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**The usury doctrine and urban public
finances in late-medieval Flanders (1220 -
1550): rentes (annuities), excise taxes,
and income transfers from the poor to
the rich**

Munro, John H.

Department of Economics, University of Toronto

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NELL'ECONOMIA EUROPEA
SECC. XIII-XVIII

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IN THE EUROPEAN ECONOMY
FROM THE 13TH TO THE 18TH CENTURIES

* *

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a cura di Simonetta Cavaciocchi

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John H. Munro

The Usury Doctrine and Urban Public Finances in Late-Medieval Flanders (1220-1550): Rentes (Annuities), Excise Taxes, and Income Transfers from the Poor to the Rich¹

The medieval origins of the 'financial revolution' in government borrowing: usury and rentes

The establishment of permanent funded national debts in many European states from the sixteenth to eighteenth centuries, often collectively called the 'financial revolution', owed their true origin to a much earlier medieval innovation in the public finances of medieval Flemish and Artesian towns, from the 1220s, which in turn was a response to the Church's recent and much revived anti-usury campaign. The essence of this so-called 'financial revolution', in establishing a permanent funded national debt, requires a clarification of each of its three main components.² First, it was 'public' because the debt was the responsibility of the government itself, and not, as had so often been the case in medieval and early-modern Europe, the personal obligation of the prince. Second, this public debt was based not on loans, or on any other forms of borrowing, but instead on the sale of perpetual though redeemable annuities, a financial instrument that was called a *rente* (*renten* in Dutch) in the Netherlands, France, and Germany (but *juros* in Spain).³

¹ I dedicate this essay to the late Professor Stephan (Larry) Epstein (1960-2007), of the London School of Economics and member of the Datini Institute's Comitato Scientifico, who had done so much to enlighten us about the state in late-medieval, early-modern Europe. See in particular, S.R. EPSTEIN, *Freedom and Growth: the Rise of States and Markets in Europe, 1300-1750*, London 2000. I also acknowledge support from the Social Sciences and Humanities Research Council of Canada, for research grants awarded in 1993-1996, 1996-1999, 1999-2003, 2003-2007, and 2007-11.

² For England, see in particular: P.G.M. DICKSON, *The Financial Revolution in England: a Study in the Development of Public Credit, 1688-1756*, London 1967; and also H. ROSEVEARE, *The Financial Revolution, 1660-1760*, London 1991; and P. O'BRIEN, *Fiscal Exceptionalism: Great Britain and its European Rivals - From Civil War to Triumph at Trafalgar and Waterloo*, in *The Political Economy of British Historical Experience, 1688-1914*, P. O'BRIEN, D. WINCH eds., Oxford 2002, pp. 245-265; P. O'BRIEN, P. HUNT, *The Rise of a Fiscal State in England, 1485-1815*, in "Historical Research", 66, 1993, pp. 129-176; P. O'BRIEN, *The Political Economy of British Taxation*, in "The Economic History Review", 2nd ser., 41, Feb. 1988, I, pp. 1-32; J. BREWER, *The Sinews of Powers: War, Money, and the English State, 1688-1783*, Cambridge Mass. 1990.

³ For the Netherlands and France, see J.D. TRACY, *A Financial Revolution in the Habsburg Netherlands: Renten and Renteniers in the County of Holland, 1515-1565*, Berkeley-London 1985; *The Rise of the Fiscal State in Europe, c. 1200-1815*, ed. R. BONNEY, Oxford 1999; J. MUNRO, *The Medieval Origins of the Financial Revolution: Usury, Rentes, and Negotiability*, in "The International History Review", 25, Sept. 2003, pp. 505-262; *A Financial History of the Netherlands*, M. 't HART, J. JONKER, J. LUITEN VAN ZANDEN eds., Cambridge 1997; M. 't HART, "The Devil or the Dutch": *Holland's Impact on the Financial Revolution in England, 1643-1694*, in "Parliaments, Estates and Representatives", 11, June 1991, pp. 39-52; W. FRITSCHY, *A "Financial Revolution" Revisited: Public Finance in Holland During the Dutch Revolt, 1568*

Because these *rentes* or annuities were perpetual obligations (unless the state chose to redeem them), the public debt was ‘permanent’ – in stark contrast to earlier forms of state borrowing, which were almost always very short-term, and usually with a specific maturity date. Finally, that public debt was ‘funded’ in the sense that the governments concerned formally authorized (usually by legislation) the use of specific excise or consumption taxes to make the annual annuity payments and, when necessary, to redeem these annuities or *rentes*.

Whether the issue is medieval or more modern forms of European public finance, and related forms of taxation, historians may justly assume one constant: that the primary if not exclusive reason for such public borrowing was financing either warfare or the military defence of the state. Although financing public works may have played a relatively greater role in late-medieval urban finances, the costs of urban defence were still almost always a major issue. Certainly in the late-medieval and early-modern Low Countries, the towns were also responsible for their share of the costs for territorial defences of the feudal principalities in this region (subsequently unified as the Habsburg Netherlands).

That English historians have so frequently used the term ‘financial revolution’ to refer their own country’s establishment of a permanent funded debt between 1693 and 1752, itself a product of both the Glorious Revolution (1688) and of wars more costly than England had ever before fought, implies that England had initiated this financial innovation, and during this very era.⁴ James Tracy, however, has demonstrated beyond any question that, as a system of national public finance, this so-called ‘financial revolution’, i.e., one based on the sale of *rentes* or annuities, was to be found much earlier, in the sixteenth-century Habsburg Netherlands, and

- 1648, in “The Economic History Review”, 2nd ser., 56, Feb. 2003, pp. 57-89. For France, See R. BONNEY, *The King’s Debts: Finance and Politics in France, 1589-1661*, Oxford 1981; P. T. HOFFMAN, G. POSTEL-VINAY, and J.-L. ROSENTHAL, *Priceless Markets: The Political Economy of Credit in Paris, 1660-1870*, Chicago 2000; D. WEIR, *Tontines, Public Finance, and Revolution in France and England, 1688 - 1789*, in “The Journal of Economic History”, 49, Mar. 1989, pp. 95-124; F. VELDE and D. WEIR, *The Financial Market and Government Debt Policy in France, 1746 - 1793*, in “The Journal of Economic History”, 52, 1992, pp. 1-39. For nineteenth-century European public finance based on annuities or *rentes* (not bonds, despite the title), see N. FERGUSON, *Political Risk and the International Bond Market between the 1848 Revolution and the Outbreak of the First World War*, in “The Economic History Review”, 2nd ser., 59, Feb. 2006, pp. 70-112. For Spain (Aragon-Catalonia and Castile), see n. 6 below.

⁴ See the sources in n. 2, above. After the Glorious Revolution of 1688, and the overthrow of James II (1685-88), Parliament invited William III of Orange, the *Stadhouder* of the (Dutch) United Provinces, to rule jointly as William III (r. 1689-1702) with his wife Mary (r. 1689-1694), the daughter and heir of James II. But William brought with him his ongoing war with Louis XIV (r. 1643-1715) of France, a war that England was then ill equipped to finance. The culmination of the English ‘Financial Revolution’ was ‘Pelhams’ Conversion’ (1749-1757) by which the Chancellor of the Exchequer Sir Henry Pelham consolidated all of the outstanding issues of the now British public debt, chiefly in perpetual annuities, in the Consolidated Stock of the Nation (Consols), which trade to this day on the London Stock Exchange. See the very influential article on the role of the Glorious Revolution: D. NORTH, B. WEINGAST, *Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century Britain*, in “The Journal of Economic History”, 49, Dec. 1989, pp. 803-832; and see recent attacks on their views in: N. SUSSMAN, Y. YAFEH, *Institutional Reforms, Financial Development and Sovereign Debt: Britain, 1690 - 1790*, in “The Journal of Economic History”, 66, Dec. 2006, pp. 882-905; D. STASAVAGE, *Partisan Politics and Public Debt: The Importance of the “Whig Supremacy” for Britain’s Financial Revolution*, in “The European Review of Economic History”, 11, April 2007, pp. 123-153.

was then transmitted to England from the Dutch ‘Republic of the United Provinces’.⁵ One might cavil, however, that in the Habsburg Netherlands this form of public finance was still the responsibility of the provincial governments, and that a stronger ‘national’ case could be made for Habsburg Spain, from at least the reign of Emperor Charles V (whose Empire included the Netherlands).⁶ Nevertheless, the issue is not the actual form of the government so responsible but the nature of this form of public finance; and in that respect, Tracy, Van Werveke, and several other historians had noted that public civic borrowing based on the sale of *rentes/renten* was being practised in the towns of northern France (chiefly Artois) and Flanders from at least the 1220s, albeit on a small scale.⁷

The thirteenth-century anti-usury campaigns: usury as a mortal sin against Natural Law

What none had noted, however, was the role of the anti-usury campaign in instigating or promoting this quite revolutionary form of medieval public finance, for reasons that have to be found in a brief examination of the medieval usury doctrine, as it had evolved by the thirteenth century. Because the usury doctrine itself goes back to the very earliest days of the Christian Church, in many respects one inherited from Greek, Roman, and Jewish civilisations, one may argue that it had always provided a hindrance to any European governments, whether those of towns or principalities, that had sought to meet their financial obligations by borrowing. But, until the full evolution of the usury doctrine and especially before the consequent intensification in the anti-usury campaign in the early thirteenth century, this doctrine had been more of a nuisance than a real obstacle in public borrowing.

Certainly the concept of ‘usury’ and the full evolution of the doctrine have both been misunderstood by a majority of historians. Before the sixteenth century, the term usury had never meant excessive interest: it meant any interest at all, any payment beyond the actual loan, beyond the principal sum that had been borrowed (except under very special and narrow circumstances).⁸ Nor, contrary to many views, did usury apply only to so-called consumption loans. Nevertheless, if the

⁵ J. TRACY, *A Financial Revolution*, cit. ; IDEM, *Taxation and State Debt*, in *Handbook of European History, 1500-1600: Late Middle Ages, Renaissance and Reformation*, T. BRADY, H. OBERMAN, J. TRACY eds., I-II, Leiden 1994-95, I, *Structures and Assertions*, pp. 563-588; J. TRACY, *On the Dual Origins of Long-Term Urban Debt in Medieval Europe*, in *Urban Public Debts: Urban Government and the Market for Annuities in Western Europe, 14th-18th Centuries*, K. DAVIDS, M. BOONE, P. JANSSENS eds., Turnout 2003, pp. 13-26; J. TRACY, *Emperor Charles V, Impresario of War: Campaign Strategy, International Finance, and Domestic Politics*, Cambridge 2002.

⁶ See the arguments in J. MUNRO, *The Medieval Origins of the Financial Revolution*, cit., pp. 505-562. For Spain, see Y. ROUSTITT, *La consolidación de la dette publique à Barcelone au milieu du XIV^e siècle*, in “Estudios de historia moderna”, 4, 1954, 2, pp. 15-156; J. GELABERT, *Castile: 1504-1808*, in *The Rise of the Fiscal State in Europe, c. 1200-1815*, ed. R. BONNEY, Oxford 1999, pp. 207-212; G. TORTELLA, F. COMÍN, *Fiscal and Monetary Institutions in Spain (1600-1900)*, in *Transferring Wealth and Power from the Old to the New World: Monetary and Financial Institutions in the 17th Through the 19th Centuries*, M. BORDO, R. CORTÉS-CONDÉ eds., Cambridge 2002, pp. 140-148.

⁷ See n. 3 above, and nn. 31-37 below.

⁸ For these circumstances see J. MUNRO, *Origins of the Financial Revolution*, cit., pp. 506-513.

actual meaning of the term had not changed, the severity of ecclesiastical opposition to usury had evolved: first, from a sin condemned when practised by the clergy to one practised by any Christian (thus it did not apply to Jews); from a sin against charity to a sin against justice, and finally to a truly mortal sin against Natural Law – and thus a sin directly against God Himself.

The core of the Scholastic usury doctrine: the Roman law concept of the loan as a mutuum

The core argument against usury was one based firmly on Roman Law, whose codification took place during the reign of Emperor Justinian I (527 - 565 CE).⁹ Derived from Roman concepts of property rights, the essential Roman Law principle concerning a loan was the following: that the ownership of the money in a loan contract, in effect the ownership of the capital and thus of all the property rights attached to the use of that capital, was transferred from the lender, as the original owner, to the borrower, who became the sole owner for the entire duration of the loan contract. Given the very great importance that medieval European society continued to give to the Justinian Code, it was included in the earliest compilation of canon law, the *Concordia discordantium canonum*, commonly known as Gratian's *Decretum*, compiled between 1130 and 1140.¹⁰

That principle can well be seen in the very exact term for a loan, found in both Roman and medieval Latin, and thus the term used in both the Justinian Code and Gratian's canon-law *Decretum*: the *mutuum* – literally, 'what was thine becomes mine'. Consequently, usury was a sin, well beyond any concept of violating Christian principles concerning charity, because it was theft of property; and that concept – 'usury as theft' – can be found in virtually all later-medieval Scholastic and canon law literature. Indeed, it can be found even before the publication of the Justinian Code, as early as the fourth century, in a statement attributed to Bishop St. Ambrose of Milan (339-97): 'if someone takes usury, he commits violent robbery [*rapina*], and he shall not live'. That seemingly harsh view is, in fact, based on very

⁹ The codification of Roman law under Emperor Justinian I (527 - 565 CE). Chiefly compiled by the lawyer Tribonian, the *Corpus iuris civilis* consists of: the *Code* (12 books) in 528-29; the *Digest* (50 books) and *Institutes* (4 books) of 529-33; and the *Novellae post codicem constitutiones*, most of which were completed by Tribonian's death, in 542. Note that, for Roman citizens, usury – lending money for a specified rate of interest – had been prohibited by the *Lex Genucia*, in 342 BCE. Under Roman law, *mutuum* contracts themselves could therefore not specify interest, and permitted the repayment only of the exact sum lent; but Roman law did permit auxiliary contracts (*stipulatio*) to specify interest payments under certain conditions, with supposedly 'moderate' interest rates. O. LANGHOLM, *Economics in the Medieval Schools: Wealth, Exchange, Value, Money and Usury According to the Paris Theological Tradition, 1200-1350*, Leiden-New York 1992 (Studien und Texte zur Geistesgeschichte des Mittelalters, 19), p. 37; J.T. NOONAN, *The Scholastic Analysis of Usury*, Cambridge Mass. 1957, pp. 22-33, 39-40, 51-81.

¹⁰ *Decretum Gratiani* D. 88, c.11, cited in O.LANGHOLM, *The Aristotelian Analysis of Usury*, Bergen-Oslo-New York 1984, pp. 71-72. The *Decretum* also incorporated decrees of the Second Lateran Council (1139). Though not officially sanctioned by the papacy of this era, it 'became the first part of the body of canon law in the law curriculum'; and it was finally ratified as part of the *Corpus iuris canonici* by Pope Gregory XIII in the Roman edition of 1582. See Kenneth Pennington, 'Gratian', in *Dictionary of the Middle Ages*, I-XIII, J. STRAYER et al. eds., V, New York 1985, pp. 656-658.

similar words in Ezekiel, in the Old Testament.¹¹ And similar if less harsh views can also be found in the fifth-century ecclesiastical palea *Ejjiens*. Both St. Ambrose's brutal stricture and this palea are quoted, with a strong emphasis on their importance, in Gratian's *Decretum*. Furthermore, as early as 1165, the Bolognese canon lawyer Paucapalea had correlated the Justinian Code entries on the *mutuum* with Gratian's entry on *usura* in the *Decretum*; and, in 1187, Huguccio, an even more renowned Bolognese canon lawyer, had explicitly enunciated the arguments on the transfer of ownership rights in a *mutuum* to justify the usury doctrine.¹² If not yet fully a sin against natural law, usury was, in this context of ownership rights, a sin against commutative justice – the equality of exchange – in that the lender, in exacting usury (interest), had received a greater value on the redemption of the loan than he had originally given.

Indeed, that principle on the ownership of capital still remains valid in modern financial jurisprudence, and provides the fundamental distinction between equity investments and loan investments. That, in essence, also explains why the only investment contract that the Church found to be sinful, as usury, was the *mutuum* or loan contract, while the Church always readily accepted both profit and rent as fully licit returns on any equity investments. For, obviously those who invested in partnership contracts or *commenda* contracts in some commercial enterprise or venture always fully retained the ownership of their capitals so invested.¹³ The very same was true of anyone who, having invested in physical property, then lent the use of that property (land, buildings, animals, etc.), receiving in return a rental income.

The Role of Aristotle: Natural Law and the 'sterility of money'

It is now a commonplace in the literature to ascribe the full fruition of the medieval Scholastic usury doctrine to the thirteenth-century reintroduction of Aristotle's principal treatises: first, the *Nicomachean Ethics*, translated from Greek into Latin, in 1246-47, and revised in the 1260s, when, second, his renowned

¹¹ O. LANGHOLM, *Legacy of Scholasticism*, cit., p. 59: 'Si quis usuram accipit, rapinam facit; vita non vivit'. See Ezekiel 18.13: He who 'hath given forth upon usury, and hath taken increase: shall he live? He shall not live .. he shall surely die'. *The Holy Bible: King James Version* (1611), p. 711.

¹² See O. LANGHOLM, *Legacy of Scholasticism*, cit., p. 59; IDEM, *Aristotelian Analysis*, cit., pp. 71-72.

¹³ In typical and traditional partnership contracts from Graeco-Roman times, each partner was entitled to a share of the profits that was in proportion to their individual capital investments; and they were similarly liable for losses and debts, in the same proportion, but legally subjected to unlimited liability. In the typical *commenda* contract, which was always drawn up for only one maritime venture (and did not apply to land-based trade), in which one partner supplied all the capital, and the other partner supplied all the enterprise and labour, the investor received 75 percent of the profits and thus the active sea-going merchants received only 25 percent. If the venture was a failure, without any profit, the investor received nothing, but he also enjoyed 'limited liability' in that he was not liable for any of the losses, debts, or other liabilities that the active sea-going merchant had incurred in this or in any other related ventures. See *Medieval Trade in the Mediterranean World: Illustrative Documents Illustrative Documents Translated with Introductions and Notes*, RS. LOPEZ, I. RAYMOND eds, New York-London 1955 (Records of Civilization, Sources, and Studies, 51), Part III: 'Commercial Contracts and Commercial Investments', pp. 157-238.

treatise on *Politics* was also translated. Both works had a most profound influence on the two major theologians of this era: St. Albert the Great, or Albertus Magnus (b. 1193 or 1206 - d. 1280), and his most famous student, St. Thomas Aquinas (1225-1274).¹⁴ The importance of Aristotle's treatises for the usury doctrine was based on the assumption that money, in the natural order, had only one function: as a medium of exchange. From that premise flowed two essential components of the medieval usury doctrine: first, the concept of the 'sterility of money', and second, the concept that, because of that essential sterility, usury was a sin against Natural Law, as can be seen in this quotation from his *Politics*:¹⁵

The most hated sort [of money-making], and with the greatest reason, is usury, which makes a gain out of money itself, and not from the natural use of it. For money was intended to be used in exchange, but not to increase at interest. And this term usury [τόκος], which means the birth of money from money, is applied to the breeding of money because the offspring resembles the parent. Whereof of all modes of making money this is the most unnatural.

Nevertheless, one must clearly recognize that the true and fundamental basis of the usury doctrine, concerning the transfer of ownership of money in the *mutuum* loan contract, long predated the reintroduction of Aristotle's treatises into western Europe. Furthermore, Aristotle's 'sterility of money' argument did not subsequently become the major feature of usury doctrine, for many theologians and canon lawyers came to recognize that 'money', as investment capital, is not in fact 'sterile'. But the 'sterility of money' concept had the great virtue of being so easy for the public to grasp, when the Church and its agents conducted a much more intense anti-usury campaign in the thirteenth and fourteenth centuries.

Finally, St. Thomas Aquinas himself made another major contribution to the anti-usury doctrine by resolving any lingering doubts about the differences between usury, in *lending money*, and rent, in *lending property*, by distinguishing between the role of fungibles and non-fungibles in such a loan (*mutuum*), without specific references to the core issue of the ownership of capital. Money (coins), and similar fungibles, such as wine and grain, were necessarily totally consumed (and in St. Thomas's view, destroyed) in their use, so that repayment, or redemption of the loan, necessarily involved their replacement with different but exactly identical objects, i.e., objects of essentially identical value.¹⁶ Nobody – or very few – would rationally borrow money (coins) in order to hoard it; and, as Aristotle had stipulated, money had only one use: as a medium of exchange, a mechanism of payment in trade. In contrast, the repayment of a loan of non-fungibles – such as the leasing of property, buildings, farm animals, etc. – involved not their

¹⁴ See in particular J.T. NOONAN, *Scholastic Analysis of Usury*, cit., pp. 38-39, 52-53.

¹⁵ *The Politics of Aristotle: Translated Into English*, I-II, trans. and ed. B. JOWETT, I, *Introduction and Translation*, Oxford 1885, p. 19: *Politics*, Book I.10. 1258b. For similar views on the Nichomachean Ethics, see O.LANGHOLM, *Aristotelian Analysis of Usury*, cit., pp. 5-21, 54-61; IDEM, *The Legacy of Scholasticism in Economic Thought: Antecedents of Choice and Power*, Cambridge-New York 1998, pp. 21-22.

¹⁶ That did involve some problems that only a few theologians recognized: namely, the repayment of loans, made in silver coins, with debased silver coins of the same nominal value but therefore of inferior real value. On this important but neglected issue, see TH. SARGENT, F. VELDE, *The Big Problem of Small Change*, Princeton-Oxford 2002, pp. 69-99.

replacement but the return of the very same objects, which were, in their use, subject to 'wear and tear', thus further justifying the fully licit payment of rent.

At the same time, however, one may note that, since rents were also calculated on the basis of time – so much rent per month or year – another common Scholastic argument, namely, that 'usury was the Theft of Time, which belongs to God alone', was clearly illogical. The utility of that argument was, however, that it clearly also appealed more to laymen, and especially to the large mass of the uneducated public, as a much more readily understandable and thus convincing explanation of why usury was truly a mortal sin.

The anti-usury campaign: the role of Lateran Councils and the mendicant preaching orders

The origins of the revived and indeed harshly vigorous (almost virulent) 'campaign against usury', which was to prove so important in altering the character of medieval urban public finances, had begun almost a full century before the re-introduction of Aristotle's treatise and the publication of St. Thomas Aquinas' *Summa Theologica* (ca. 1265-74). One may well contend that this campaign had begun with the Third Lateran Council of 1179, which, after endorsing all of the Second Lateran Councils prohibitions against usury (1139), issued the formal sanction or penalty of excommunication – i.e., complete banishment from the Church – for all usurers who did not repent and restore their ill-gotten 'stolen' gains. It also forbade them to receive a Christian burial if they 'died in sin', as unrepentant usurers.¹⁷

The next and Fourth Lateran Council, of 1215, apart from reiterating all of the prohibitions against usury, and the prescribed punishments for this sin, provided two additional features of great importance. First, it issued a vicious, excoriating diatribe against Jews, for their supposed 'treachery' and 'cruel oppression' in extorting 'oppressive and excessive interest', in engaging in licensed pawn broking.¹⁸ The prohibitions against usury, it must be noted, applied only to Christians; and the only non-Christians in western Europe who were able to engage in lending were Jews.¹⁹ While both ecclesiastical and secular regulations did limit the

¹⁷ J. GILCHRIST, *The Church and Economic Activity in the Middle Ages*, New York 1969, pp. 182-183: Canon 25: 'Seeing that almost everywhere the crime of usury has taken such hold that many pass over other professions to devote themselves to the business of usury, as if it were lawful, and thus disregard the strict scriptural prohibition, we decree that notorious [publicly known] usurers are not to be admitted to the communion of the altar, nor, if they die in that sin, to receive Christian burial.'

¹⁸ See Constitution 67, from the Fourth Lateran Council (1215), translated and published in J. GILCHRIST, *Church and Economic Activity*, cit., pp. 182-183, in particular this passage: 'The more that Christians are restrained from the practice of usury, the more are they oppressed in this matter by the treachery of the Jews, so that in a short time they will exhaust the resources of Christians...'; and thus, 'we ordain in this decree that if in the future ... Jews extort from Christians oppressive and excessive interest, the society of Christians shall be denied them until they have made suitable satisfaction for their excesses'. This passage is evidently a source of the common erroneous view that the Church opposed only 'excessive' interest.

¹⁹ The Muslim presence was almost non-existent, especially in commerce and finance; and, in any event, Muslims themselves were prohibited by the Koran from usurious lending practices (the Arabic term is *raba*). See H. SOLOVEITCHIK, *Usury, Jewish Law*, and S. WARD, *Usury, Islamic Law*, both in

interest rates that Jewish money-lenders were allowed to charge, sometimes the legal limit interest reached 25 percent (reflecting the high risk factor of non-payment): or up to 43.33 percent in pawnbroking (2d per pound per week: 104/240d).²⁰ By so associating Jewish money-lenders with usury, the Council certainly made it appear to be all the more a heinous, and not just mortal, sin to a largely anti-Semitic public. And thus these provisions proved to be a very powerful weapon in the new revival of the anti-usury campaign. Second, the Fourth Lateran Council made annual confessions obligatory for all; and that of course meant confessions of usury, another powerful weapon for what became the prime agency for the anti-usury campaign: the new mendicant preaching orders.

The first of these was the Order of Friars Minor or Franciscans (St. Francis of Assisi), founded c.1206-10; and the second was the Order of Friars Preacher or Dominicans (St. Dominic), founded in 1216, the very year after Lateran IV. Of the two, the Dominicans became the even more hostile foe of usury. In the thirteenth century they would boast such leading theologians in the anti-usury campaigns as St. Albertus Magnus and St. Thomas Aquinas.²¹ Obviously the far more powerful agents in this campaign were those mendicant friars who were sent out to preach to the chiefly illiterate and uneducated public. Not content with the formal statements and strictures issued by the Lateran Councils, the Dominican and Franciscan friars concocted their own lurid *exempla* – diabolic and utterly horrifying stories about the ghastly fates awaiting usurers in the eternal fires of Hell, thereby convincing most of the public that usurers were amongst the very worst of all evildoers.²² That usurers so richly deserved this horrid fate was certainly the view of the famed Florentine Dante Alighieri (1265-1321), who, in his *Commedia* (Divine Comedy), placed usurers in the lower depths of Hell, the Seventh Circle (*Inferno*), as ‘the last class of sinners that are punished in the burning sands’.²³ In their inflammatory preaching, with such enormous public appeal, the mendicant preachers also

Dictionary of the Middle Ages, J. STRAYER, et al. eds., XII, New York 1989, pp. 339-341. Jewish law, however, permitted exacting usury from gentiles. See n. 11, above (Ezekiel 18:13).

²⁰ On licensed Jewish money-lenders, see J. SHATZMILLER, *Shylock Reconsidered: Jews, Moneylending, and Medieval Society*, Berkeley-Los Angeles-London 1990; and M. BOTTICINI, *A Tale of “Benevolent” Governments: Private Credit Markets, Public Finance, and the Role of Jewish Lenders in Medieval and Renaissance Italy*, in “The Journal of Economic History”, 60, Mar. 2000, pp. 164-189; D. BORNSTEIN, *Law, Religion, and Economics: Jewish Moneylenders in Christian Cortona*, in *A Renaissance of Conflicts: Visions and Revisions of Law and Society in Italy and Spain*, J. MARINO, T. KUEHN eds., Toronto 2003, pp. 241-256. In late thirteenth-century Flanders, Lombards (northern Italians) were also allowed to engage in pawnbroking, at rates up to 18 percent. See R. DE ROOVER, *Money, Banking, and Credit in Mediaeval Bruges: Italian Merchant Bankers, Lombards, and Money-Changers: A Study in the Origins of Banking*, Cambridge Mass. 1948, pp. 99-148.

²¹ See J.T. NOONAN, *Scholastic Analysis of Usury*, cit., pp. 38-39, 52-53; R. MCINERY, *Aquinas, St. Thomas* in *Dictionary of the Middle Ages*, J. STRAYER et al. eds, I, New York 1982, pp. 353-366.

²² See in particular, J. LE GOFF, *The Usurer and Purgatory*, in *The Dawn of Modern Banking*, ed. CENTER FOR MEDIEVAL AND RENAISSANCE STUDIES, UCLA, New Haven 1979, pp. 29-34, contending that the friars linked usurers ‘with the worst evildoers, the worst occupations, the worst sins, and the worst vices’.

²³ Canto XVII of *Inferno*, in D. ALIGHIERI, *The Divine Comedy*, Carlyle-Okey-Wicksteed translation, ed. C.H. GRANDAGENT, New York 1950 (Modern Library Editions), p. 93. Set in the year 1300, it was probably written between 1304 and 1321.

convinced secular governments of their God-ordained duty to enforce the usury ban vigorously during the later Middle Ages.²⁴

Finally, the mendicant preaching orders and others engaged in the anti-usury campaign received much valued additional support from the famous *Decretales* that Pope Gregory IX (1227-1241) issued in 1234.²⁵ Amongst its many detailed provisions are the following: that usurers were forever to be classed as *infames*: ineligible to hold public office, honours, or to testify in court. To enforce that provision, all princes were commanded to expel usurers from their realms and never readmit them; and landlords were forbidden to rent property to those lending money at interest. Indeed, clerics who permitted Church burials of usurers were to be classed as usurers themselves. The wills and testaments of usurers were to be held invalid; and the heirs of usurers who failed to make restitutions were also to be held as usurers and *infames*.

Well before Gregory IX's issue of these *Decretales* – which really just confirmed and codified the Church's now well established doctrines – and not long after the establishment of the two mendicant preaching orders, the anti-usury campaign had already borne fruit in a very fundamental change in urban public finances: with the first successful issue of *rentes*, in the 1220s.

The origins and evolution of the rente contracts

As indicated above, the vital importance of the *rente* contract in the medieval 'financial revolution', involving urban public finances, was its essential character: that it was not a loan, or any other related form of borrowing, even though it did indeed constitute part of the public debt. Instead, it represented the town government's sale of a future stream of urban income that was paid to the purchaser in return for a lump sum of capital, paid in full at the time of purchase. This peculiar form of public finance has no known antecedent in the ancient world. It first appears in private rather than public finance: as a *census* contract that some Carolingian monasteries had been issuing from about the early eighth century. In order to secure bequests of lands from the laity, monasteries had guaranteed the donor that, in return for surrendering all property rights to the land, the donor would receive an annual usufruct income (*redditus*) from the lands donated, i.e., 'fruits' of that property, delivered either in 'kind', as a share of the harvest, or later, more commonly in money, for the rest of his or her life, and sometimes also for the

²⁴ See J. LE GOFF, *Purgatory*, cit., pp. 29-34. No longer would one find open and direct references to interest payments that had been fairly common in commercial contracts of the twelfth century. For Genoese examples, see *Medieval Trade in the Mediterranean*, cit., no. 66, pp. 158-159 (Genoa, 16 July 1161), and n. 13 above; and *Business Contracts of Medieval Provence: Selected Notulae from the Cartulary of Giraud Amalric of Marseilles, 1248*, ed. J. PRYOR, Toronto 1981 (PIMS, Studies and Texts, 54).

²⁵ For a good summary of the usury doctrine and the related clerical punishments, see J. BRUNDAGE, *Usury*, in *Dictionary of the Middle Ages*, 12, New York 1989, pp. 335-339. See also L. ARMSTRONG, *Usury*, in *The Oxford Encyclopedia of Economic History*, J. MOKYR et al. eds., I-V, New York 2003, 5, pp. 183-185.

lives of designated heirs.²⁶ Because that annual income was quite obviously deemed to be part of the rental value of the land, the *census* contract more commonly came to be known as a *rente*, from which the now common financial term *rentier* has been derived.²⁷

In the realm of medieval private finance, that Carolingian contract developed into two somewhat different contracts: (1) the *bail à rente*, more closely related to the Carolingian contract: the sale of real estate or some form of immobile property in return for a perpetual annual income (normally hereditary); and its variant, (2) the *constitution de rente*, also known as the *rente à prix d'argent*: by which a property holder sold, for a specified lump sum of money, the right to receive a fixed annual income from his property or other real assets, though the property itself remained under his ownership.²⁸ Long before its use in public finance, this contract had become a widespread vehicle for private investment in the agricultural economies of Mediterranean western Europe (Italy and Aragon in particular): one by which small peasant landholders received needed capital by 'selling' such contracts to wealthy bourgeois merchants and financiers, who received in return this form of perpetual *rente* income.²⁹ The property-holding seller or issuer of the *rente* contract was known as the *débirentier*, who normally pledged all of his goods and assets to meet the annual payment, on penalty of forfeiture; and the buyer of the contract, the one receiving the future stream of income, was known as the *crédirentier*. The transfer of this contract to the realm of public finance meant that the city government assumed the role of the *débirentier* seller or issuer of the *rentes* (and, in theory at least, similarly obliged to pledge urban assets as collateral for the annuity payments).

Those towns that sold or issued these *rente* contracts used, from the very beginning, two distinct forms: (1) perpetual hereditary rents, known as *rentes*

²⁶ A.P. USHER, *The Early History of Deposit Banking in Mediterranean Europe*, I, *The Structure and Functions of the Early Credit System: Banking in Catalonia: 1240-1723*, Cambridge Mass. 1943 (Harvard Economic Studies, 75; reissued New York 1967), p. 146, citing TH. SOMMERLAD, *Die Wirtschaftliche Thätigkeit der deutschen Kirche*, Leipzig 1905, II, p. 171: reference to Abbey of St. Gallen, 816 CE; J. TRACY, *On the Dual Origins*, cit., citing (p. 14) the seminal work of B. KUSKE, *Das Schuldenwesen der deutschen Städte im Mittelalter*, Tübingen 1904 (Zeitschrift für die gesamte Staatswissenschaft, Ergänzungsheft, XII), pp. 12-24 (whose earliest example is for the Abbey of St. Gallen, in Hergau, 'um 700'). R. VAN UYTVEN, *Stadsfinanciën en stadseconomie te Leuven: van de XIIe tot het einde der XVde eeuw*, Brussels 1961, p. 196, citing M. VAN HAAFTEN, *Lijffrente*, in *Winkler Prins Encyclopaedie*, I-XVIII, Amsterdam 1947-54, XIII, p. 165 (footnote), had contended that the ancient Greek city state of Miletus (ca. 200 BCE) had used a similar census contract. But there is no evidence to substantiate this claim; and Van Haaften's revised entry on *Lijffrente*, in the *Grote Winkler Prins*, XII, Amsterdam-Brussels 1971, pp. 351-352 does not repeat this unfounded assertion.

²⁷ See J.T. NOONAN, *Scholastic Analysis of Usury*, cit., pp. 154-170 (quotation on p. 155).

²⁸ See B. SCHNAPPER, *Les rentes au XVI^e siècle: histoire d'un instrument de crédit*, Paris 1957 (S.E.V.P.E.N, École Pratique des Hautes Études: Centre de recherches historiques: Affaires et gens d'affaires, 12), pp. 50-61; H. VAN DER WEE, *Monetary, Credit, and Banking Systems*, in *The Cambridge Economic History of Europe*, E.E. RICH, CH. WILSON eds., V, *The Economic Organization of Early Modern Europe*, Cambridge 1975, pp. 303-305.

²⁹ See D. HERLIHY, *Medieval and Renaissance Pistoia, 1200-1430*, New Haven 1967, pp. 136-145, and Table 18, with graph 3: median price of a perpetual rent of one *staio* of wheat; p. 241 (church revenues in perpetual rents); *Business Contracts of Medieval Provence*: see *censuales*, cit., in *notulae* 55 (pp. 168-171), 93 (pp. 230-231).

héréditaires (*erfelijke renten*, *erfrenten*, and later called *losrenten*, in Flemish/Dutch); and (2) life-rents, known as *rentes viagères* (French) and *lijfrenten* (Flemish), which were normally extinguished on the death of the holder. Some of the latter were issued, however, for two or three designated lives, i.e., to be transferred to a spouse, child, or some other close relative. Frequently the designated recipient of the annuity income was an infant, who thus earned income over a far longer life-span than that left to the actual investor. In general, through the centuries, the annual ‘annuity’ payments on single life-rents, though always far lower than interest rates on voluntary short-term loans, were always much higher than those on perpetual or hereditary rents, sometimes double, perhaps reflecting the fact that the latter, by their very nature inheritable and also assignable, ultimately proved to be more marketable, certainly by the sixteenth century.³⁰

The first documented and successful urban sale of *rentes* took place in or just before 1228: at Troyes, one of the major towns of Champagne Fairs, which then governed the commerce between north-western Europe and Italy. That transaction involved the sale of a series of several *rentes viagères* to a group of Artesian financiers from Arras and St. Quentin.³¹ Subsequently, in December 1232, Troyes sold another set of 32 *rentes viagères*, 26 of them to Rheims financiers, who may have resold them to local citizens. Because a very important feature of this new form of public finance was its transferability, if by no means outright negotiability, we must note a very important feature of this transaction: that the buyers (*crédirentiers*) were explicitly permitted to sell their *rentes* to third parties. Furthermore, if they still held them on their death, some *rentes* were then, by contract provisions, to be transferred to wives (if they outlived the husbands), who were entitled to receive half of the annual income for the rest of their lifetime.³²

At almost the same time, in 1235, Auxerre also sold *rentes viagères*, chiefly also to Rheims financiers, whose town government was possibly also then selling *rentes*, despite some prior ecclesiastical opposition.³³ While Arras, deemed to be the most important financial centre in northern France, may have sold *rentes* before this time, our earliest evidence comes only from the first extant financial accounts, for the period October 1241 to February 1244, which record the sale *rentes viagères*, with a total value of £2,500 *parisis*, for one or two lives. The ‘rate of return’, the annual annuity payments, was reckoned at 1/6.5, which in modern terms means 15.38

³⁰ See G. BIGWOOD, *Le régime juridique et économique du commerce de l'argent dans la Belgique du moyen âge*, I-II, Brussels, 1921-22 (Académie Royale de Belgique, Classe des Lettres, XIV), I, pp. 120-123; J. MUNRO, *Medieval Origins of the Financial Revolution*, cit., pp. 505-562; TRACY, *A Financial Revolution*, cit., pp. 108-138; H. VAN DER WEE, *Anvers et les innovations de la technique financière aux XVI^e et XVII^e siècles*, in “*Annales: E.S.C.*”, 22, 1967, pp. 1067-1089, republished as *Antwerp and the New Financial Methods of the 16th and 17th Centuries*, in H. VAN DER WEE, *The Low Countries in the Early Modern World*, trans. by Elizabeth Fackelman, Aldershot 1993 (Variorum Series), pp. 145-166; IDEM, *Monetary, Credit, and Banking Systems*, cit., pp. 290-393.

³¹ J. TRACY, *On the Dual Origins*, cit., pp. 16, citing in particular (in n. 19) P. BOUGARD, C. WYFFELS, *Les finances de Calais au XIII^e siècle*, Brussels 1966.

³² P. DESPORTES, *Reims et les Rémois au XIII^e et XIV^e siècles*, Paris 1979, pp. 127-29; J. TRACY, *On the Dual Origins*, cit., pp. 16-17 (I am indebted to James Tracy to this reference).

³³ P. DESPORTES, *Reims et les Rémois*, cit., p. 128; similarly cited in J. TRACY, *On the Dual Origins*, cit., pp. 16-17. For the ecclesiastical opposition, see below, p. 986 and nn. 47-50.

percent; and the annual annuity payments accounted for almost 75 percent of Arras's expenditures in servicing its total debt during these years.³⁴ Subsequently, many other northern French towns (Artesian, Picard, and Flemish) began issuing *rentes* from just after the mid-century: Douai, in or about 1250; Roye, in 1260; Calais, in 1263; Saint-Riquier, in 1268; and Saint-Omer, in 1271.³⁵

The relationship between urban rentes and the anti-usury campaign in the thirteenth century

What did this evidently important financial innovation in urban public finances, in the sale of the various *rente* contracts, have to do with the anti-usury campaign? The first direct evidence of such a link comes from an event that Pierre Desportes has recorded in his history of Rheims during the thirteenth century: that, in 1234, after ecclesiastical authorities, in so vigorously pursuing this campaign, threatened the Rheims *bourgeoisie* with dire consequences for their suspected 'usures', provoking a 'véritable terreur', so much so that those who had been financing the town government quickly came to prefer 'les achats de rentes aux prêts proprement dits'.³⁶ Furthermore, in 1254 Innocent IV relieved the monks of Saint-Rémi and the commune of Beauvais of any obligation to pay interest owing to their creditors, 'notwithstanding their obligations'.³⁷ In his study of thirteenth-century Flanders (both francophone and Flemish regions), Georges Bigwood asserted that 'the struggle against usury was energetically and remorselessly conducted' by the Church, town governments (citing Douai, in particular, from 1247), and the counts of both Flanders and Artois.³⁸ To be sure, from 1281, Count Guy de Dampierre and successor counts of Flanders had licensed Italian 'Lombard' merchants to maintain regulated pawn-broking 'tables', with, to all appearances, interest charges contained in their transactions. But such pawn-broking could be interpreted as a discounted sale and repurchase of goods, rather than as genuine usury. Even so, Raymond de Roover has contended that 'the lombards in Flanders as elsewhere lived in constant fear of a sudden reversion to repressive methods and

³⁴ P. BOUGARD, *L'apogée de la ville (1191-1340)*, in IDEM, Y.-M. HILAIRE, A. NOLIBOS, *Histoire d'Arras*, Arras 1988 (Collection Histoire des villes du Nord - Pas de Calais), pp. 61-62. J. TRACY, *On the Dual Origins*, cit., pp. 16-17 cites P. DESPORTES, *Reims et les Rémois*, cit., for a somewhat different figure of £2,610 *parisis* (a year). Note that in medieval Europe, percentages were always expressed as fractions.

³⁵ J. TRACY, *On the Dual Origins*, cit., pp.16-19; IDEM, *Financial Revolution*, pp. 13-15; H. VAN WERVEKE, *De Gentsche stadsfinanciën in de middeleeuwen*, Brussels 1934 (Koninklijke Academie voor Wetenschappen, Letteren, en Schone Kunsten van België, Klasse der Letteren, Jaargang, XXXIV), pp. 164-171, 282-290.

³⁶ Quotation from P. DESPORTES, *Reims et les Rémois*, cit., pp. 126, and 131, also cited in J. TRACY, *On the Dual Origins*, cit., pp. 16-17.

³⁷ P. DESPORTES, *Reims et les Rémois*, cit., p. 126.

³⁸ G. BIGWOOD, *Le régime juridique*, cit., I, pp. 567-603. For example, in July 1288 the Synod at Liège excommunicated all manifest usurers and forbade acceptance of their donations (p. 580). Some of his views are challenged, but not entirely successfully, in C. WYFFELS, *L'usure en Flandre au XIII^e siècle*, in "Revue belge de philologie et d'histoire/Belgisch tijdschrift voor filologie en geschiedenis", 69, 1991, 4, pp. 853-857.

under the permanent threat of expulsion and spoliation'.³⁹ David Nicholas has also observed that in the thirteenth century 'the Flemings seem to have been more concerned than the Italians to avoid the imputation of usury'.⁴⁰

The continuous risks of debt repudiation for 'usurious' lenders was demonstrated during the financial crises that the Flemish towns were experiencing in the 1290s.⁴¹ In November 1291, the Parlement de Paris issued a formal decree cancelling Flemish communal debts deemed to be usurious 'ou soupetenreuse d'usure', while also stipulating the punishment of civic 'administrateurs par lesquelz la commune aura estre dommagé' by such usuries.⁴² In February 1294, King Philip IV ordered his bailiffs in Ghent to take any measures necessary to protect the town's victims of 'usurious transactions'.⁴³ Shortly after, in January 1296, Pope Boniface VIII, evidently under pressure from Philip IV, issued a decree to relieve Bruges from the 'vicious usurious obligations' (*per usurariam pravitatem de solvendis*) owed to the prominent Arras financiers Robert and Baldwin Crespin, 'beyond the principal sums owed to them'.⁴⁴ At the same time, Count Guy de Dampierre also appealed for papal assistance in releasing him from the 'usurious loans' owed to these very same Arras bankers.⁴⁵

Quite possibly, as some may argue, the real purpose of these harsh measures was not to eliminate usury as such, but rather to enhance the ability of severely indebted town governments and princes to extort new loans at much lower rates of interest, with the implied threat of the renunciation or abrogation of existing loans. Such measures might have severely injured their ability to secure new financing – i.e., if potential lenders had refused to co-operate and to offer new loans – had the town governments and princes not had available that alternative source in the form of the relatively new *rente* contracts. If most investors were not as frightened and timid as those of Rheims had supposedly been in 1230s, to invest only in *rentes*, a fair proportion of them now probably preferred to hold a more balanced investment portfolio that consisted of both high-interest short term loans and *rentes*,

³⁹ R. DE ROOVER, *Money, Banking, and Credit*, cit., pp. 99-148; C. WYFFELS, *L'usure*, cit., pp. 866-867; G. BIGWOOD, *Le régime juridique*, cit., I, pp. 319-388, 639-648. In 1280-81, eight Yprois citizens and two Lombards were condemned for usury; but Lombards also lent funds to the towns, at rates up to 18 percent. See also n. 20 above.

⁴⁰ D. NICHOLAS, *The Metamorphosis of a Medieval City: Ghent in the Age of the Artevelde, 1302-1390* (Lincoln 1987), p. 122 (though referring in fact to fourteenth-century private transactions).

⁴¹ See IDEM, *Medieval Flanders*, London-New York 1992, pp. 180-194.

⁴² G. BIGWOOD, *Le régime juridique*, cit., II, doc. no. 17, pp. 299-300.

⁴³ *Ibid.*, II, doc. no. 19, pp. 303-04 (26 Feb 1294): 'plures pecuniarum quantitates extorquere nitantur per usurariam pravitatem'.

⁴⁴ *Ibid.*, I, pp. 578-83; vol. II, doc. no. 21, p. 306 (21 Jan 1296), imposing those penalties prescribed by the Lateran councils.

⁴⁵ G. BIGWOOD, *Le régime juridique*, cit., II, doc. no. 15, pp. 293-98, for a partial list of Count Guy's loans to the Crespin brothers. See also M. FRYDE, *Public Credit, with Special Reference to North-Western Europe*, in *The Cambridge Economic History of Europe*, III, *Economic Organization in the Middle Ages*, M. POSTAN et al. eds., Cambridge 1963, p. 495.

both life- and perpetual-rents, with much lower but both financially, legally, and morally 'safer' rates of return.⁴⁶

These *rentes* were, of course, 'safer' in these respects only if they were not deemed to be a subterfuge for usury. At the very beginning of their financial history, about 1220, the future of the *rentes*, in any form, did not look to be very secure. In 1218, in that very same city of Rheims, which later became so prominent in resorting to this new financial instrument, the city's Archbishop had forbidden the town (or the *Hôtel-Dieu*) to sell any *rentes viagères* for reasons that may have involved the usury question – though the document does not supply the actual reason.⁴⁷ But if suspicions of usury were the issue, the Archbishop had no papal or canon-law authority to issue a ban on these grounds. As indicted earlier, Rheims' town government was evidently selling *rentes*, in lieu of accepting interest-bearing loans, during that bitter ecclesiastical anti-usury campaign of the 1230s, even if the licit nature of *rentes* still remained unclear. In the following decade, the Italian canonist Geoffrey of Trani (Gottofredo da Trani, d. 1245), who also taught at Bologna, levied the specific charge of usury against those purchased *rentes*, on the grounds that they were guilty of an 'immoral hope' that the value of their annual annuity payments over time would exceed their costs in purchasing the *rentes*. Shortly after, about 1250, the Dominican canonist Guillaume de Rennes, in his gloss on the *Summa* of Raymond de Peñafort, agreed with Geoffrey that the *rente* contract was indeed immoral and illegitimate, even if not in itself intrinsically (*ex forma*) usurious.⁴⁸

The very next year (c. 1251), however, a fully contrary and official pronouncement came from the ultimate Christian source, the papacy, when Innocent IV (r. 1243-1254) declared that *rentes* were not loans but legitimate contracts of sale, and thus not usurious, provided that the annual payments were based on 'real' properties and the income from such properties – a contentious issue that would not be fully resolved for two more centuries.⁴⁹ Shortly after (c. 1253), one of the most eminent theologians of the day, Henry of Susa (or Hostiensis, later Cardinal Archbishop of Ostia, 1261-1271) fully supported

⁴⁶ See J. MUNRO, *Medieval Origins*, cit., pp. 220-245.

⁴⁷ P. DESPORTES, *Reims et les Rémois*, cit., pp. 127-28 and n. 226. The proposed sale of a *rente viagère* for £45 parisisis, to Hugues, còtre of the church of Rheims, for an annual payment of 50 sols parisisis (thus: 5.55 percent).

⁴⁸ GEOFFREY OF TRANI (Goffredo da Trani), *Summa super titulis decretalium*. For this and other canonical sources, I am indebted to L. ARMSTRONG, *Usury and Public Debt in Early Renaissance Florence: Lorenzo Ridolfi on the Monte Comune*, Toronto 2003 (Pontifical Institute of Mediaeval Studies, Studies and Texts, 144), pp. 53-84, and p. 400. See also L. ARMSTRONG, *The Politics of Usury in Trecento Florence: The Questio de Monte of Francesco da Empoli*, in "Mediaeval Studies", 61, 1999, pp. 1-44.

⁴⁹ INNOCENT IV, *Apparatus seu commentaria super libris quinque decretalium*, ad X 5.19.6, *In Civitate*, Frankfurt 1570; reprinted Frankfurt 1968. See F. VERAJA, *Le origini della controversia teologica sul contratto di censo nel 13 secolo*, Rome 1960 (*Storia ed economia*, 7), pp. 30-43; B. SCHNAPPER, *Les rentes chez les théologiens*, cit., pp. 966-967; and PH. GODDING, *Wilhelmi Bont Lovaniensis de redditibus perpetuis et ad vitam (1451)*, in "Tijdschrift voor rechtsgeschiedenis/Revue d'histoire du droit/The Legal History Review", 58, 2000, pp. 261-262; O. LANGHOLM, *Economics in the Medieval Schools*, cit., p. 97.

Innocent IV, in a carefully constructed treatise that rejected all of Geoffrey of Trani's arguments against the *rentes*.⁵⁰

Nevertheless, their views had not yet gained universal acceptance. For, in 1276, Henry of Ghent, the leading theologian in the Paris faculty, reiterated Geoffrey of Trani's views that *rentes* promised gains well beyond the principal sum, especially perpetual *rentes*, offering the purchaser 'immoral hopes of gain'. In any event, he further contended, the sale of *rentes* was in actuality the 'sale of money [itself], which is non-vendible'.⁵¹ But even within his own University of Paris, Henry of Ghent found no support; for by this time, almost all theologians had accepted the contrary view: that the *census* or *rente* contract was a fully licit agreement of 'purchase and sale' (*emptio in forma*) of future streams of income or usufruct from property, provided that Innocent IV's stipulations were fully observed.⁵² In the late thirteenth and early fourteenth centuries, numerous Scholastic treatises – *inter alia*, from Gervais de Mont Saint-Eloi, Matthew d'Aquasparta, Godfrey of Fontaines, Richard of Middleton, and Alexander Lombard – fully endorsed the *census* and the various related *rente* contracts.⁵³

The governing principle of this theological discussion was that, since the *census* and *rente* contracts had no provisions for repayment, as did the *mutuum* (and on a stipulated date), they were – to repeat the point made earlier – not true loan contracts, the sole form of usury. As the later theologian Leonardus Lessius contended, *ubi non est mutuum, ibi non est usura* ('where there is no loan, there is no usury').⁵⁴ Thus, in full accordance with that principle, anyone who purchased a *rente*, i.e., the *crédirentier*, could never ever demand redemption – repayment of the principal sum – so long as the seller or *débirentier* continued to honour the obligation to make the annual annuity payments. For, if such redemption rights were ever granted, their *rentes* would be nothing more than a devious and most sinful device to cloak a usurious loan. Otherwise, any *crédirentier* who wished to

⁵⁰ F. VERAJA, *Origini della controversia*, cit., pp. 43-47: Summa aurea or Summa super titulis decretalium (ca. 1253); and Commentaria in V librum decretalium, ad X.5.19.6, In civitate (ca. 1270).

⁵¹ F. VERAJA, *Origini della controversia*, cit., pp., 50-52, 55-81, 106-11, 125-31; B. SCHNAPPER, *Les rentes chez les théologiens*, cit., pp. 969-72; O. LANGHOLM, *Economics in the Medieval Schools*, cit., pp. 249-273. Henry of Ghent (d. 1293) had issued his *Quodlibets* in response to questions from the Flemish Beguines on the morality of investing in *rentes*. He advised them to use their funds instead to purchase real estate or other property that they could then lease out for annual rents, to achieve the same financial goals.

⁵² In 1278, almost immediately after Henry of Ghent has issued his *Quodlibets*, Giles of Lessines justified the return on *census* contracts in this very same context. See F. VERAJA, *Origini della controversia*, cit., pp. 89-99; J.T. NOONAN, *Scholastic Analysis of Usury*, cit., pp. 155-157; O. LANGHOLM, *Economics of Medieval Schools*, pp. 310-317.

⁵³ F. VERAJA, *Origini della controversia*, cit., pp. 69-73, 101-124, 131-162; and conclusions, pp. 163-195; B. SCHNAPPER, *Les rentes chez les théologiens*, cit., pp. 969-972; O. LANGHOLM, *Economics in the Medieval Schools*, cit., p. 283; J.T. NOONAN, *Scholastic Analysis of Usury*, cit., pp. 154-170.

⁵⁴ LEONARDUS LESSIUS (Theologian at the University of Leuven, 1554-1623), *De justitia et jure*, Paris 1606, Liber 2, cap. 21, dub 2, n. 9, cited in R. DE ROOVER, *Leonardus Lessius als economist: de economische leerstellingen en van de latere scholastiek in de Zuidelijke Nederlanden*, Brussels 1969 (Mededelingen van Koninklijke Academie voor Wetenschappen, Letteren en Schone Kunsten van België, Klasse der Letteren, XXXI), p. 11; and on *renten*, p. 26.

regain some or all of the principal had to find some third party willing to buy the *rente*, with its annual income, but often at some discount.⁵⁵ As noted earlier, from the beginning, *rentes*, or more specifically perpetual rents, and the annuity and other privileges attached to them, could be sold and transferred to third parties, though full and legally sanctioned negotiability would not be established until the early sixteenth century.⁵⁶

As the history of the *rente* contracts fully reveal, *rentes* were indeed often redeemed, but, only at the option, the exclusive option, of the issuer and seller of *rentes*, i.e., the *débirentiers*. That usually, if not always, was a right that pertained to perpetual rents – i.e., to *erfelijk renten* or *rentes héritables*. Town and princely governments usually chose to redeem such *rentes* only when it was profitable to do so, particularly when real interest rates declined, allowing them to refinance their *rentes* at lower costs. Obviously such choices injured the financial interests of the *crédirentiers*, who usually preferred to maintain the real value of their investments. Whether or not town and princely governments, as *débirentiers*, always had the completely independent right to redeem *rentes* without consulting the *crédirentiers* became an issue of considerable debate during the later Middle Ages.

Finally, in 1416, the outstanding issues concerning the validity of *rentes*, and especially those concerning redemption, were brought before the Council of Constance (1414-18) for a final resolution. All those consulted, seven jurists and four theologians, confirmed the fully licit nature of *rentes*, as a non-usurious contract, and the exclusive right of the *débirentier* to redeem *rentes* at any time, but with one major provision: that such redemptions did not involve any reduction in (nominal, not real) capital values. All of these conclusions of the Council, and the earlier views of Innocent IV, were finally confirmed by three papal bulls, which finally removed any remaining doubts and any remaining taint of usury for the *rente* contracts: those of Martin V (*Regimini*, 1425), Nicholas V (*Sollicitudo pastoralis*, 1452), and finally, Calixtus III (*Regimini*, 1455).⁵⁷ Nevertheless, for *rente* contracts to be fully licit and acceptable to the papacy, three further conditions had to be met: that

⁵⁵ See B. SCHNAPPER, *Les rentes au XVI siècle*, cit., pp. 50-61.

⁵⁶ For the more complicated issue of the legal recognition of full negotiability, see J. MUNRO, *Medieval Origins of the Financial Revolution*, cit., pp. 542-562, and other sources cited in n. 30 above; and IDEM, *English "Backwardness" and Financial Innovations in Commerce with the Low Countries, 14th to 16th Centuries*, in *International Trade in the Low Countries (14th-16th Centuries): Merchants, Organisation, Infrastructure*, P. STABEL, B. BLONDÉ, A. GREVE eds., Leuven-Apeldoorn 2000 (Studies in Urban, Social, Economic, and Political History of the Medieval and Early Modern Low Countries, 10), pp. 105-167.

⁵⁷ B. SCHNAPPER, *Les rentes chez les théologiens*, cit., pp. 977-987; IDEM, *Les rentes au XVI siècle*, cit., pp. 65-59; J.T. NOONAN, *Scholastic Analysis of Usury*, cit., pp. 160-161, 206-208, 230-237; H. VAN DER WEE, *Monetary, Credit, and Banking Systems*, cit., pp. 304-305. The bull of Martin V (1425, confirmed by Calixtus III in 1455, in *Extravagantes communes*, 3.5.2 *Regimini*) had been restrictive in limiting the validity of *rentes* to those based on real estate (fixed, real properties). Thus the crucial bull was that of Nicholas V in 1452, which recognized the validity of *rentes* based merely on the assets or patrimony of the vender. That bull in turn had been influenced by the *quodlibet* that Willem II Bont of Leuven issued in 1451: as a refutation of Henry of Ghent's treatise, so that, in conclusion, the purchase of all such rents – *de redditibus perpetuis et ad vitam est omni iure licita et nullo modo usuraria*. See PH. GODDING, *Wilbelmi Bont Lovaniensis de redditibus*, cit., pp. 262-267. The maximum rates actually ranged from 1/10 (10.0 percent) to 1/14 (7.14 percent).

the *rentes* had to be tied to real estate, or other real property - i.e., that payments related to such *rentes* must in essence be a form of rental income; that the annual return or annuity payments could not exceed ten percent of the capital sum (almost never observed); and, once more, that the *débirentier* alone had the exclusive right to redeem the *census* or *rente* contracts.⁵⁸

Rentes in the public finances of later-medieval Flemish towns: Douai, Bruges, and Ghent

If a continuing public debate about the licit nature of *rentes* and the moral ‘taint of usury’ were not fully and finally resolved until the promulgation of those three papal bulls in the early to mid-fifteenth century, we may better understand why the role of these financial instruments in public finance – urban and territorial – did not really become prominent until the fifteenth century in the finances of west European towns. There were, however, several other legal issues of lesser importance and also the very major issue of fully-fledged, legally-sanctioned negotiability that were also not fully resolved, as noted earlier, until the early sixteenth century: important issues that have been analysed in other publications.⁵⁹ But no one can really question the growing importance of *rentes* in both urban and territorial public finances from the later fifteenth and sixteenth centuries: throughout the Low Countries, south and north; France, for northern urban public finances, but also royal, national finances; in the Rhineland and other regions of western Germany; and in the Spanish union of Castile and Aragon (beginning in Catalonia, in the 1330s). The reasons for and nature of that diffusion – and why such forms of urban public finance were not, however, to be found in southern France and in Italy – have also been fully discussed in many other publications.⁶⁰

This current study must therefore be focused on the role of *rentes* in the public finances and taxation in only the late-medieval Flemish towns (up to the mid sixteenth century), limitations imposed in part by the current status of the very laborious and very voluminous research that I have so far conducted. Thus, the historical analysis of this ‘financial revolution’ requires us to return to the Flemish towns of the mid-thirteenth century, which were then part of the kingdom of France.

In Flanders, the francophone town of Douai (the leading textile producer, in the mid thirteenth century) was evidently the first to sell *rentes*. One financial document, dated about 1250, provides a substantial list of ‘les rentes que li ville doit

⁵⁸ See in particular A.P. USHER, *Early History of Deposit Banking*, cit., p. 137, thereby denying any link between *rentes* and the usury question; H. VAN DER WEE, *Monetary, Credit, and Banking Systems*, cit., pp. 303-304. In 1569, Pope St. Pius V issued the bull *Cum onus*, which revalidated the fifteenth-century bulls. J.T. NOONAN, *Scholastic Analysis of Usury*, cit., p. 237; B. SCHNAPPER, *Les rentes au XVI siècle*, cit., pp. 117-120.

⁵⁹ See nn. 30 and 56, above.

⁶⁰ See nn. 3 and 6 above; and especially J. MUNRO, *Medieval Origins*, cit., pp. 505-562; J. TRACY, *Financial Revolution in the Habsburg Netherlands*; IDEM, *On the Dual Origins*, pp. 13-24; see also J. ROUSTIT, *La consolidation de la dette publique à Barcelone*, cit., pp. 15-156; A. FURIO, *La dette dans les dépenses municipales*, in *La fiscalité des villes au Moyen Age (Occident médiéval)*, D. MENJOT, M. SANCHEZ MARTINEZ eds, 3, *La redistribution de l'impôt*, Toulouse 2002, pp. 321-350.

a hiretage': i.e., *rentes héritables*, while another document, more accurately dated to March 1270, lists the town's current obligations for current life-rents: *rentes viagères*. Douai continued to sell issue *rentes héritables*, even after being incorporated directly into the French kingdom, in 1305, but the king (Philip IV) forbade the town to sell any more *rentes viagères* without royal permission. Those that were sold were marketed chiefly in Arras, Tournai, and Valenciennes, and were transferable to the spouses and offspring (sometimes grandchildren) of the buyers.⁶¹

In the northern, Flemish-speaking zone, the leading industrial city of Ghent was certainly selling *renten*, from at least 1275: but evidently only *lijfrenten*, then amounting to £1,600 *parisis*. The Ghent town government also found most of its purchasers in Arras, whose financiers had agreed to convert Ghent's short term debts into these much longer-term *rentes*.⁶² Then, three years later, in July 1288, Ghent's town government began selling perpetual or *erfelijk renten*, after Count Guy de Dampierre (1278-1304) had issued an ordinance authorizing all the Flemish town governments to sell and to redeem such *renten* whenever they chose to do so, while also guaranteeing the principal values and annuity payments on these *renten*.⁶³ Meanwhile, the other leading Flemish town of Bruges had become heavily indebted to Arras bankers, in particular the renowned Crespin family, who collectively held almost half of Bruges's financial obligations: as of 1298, £157,093 *parisis* of a total of debt of £346,880 *parisis*, of which £124,307 were in 'usurious loans' and £32,787 in *lijfrenten* or *rentes viagères* (20.9 percent).⁶⁴ Issues of *erfelijk renten* or *rentes héritables* do not appear to have been of any great importance: just 3.14 percent of the value of *lijfrenten*, in 1297-98.⁶⁵

During this period, the leading Flemish towns were engaged in a serious conflict with their count, Guy de Dampierre, whose mother, Countess Marguerite

⁶¹ G. ESPINAS, *Les finances de la commune de Douai, des origines au XV^e siècle*, Paris 1902, p. 314, n. 3; and p. 315-356. For perpetual rents, see pp. 314-21; for life-rents, see pp. 321-46. See also IDEM, *La vie urbaine de Douai au moyen âge*, Paris 1913.

⁶² H. VAN WERVEKE, *Gentsche stadsfinanciën*, cit., pp. 289-290.

⁶³ Ordinance of 1 July 1288: 'ke li eschevins puissent vendre a leur bourgeois ki aisiet en second et a autre gent, rentes sur le vile devant dite, pour convertir les deniers en payements des debts de le vile ke ele doit à ore, leskeles rentes on puis racater kant le vile en iert aisie': in *Mémoires sur les lois et coutumes et les privilèges des Gantois, depuis l'institution de leur commune jusqu'à la revolution de l'an 1540*, I-II, ed. CH.-L. DIERICK, Ghent 1817-18, cited in H. VAN WERVEKE, *Gentsche stadsfinanciën*, cit., pp. 289-290; see also pp. 164-171. The guarantees, however, probably did not extend beyond using his coercive powers to ensure that the town governments made their annual payments. From October 1288 to 1290, a total of 118 *erfrenten brieven*, with a yearly average of £2,046 *parisis*, with an annuity rate of 10 percent (£1 *parisis* for each £10 *par*.)

⁶⁴ See A. DERVILLE, *La finance Arrageoise: usure et banque*, in *Arras au moyen âge: histoire et littérature*, M.-M. CASTELLANI, J.-P. MARTIN eds., Arras 1994, pp. 40-41; based upon the municipal accounts in *De rekeningen van de stad Brugge, 1280-1319*, C. WYFFELS, J. DE SMET eds., I-II, Ghent 1965-1971, I, 1280-1302 (evidently based on doc. no. 10, for 14 Sept 1297 - 23 Dec. 1298, pp. 509-675). The total financial obligations were 13.62 times as much as Bruges's revenues that year: £25,460.75 *parisis*; though my calculations of the data differ from those of Derville.

⁶⁵ In the account for Sept 1297 to Dec 1298, the total payments made to holders of *rentes viagères* or *lijfrenten* (*redditus ad vitam*) amounted to £3,154 5s 11 d *parisis* (225 persons, including Robert and Baldwin Crespin and Jehan Boinebroke); but payments for *rentes héritables* (*redditu hereditario* or *rente yretante*) were only £99 (4 persons). *Rekeningen van de stad Brugge*, cit., I, p. 551.

de Constantinople (r.1244-78, d. 1280) had provoked the conflict, in 1275, by deposing Ghent's oligarchic civic government, the so-called XXXIX. In response, the Flemish town governments then secured support from the French king, whose Parlement de Paris restored the Ghent government, though imposing external financial audits. In 1289, Philip IV (1285-1314) placed Ghent under his personal protection, while also installing the Bailiff of Vermandois as the governor of Flanders. Two years later, in November 1291, Ghent's town government had secured from the Parlement de Paris a judicial decision that permitted all the Flemish towns to suspend further payments to all those holding *rentes à vie* who had already received more than their original investment, 'jusques à tant que la commune sera délivrée des debtes'.⁶⁶ Possibly connected to this decree was Ghent's decision to suspend all further issue of *rentes*.

The subsequent events may explain why Ghent did not, in fact, resume the sale of *rentes* for another four decades. In 1296-97, Count Guy de Dampierre rashly sought to remove the French royal presence from Flanders: he again abolished the Ghent XXXIX oligarchy, and then formed an alliance with Philip IV's chief enemy, Edward I (1272-1307) of England, which country was also a major source of the wools so necessary for Flanders' textile-based economy. In retaliation, Philip IV invaded Flanders, in June 1297, defeating the Flemish forces at the Battle of Furnes, and then occupying half the county. In 1299-1300, a French royal army again invaded, and occupied the remainder of the county, while also imprisoning Count Guy. In 1302, when oppressive rule from the French occupiers had provoked a major rebellion, the urban guild militias, aided by the count's forces, won an astonishing victory over the French cavalry at the Battle of Kortrijk. For many Belgian historians that marked the first step towards Flemish independence – though certainly not immediately. In 1305, Philip IV's armies finally forced the Flemings to accept defeat, by the Truce of Athis-sur-Orge, which subjected Flanders to enormous indemnities, and to the loss of the major francophone towns of Lille, Douai, and Orchies. Further Franco-Flemish conflicts then ensued, so that peace was not achieved until 1319-20.⁶⁷ There is no evidence that, during this protracted era of conflicts, any of the Flemish towns resorted to the use of *renten* to finance their wars or to pay these heavy indemnities.

Thus, after more than four decades, and not until the mid 1320s – in 1325-26, to be more exact – the city government of Ghent finally resumed its sale of *renten*, which now consisted almost exclusively of *erfelijke renten*. It also resumed its annual annuity payments on those suspended *renten* from the 1290s.⁶⁸ At this time, Ghent

⁶⁶ See G. BIGWOOD, *Le régime juridique*, cit., II, doc. no. 17, pp. 299-300; B. SCHNAPPER, *Les rentes chez les théologiens et les canonistes du XIII^e au XVI^e siècles*, in *Études d'histoire du droit canonique dédiées à Gabriel le Bras*, ed. G. VEDEL, I-II, Paris 1965 (Centre National de la Recherche Scientifique), I, pp. 965-995, especially p. 972.

⁶⁷ D. NICHOLAS, *Medieval Flanders*, cit., pp. 186-202, 212-224; IDEM, *Town and Countryside: Social, Economic, and Political Tensions in Fourteenth-Century Flanders*, Bruges 1971; IDEM, *Metamorphosis of a Medieval City*, cit., pp. 1-16; H. NOWE, *La bataille des éperons d'or*, Brussels 1945, pp. 13-113.

⁶⁸ *Gentsche stads- en baljunsrekeningen, 1280-1336/ Comptes de la ville de Gand, 1280-1336*, J. VUYLSTEKE ed., in the series Oorkondenboek der stad Gent, eerste afdeling: Rekeningen [Cartulaire

was also in the midst of yet another civil war, the so-called Revolt of Maritime Flanders (1323-28), in which Ghent wisely refused to participate, thereby gaining considerable economic ascendancy in Flanders.⁶⁹ We may well wonder what had happened to the holders of Ghent's civic *renten* in the intervening three decades. If the city, as the seller of the *renten* and thus as legal *débirentier* had pledged its assets (properties and tax incomes) to honour its commitment to make the annual payments, had any *rentier* sued the town government for non-payment? There is no evidence that any such law suits had been launched.⁷⁰ But obviously the Ghent town government well knew that, unless it honoured its commitments to pay the arrears on previously issued *renten*, it would have little success in selling any new issues.

In virtually every succeeding year of the fourteenth century, Ghent continued to sell small but respectable amounts of such *renten*. The most remarkable financial event to be observed in the Ghent town accounts took place in the fiscal year 1346-47, towards the end of the revolutionary 'Artevelde era' (1335-1349), when Ghent, governed by a weaver-led guild regime, dominated Flanders, to the exclusion of the count (Louis de Nevers, 1322-46); and in doing so, it was antagonizing the other leading Flemish towns.⁷¹ In that year, which was also just on the eve of the Black Death, the Ghent civic government marketed a remarkably large amount of *lijffrenten*: in total worth £21,295 *parisis* (£1,774.583 *groot* Flemish), almost thirty times the value of the *erfelijke renten* sold that year.⁷² These political circumstances may explain the other remarkable feature of this financial experiment: that virtually all of these *renten* were sold outside the county of Flanders, in the neighbouring duchy of Brabant, especially in the major drapery towns of Brussels and Leuven.⁷³ In view of the fact that *lijffrenten*, if indeed for one life only, were extinguished on the death of the holders, one may well speculate on how much the Ghent civic government enjoyed a reduction in its public debt from the ensuing and highly fortuitous Black Death of 1348.

Subsequently, in the fourteenth century, Ghent marketed just two further issues of *lijffrenten*, in far more modest amounts: £2,311 *parisis* (= £193.583 *groot*) in 1349-50, shortly after the overthrow of the weaver-dominated regime; and even less, just

de la ville de Gand, première série: Comptes], Gent 1900; and H. VAN WERVEKE, *Gentsche stadsfinanciën*, cit., pp. 235-236; 353-353.

⁶⁹ The war ended when French armies defeated the rebel forces of Bruges and Ypres (at Cassel, August 1328). See D. NICHOLAS, *Medieval Flanders*, cit., pp. 209-217.

⁷⁰ For legal actions undertaken against some sixteenth-century defaulting Dutch towns, see J. TRACY, *Financial Revolution*, cit., pp. 28-107.

⁷¹ For the political events, see D. NICHOLAS, *The Van Arteveldes of Ghent: the Varieties of Vendetta and the Hero in History*, Ithaca 1988, pp. 19-98; IDEM, *Medieval Flanders*, cit., pp. 219-224; and H. VAN WERVEKE, *Jacques Van Artevelde*, Brussels 1943, pp. 37-110. Jacob Artevelde himself had been assassinated in July 1345.

⁷² The transactions involving the sale of *renten* are contained in the annual civic treasurer's accounts, in the Stadsarchief Gent, *stadsrekeningen*, Series 400. See the list of sources for Tables IA and IB in J. MUNRO, *Medieval Origins of the Financial Revolution*, cit., pp. 530-32. Note that £12 *parisis* = £1 *groot* Flemish.

⁷³ From: N. DE PAUW AND J. VUYLSTEKE, *De rekeningen der stad Gent: Tijdsvak van Jacob Van Artevelde*, III, pp. 21-22. Payments made on these *lijffrenten* in 1347-48: pp. 190-196.

£1,232 *parisis* (£102,667 *groot*) in 1355-56. Some of these had been sold in Mons (Bergen), in the nearby francophone but Imperial county of Hainaut. There is, however, no conclusive evidence that during the fourteenth century Ghent or other Flemish towns were unduly dependent on external sources in financing civic debts.⁷⁴

In sum, in only two periods of the fourteenth century were revenues from public borrowing significant in Ghent. The first was the previously noted resumption of *renten* sales in the mid-1320s, in the latter phase of the Revolt of Maritime Flanders (1323-28), when revenues from public borrowing accounted for 11.46 percent of Ghent's total income; but only 4.06 percent was in the form of *renten*, and the rest came from loans. The second was the aforementioned Artevelde era, with such disruptive civil wars, from 1336 to 1350. In 1336-40, 43.83 percent of total civic income came from public borrowing, but now only 2.19 percent came from *renten* sales. Conversely, in 1346-50, 27.56 percent of total civic income came from public borrowing, of which, this time *renten* sales accounted for 16.14 percent. In the later fourteenth century, from 1361 to 1390, when the only form of annuities that the city sold were *erfelijke renten*, they accounted for an average of only 3.0 percent of total civic revenues during these three decades (followed by a long gap in the accounts, to 1400).⁷⁵

In these same decades, however, when Ghent usually experienced annual deficits, payments on the civic public debt accounted for an average of 20.70 percent of total expenditures.⁷⁶ Over the fourteenth century as a whole (or, rather from 1320 to 1390, when civic accounts are available), the percentages of total expenditures in the form of debt payments ranged from an initial high, for the first half of the fourteenth century, of 37.20 percent in 1321-25; and in the second half of the century, the maximum shares of total civic expenditures in debt payments were 41.28 percent in 1361-65, and 44.31 percent in 1366-70. The lowest shares of total expenditures in debt payments were just 2.21 percent in 1351-55, and then shares of about 4.5 percent of total expenditures in each of the quinquenniums from 1376-80 to 1386-90. Clearly the role of *renten* in Ghent's fourteenth-century civic finances had not yet assumed the major role that it would in the fifteenth and sixteenth centuries.⁷⁷

⁷⁴ *Ibid.*, pp. 397-445; H. VAN WERVEKE, *Gentse stads- en baljumsrekeningen (1351-1364)*, cit., pp. 226-242; 369-341 (account for 1358-59). See also: See also H. VAN WERVEKE, *Gentse stadsfinanciën*, cit., pp. 282-290; FRYDE, *Public Credit*, cit., pp. 430-543; J. TRACY, *Financial Revolution*, cit., pp. 13-15.

⁷⁵ See J. MUNRO, *Medieval Origins of the Financial Revolution*, cit., Tables IA and IB, pp. 530-32.

⁷⁶ See *Ibid.*, pp. 530-32. See also J. TRACY, *Financial Revolution*, cit., p. 14, who states that 'between 1346 and 1356;' but clearly the annual issues extended long beyond that year, certainly up to the next Ghent (Artevelde) revolt of 1379 and beyond. My statistical analyses of the public finances from the town accounts of Ghent (from 1400-1550), Bruges (1302-1550), Ypres (1408-1550), and Kortrijk (1393-1550) will be presented in future publications.

⁷⁷ See n. 75 above. For currently available publications on fifteenth-century Ghent (though only to the 1450s), see especially M. BOONE, *Geld en macht: de Gentse stadsfinanciën en de Bourgondische staatsvorming (1384-1453)*, Ghent 1990 (Verhandelingen der Maatschappij voor Geschiedenis en Oudheidkunde te Gent, XV), pp. 60-67, 163, and Table 11 (sales of *lijf-* and *erfrenten*, but only for the years 1453-1461), available only in a microfiche. This book regrettably pays almost no attention to this form of civic finances. But see also IDEM, *Plus deuil que joie: Les ventes de rentes par la ville de Gand pendant la période bourguignonne: entre intérêts privés et finances publiques*, in "Credit Communal: bulletin trimestriel",

Financing rentes with excise taxes on food consumption, drink, and other household necessities in late-medieval Flemish towns

The most important issue to be examined now is the question: precisely how did the Flemish (and other) urban governments finance the annual annuity payments – obviously the term ‘interest payments’ is quite inappropriate – and also any redemptions of *renten*? As indicated earlier, the papal acceptances of *renten* as fully licit, non-usurious contracts depended in part on their link with income from real property. As an examination of the Flemish town accounts for the late-medieval and early-modern eras reveals, and as independent analyses of Bruno Kuske and James Tracy confirm, the annual payments (and redemptions) came from two different sources, each linked to the specific corresponding type of the two major kinds of *rentes*.⁷⁸ The payments for the perpetual rents – the *rentes héritables* or *erfelijkte renten* – were usually derived from the rental incomes from actual real estate or some other form of immobile property, and thus in accordance with the three fifteenth-century papal bulls.

For the *rentes viagères* (*à vie*) or *lijfrenten*, payments normally came from the *accijnzen* or excise taxes that the town levied on the inhabitants’ consumption of various foodstuffs (alcoholic beverages, grain, flour, bread itself, meat and dairy products, herring, and other species of fish), textile products (wool, cloth, linen), and building products (wood, iron, coal and other fuels). Note that, in accordance with the principles established by the fifteenth-century papal bulls on *rentes*, all of these commodities were products of the land (and the sea): certainly they were all the fruits of ‘real property’ (real estate). The obvious significance of this form of public-finance related taxation was that it was essentially very regressive, in representing a far greater burden on the poor than on the middle classes, let alone the rich. Most governments today do not tax the consumption of vital necessities, especially foodstuffs for home preparation: as opposed to packaged ‘junk foods’, and food and drink purchased and consumed within restaurants and bars.

More generally, most if not all towns (and later, many territorial or national governments) collected such tax incomes not from the specific excise taxes levied on individual urban consumers, but rather from the annual or even monthly sale of the *pachten* or tax farms. Tax-farming was the major feature and indeed major curse of public finances in medieval and early-modern Europe. Most governments were almost always in urgent need of ready cash, and could ill afford to wait until tax receipts slowly percolated from the citizenry into the civic or territorial treasury. Indeed, as the theologian Giles of Lessines had observed (in 1278): ‘future things over a period are not estimated of such value as things collected in an instant [in

176, 1991-92, pp. 3-24. Somewhat surprisingly there are no studies on Ghent itself in *Urban Public Debts: Urban Government and the Market for Annuities in Western Europe (14th-18th Centuries)*, M. BOONE, K. DAVIDS, P. JANSSENS eds., Turnhout 2003 (Brepols, Studies in European Urban History, III); but for Flanders and Holland in this volume see nn. 94-100, below.

⁷⁸ B. KUSKE, *Schuldenwesen der deutschen Städte*, cit., pp. 27-45; J. TRACY, *On the Dual Origins*, cit., pp. 14-17.

the present]'.⁷⁹ Usually, these tax farms were sold at auction, to the highest bidder; and we must therefore assume that the sales values underestimate the actual tax burden on the urban citizenry, since the tax farmers obviously hoped to make a profit, over and beyond the amounts that they paid to the city. On the other hand, if the bids were truly competitive, such auctions would have reduced the extent of 'economic rent' that the tax farmers could have extracted from urban consumers.

The two most important commodities, by far, on which these excise-taxes were levied were beer and (secondly) wine. Of course, they also represent the principal exception to the just-enunciated dictum that most modern governments do not tax the consumption of foodstuffs. On the contrary, virtually all governments, past and present, have levied very heavy taxes on alcoholic beverages; and the modern justification is that they are 'sin taxes', taxes on 'morally dubious' luxuries that anyone can now choose to avoid. But of course, from the point of view of any government, past or present, the highly addictive nature of alcohol has meant that most consumers (or those lacking will power) cannot avoid the consumption of such beverages, for which, therefore, demand is very highly inelastic and thus virtually guaranteed to produce high tax revenues.

Apart from the arguably irrelevant moral considerations about 'sin taxes' involved in late-medieval public finances, one may well contend that beer and wine, especially beer in northern Europe, were in fact vital necessities, because most other beverages, water and milk, especially, were so generally unsafe to drink. Most sources of water for urban public consumption came from highly polluted rivers, streams, and lakes. Indeed, the single most important cause of the remarkable drop in European and North American mortalities in the later nineteenth-century was the introduction of urban systems of water-purification and related sanitation systems.⁸⁰ Those innovations in turn were the product of the almost identical discovery of the bacterial transmission of diseases in the mid-1870s: first, in 1876, from the researches of the German micro-biologist Robert Koch (1843-1910); and then, in 1878, from those of the French biologist Louis Pasteur (1822-1895).⁸¹

⁷⁹ See F. VERAJA, *Origini della controversia*, cit., pp. 89-99; J.T. NOONAN, *Scholastic Analysis of Usury*, cit., pp. 155-157; O. LANGHOLM, *Economics of Medieval Schools*, cit., pp. 310-317: '... a present and assembled thing is estimated at a higher value than a future and divided one' (i.e., in terms of future annuity payments). On the demand side, that observation explains the reality of interest; on the supply side, it is the opportunity cost of foregone alternative investments.

⁸⁰ See L.P. CAIN, E.J. ROTELLA, *Death and Spending: Urban Mortality and Municipal Expenditure on Sanitation*, in "Annales de démographie historique", 101, 2001, 1, pp. 139-154; and also M. HAINES, *The Urban Mortality Transition in the United States, 1800-1940*, in "Annales de démographie historique", 101, 2001, 1, pp. 33-64. Possibly the introduction into western Europe, of first coffee, reputedly by the Ottoman Turkish siege of Vienna in 1529 (certainly by 1600), and then of tea, by the Dutch, in 1655 (from Ceylon), provided an effective alternative, in that both required boiling water, which action would kill the harmful bacteria.

⁸¹ In 1876, Robert Koch had demonstrated that the bacterium *Bacillus anthracis* causes anthrax, a disease of animals also transmissible to humans. He subsequently discovered the two bacteria that cause tuberculosis and cholera. In 1905, he won the Nobel prize in medicine. Pasteur's 1878 paper on micro-organisms in various beverages led to the 'pasteurization' process of heating milk to kill harmful bacteria in milk.

The importance of beer especially in late-medieval consumer expenditures can be demonstrated from various household and institutional budgets, which are also important for this study, in that they are major components of the cost-of-living or Consumer Price Indexes [CPI] that will be used to measure the burden of these excise taxes. For fifteenth-century England, the best known budget is the set of household accounts of William Savernak, in Bridport, Dorsetshire for the years 1453-1460, which allocated a share of 23 percent to beer (with barley malt), compared to 20 percent for cereal grains and 37 percent for meat, dairy products, and fish combined.⁸² In the well-known Phelps Brown and Hopkins 'Basket of Consumables' Price Index [CPI], the share allocated to beer is almost identical: 22.5 percent.⁸³ Subsequently, Steve Rappaport allocated a 20-percent share for beer and ale, in his consumer price index for early-modern London.⁸⁴ For the southern Low Countries (the Antwerp-Lier region in Brabant), Herman Van der Wee chose a slightly lower share for beer: 17.1 percent, even though in principle he sought to adopt the same weights employed in the Phelps Brown and Hopkins price index.⁸⁵ His choice was influenced by the accounts for Lier's Beguinage Infirmary (1586-1600), which indicate that, on average, beer accounted for 16 percent of total foodstuffs expenditures (while wine accounted for only 1 percent).⁸⁶ Van der Wee also observed that the annual per capita beer consumption in Lier (near Antwerp) was about 310 litres in 1472 – well more than double the Belgian per capita consumption in 1958 (115 litres).⁸⁷ According to statistical analyses of Richard

⁸² See K.L. WOOD-LEGH, *A Small Household of the Fifteenth Century*, Manchester 1956.

⁸³ E.H. PHELPS BROWN, SH. V. HOPKINS, *Seven Centuries of the Prices of Consumables, Compared with Builders' Wage Rates*, in "Economica", 23, 1956, 92, pp. 296-314: reprinted in *Essays in Economic History*, ed. E.M. CARUS-WILSON, I-III, London 1954-62, II, pp. 168-178, 179-196, and in E.H. PHELPS BROWN, SH. V. HOPKINS, *A Perspective of Wages and Prices*, London 1981, pp. 13-39 (with indexes not in the original). They allocated, in addition to the 22.5% for drink, 20.0% for cereal grains, 12.5% for dairy products (butter and cheese), 21.0% for meat (mutton and pork), totalling 80.0% for foodstuffs. The remaining 20% consisted of 7.5% for fuels and 12.5% for textiles.

⁸⁴ S. RAPPAPORT, *Worlds Within Worlds: The Structures of Life in Sixteenth-century London*, Cambridge-New York 1989, p. 125 (Table 5.1).

⁸⁵ H. VAN DER WEE, *Prijzen en lonen als ontwikkelingsvariabelen: Een vergelijkend onderzoek tussen Engeland en de Zuidelijke Nederlanden, 1400-1700*, in *Album aangeboden aan Charles Verlinden ter gelegenheid van zijn dertig jaar professoraat*, Wetteren 1975, pp. 413-447; reissued in English translation (without the tables) as *Prices and Wages as Development Variables: A Comparison Between England and the Southern Netherlands, 1400-1700*, in "Acta Historiae Neerlandicae", 10, 1978, pp. 58-78; republished in IDEM, *The Low Countries in the Early Modern World*, trans. by Lizabeth Fackelman, Cambridge-New York 1993 (Cambridge University Press and Variorum), pp. 223-241.

⁸⁶ See IDEM, *Voeding en Dieet in het Ancien Régime*, in "Spiegel Historiae!", 1, 1966, pp. 94-101, republished in translation: as *Nutrition and Diet in the Ancien Régime*, in IDEM, *The Low Countries*, cit., pp. 279-287. In these Lier Beguinage expenditure accounts, the allocation of food consumption shares were: 44% for bread, 16% for beer, 1% only for wine, 20% for meat, 3% for fish, and 10% for dairy products. But note, however, that fuels and textiles are not included. See also IDEM, *The Growth of the Antwerp Market and the European Economy (Fourteenth-sixteenth Centuries)*, I-III, The Hague 1963 (Martinus Nijhoff), I, *Statistics*, Appendix 47: Budget of the Infirmary of the Béguignage of Lier for Foodstuffs, 1526-1602), pp. 534-538.

⁸⁷ H. VAN DER WEE, *Nutrition and Diet*, cit., pp. 282-284, and Figure 151.; and p. 286 (on water consumption). See also E. AERTS, *Het bier van Lier: de economische ontwikkeling van de bierindustrie in een middelgrote Brabantse stad, einde 14de - begin 19de eeuw*, Brussels 1996.

Unger, the mean annual per capita beer consumption in various towns of the fifteenth- and sixteenth-century Low Countries was as follows: in Antwerp, 319 litres; Bruges, 263 litres; Leuven, 257 litres; Leiden, 255 litres; Haarlem, 236 litres; and Ghent, 202 litres. Unger further notes that beer was not just a beverage but an important and highly nutritious component in household cuisine.⁸⁸ Finally, and most recently, Robert Allen's independently constructed price-index base for early-modern northern Europe (1500 - 1900) also allocates a 20.6 percent share to beer and ale, in his household budget, representing an estimated average annual per capita consumption of 182 litres.⁸⁹

Clearly the burden of excise taxes on beer consumption was a very heavy one for the average lower-class or working-class household in the late-medieval Low Countries (and for northern Europe in general).⁹⁰ The burden of consumption taxes on wine, however, may have been correspondingly and relatively lighter for the working and artisanal classes, if we may assume that they drank principally beer, and little wine. As just noted, the Lier Beguignage expenditures on food and drink indicate that wine accounted for only 1.0 percent of total expenditures. As Figures 5 and 6 below indicate, for Aalst's urban excise tax-farm revenues, the beer excise-tax farm normally accounted for four to five times the revenue acquired from the wine excise-farm for the 150-year period from 1396-1400 to 1546-50. Over this entire period, wine accounted for a mean of 11.93 percent of total excise-tax farm

⁸⁸ R. UNGER, *A History of Brewing in Holland, 900 - 1900: Economy, Technology, and the State*, Leiden 2001, Table III-4, pp. 90-91, noting also that the daily beer ration for English and Hanseatic sailors was then about 5 litres. For Leuven, see also R. VAN UYTVEN, *Stadsfinanciën en stadseconomie te Leuven van de XIIde tot het einde der XVIde eeuw*, Brussels 1961, pp. 313-336, especially p. 335; and IDEM, *Beer Consumption and the Socio-Economic Situation in the Franc of Bruges in the Sixteenth Century*, English translation of *Het bierverbruik en de sociaal-economische toestand in het Brugse Vrije in de zestiende eeuw*, in "Handelingen van het Genootschap voor Geschiedenis, gesticht onder de benaming 'Société d'émulation' te Brugge", 131, 1994, pp. 5-34; republished in IDEM, *Production and Consumption in the Low Countries, 13th-16th Centuries*, Aldershot 2001 (Variorum Collected Studies Series CS 714, Ashgate-Variorum), XII, pp. 1-24; E. AERTS, *Het bier van Lier*, cit. Furthermore, according to T.R. Gourvish and Richard Wilson, 'beer was the largest item of working-class expenditure, ranking well above amounts spent on meat or bread', around 1870. Furthermore, citing evidence of Victorian observers, they estimate that 'between 14 and 25 percent of working-class incomes was spent on beer', with a mean per capita beer consumption, in England and Wales, during the years 1875-79, of about £4.36 in expenditures, and 40.5 gallons (184.12 litres) in physical consumption, which, however, fell to 29.4 gallons (133.66 litres) per person annually, in 1910-13. See T.R. GOURVISH, R.G. WILSON, *The British Brewing Industry, 1830-1980*, Cambridge-New York 1994, tables 2.1, p. 30, table 2.5, p. 34, and data and quotation on p. 36.

⁸⁹ R. ALLEN, *The Great Divergence in European Wages and Prices from the Middle Ages to the First World War*, in "Explorations in Economic History", 38, 2001, 4, pp. 411-447, Table 3, p. 421. For southern Europe, the equivalent average annual per capita alcoholic consumption was 68.25 litres of wine.

⁹⁰ It is interesting to note, as well, that in late-eighteenth century England, beer (sum of beer, malt, and hops) accounted for 24.6% of the 'Major Taxes' (about 90% of the presumed total) collected, while wine accounted for only 4.63%. The sum of all taxes on alcohol and tobacco then accounted from 43.30% of all such English tax revenues (£6,917,000 out of £15,973,000). P. O'BRIEN, *Political Economy of British Taxation*, cit., Table 5, p. 11. See also the following note, on beer and wine taxes.

revenues, beer for 43.17 percent – and the total of the excise tax farms for the two beverages account for 55.11 percent of the total.⁹¹

Since we may further assume that most of those who purchased *rentes* from urban or territorial governments, came principally, if by no means entirely, from the wealthier strata of late-medieval and early-modern European societies, this highly regressive form of taxation to finance the payments on these various *rentes* presumably also meant a substantial transfer of income from the urban poor to the wealthy (who were not all necessarily urban). Even today, or certainly in the previous three centuries, the common term *rentier* – obviously directly derived from the very word *rente* – refers to those who live from investment income (rather than from ‘earned income’, such as wages or business profits), and often principally from their holdings of government debts. The most common implication of this term, so often used with a negative connotation, is that such people come from the ultra-richer strata of society. Who would doubt, for example, that the Arras banking family of the Crespins, who held such a very large share of Bruges’ public debt in the 1290s – in ‘usurious’ loans and *renten* – were not among the very richest to be found in north-western France (and Flanders) in this era?

While that assumption may well be generally valid for the late-medieval era, it was not necessarily true of all towns. For example, in the small town of Aalst (Alost), in eastern (Imperial) Flanders, the annual town accounts (*stadsrekeningen*) indicate that the urban market for *lijfrenten* was remarkably broad, especially for such a small and economically lesser town, whose early fifteenth-century population has been estimated at 3,600 to 4,000 (today’s population: 76,800).⁹² One random sample, taken from the account for February 1402–February 1403, lists annuity payments to 769 recipients. If they were all citizens of Aalst – and the accounts do not designate their residences – that number would represent almost 20 percent of the town’s estimated total population, and perhaps 40 percent of the

⁹¹ See Figure 5. In the Bruges annual town accounts, for the years 1308-1500 [STADSARCHIEF BRUGGE: *Stadsrekeningen* 1307/08 to 1499/1500], there is a very marked shift from a predominance of wine excise tax-farm revenues in the early fourteenth century to a predominance of beer excise-tax farms in the late fifteenth century – sometimes as much as 81% for beer and thus just 19% for wine, for the combined total of the farms on the two beverages. Over this entire period, the mean percentages for excise-tax farm revenues from beer is 52.38%, and from wine, 47.62%. I have not yet calculated the total annual tax farm revenues for this entire, almost two-century long, period.

⁹² For the economy, demography, and society of Aalst and neighbouring Oudenaarde, the fundamental study is: E. THOEN, *Landbouweconomie en bevolking in Vlaanderen gedurende de late Middeleeuwen en het begin van de Moderne Tijden. Testregio: de kasselrijen van Oudenaarde en Aalst (einde 13de – eerste helft 16de eeuw)*, I-II, Ghent 1988 (Belgisch Centrum voor Landelijke Geschiedenis, 90), Part I: ‘De demografische evolutie’, pp. 15-233 (but more on Oudenaarde). For the population figures, see also P. STABEL, *De kleine stad in Vlaanderen: Bevolkingsdynamiek en economische functies van de kleine en secundaire stedelijke centra in het Gentse kwartier (14de-16de eeuw)*, Brussels 1995 (Paleis der Academiën, Verhandelingen van de Koninklijke Academie voor Wetenschappen, Letteren en Schone Kunsten van België, Klasse der Letteren, Jaargang 57, 156), p. n. 18, stating that Aalst had about 3,600 inhabitants in 1338 and possibly 4,000 in 1500; but see also IDEM, *Dwarfs among Giants: The Flemish Urban Network in the Late Middle Ages*, Leuven-Apeldoorn 1997 (Garant, Studies in Urban, Social, Economic and Political History of the Medieval and Modern Low Countries, 8), p. 41, indicating that Aalst’s fifteenth-century population was ‘3,600 or more’, which ‘grew further in the middle of the 16th century’. See nn. 142 and 144, below.

adult population. If so, by no means all of them could have been ‘rich’.⁹³ But, as has just been shown for fourteenth-century Ghent, and has also been demonstrated for other late-medieval towns in the Low Countries, many purchasers of urban *renten* were non-residents, some from very distant towns. Some others were resident foreign merchants, though obviously more so in towns such as Ghent and Bruges, rather than in small towns such as Aalst.⁹⁴ For Bruges’ annuity markets, Laurence Derycke, in a meticulous study on late fifteenth-century Bruges, found that citizens were then generally not in the majority of *renten* holders, not until the early sixteenth century.⁹⁵ The breadth of the market for annuities varied, of course, by town, region, and period, and may have become broader by the eighteenth century, especially in the northern Netherlands.⁹⁶

But, as Laurence Derycke has also demonstrated, the domestic ‘annuity purchasers belonged to the same socio-economic strata as those from which the members of the urban government were recruited’ in Bruges. To be sure that included ‘craftsmen’, but principally the very wealthy craftsmen-entrepreneurs who were the guild leaders represented in the town government, which (since 1302) had allotted 16 of the 24 magistracies (seats) to the craft guilds.⁹⁷ As she also notes, those who were socially and economically considered to be *poorters* – merchants and wealthy property owners – were often technically also guild leaders. She contends that by the early fifteenth century, the Bruges civic government was ‘almost exclusively in the hands of the city’s commercial and industrial elite,’ which she calls an ‘alliance of the *poorterij* on the one hand and the rich and powerful craft guilds on the other’, who held ‘an iron grip on the public finances’. For the ‘richer craft-guilds and the *poorterij* were time and again the socio-economic circles par excellence where enough money was available to buy public *renten*, as urban annuities were expensive and not attainable for everyone’. She contends, in particular, that ‘the cheapest annuity that was sold on the occasion of the three issues [1472, 1489, 1492] studied cost 9 lb. gr, an amount that corresponded .. to the wage of a skilled mason for nine full months of labour’. Therefore, ‘the lower layers of the population were fully excluded from participation in the consolidated public debt.’ According to her analyses, only 20 percent of the buyers were

⁹³ Aalst *Stadsrekeningen* (1395-1550) in ALGMEEN RIJKSARCHIEF BRUSSEL, *Rekenkamer*, doc. nos. 31,412 - 31,553. The account no. for this year 1402-03 is: 31,487.

⁹⁴ In the fifteenth-century Bruges accounts, the *renten* rolls indicate a very large number of foreign buyers: from almost all of the major towns in the Low Countries, the Hanseatic towns, and mercantile towns of Portugal and Italy. See L. DERYCKE, *The Public Annuity Market in Bruges at the End of the 15th Century*, in *Urban Public Debts: Urban Government and the Market for Annuities in Western Europe (14th-18th Centuries)*, M. BOONE, K. DAVIDS, P. JANSSENS eds., Turnout 2003 (Studies in European Urban History (1100-1800), 3), pp. 165-182.

⁹⁵ *Ibid.*, p. 167: the marked reduction in the number of foreign buyers was partly the goal of urban government policies.

⁹⁶ See the studies in M. BOONE, K. DAVIDS, P. JANSSENS, *Urban Public Debts*, cited in nn. 77, 94-95, 97-100; and see also M. BOONE, ‘*Plus denil que joie*’, pp. 3-24, in n. 77 above.

⁹⁷ Especially in textiles, building trades, leather- and luxury-wares; butchers and brewers, etc. See M. RYCKAERT, A. VANDEWALLE, *Brugge: de geschiedenis van een Europese stad*, Tielt 1999, pp. 41-42, cited in L. DERYCKE, *Public Annuity Market*, pp. 171-72; and also M. RYCKAERT, *Bruges: L’histoire d’une ville européenne*, Lannoo 1999.

responsible for 75 percent of the total revenues produced from annuity sales; and that the major purchasers were ‘the major office holders in the government, treasurers, and noblemen and those linked by marriage to noble families,’ including many of their widows.⁹⁸

Similar circumstances may be found in some sixteenth-century Dutch towns. In Dordrecht, over the century 1550-1650, 23 percent of those purchasing urban *renten* came from outside the city, according to Manon van der Heijden, whose research, for the much shorter period of 1549-1577, also indicates that 34 percent of the urban magistrates bought annuities.⁹⁹ For Amsterdam, in the years, 1578-1608, Martijn van der Burg and Marjolein t’Hart found that merchants accounted for 63 percent of purchases of urban debts and annuities; industrial entrepreneurs, for 21 percent; professionals (doctors, chemists, notaries), for 7 percent; office-holders, for 5 percent. But if, to that last group are added those from the other categories known to have held government offices, this category of urban magistrates would account for about 22 percent of the total annuities market.¹⁰⁰ Similarly, James Tracy had earlier demonstrated the overwhelming prominence of urban office-holders and their surviving widows as purchasers of *renten* in eight sixteenth-century Dutch towns: especially those whose occupations were ‘grain dealers, Baltic exporters, merchants, and shippers’ (along with some drapers, brewers, and professionals).¹⁰¹ From all these studies, therefore, we may safely assert that, even if not all buyers of urban *renten* in the late-medieval and early-modern Low Countries were ‘rich’, the preponderant majority of them most certainly were, and further that they also held an even greater share of the aggregate urban public debt.¹⁰²

Later-medieval and sixteenth-century Flanders: the role of renten Aalst’s civic finances

The Flemish town that constitutes the major object of this study on late-medieval urban finances, *renten*, and excise taxes is the aforementioned Aalst, from the very late fourteenth to the mid sixteenth century. A small town near the border with the duchy of Brabant, to the east, Aalst had a far different financial history

⁹⁸ L. DERYCKE, *Public Annuity Market*, pp. 171-177.

⁹⁹ M. VAN DER HEIJDEN, *Renteniers and the Public Debt of Dordrecht (1555-1572)*, in *Urban Public Debts: Urban Government and the Market for Annuities in Western Europe (14th - 18th Centuries)*, M. BOONE, K. DAVIDS, P. JANSSENS eds., cit., pp. 183-196.

¹⁰⁰ M. VAN DER BURG, M. t’HART, *Renteniers and the Recovery of Amsterdam’s Credit (1578-1605)*, in *Urban Public Debts*, cit., pp. 197-216: with the remaining 4 percent classed as ‘others’. See also VAN DER HEIJDEN, *Public Debt*, cit., pp. 190-94: stating that in Dordrecht ‘urban officeholders and their kin were thus highly involved in urban finances’, and that in the century 1550-1650, an average of 58 percent of female buyers of *renten* were ‘related to the political elite’; and that 69 percent of the women were widows. For other studies on Dutch towns in this volume, see W. FRITSCHY, *Three Centuries of Urban and Provincial Public Debts: Amsterdam and Holland*, pp. 75-92; and R. VAN SHAIK, *The Sale of Annuities and Financial Politics in a Town in the Eastern Netherlands: Zutphen, 1400-1600*, pp. 108-126.

¹⁰¹ J. TRACY, *Financial Revolution*, cit., ch. 5, ‘The Renteniers’, pp. 139-192; quotations on p. 171.

¹⁰² In assessing my most recent and successful Social Science and Humanities Research Council of Canada research grant application, for my project ‘Warfare, taxation, depopulation, and living standards in the southern Low Countries’, one anonymous referee asserted that ‘It is not true that those receiving payments of the *renten* were only the “rich”.’ See n. 1 above.

from that just seen in fourteenth-century Ghent. The role that *renten* played in Aalst's civic finances, for the period 1395-96 (first extant account) to 1550, when this study terminates, can be seen in Figures (graphs) 1 – 7.¹⁰³ While accounts for some years within this long 155-year era are missing, especially in the 1490s, there are fewer gaps in these accounts than in the Ghent accounts; and, even more important, almost all of the extant Aalst accounts are fully complete, while many of the fourteenth-century Ghent accounts have survived in only partial form.

Figure 1: revenues from the annual sales of both *erfelijke renten* and *lijfrenten*, and as percentages of total civic revenues.

Figure 2: annual expenditures on both *erfelijke renten* and *lijfrenten* (annuity payments and redemptions); the proportional shares accounted for by each form of *renten*; and total *renten* payments as percentages of total civic expenditures.

Figure 3: Annual balance sheets of total revenues, total expenditures, and consequent surpluses or deficits, in both *livres paris* and *ponds groot* Flemish (£12 *parisis* = £1 *groot*).

Figure 4: Total annual mean revenues from the sales of excise tax farms (*accijnzen*); annual payments for *renten* (both kinds) as percentages of total income from the tax farms and, for comparison, as percentages of total civic expenditures.

Figure 5: Annual mean revenues from the excise-tax farms on the consumption (sales) of wine, beer, woollen cloth, grain, and the total excise tax farms, in £ *parisis* (only), with an index based on mean values for 1451-75, the statistical base period used throughout this study.

Figures 6 and 7: Total revenues from the combined sale of the wine and beer excise-tax farms; total revenues from the sales of all excise-tax farms; and the shares of total civic incomes accounted for by both the sales of excise-tax farms and the sales of *renten*, in £ *parisis* and *groot*.

These seven figures together permit an interesting comparison between the civic finances of Ghent and Aalst (in the periods indicated). Thus if *erfelijke renten* had been the predominant form of annuities that were sold in financing the government of fourteenth-century Ghent – if only to a small extent, the exact opposite was true for Aalst, for the 155-year period of this study, from 1395 to 1550. Thus, *lijfrenten* were always vastly more important, by an almost 25:1 ratio. In summary, over this 155-year period, *lijfrenten* accounted for 96.04 percent of the total sales value of annuities, and thus *erfelijke renten* accounted for only 3.96 percent. Together, over this same period, the sales of all *renten* provided (as an annual average) 11.86 percent of total civic revenues, ranging from an unusual low of 0.37

¹⁰³ Sources: Aalst *Stadsrekeningen* (1395-1550) in ALGMEEN RIJKSARCHIEF BRUSSEL, *Rekenkamer*, doc. nos. 31,412 - 31,553. For various reasons, I have set 1550 as the terminal date for my analysis of urban finances in the southern Low Countries; and I certainly saw no valid reason to go beyond 1568, with the outbreak of the Revolt of the Low Countries against Spanish rule, so destructive for Flanders and Brabant.

percent in 1511-15 (quinquennial mean) to a high of 25.42 percent in 1431-35 (years of strife). Over this same 155-year period, *erfelijke renten* accounted for a correspondingly small share, 2.37 percent, of the annual payments for *renten* obligations (i.e., both annuity payments and redemptions), while the *lijfrenten* thus accounted for 97.63 percent of those annuity expenditures. The difference, albeit small, between the relative proportions for sales revenue and expenditures, for these two forms of civic annuities, is readily explained by the fact that the rate of return on *erfelijke renten* was always lower than that for *lijfrenten* – often only half that for *lijfrenten*; and both forms of *renten* evidently always had a much lower yield than interest on loans (information for which is understandably scarce, because of the usury prohibition).¹⁰⁴

As indicated in Figure 4, on *renten*-related expenditures, the annual payments for both kinds of *renten* in Aalst (for both annuity payments and redemptions) accounted for an annual mean of 36.47 percent of total civic expenditures, over this 155-year period. Those shares of total civic expenditures ranged from a low 22.17 percent, at the end our period, in 1541-45 (and only 22.27 percent in 1546-50) to a high of 74.65 percent in 1436-40, during the very costly and economically disruptive Anglo-Burgundian war.

Of equal interest in this important Figure 4 is the relationship between expenditures on *renten* and the revenues derived from the annual sale of excise-tax farms on consumption: especially if we assume that the major if not exclusive reason for those excise taxes was to finance such annuity expenditures. Thus, *renten*-related annual expenditures ranged from a low of 33.28 percent – again in 1541-45 – to a very unusual high of 110.55 percent of the sales value of the excise-tax farms, again in the years of the Anglo-Burgundian war: 1436-40; but that was the only quinquennium in this entire period in which *renten* expenditures exceeded such income from the excise-tax farms.

The next two Figures 5 and 6 provide more detailed information on the mean annual revenues from the various excise-tax farms: principally wine, beer, cloth (Aalst was a textile-town), and grains. It will be readily seen, as was previously noted, that together the wine and beer excise-tax farms usually accounted for well over half of the tax-farm revenues: ranging from an unusual low (in quinquennial means) of 44.96 percent in 1476-80 to a high of 67.95 percent in 1546-60. For the first half of the sixteenth century, the sum of the wine and beer tax-farms accounted for 63.1 percent of total excise-tax farm revenues. In the same period, as indicated in Figure 6, the revenues from the sales of excise-tax farms accounted for a mean of 78.5 percent of total civic revenues. Over the entire 150-year period, that share of total civic revenues accounted for by the sales of the excise-tax farms averaged almost the same: 74.53 percent; and it ranged from a low of 50.16 percent in the civil war years of 1486-90 to a high of 84.74 percent in 1446-50, virtually matched by the 84.58 percent share in 1526-30.

¹⁰⁴ On the differences in yields on public debts in France and the medieval, early-modern Low Countries, see J. Munro, *Medieval Origins of the Financial Revolution*, pp. 524-540.

The burden of taxation in Aalst: 1396 - 1550: a new look at the 'standard of living' controversy

The central issue of this study is a measurement of the burden of taxation – though only a partial measurement – in financing urban *renten*, specifically in later-medieval and early-modern Flanders. The measurement of this taxation provides us, in turn, with another statistical mechanism to evaluate the still ongoing ‘standard of living’ debate in late-medieval and early-modern western Europe (up to ca. 1550). The major problem facing the economic historian in dealing with the statistical data of this era is to convert the those ‘nominal’ values that are expressed in the current money-of-account (*livre parisien* and *pond groot*) into some estimate of ‘real’ values, as statisticians and economists do today with current values. The monetary problem was, in many ways, a much bigger one for this era, from the mid-fourteenth to mid-sixteenth centuries, involving two separate sets of factors, both concerning alternating cycles of inflation and deflation, finally culminating in the 130-year period of sustained inflation, throughout Europe known as the ‘Price Revolution’ (ca. 1520 - ca. 1650).¹⁰⁵

The first was coinage debasement (i.e., reductions in the precious-metal contents), almost always inflationary, followed by its opposite, coinage *renforcements*, usually deflationary, which provided monetary disturbances and price fluctuations that were far more severe in the southern Low Countries than in England, if generally less severe than those in late-medieval France.¹⁰⁶

Complicating these fluctuations in the price levels was a quite separate second set of factors: those that produced first monetary contraction and then monetary expansion. The problems of monetary contraction and consequent (further) deflation affected the Low Countries in three major periods: the late fourteenth, early fifteenth-century (ca. 1380 - ca. 1415), the mid fifteenth century (ca. 1440 - ca. 1475), and the late fifteenth-early sixteenth century (ca. 1495 - ca. 1510). That was then followed by a new form of monetary expansion, involving both precious metals (the South-German silver mining boom) and credit (i.e., innovations in financial institutions), which provided the true origins of the Price Revolution, long before any important influxes of silver came from the Spanish Americas (and also before any significant demographic expansion). The nature of these various monetary forces, and the economic characteristics and consequences of the cycles

¹⁰⁵ See J. MUNRO, *The Monetary Origins of the “Price Revolution:” South German Silver Mining, Merchant-Banking, and Venetian Commerce, 1470-1540*, in *Global Connections and Monetary History, 1470–1800*, D. FLYNN, A. GIRÁLDEZ, R. VON GLAHN eds., Aldershot-Brookfield 2003 (Vt: Ashgate Publishing), pp. 1-34.

¹⁰⁶ See J. MUNRO, *Wage-Stickiness, Monetary Changes, and Real Incomes in Late-Medieval England and the Low Countries, 1300-1500: Did Money Matter?*, in “Research in Economic History”, 21, 2003, pp. 185 - 297; IDEM, *Wool, Cloth, and Gold: The Struggle for Bullion in Anglo-Burgundian Trade 1340-1478*, Brussels-Toronto, 1973; and various studies in IDEM, *Bullion Flows and Monetary Policies in England and the Low Countries, 1350-1500*, Aldershot Hampshire-Brookfield Vermont 1992 (Ashgate Publishing Ltd., Variorum Collected Studies series CS 355).

of inflation, deflation, and then inflation have been dealt with very extensively elsewhere and need not detain us further in this study.¹⁰⁷

The major issue that the economic historian must resolve is the proper method of ‘discounting’ the effects of inflation and deflation and thus of converting ‘nominal’ values into ‘real values’. In other words, a sharp rise in the aggregate value of the excise-tax farm revenues may be only the result of inflation and thus illusory. Figures 8 and 9 seek to provide that solution, and, at the same time, to provide a better method of measuring the burden of urban taxation in Aalst. Figure 8 presents the mean annual values of the revenues from the sale of all the excise-tax farms in Aalst (with nominal values in both *livres parisis* and *pond groot*) in terms of fixed ‘baskets of consumables’, similar in nature to those that statisticians compile today to measure the Consumer Price Index (or cost of living index). For England, over a period of almost seven centuries (from 1264 to 1954), this statistical technique was pioneered (in 1956) by the English team of Henry Phelps Brown and Sheila Hopkins; and it is still the most widely used method of measuring changes in the English price level, at least until the Industrial Revolution era.¹⁰⁸ In essence their basket consists of fixed shares of foodstuffs and industrial goods: 80 percent and 20 percent, respectively (but the grain-weight itself – wheat, rye, barley, and peas – is only 20 percent). The base that they chose for their Consumer Price Index is the mean of all commodity prices for the quarter century 1451-1475. Obviously, such a weighted price index – despite many imperfections – is vastly superior to one based solely on wheat or rye: ‘for man lives not by bread alone’.

In 1975, Professor Herman Van der Wee adopted the Phelps Brown and Hopkins methodology, and the same statistical base (1451-75), selecting as far as possible the same commodities, in the same or similar quantities, to produce his own ‘basket of consumables’ Consumer Price Index for the Antwerp-Lier region of Brabant for the three centuries from 1400 to 1700.¹⁰⁹ I myself then followed Van der Wee’s methodology to construct a ‘basket of consumables’ Consumer Price Index for Flanders, from 1350 to 1500.¹¹⁰ Unfortunately, while there are ample grain prices for the following centuries, we do not possess adequate price data for the other commodities in this basket, either before 1350 or after 1500. To resolve this problem, I have utilized the Van der Wee Consumer Price Index for the first half of the sixteenth century (but converting prices in Brabant *grotten* into Flemish *grotten*, and using the Flemish price base of 1451-75), on the assumption that by 1500 the market economies of Flanders and Brabant had become sufficiently integrated – long after their coinages had been unified (in 1433-35) – to justify this

¹⁰⁷ See sources cited in nn. 105-106, above.

¹⁰⁸ E.H. PHELPS BROWN, SH.V. HOPKINS, *Seven Centuries*, cit., pp. 1-12. See n. 83 above.

¹⁰⁹ H. VAN DER WEE, *Prijzen en lonen als ontwikkelingsvariabelen*, cit., pp. 413-447. See n. 85 above.

¹¹⁰ See J. MUNRO, *Builders’ Wages in Southern England and the Southern Low Countries, 1346-1500: A Comparative Study of Trends in and Levels of Real Incomes*, in *L’Edilizia prima della rivoluzione industriale, secc. XIII-XVIII*, ed. S. CAVACIOCCHI, Florence 2005 (Le Monnier - Atti delle “Settimana di Studi” e altri convegni, 36, Istituto Internazionale di Storia Economica “Francesco Datini”), pp. 1013-1076; and IDEM, *Wage-Stickiness*, cit., pp. 185-297.

technique. Furthermore, Aalst was fairly close to Brabant, and not so distant from the Antwerp market, which indeed its textile industries then served.

One very major difference between our price indexes for the southern Low Countries and the Phelps Brown & Hopkins English price index must be noted. While the latter consists only of disembodied index numbers, with fixed expenditures shares for all commodities in the basket, our two price indexes can be expressed in both index numbers (on that same base of 1451-75) and in current nominal money-of-account values: i.e., in pence (d.) *groot* of Flanders and Brabant (£1.0 *groot* Flemish = £1.5 *groot* Brabant). The major benefit of this technique is that the commodity expenditure shares are not rigidly fixed, but vary with the changes in relative prices, and thus provide a better method of representing relative purchasing power.¹¹¹

As Figure 8 indicates, the quinquennial mean real value of the sales revenue from the aggregate excise-tax farms, as expressed in the number of Flemish 'baskets of consumables' of equivalent value, rose from 865.37 Flemish 'baskets' in 1396-1400 to a mid-century peak of 1,283.39 baskets – an almost 50 percent (48.3) increase – for the economically depressed post-Anglo-Burgundian war years of 1441-45. Thereafter, after temporarily declining, that real tax burden rose again to a new peak of 1,523.48 baskets in 1471-75: i.e., 76 percent higher than in 1396-1400; and that peak was surpassed at the end of the century, in 1496-1500, with an excise-tax burden of 1,593.471 baskets. In the sixteenth century, however, that excise-tax burden was evidently diminished, as the equivalent number of (Brabantine) 'baskets of consumables' steadily fell to a low of 599.319 baskets in 1521-25 (only 69.25 percent of the real tax burden in 1396-1400); but thereafter it rose to 882.57 baskets at the very end of our period of statistical analysis, in 1546-50, representing about the same tax burden as that for 1396-1400, at the beginning of our period. The most effective means of measuring changes in the tax burden over this 155-year period is the index numbers, with a base of 1451-75, for the equivalent value of the aggregate tax-excite farms in terms of the Flemish basket of consumables. The corresponding graphic line for these index numbers in Figure 8 indicates, for example, that the burden in 1496-1500 was 27.1 percent higher than for the base period, 1451-75.

Monetary factors concerning inflation and deflation may explain some of the differences in these excise-tax burdens: i.e., in that nominal values of the excise taxes and thus of the farms were 'sticky', and thus did not smoothly change with the rise and fall of prices. Note, for example, that the fifteenth-century peaks were during periods of severe deflation (except in the years of civil strife and war, in the 1470s and 1480s). Conversely, the fall in the real values of the excise-tax farms during the initial phase of the Price Revolution may reflect a 'stickiness' of the nominal tax rates during the onset of prolonged inflation.

¹¹¹ I have in fact been able to use the working papers of the Phelps Brown and Hopkins project, now maintained in the Archives of the British Library of Political and Economic Science (London School of Economics), and have converted all of their commodity index numbers into monetary values (from 1264 to 1700), in pence sterling. I have also used them in my comparative study of real wages, in late-medieval England and the Low Countries, where I have also examined the statistical nature of this difference in the consumer price indexes. See IDEM, *Builders' Wages*, cit., pp. 1013-1076.

Figure 9 presents an even better measure of the real tax burden, especially for the middle and lower classes of Aalst's urban society: the value of the excise-tax revenues as expressed in the equivalent value of the number of days' wages for master masons and carpenters. These were building craftsmen who periodically obtained employment from the civic government for building projects, while also employed, in other periods of the year in institutional and other private construction projects. Some masters in the Aalst building trades, if by no means a majority, were more than just artisans. They were also industrial 'contractors' and entrepreneurs, who often earned substantial additional incomes from trading in construction materials – selling building supplies to town governments, and various institutions, such as hospitals, churches, guilds, etc. They also generally earned much higher wages – which have thus been excluded from this study. Perhaps an even better measure might have been to use the daily wages of their journeymen helpers, all the more so since journeymen (*kenapen*) earned virtually all of their income from wages. But, while the journeymen's wages in, say Bruges, were virtually always one-half (50 percent) of the master's wage, they varied in Aalst from about 43 percent (e.g., 3d/7d) to 50 percent (e.g., 4d/8d) or 57 percent (e.g., 4d/7d).¹¹²

Some historians, however, have contended that masons and carpenters – or other similar building craftsmen – are not a good choice, as representatives of skilled artisans, since they did not necessarily rank all that high in the hierarchy of urban wages.¹¹³ But that objection misses the point – which is not to present such wages as though they truly 'representative' of the artisan labour force, and certainly not as the highest of such urban wages. There is one fundamental reason why most medieval economic historians use such builders' wages: because they are, for most towns of this era (and also English manorial estates) the only daily-wage labour statistics available in a verifiable and continuous series over many, many centuries. We must also remember that most artisans and labourers worked for piece-work wages (never or rarely available in such continuous series); and building craftsmen therefore also provide one of the few examples of daily wages, based on a working day from 8 hours in the winter to 12-14 hours in the summer, explaining why the records often distinguish between summer and winter wages.¹¹⁴

Such a measurement, based on builders' wages, explains another very major reason for choosing the town accounts of Aalst: the fact that they provide, along with all of the aforementioned statistical data on *rentes* and excise-taxes, a very complete set of data on urban wages — providing, year after year, the wages (summer and winter) for specified artisans – from which I have chosen just the

¹¹² On these issues, see J. MUNRO, *Wage Stickiness*, cit., pp. 185-297; and IDEM, *Builders Wages in Southern England and the Low Countries*, cit., pp. 1013-1076. For the Aalst wage data, see the sources for the figures, below.

¹¹³ See for example: B. BLONDÉ, *De sociale structuren en economische dynamiek van 's-Hertogenbosch 1500-1550*, Antwerp 1987; and also *Labour and Labour Markets Between Town and Countryside, Middle Ages-19th century*, ed. B. BLONDÉ, Turnhout 2001.

¹¹⁴ See J. MUNRO, *Urban Wage Structures in Late-Medieval England and the Low Countries: Work-Time and Seasonal Wages*, in *Labour and Leisure in Historical Perspective, Thirteenth to Twentieth Centuries*, ed. I. BLANCHARD, Stuttgart 1994 (Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte Beiheft series, 116), pp. 65-78; and IDEM, *Wage-Stickiness*, cit., pp. 185-297.

daily (summer) wages for master masons and carpenters. In contrast to these rich and so informative Aalst civic accounts, the Ghent accounts provide almost no such annual, useable wage data (except a very few years in the fourteenth century); and the individual wage data in the Bruges civic accounts cease in the 1480s, when the town treasurers chose to provide, thereafter, only the annual totals of wage expenditures (as do the later Ypres accounts). Conversely, while we have abundant wage data for Antwerp (1400-1700), we have virtually no civic records of revenues from excise tax farms until the later sixteenth century.¹¹⁵

In Figure 9, the mean daily wages for these artisans are indicated, in pence *groot* Flemish. They range from a mean of 7.2d in 1396-1400 to a nominal peak mean of 10.0d from the mid 1480s to the mid 1490s. For purposes of comparative analysis, this Figure 9 also provides the estimated annual wage income (for a mean estimated employment year of 210 days) for these master masons and carpenters, again, in terms of the equivalent number Flemish (and Brabantine) 'baskets of consumables': i.e., the amount of real goods that these artisans could have purchased yearly with their money wage income. That indeed is the true meaning of the often misunderstood term 'real wages'.¹¹⁶ For reasons that I have supplied in depth in other publications, this measure of annual income in commodity baskets, along with the real-wage index (final column), are and must be presented in harmonic rather than arithmetic means.¹¹⁷

The most striking feature of this Figure 9 is the very large number of days' wages, for master masons and carpenters, whose aggregate money value provides the equivalent value of the annual tax-farms in Aalst. That number rise from an annual mean of 13,205.93 days' wages in 1396-1400 (62.89 years' wage income) to an initial peak, again in those depressed post-war years of 1441-45: when the excise-tax burden represented 20,201.43 days' wages (96.2 years' wage income, almost a century) for these artisans. But that burden was subsequently exceeded consistently in the years from 1466 to 1485: varying from 21,640.64 days' wages in 1466-70 to a new peak of 24,419.60 days' wages (116.3 years' wage income) in 1471-75. While

¹¹⁵ For published statistics on the available wage data for late-medieval Ghent, see E. THOEN, *Landbouweconomie*, cit., II, Part IV: 'Loonevolutie en loonarbeid', pp. 941-79, especially Figure (graph) 43, p. 950; and also Appendix XVI, pp. 1317-26. For wages of building craftsmen in Bruges, Antwerp, and Mechelen, see the data provided in J. MUNRO, *Wage-Stickiness*, cit., Tables 10-14, pp. 252-261; and also in IDEM, *Builders' Wages*, cit., Tables 3-7, pp. 1053-1066; H. VAN DER WEE, *Prijzen en lonen*, cit., pp. 413-447; and in IDEM, *Antwerp Market, I: Statistics*, cit., pp. 383-389; Synoptic Tables of Wages and Appendices 27-30, pp. 393-92; for beer excise taxes in Antwerp, in scattered years only from 1560 to 1600, see Appendix 43/5, p. 521. As Van der Wee notes (p. 510), 'the town accounts of Antwerp have only been conserved in full from the last quarter of the sixteenth century'.

¹¹⁶ For an explanation and justification for the choice of a mean employment year of 210 days, see J. MUNRO, *Wage-Stickiness*, cit., pp. 185-297; IDEM, *Builders' Wages*, cit., pp. pp. 1013-1076; and especially H. VAN DER WEE, *Growth of the Antwerp Market, I, Statistics*, cit., Appendix 48, pp. 540-544 (for Antwerp and Lier, in the period 1437-1600).

¹¹⁷ The harmonic mean is 'the reciprocal of the arithmetic mean of the reciprocals of the individual numbers in a given series'; and it is always somewhat less than the arithmetic mean. For the statistical explanation, see F.C. MILLS, *Introduction to Statistics*, New York 1956, pp. 108-112, 401. For an explanation of why harmonic and not arithmetic means must be used in such historical studies, see, J. MUNRO, *Builders' Wages*, cit., pp. 1027-1028.

falling somewhat in the 1480s, but only because of a rise in nominal money wages, that tax burden again rose (to 21,442.91 days' wages in 1496-1500) and never fell below 20,000 days' wages in the first two decades of the sixteenth century, thereafter rising to a new and final peak of 29,949.60 days' wages (142.6 years' wages) in the final quinquennium of this study, 1546-50. The principal reason for this rising tax burden on such artisans should be obvious as well from Figure 9: the fact that nominal money wages did not rise to keep pace with inflation, and sometimes even fell, during this first phase of the Price Revolution, while, at the same time, the nominal value of the excise taxes did rise, if not as much as the price level, at least more in accordance with inflation.

For the early fifteenth century, when, as noted earlier, Aalst had between 3,600 and 4,000 inhabitants, this highly regressive excise-tax burden must have been a very heavy one indeed for adult master artisans, let alone their far less well paid journeymen labourers.¹¹⁸ However, that tax burden appears to have been far less draconian, if measured on a per capita basis (for a population of 3,600): thus ranging from 3.668 days' wages in 1396-1400 to the onerous peak of 8.319 days' wages in 1546-50. If instead we measure the burden in terms of the estimated number of employed adult males (taken as one-quarter of that population), the burden correspondingly rises from 14.673 days' wages in 1396-1400 to 33.277 days' wages in 1546-1550: i.e., with a work-week of six days, about 5.5 weeks' wages.

One may now ask if there were any alternative forms of late-medieval taxation that were less regressive than these urban excise taxes, which were obviously an indirect tax. For my research indicates that this was indeed, as to be expected, the almost exclusive form of taxation used to finance annuity (*rente*) payments in late-medieval Flemish towns, and elsewhere. Let us also recall that the various papal edicts that had accepted *rentes* as non-usurious contracts had virtually stipulated this very form of taxation in financing annuities. The alternative form of taxation to be found in many other jurisdictions was, of course, direct taxes, of which the most predominant form was a property tax: both hearth taxes (on residences) in towns and villages, and a land tax on rural estates and farms. These were certainly far less regressive in that their assessments were based to some degree on market values, so that those with more expensive properties paid more taxes (normally a larger share of their incomes) than did those with cheaper properties. Furthermore, as indicated in Table 1, on populations and taxes in fifteenth-century Brabant, those families considered sufficiently indigent to be classed as 'poor hearths' escaped this taxation entirely, while even the poorest who consumed bread and beer, etc., had to pay the excise taxes. Note in particular, in this table, the rise in the proportion of tax-exempt 'poor hearths' in the duchy of Brabant (combined with demographic decline), between 1437 and 1480, especially in the smaller towns: from 9.2 percent in 1437 to 28.1 percent of total hearths in 1480 (no data for 1496). This provides yet another statistical indicator to challenge the commonplace notion of a 'Golden Age' of artisans (and peasants) in the fifteenth century.

Another recent study on Flemish taxation – taxation in the Flemish countryside, from the late thirteenth to eighteenth centuries – now permits us to

¹¹⁸ For Aalst's population, see note 92 above.

make another and most valuable comparative observation.¹¹⁹ As Tim Soens and Erik Thoen have demonstrated, the levels of taxation – direct taxation – were far, far lower in the Flemish countryside, and much less regressive, at least before the seventeenth century; and, furthermore, they have concluded that very few if any rural inhabitants purchased urban commodities subject to these excise taxes. Beer, for examples, was a widespread object of production and consumption in rural households, as were most foodstuffs.¹²⁰ Thus, if the tax burden between town and countryside widened in the later middle ages and sixteenth century, that gap may have provided yet another incentive for some artisans to seek industrial employment in the countryside: a contention that is indeed widespread in the now extensive literature on the ‘proto-industrialisation’ debate.¹²¹

The late-medieval ‘standard of living’ debate: the role of demographic and monetary factors

The evidence in these figures, especially Figure 9, provides us – as promised earlier – with important new insights into the ongoing controversy about real incomes and living standards in late-medieval western Europe, especially after the Black Death. The still prevailing opinion amongst medieval economic historians, deeply influenced by the Postan and Duby schools, using fundamentally a Ricardian model, is that the Black Death and subsequent, if periodic, declines in population, amounting to perhaps 40 percent by the fifteenth century, so altered the land:labour ratio that the marginal productivity of labour ‘must’ have risen substantially, as did, therefore, real wages.¹²² For, according to Classical economic theory, the real wage is determined by the marginal product of labour – though more precisely it is determined by its *marginal revenue product*. For an even simpler explanation, one may contend that such a decline in population and thus in aggregate demand led to the abandonment of relatively infertile, high-cost ‘marginal lands’, so that the

¹¹⁹ T. SOENS, E. THOEN, *The Impact of Central Government Taxation on the Flemish Countryside (end 13th-18th Centuries): Some Reflections*, in *La fiscalità nell’economia europea, Secoli XIII - XV/III/Fiscal Systems in the European Economy from the 13th to the 18th Centuries*, ed. S. CAVACIOCCHI, Florence 2008 (XXXIX Settimana di Studi), pp. 957-971.

¹²⁰ See E. AERTS, *Bier van Lier*, cit.; J. M. BENNETT, *Ale, Beer and Brewsters in England: Women’s Work in a Changing World, 1300-1600*, Oxford 1996.

¹²¹ See, for example: F. MENDELS, *Proto-Industrialization: The First Phase of the Industrialization Process*, in “The Journal of Economic History”, 32, March 1972, pp. 241-261; D.C. COLEMAN, *Proto-Industrialization: A Concept Too Many*, in “The Economic History Review”, 2nd ser., 36, August 1983, pp. 435-448; L.A. CLARKSON, *Proto-Industrialization: The First Phase of Industrialization?*, London 1985 (Studies in Economic and Social History Series), pp. 9-57; E. SCHREMMER, *Proto-Industrialisation: A Step Towards Industrialisation?*, in “The Journal of European Economic History”, 10, 1981, pp. 653-670; *European Proto-Industrialization*, S.C. OGILVIE, M. CERMAN eds., Cambridge 1996; P. KRIEDTE, H. MEDICK, J. SCHLUMBOHM, *Industrialization Before Industrialization*, Cambridge 1977.

¹²² See M. POSTAN, *Some Economic Evidence of Declining Population in the Later Middle Ages*, in “The Economic History Review”, 2nd ser., 2, 1950, pp. 130-167, reprinted in his *Essays on Medieval Agriculture and General Problems of the Medieval Economy*, Cambridge 1973, pp. 186-213 (with the revised title of *Some Agrarian Evidence of Declining Population in the Later Middle Ages*); IDEM, *The Medieval Economy and Society: An Economic History of Britain, 1100-1500*, Cambridge 1972; G. DUBY, *Rural Economy and Country Life in the Medieval West*, trans. Cynthia Postan, London 1962, pp. 289-360. See also the next note.

foodstuffs needed to feed such a smaller population were largely produced at much lower costs on lands that were far more fertile, and closer to markets (and thus with lower Ricardian economic rent). Since the living standards of the later-medieval urban lower classes were largely determined by food prices – accounting for about 80 percent of household budgets, as indicated earlier – those lower agricultural costs and thus food prices, and (presumably) lower rents would largely explain the rise in their real wages and thus also in their real incomes.

In several publications on real incomes in late-medieval England and the Low Countries, I have challenged these theoretical notions, which I find simplistic and unhistorical.¹²³ In particular, I have sought to demonstrate that real wages for urban craftsmen generally fell – not rose – in the aftermath of the Black Death, for about three decades, when inflation and the real cost of living rose more than did money-wages. By the late fourteenth century, in both regions, real wages had not only recovered from the pre-1340 levels, but then experienced a sustained rise to reach an unprecedented peak in the mid fifteenth century. I had contended that this ultimate rise in real wages is chiefly explained, not by changes in labour productivity, but by the combination of sustained deflation and institutional ‘wage stickiness’. Thus, with deflation and the even sharper fall in the cost of living, the purchasing power of stable (‘sticky’) money wages rose, especially in England but also in the southern Low Countries (both Flanders and Brabant) during especially the mid fifteenth century: from the mid 1440s to the mid 1470s, and peaking in both principalities in the quinquennium 1461-65. But otherwise, in the fifteenth century (except for the late 1490s), real wages suffered a very considerable deterioration, chiefly because of warfare, coinage debasements, and consequent inflations. In this current study, Figure 9, on nominal and real wages in Aalst, provides additional evidence for this thesis. Note the long-term ‘wage stickiness’ for building craftsmen in Aalst (if not quite as ‘sticky’ as builders’ wages in Bruges, Mechelen, and Antwerp);¹²⁴ and note therefore that in Aalst, as elsewhere in the southern Low Countries, real wages rose only when consumer prices fell, and thus fell when those consumer prices rose.

England, however, enjoyed a more prolonged and continuous, if by no means fully continuous, rise in real wages from the later fourteenth century into the early sixteenth century, principally because of a highly unusual degree of monetary stability: first between 1351 and 1464, when Edward IV debased the silver coinage by 20 percent; and thereafter from 1465 until 1526 (with Henry VIII’s first if relatively minor debasement).¹²⁵ Partly because of that difference, real wages in southern England, whose level, on the eve of the Black Death, had been only about 50 percent of those in urban Flanders (Bruges and Ghent), had risen rose to about

¹²³ For the following, see in particular J. MUNRO, *Wage-Stickiness*, cit., pp. 185-297; and IDEM, *Builders’ Wages*, cit., pp. 1013-1076. For another valuable perspective, specifically on Flanders, see E. THOEN, *Landbouweconomie*, cit., I, part II: ‘Het algemeen kader van prijzen en levensduurte’, pp. 234-299.

¹²⁴ See J. MUNRO, *Wage-Stickiness*, cit., pp. 185-297; and IDEM, *Builders’ Wages*, cit., pp. 1013-1076.

¹²⁵ See the sources cited in nn 105-106, and 123-24, above.

80 per cent of the urban Flemish level by the 1480s, when, as also noted earlier, the Bruges wage data cease to be presented in the annual town accounts.¹²⁶

But even some of those who still accept the view that the Black Death ultimately ushered in a 'golden age' for the artisan and labourer do evince some doubts.¹²⁷ Thus Ralph Davis has asserted that while, in late-medieval Europe, 'the most powerful upward regulator of income per head was a calamitous drop in population', nevertheless 'the economy of modern Europe would never have come into existence on the basis of population decline'.¹²⁸ Of course, several economic historians have argued that the late-medieval population decline did not occur peacefully; that the ravages of plagues and warfare that accompanied and directly or indirectly explain the population decline were extremely disruptive to the economy, especially to trade and commerce. We must also take account of the extremely high levels of physical violence, apart from warfare, in late-medieval society, especially in the Low Countries. In this region, the homicide rates were about 45 - 47 per 100,000 persons in the fourteenth and fifteenth centuries (vs. a rate of 23 in late-medieval England), compared to just 0.9 per 100,000 in the Netherlands and Belgium during the late twentieth century.¹²⁹ The Nobel-prize winning economist Douglass North has more clearly discerned the key issues about the late-medieval European economies than have most historians, in stating that:¹³⁰

The decline of population, coupled with war, confiscation, pillage and revolution, reduced the volume of trade and stimulated a trend toward local self-sufficiency. The losses to society due to the decline in specialization and reduced division of labor certainly argues against a rise in the standard of living. This change was synonymous with increased transaction costs from

¹²⁶ See the evidence in nn. 123-24, above.

¹²⁷ For the original 'Golden Age' view, though more correctly placed well after the Black Death, see J.E. THOROLD ROGERS, *Six Centuries of Work and Wages: the History of English Labour*, London 1903, p. 326: 'the fifteenth century and the first quarter of the sixteenth were the Golden Age of the English labourer, if we are to interpret the wages which he earned by the cost of the necessities of life.' See also, and from this same era, G.F. STEFFEN, *Studien zur Geschichte der englischen Lohnarbeiter*, I-III, Stuttgart 1901-05.

¹²⁸ R. DAVIS, *The Rise of the Atlantic Economies*, London 1973, p. 16.

¹²⁹ T.R. GURR, *Historical Trends in Violent Crime: a Critical Review of the Evidence*, in "Crime and Justice: An Annual Review of Research", 3, 1981, pp. 295-353, esp. pp. 312-315, asserting that 'there was a tremendous upsurge in violent crime in England (or at least in its cities) during the early fourteenth century', i.e., well before the Black Death (with homicide rates of about 23/100,000). See also M. EISNER, *Long-Term Historical Trends in Violent Crime*, in "Crime and Justice: A Review of Research", 30, 2003, pp. 83-242, esp. Table 1, p. 99; for Europe as a whole, homicide rates dropped from a peak of 41 per 100,000 in the 15th century, to 1.4 in the 20th century (Table 2, p. 99); D. NICHOLAS, *Crime and Punishment in Fourteenth-Century Ghent*, in "Revue belge de philologie et d'histoire/Belgisch tijdschrift voor filologie en geschiedenis", 48, 1970, pp. 289-334, 1141-1176; reprinted in IDEM, *Trade, Urbanisation and the Family*, Aldershot 1996 (Variorum Collected Studies Series CS531, Ashgate Publishing); no. VI [same pagination], esp. pp. 314-16, 1176: 'Crime was not the assassination of one's neighbor, but the failure to offer suitable atonement to his kindred'.

¹³⁰ D. NORTH, R. THOMAS, *The Rise of the Western World: A New Economic History*, Cambridge 1973, pp. 71-96 (quotation on p. 78), 93; 134-138; D. NORTH, *Structure and Change in Economic History*, New York 1981, chapters 1-5; IDEM, *Government and the Cost of Exchange in History*, in "Journal of Economic History", 44, 1984, pp. 255-264; IDEM, *Transaction Costs in History*, in "Journal of European Economic History", 14, 1985, pp. 557-576.

using the market, a change which increased the incentives for independent groups to rely upon the coercive powers of government to organize economic activity.

To this we may add two very specific coercive powers of government: greatly increased taxation and coinage debasements, which are also, of course, a major form of taxation that so many medieval princes utilized, above all in financing warfare.¹³¹

Demographic changes and the burden of taxation

What has not so far been clearly specified is the very adverse economic consequences in the relationship between depopulation and taxes, especially excise taxes. Thus the increasingly expensive warfare of late-thirteenth and early fourteenth-century western Europe, i.e., even before the even more expensive Hundred Years' War (1337-1453), created an ever increasing mountain of public debt (hence the Italian term, the *monte*) whose financial burdens had to be borne by a greatly reduced number of survivors, for no governments could afford to repudiate public debts and the interest or annuity payments that an ever smaller urban citizenry had to finance principally through consumption taxes. The fact that the level of excise taxes did not appreciably change in Bruges and Ghent after the Black Death had led the famed Belgian historian Hans Van Werveke to believe that the Black Death had largely spared mid-fourteenth century Flanders.¹³² He evidently did not consider the alternative: that a plague-reduced urban population had to bear, as well, a significant increase in the per capita burden of taxation, at a substantial cost to its living standards.¹³³

Thus the most serious and most misleading deficiency in this late-medieval standard of living debate, especially for urban society, has been the failure to take into account, in proper quantitative fashion, the role of taxation: in particular steep increases in excise or consumption taxes for the lower middle and working classes in towns of the southern Low Countries. What is also especially revealing about Figures 8 and 9 is the contradictory evidence about real wages for master masons and carpenters in Aalst: that when, in the mid-fifteenth century, they supposedly experienced a rise in their real wages, as computed by the normal method – i.e., by dividing the nominal money wage index by the consumer price index (RWI = NWI/CPI) – these artisans and their labourers also experienced a steep rise in the burden of the excise taxes. In so far as the real incomes of the Aalst building

¹³¹ See my publications on coinage debasements and princely finances in n. 106 above.

¹³² H. VAN WERVEKE, *De Zwarte Dood in de zuidelijke Nederlanden, 1349-1351*, in “Mededelingen van de koninklijke Vlaamse Academie voor wetenschappen, letteren, en schone kunsten van België, Klasse der Letteren”, XII, 1950, no. 3. See the next note.

¹³³ For a very cogent and convincing rebuttal of Van Werveke's thesis, though not involving these specific issues, see W. BLOCKMANS, *The Social and Economic Effects of Plague in the Low Countries, 1349-1500*, in “Belgisch tijdschrift voor philologie en geschiedenis/ Revue belge de philologie et d'histoire”, 58, 1980, pp. 833-563. See also G. DESPY, *La 'Grande Peste Noire de 1348': a-t-elle touché le roman pays de Brabant?*, in *Centenaire du séminaire d'histoire médiévale de l'Université Libre de Bruxelles, 1876-1976* ed. IDEM, Brussels 1977, pp. 195-217.

craftsmen are being measured, in this study, in terms the number of 'baskets of consumables' that could have been purchased with annual money wage incomes, one may wonder if any of these excise taxes had been included in the prices of the commodities contained in these baskets. If they had been, that presumably would have been true only for those that were sold as final products, at retail outlets: such as butter, cheese, meat, fish, and textiles. The major items in the baskets, by value, were primary commodities, such as grains, and thus were not subject to these excise taxes, which would have been imposed instead on the products manufactured from them: e.g., bread and beer (whose wholesale or retail prices are not in the price indexes, but only their grain components). Furthermore, of these commodities just listed, only textiles figured prominently in the total value of all the Aalst excise-tax farms.

The issue of excise taxes also adds yet another dimension to the comparison of the actual levels of real wages in England and the Southern Low Countries: a factor that may well have narrowed the statistically evident gap between the real wages for urban building craftsmen even more, in these two countries. For England, unlike almost all of the continent (or continental towns), had experienced few significant internal taxes on consumption – as opposed to import duties – until as late as July 1643, when the Long Parliament, under the leadership of John Pym, shortly after the outbreak of the Civil War between Crown and Parliament, introduced this continental form of excise taxes.¹³⁴ By the late eighteenth century (and presumably much earlier), the sum of excise and import-customs duties on such consumables accounted for 78.8 percent of the 'Major Taxes' (accounting for over 90 percent of total taxes), while direct taxation (chiefly the land tax) account for only 21.2 percent.¹³⁵

Of course a major reason why such excise taxes had not been necessary before the mid-seventeenth century was the very high level of revenue that the English crown had gained for centuries from both export taxes, chiefly on wool and cloth, and the land taxes, along with such direct taxes as the levies of 'fifteenths and tenths'¹³⁶ It is also interesting to note that an experiment in a progressive income

¹³⁴ See M. ASHLEY, *Financial and Commercial Policy Under the Cromwellian Protectorate*, Oxford 1934; revised edn: London 1962 (Frank Cass and Co. Ltd), chapter VII: 'Taxes, ii. Excise', pp. 62-71; P. O'BRIEN, P. HUNT, *The Emergence and Consolidation of Excises in the English Fiscal System before the Glorious Revolution*, in "British Tax Review 1997" [42, 1997], pp. 35-58, noting, on pp. 38-41 (with Table 1) that there were a few inland duties collected on goods traded within the realm – e.g., coal, alum, salt, copperas, soap; P. O'BRIEN, *Political Economy of British Taxation*, cit., pp. 1-32; W. ASHWORTH, *Customs and Excise: Trade, Production and Consumption in England, 1640–1845*, Oxford 2003. Such taxation, of course, also helped make possible England's 'financial revolution', following the 1688 'Glorious Revolution'. See n. 2 above.

¹³⁵ P. O'BRIEN, *Political Economy of British Taxation*, cit., pp. 8-17, esp. Table 5, p. 11 (but based on my calculations from that table).

¹³⁶ See J. MUNRO, *Medieval Woollens: Textiles, Textile Technology, and Industrial Organisation, c. 800-1500*, in *The Cambridge History of Western Textiles*, ed. D. JENKINS, I-II, Cambridge-New York 2003, I, pp. 181-227; W.M. ORMROD, *The Crown and the English Economy, 1290-1348*, in *Before the Black Death: Studies in 'Crisis' of the Early Fourteenth Century*, ed. B.M.S. CAMPBELL, Manchester 1991, pp. 149-183. Even in 1640, over 90 percent of the value of English exports came from wool and textiles. For London's finances in this period, see V. HARDING, *The Crown, the City, and the Orphans: the City of*

tax, undertaken by Henry VIII, in the period 1513-1547, did not survive the reign of Elizabeth I (1558-1603).¹³⁷ At the same time, it must be observed that English import customs duties on wine, and then from 1660s, in the ensuing era of the so-called 'New Colonialism', customs duties on such colonial imports as tea, sugar, rum, tobacco, linens, Indian cottons, timber, and iron, provided a consumption-tax burden that was equivalent in nature to urban excise taxes in continental towns.¹³⁸

It must here be stressed once more that in both these countries, and indeed in most of western Europe, excise taxes were principally, perhaps almost exclusively, an urban form of taxation, and thus may be used in comparing only urban industrial wages. But we lack sufficient data on most of the other taxes, just as we lack full data on urban household incomes, for which women (wives, daughters, resident widows) were presumably also important contributors, especially after the Black Death, in any attempt to measure inter-regional urban differences in 'after-tax' real incomes in later-medieval, early-modern western Europe.¹³⁹ Unfortunately, for Aalst in particular, we lack any significant data on female incomes, even for the important woollen textile industry, for which over 60 percent of the employment was probably then female (earning piece-work incomes).¹⁴⁰

But the plight of these urban artisan and labouring consumers may have been even worse, since these statistics do not take account of the *per capita* burden: i.e., of the effects population decline throughout the fifteenth century. Another common mistaken belief concerning medieval demography is that western Europe suffered a major fall in population only after the first phase of Black Death (from 1348, and into the 1360s), and the corresponding belief that Europe's population began to recover from at least the mid fifteenth century.

Recent studies indicate however, for both the southern Low Countries (except the Antwerp region) and England, that general demographic recovery did not

London and its Finances, 1400-1700, in *Urban Public Debts: Urban Government and the Market for Annuities in Western Europe (14th-18th Centuries)*, M. BOONE, K. DAVIDS, P. JANSSENS eds., Turnout 2003, pp. 51-60.

¹³⁷ R. SCHOFIELD, *Taxation Under the Early Tudors, 1485-1547*, Oxford 2004.

¹³⁸ See P. O'BRIEN, *Political Economy of British Taxation*, cit., Table 5, p. 11; and other sources cited in n. 134 above.

¹³⁹ See P.J. AND P. GOLDBERG, *Women, Work, and Life Cycle in a Medieval Economy: Women in York and Yorkshire, c.1300-1520*, Oxford 1992; S. BARDSLEY, *Women's Work Reconsidered: Gender and Wage-Differentiation in Late Medieval England*, in "Past & Present", 165, Nov. 1999, pp. 3-29; L. SOLTOW, *Income and Wealth Inequality in the Netherlands, 16th-20th Century*, Amsterdam 1998; T. DE MOOR, J. LUITEN VAN ZANDEN, *Vrouwen en de geboorte van het kapitalisme in West-Europa*, Meppel 2006; J. LUITEN VAN ZANDEN, *Wages and the Standard of Living in Europe, 1500-1800*, in "European Review of Economic History", 3, Aug. 1999, pp. 175-197, in which he states (p. 178): "This [artisan's household] budget is made up of different sources of income, of which wage income is only one. But we assume it was an important source (and not a marginal one) for the European working classes of the early modern period. Moreover, the wage rate is exogenous for the household: it cannot influence its level in the short or the long run. This means that a rationally acting household will adapt its strategy to this given wage-level': i.e., will adjust the family's non-wage forms of income accordingly.

¹⁴⁰ See J. MUNRO, *Medieval Woollens*, cit., pp. 181-227: especially in wool-sorting, wool-preparation (cleansing and greasing), combing, card, spinning, warping (on the loom); while weaving, fulling, dyeing, and shearing were essentially male occupations.

commence until the early sixteenth century, perhaps not until the 1520s.¹⁴¹ As Table 1 indicates, for the population of Brabant, the recorded number of ‘hearths’ for the entire duchy fell by 18.76 percent, from 1437 to 1496, despite the very significant (and expected) growth of Antwerp (by 91.5 percent), which became the commercial and financial capital of Europe from the 1460s. The population decline was the most severe for the small towns (i.e., those like Aalst) and villages, whose number of hearths fell by 25.14 and 26.35 percent, respectively. Finally, if we assume that population decline consists not just in the disappearance of households but also in a smaller average family size of those that survived, the demographic decline may have been much more serious than these grim data would indicate.

Unfortunately, we lack any such comparable demographic data for Aalst (nothing beyond that already presented), but, thanks to Erik Thoen and Peter Stabel, we do have information on significant demographic decline for some fifteenth-century Flemish towns. For example, Hulst’s population (about the same as that of Aalst) had fallen from 3,600 in 1417 to 3,000 in 1469, a decline of about 17 percent. From the mid-fourteenth to the mid or later fifteenth century, the population of Dendermonde had fallen by about one half: from about 9,000 to about 4,500. But Kortrijk seems to have maintained a stable population of about 5,300 from 1440 to 1477; and Oudenaarde’s population (with a thriving tapestry industry) actually grew from 5,700 in the 1440s to 6,200 in about 1500.¹⁴² Perhaps the worst Flemish demographic crisis took place in Ypres (Ieper), whose traditional woollen cloth industry suffered a greater decline than that of any other major Flemish city during the fifteenth century. According to estimates of Henri Pirenne, though disputed by some historians, Ypres’ population had fallen from 10,523 in 1431 to 7,626 in 1491: a decline of 27.53 percent (but thereafter recovering to 9,563 in 1506).¹⁴³

Whether or not Aalst had suffered any demographic decline in the fifteenth century cannot, regrettably, be ascertained with any certainty.¹⁴⁴ If it did, then these

¹⁴¹ For England, see B. CAMPBELL, *The Population of Early Tudor England: A Re-evaluation of the 1522 Muster Returns and the 1524 and 1525 Lay Subsidies*, in “Journal of Historical Geography”, 7, 1981, pp. 145-154; J. CORNWALL, *English Population in the Early Sixteenth Century*, in “Economic History Review”, 2nd ser., 23, 1970, 1, pp. 32-44; I. BLANCHARD, *Population Change, Enclosure, and the Early Tudor Economy*, in “Economic History Review”, 2nd ser., 23, 1970, 3, pp. 427-445.

¹⁴² See E. THOEN, *Landbouweconomie*, cit., I, pp. 1-233; P. STABEL, *Kleine stad*, cit., pp. 17-24; IDEM, *Dwarfs among Giants*, cit., pp. 38-43. According to estimates put forth by W. PREVENIER, *La démographie des villes du comté de Flandre aux XIV^e et XV^e siècles: État de question: essai d'interprétation*, in “Revue du Nord”, 65, no. 257, 1983, pp. 255-275, especially Table D (p. 264); Kortrijk had a population of 9,517 in 1469 (based on the Burgundian census); and Oudenaarde then had a population of 7,290. All of his estimates seem to be unduly high, and based on a high multiplier of 4.5 persons per household.

¹⁴³ H. PIRENNE, *Les dénombrements de la population d'Ypres au XV^e siècle (1412-1506)*, in “Vierteljahrsschrift für Sozial und Wirtschaftsgeschichte”, 1903, republished in IDEM, *Histoire économique de l'occident médiéval*, ed. E. COORNAERT, Bruges 1951, pp. 458-488, especially p. 467 (also presenting alternative figures of 10,736 inhabitants in 1412 and 9,390 in 1437). But see W. PREVENIER, *La démographie*, cit., who provides slightly different alternative estimates for Ypres’ 1412 population: 10,782 and 10,489 inhabitants (pp. 259-60); and an estimate of perhaps 9,878 in 1469 (Table G, p. 270: 2,195 hearths with an average family size of 4.5 persons).

¹⁴⁴ P. STABEL, *Dwarfs among Giants*, cit., pp. 38-43; he believes that Aalst enjoyed relative demographic stability during the 15th century; W. PREVENIER, *La démographie*, cit., Table D, p. 264,

data on the burden of excise taxes in Figures 8 and 9 still provide a very grim picture; and of course if there had been demographic decline, the per capita tax burden would have risen commensurately, with very possibly very significant reductions in real incomes for the urban working classes.¹⁴⁵ On the other hand, the urban excise-tax burden was not entirely negative for craftsmen and labourers in the building trades: for such taxes also financed much of their employment, in urban public works.

provides an estimate of Aalst's population in 1469 (extrapolated from the Burgundian census of that year): 3,962 inhabitants, about the same as other estimates for 1400. See n. 92 above.

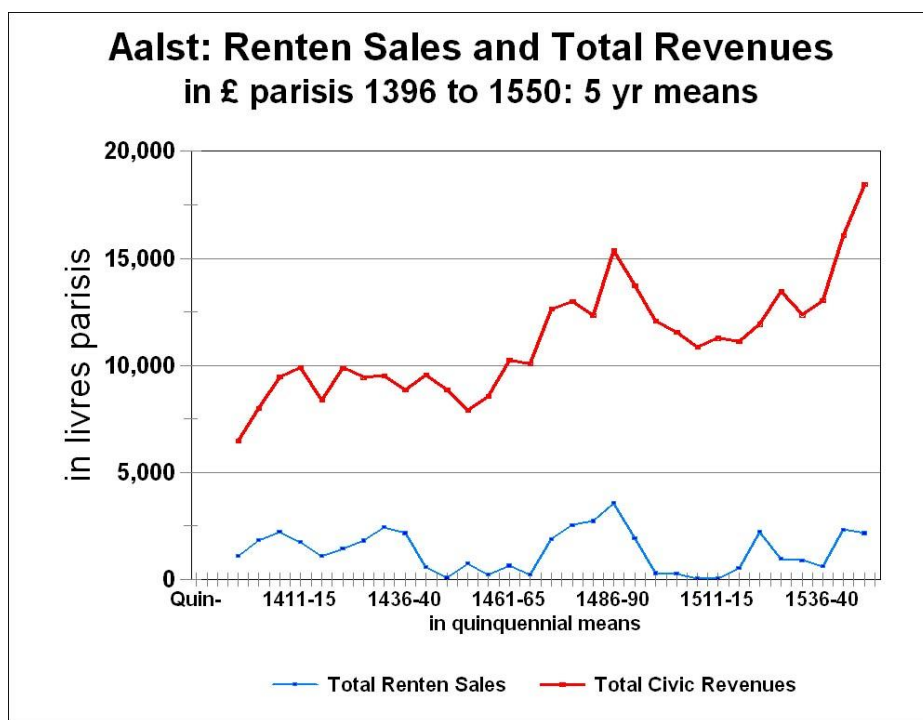
¹⁴⁵ Conversely, of course, the evident growth in Aalst's population by the mid sixteenth century would have reduced the per capita tax burden indicated in Figure 9.

Table 1. **Population Decline and Poverty in the Duchy of Brabant, 1437–1496.**
 The number of family hearths (households) and percentage of hearths without taxable income: ('poor hearths') in 1437, 1480, and 1496

Area of Census in the duchy of Brabant	1437		1480		1496		Percentage change from 1437 to 1496
	<i>no. of hearths</i>	<i>per cent poor hearths</i>	<i>no. of hearths</i>	<i>per cent poor hearths</i>	<i>no. of hearths</i>	<i>per cent poor hearths</i>	
Brussels	6,376	10.5	7,414	7.9	5,750	17.1	-9.82%
Antwerp	3,440	13.5	5,450	10.5	6,586	12.5	91.45%
Leuven	3,579	7.6	3,933	18.3	3,069	n.a.	-14.25%
s'Hertogen-bosch	2,883	10.4	2,930	7.9	3,456	n.a.	19.88%
Sub-total Large Towns	16,278	10.5	19,727	14.8	18,861	n.a.	15.87%
Small Towns	14,159	9.2	12,216	28.1	10,600	n.a.	-25.14%
Villages	62,301	29.7	54,540	31.6	45,882	n.a.	-26.35%
Total Duchy	92,738	23.4	86,483	27.3	75,343	n.a.	-18.76%

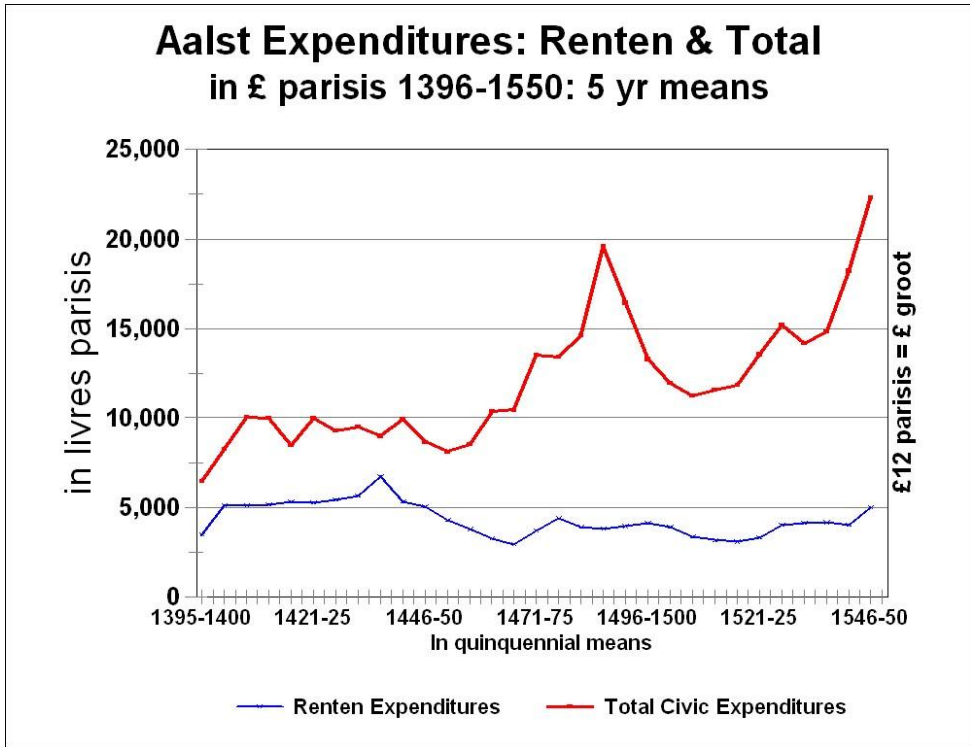
Source: J. CUVLIER, *Les dénombrements de foyers en Brabant, XIV-XVI siècle*, I-II, Brussels 1912-13, I, pp. 432-433, 446-447, 462-477, 484-487; and also pp. cxxxv, clxxvii-viii, ccxxiii-xviii.

Figure 1. Sales of Renten (Erfelijk Renten and Lijfrenten)
and Total Civic Revenues in Aalst
1396-1400 to 1546-50, in quinquennial means
Values in Livres Parisis: £12 parisis = £1 groot Flemish:



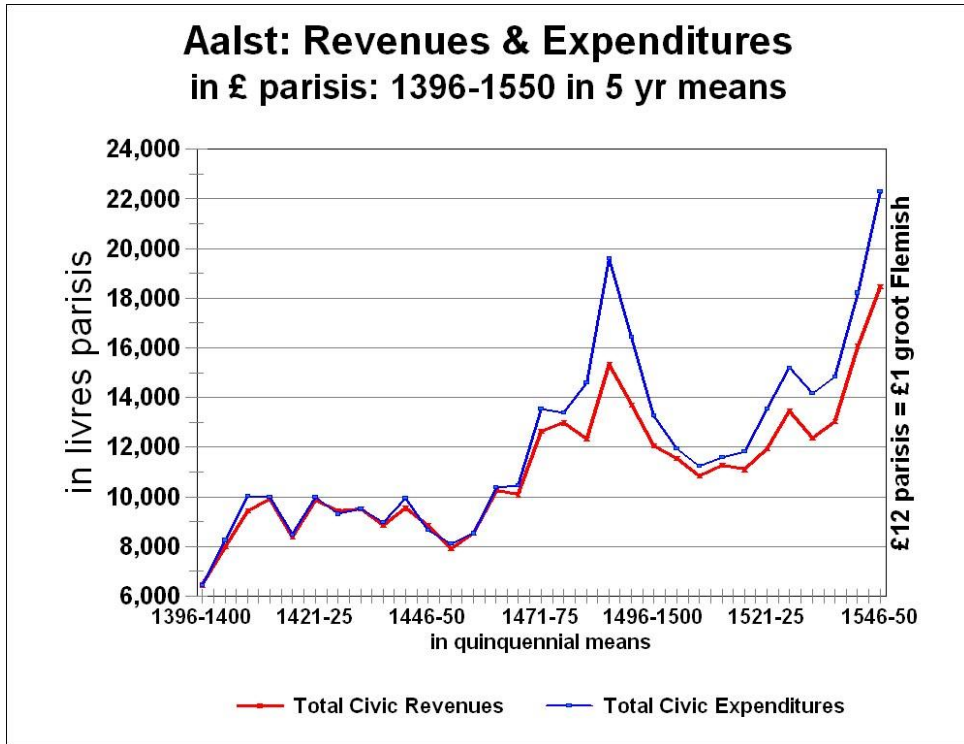
Source: ALGEMEEN RIJKSARCHIEF BELGIË (ARCHIVES GENERALES DU ROYAUME - ARB), *Rekenkamer/ Chambre de Comptes*, reg. 31,412 - 31,532.

Figure 2. Expenditures on Renten (Erfelijck Renten and Lijfrenten) and Total Civic Expenditures in Aalst, 1396-1400 to 1546-1550, in quinquennial means
 Values in Livres Parisis: £12 parisis = £1 groot Flemish:



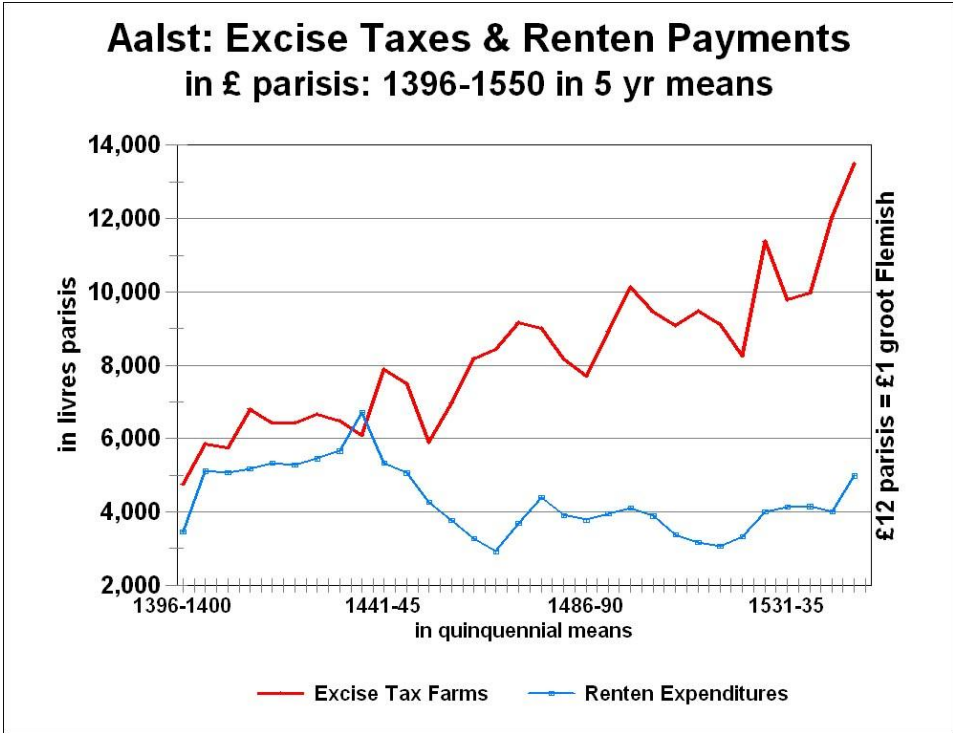
Source: ARB, *Rekenkamer/Chambre de Comptes*, reg. 31,412 - 31,532.

Figure 3. Total Civic Revenues and Civic Expenditures, in Aalst
 1396-1400 to 1546-1550 , in quinquennial means
 Values in Livres Parisis: £12 parisis = £1 groot Flemish:



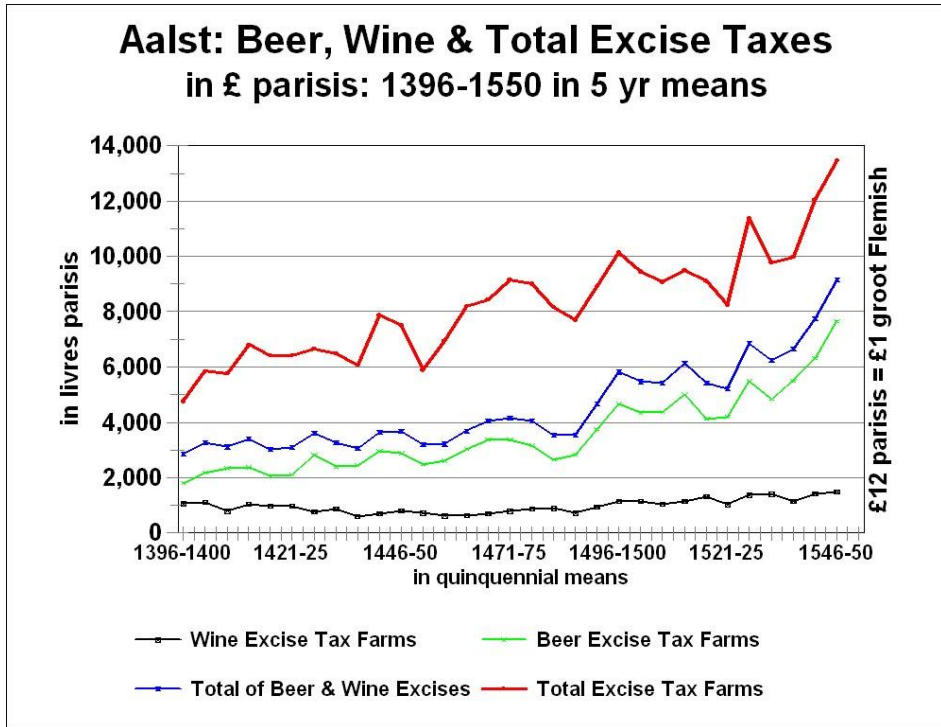
Source: ARG, *Rekenkamer/Chambre de Comptes*, reg. 31,412 - 31,532.

Figure 4. **Total Excise Tax Farm Revenues and Total Expenditures on Renten (Erfelijk Renten and Lijfrenten) in Aalst: 1396-1400 to 1546-50, in quinquennial means**
 Values in Livres Paris: £12 parisis = £1 groot Flemish



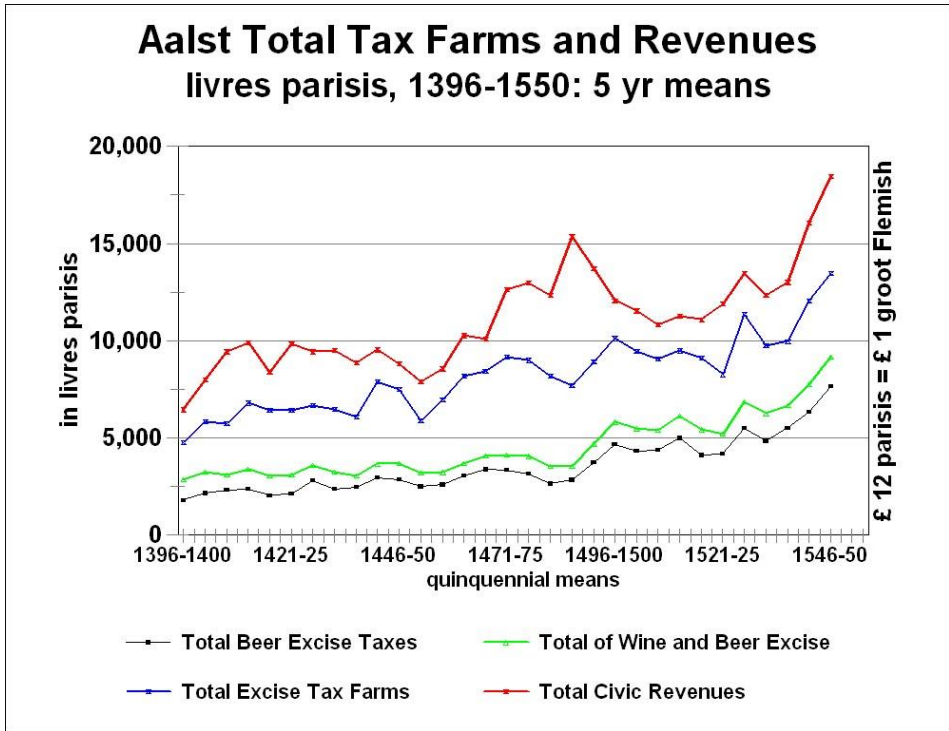
Source: ARB, *Rekenkamer/Chambre de Comptes*, reg. 31,412 - 31,532.

Figure 5. Revenues from the Sale of Excise Tax Farms in Aalst: on beer, wine, and total consumer products taxes, 1396-1400 to 1546-50, in quinquennial means
 Values in Livres Paris: £12 paris = £1 groot Flemish



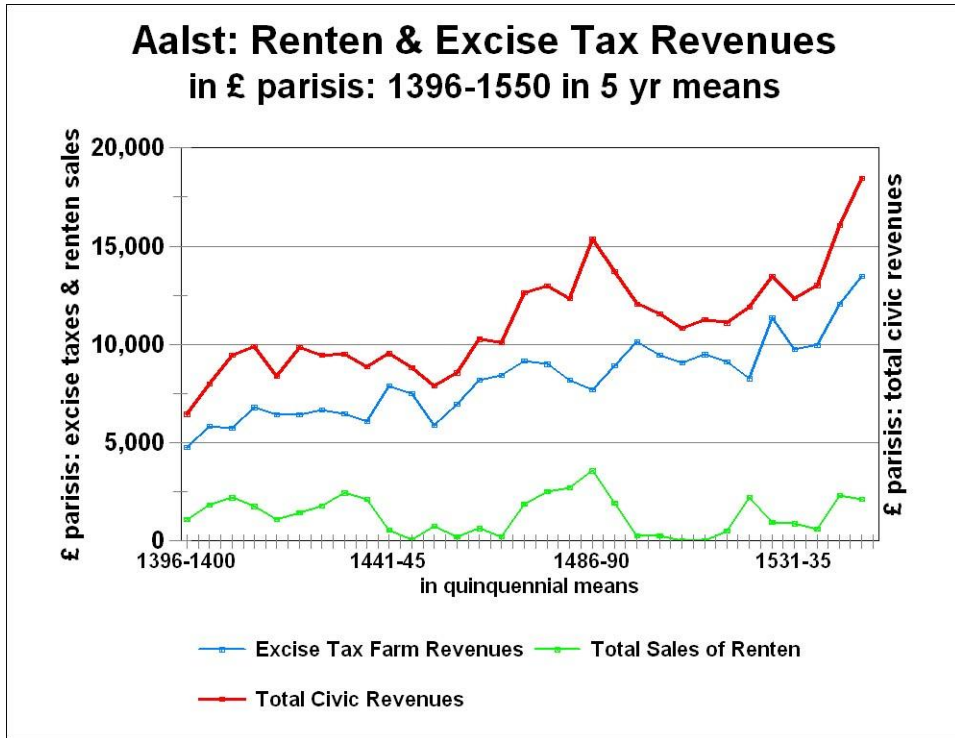
Source: ARB, *Rekenkamer/Chambre de Comptes*, reg. 31,412 - 31,532.

Figure 6. **Total Excise Taxes on Alcohol, Total Excise Tax Farms, and Total Civic Revenues, in Aalst**
 1396-1400 to 1546-50, in quinquennial means
 Values in Livres Parisis: £12 paris is = £1 groot Flemish



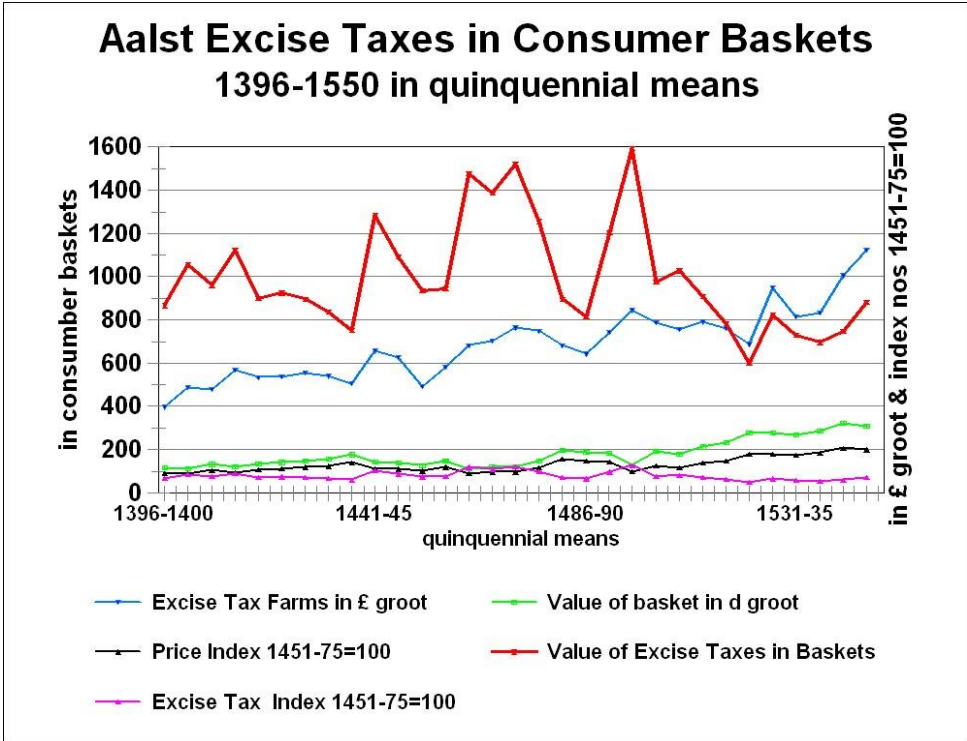
Source: ARB, *Rekenkamer/Chambre de Comptes*, reg. 31,412 - 31,532.

Figure 7. Values of the Sale of Renten (Erfelijk and Lijfrenten), Total Values of the Tax Farms, and Total Civic Revenues in Aalst, 1396 – 1400 to 1546-1550
 1396-1400 to 1546-50, in quinquennial means
 Values in Livres Paris: £12 paris = £1 groot Flemish



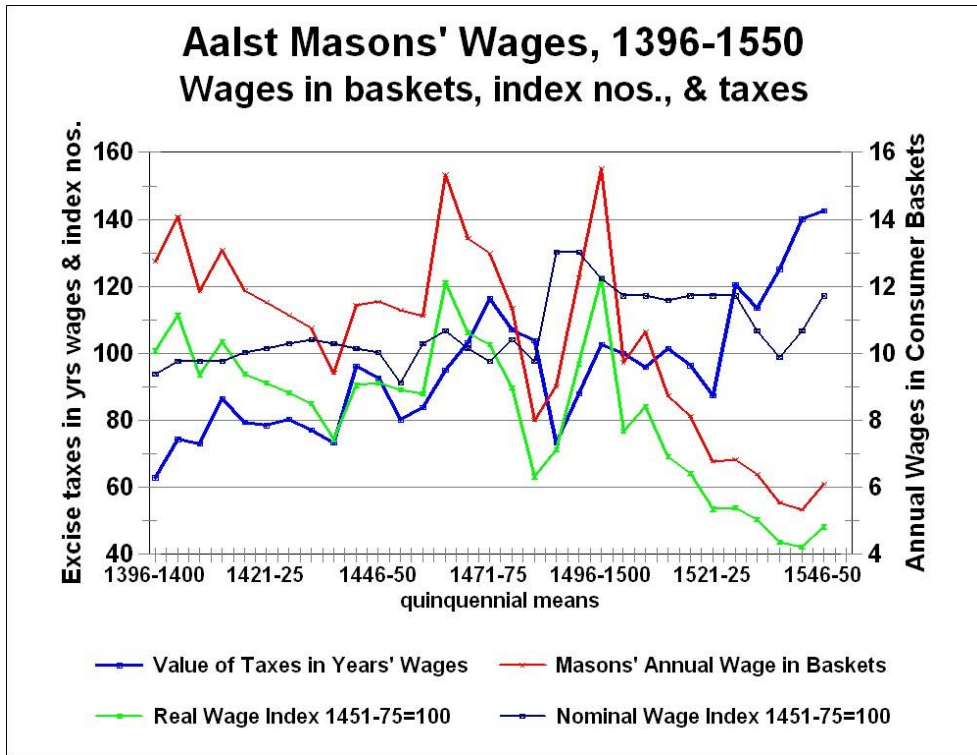
Source: ARB, *Rekenkamer/Chambre de Comptes*, reg. 31,412 - 31,532.

Figure 8. Mean Values of Excise Tax Farms, expressed in Pounds Groot Flemish and in the Number of Consumer Baskets, with the Flemish Price Index (1451-75 = 100) and Indexes for the Excise Tax Farms as valued in Flemish Consumer Baskets, in Aalst 1396-1400 to 1546-50, in quinquennial means



Sources: ARB, *Rekenkamer/Chambre de Comptes*, reg. 31,412 - 31,532; H. VAN DER WEE, *Prijzen en lonen als ontwikkelingsvariabelen: Een vergelijkend onderzoek tussen Engeland en de Zuidelijke Nederlanden, 1400-1700*, in *Album aangeboden aan Charles Verlinden ter gelegenheid van zijn dertig jaar professoraat*, Wetters 1975 (Universum), pp. 413-447; reissued in English translation (without the tables) as *Prices and Wages as Development Variables: A Comparison Between England and the Southern Netherlands, 1400-1700*, in "Acta Historiae Neerlandicae", 10, 1978, pp. 58-78; republished in H. VAN DER WEE, *The Low Countries in the Early Modern World*, trans. by Lizabeth Fackelman, Cambridge-New York 1993 (Cambridge University Press and Variorum), pp. 223-241; *Documents pour l'histoire des prix et des salaires en Flandre et en Brabant/Dokumenten voor de geschiedenis van prijzen en lonen in Vlaanderen en Brabant*, I CH. VERLINDEN, E. SCHOLLIERS et al. eds., I-IV, Bruges 1959-65 (Rijksuniversiteit te Gent: Werken Uitgegeven door de Faculteit van de Letteren en Wijsbegeerte", 125 [vol. I], 136 [vol. II/i], 137 [Vol.II/ii]).

Figure 9. Excise Tax Farm Revenues and Masons' Wages in Aalst:
 Nominal and Real Wages
 Excise Tax Farm Revenues expressed in pounds groot Flemish
 and in masons' wage incomes
 The Excise Tax Burden Expressed as the equivalent number of years
 of masons' wages in Aalst
 Aalst nominal and real wage indexes: mean of 1451-75 = 100
 with annual wage incomes expressed as the equivalent number of baskets of
 consumable (purchasable by that wage income)
 1396-1400 to 1546-50, in quinquennial means



Sources: ARB, *Rekenkamer/Chambre de Comptes*, reg. nos. 31,412 - 31,532; H. VAN DER WEE, *Prijzen en lonen als ontwikkelingsvariabelen*, cit.; *Documents pour l'histoire des prix et des salaires en Flandre*, cit.