 440 | 180 | 450 |
| Scots | N | 59 | 19 | 57 | 31 |
| | Average tax | 6.3 | 16.4 | 8.9 | 19.1 |
| | Max Tax | 48 | 40 | 48 | 180 |
| Jews | N | 87 | 80 | | |
| | Average tax | 28.9 | 24.7 | | |
| | Max Tax | 490 | 300 | | |
| Non foreigners | Average tax | 15 | 32 | 19 | 44 |

Not surprisingly, the affluent foreigners were the Italians and Flemish – representatives of the more advanced and prosperous regions in Europe during the commercial revolution. These

groups probably included representatives of Italians and Flemish banking and trading firms in Paris and the elite of financiers and international merchants. As the data on maximum tax assessment show, individuals in these groups were the highest taxed in Paris – the richest of all residents.

The Jews, an ethnic group rather than typical migrants, were wealthier than the average Parisian, second only to the Flemish and Italians. Their expulsion does not allow us to track changes in their numbers or wealth for the whole period. Nevertheless, it seems that the Jews and Italians were not subject to the exemptions made for the poorer citizens in 1296. The exclusion of the poorest taxpayers should have lowered their number and raised average tax. This does not happen in the case of these two groups. The tax rolls accounted for Jews and *Lombard* under separate accounts, which suggest that they were subject to a different treatment than other foreigners. The expulsion of the Jews in 1305 and the decline in the number of (wealthy) Italian taxpayers and their average tax assessment allude to the hardships faced by groups associated with finance and money lending during times of fiscal crisis[16].

## 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 Parisan *tailles*

[16] See also the default of Edward III in 1326 on his loans to the Italian banks of Bardi and Peruzzi.

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.

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[17]. 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 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 ca 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 bellow, 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

[17] I intend to analyze the urban self-taxation mechanism in detail in future work.

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$^{th}$ 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[18]. 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

[18] 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 European at the end of the 13th 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 he 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 Chardonnay | 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.[19] 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 | | |

[19] 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 in to three skill and capital categories groups (as described above). Table 14 present 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[20]. 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 | Population | Average tax | Gini | Top 1% | Top 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 |
| 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

[20] 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 tax | Gini | Top 1% | Top 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

| | 1292 | | | 1297 | | |
|---|---|---|---|---|---|---|
| Profession | 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 1296and 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 droit* , largely in the Parishes of St. Germain LwAuxerrois, and St. Jacque, 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 it wealth) from 1292 to 1313.

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

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

| | 1292 | | | 1297 | | | 1313 | | |
|---|---|---|---|---|---|---|---|---|---|
| Parish | **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 Chardonnay | | | | | | | | | |
| 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

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

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

| | 1297 | | | 1313 | | |
|---|---|---|---|---|---|---|
| **Professions** | N | Mean | Max | N | Mean | Max |
| **Banker** | 29 | 529 | 1090 | 3 | 269 | 308 |
| **Draper** | 7 | 342 | 490 | 19 | 708 | 2308 |
| **Merchant** | 9 | 264 | 300 | 5 | 628 | 1385 |
| **Goldsmith** | 6 | 263 | 332 | 2 | 738 | 1154 |
| **Inn Keeper** | 4 | 270 | 380 | 3 | 554 | 923 |
| **Spice dealer** | 4 | 247 | 300 | 8 | 493 | 1385 |
| **Money changer** | 1 | 200 | 200 | 5 | 427 | 577 |
| **Doctor** | 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 126 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 tan 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 |
|---|---|---|---|---|---|---|
| **1292** | **Total** | | 166 | 372 | 2290 | |
| | **One time mention** | | 92 | 356 | 1880 | |
| | **Repeat mention** | | 74 | 393 | 2290 | |
| | **Continue to** | 1296 | 67 | 404 | 2290 | 0.167 |
| | | 1297 | 58 | 403 | 2290 | 0.147 |
| | | 1313 | 12 | 286 | 480 | 0 |
| **1296** | **Total** | | 148 | 360 | 2850 | |
| | **One time mention** | | 40 | 342 | 770 | |
| | **Repeat mention** | | 108 | 367 | 2850 | |
| | **New comers** | | 76 | 294 | 930 | |
| | **From** | 1292 | 67 | 413 | 2290 | 0.167 |
| | **Continue to** | 1297 | 96 | 359 | 2850 | 0.369** |
| | | 1313 | 17 | 256 | 360 | -0.208 |
| **1297** | **Total** | | 146 | 348 | 1090 | |
| | **One time mention** | | 43 | 370 | 1090 | |
| | **Repeat mention** | | 103 | 340 | 1090 | |
| | **New comers** | | 38 | 350 | 1090 | |
| | **From** | 1292 | 58 | 363 | 960 | 0.147 |
| | | 1296 | 96 | 343 | 1090 | 0.369** |
| | **Continue to** | 1313 | 20 | 267 | 490 | 0.388 |
| **1313** | **Total** | | 144 | 535 | 2308 | |
| | **New Comers** | | 120 | 512 | 2308 | |
| | **From** | 1292 | 12 | 479 | 1385 | 0 |
| | | 1296 | 17 | 651 | 1962 | -0.208 |
| | | 1297 | 20 | 625 | 1962 | 0.388 |

**Conclusions**

The results of a preliminary investigation into the Parisian *taille* of Philip the Fair presented in this paper shows that Paris exhibited a large degree of inequality comparable with that of contemporary London , Florence in 1427 and early modern Holland. Inequality was high in every possible category: gender, residence, country of origin, occupation skills and capital. It appears that inequality was positively correlated with average wealth and population size. The more affluent parishes were in the central areas of the *right bank*, outside the walls, wealth was substantially lower. The only discernable difference between groups is measured in the case of foreign nationals and professions: There are significant differences between the very unequal income distributions of the most wealthy foreigners – the Italians and Flemish and the less affluent ones – the English and Scots and there are significant differences in inequality between the prominent professions and less prominent ones.

In modern inequality distributions, the wealthiest and most advanced countries have lower degrees of inequality than lesser developed countries. In medieval Paris, and possibly all over Western Europe, large and wealthy urban centers were associated with extreme degrees of income inequality, that spanned across subcategories. Given the almost progressive nature of the taxation scheme of the *taille*, it seems that inequality was the outcome of unregulated market forces. Inequality was not an outcome of the feudal system, as the landed elite were not part of the tax rolls. Marxist inequality based on concentration of industrial capital can not explain it either. It appears, then, that individual ability and skills were differentially rewarded and there

seemed to have been a large premium on human capital. In its emphasis on human capital, rather than land or capital, medieval Paris was similar to the information age economy.

The data pose an interesting question for growth theorists: what was the causal relationship between inequality, wealth and population growth? In recent growth models the return to human capital induces more investment in children quality and this tends to lower population growth and produces a blessed cycle of low fertility, high human capital and sustained growth. The incentives for investing in human capital in medieval Paris were not absent. Given the high inequality in wages, the option value of education must have been very high. The large share of migrants and foreigners suggests that option of going to a large urban center increased the value of education in the countryside and periphery. If recent growth models have general validity, urban centers in medieval Europe should have behaved according to the post-Malthusian models.[21] At the same time, it seems that inequality was associated with higher population growth perhaps because only in ever expanding markets and demands the relatively inelastic supply of human capital can reap such rewards. Yet, it seems that the pressure of population growth on landed resources, in the end, derailed the commercial revolution. Alternatively, should we add political economy effects to growth models: could a more inequality averse society might have reduced inequality by redistributing income in such a way as to reduce the vulnerability of the lower classes to high food prices? The comparison of medieval Europe with the post-industrial society could help us get closer to answering these important questions.

[21] For example Galor Weil (2000)

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