

Rural wage labour in the sixteenth-century Low Countries: an assessment of the importance and nature of wage labour in the countryside of Holland, Guelders and Flanders

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ABSTRACT. *The rise of wage labour in the countryside forms a fundamental element in the transition to a modern, capitalist economy and society. Hard data on this development, however, are scarce. Here, the importance of wage labour around the middle of the sixteenth century is reconstructed for three regions in the Low Countries. This reconstruction shows not only a high importance of wage labour, between a quarter to almost 60 per cent of rural labour input, but also strong regional differences. These differences appear not to be connected to urbanization or to the rise of one or another sector in the rural economy, but to the regional social and institutional framework in which the economy developed.*

I. INTRODUCTION

In the debates about long-term structural changes in economy and society, increasing attention is being paid to the interaction between town and countryside and to the role of the rural economy in these changes. However, hard knowledge of the extent, nature and chronology of structural changes in the rural economy before the seventeenth/eighteenth centuries is still limited; mostly there is speculation rather than firm empirical foundation. This applies to, for example, the development from subsistence agriculture to commercial, market-oriented farming. A few

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attempts to measure this development have been made for England – by, for instance, measuring rural commercialization in the late Middle Ages by calculating the proportion of agricultural output from seigniorial estates sold on the market¹ – but in this field there is not much more than this, at least not for this early period. Moreover, attempts like these are almost completely lacking for parts of Europe other than England, making comparisons impossible and hindering the search for the underlying factors in the development of the rural economy. Historians in this field therefore face the task of seeking more quantitative indicators in order to reconstruct the chronology of the rural transition, that is, the development from the medieval, feudal society to the modern, capitalist one, and to assess the regional differences in this process. However, this is not an easy task in view of the scarceness and opacity of relevant sources from the period before the seventeenth/eighteenth centuries.

Here, I shall try to investigate one of the indicators of structural transformation of the rural economy, namely the importance of wage labour in the countryside. The change from coerced labour and independent labour – which dominated most parts of Europe until the modern period – to wage labour perhaps formed the most fundamental element in the transition to capitalism. It created a mass of people, often largely or fully proletarianized, who became dependent on the sale of their labour in the market and subject to competition in the labour market, with strong effects on their social and economic behaviour. Also, a large reservoir of wage labourers thus became available to agricultural and industrial entrepreneurs who were striving to expand their enterprise, forming a condition for further accumulation and scale-enlargement. Despite the importance of the subject, the growth of wage labour in the pre-industrial countryside has not been very well investigated. Generally, it is assumed that wage labour in the countryside was not important until the seventeenth/eighteenth centuries. Sometimes, the importance of wage labour in a particular area is even simply equated with the degree of urbanization, or with the share of non-agricultural labour, thus assuming that cities and/or industries and services had a high share of wage labour whereas the countryside and agriculture had a low one, but these assumptions are only seldom sustained by hard data. The few estimates or calculations available for the sixteenth century, again mainly for England, indicate rather a substantial share of wage labour. In Norfolk and some other parts of England, about a quarter or even a third of the rural population is assumed to have worked mainly for wages.² These figures, however, are based almost solely on a specific type of fiscal sources, which are hard to interpret and thus open to contestation.

There is thus a clear need for direct figures on the rise of rural wage labour, but these are scarce. This applies to a strong degree to the Low Countries, where estimates of the importance of wage labour in the countryside, let alone calculations, are completely lacking. This is the more regrettable since it can be assumed that this area, together with the eastern parts of England, was the first in which an early and rapid transition of the rural economy took place.³ More insight into the chronology of the rise of wage labour here could thus form an important element in the analysis of the causes underlying the early transition of these areas.

This article aims to fill this lacuna by investigating three regions in the Low Countries, namely the central part of Holland, the Guelders river area and inland Flanders. The investigation concentrates on the period around the middle of the sixteenth century, which is particularly blessed with extensive fiscal sources. These three regions were chosen because of the availability of relevant sources and the abundance of recent studies, and because of the strong differences between these regions, which provide ample possibilities for comparative analysis. In inland Flanders, the countryside witnessed a strong rise of proto-industries, combined with small-scale peasant landholding and a large importance of independent subsistence farming. This rural structure remained intact until far into the early modern period; no rapid transition took place here.⁴ Holland and the Guelders river area, on the other hand, witnessed a strong rural transformation, but each along very different lines. In the Guelders countryside a transition to capitalism unfolded in agriculture and was led by large tenant farmers, while in Holland there was a proto-industrial transition led by urban merchant-entrepreneurs, only later followed by an agricultural transition.⁵ Connected to this, the importance of the different sectors in the rural economy also varied strongly between the regions, as will become clear in the following section. The three regions also differed as regards their degree of urbanization: in this period the central part of Holland was very highly urbanized (50–55 per cent), while inland Flanders was rather highly urbanized (c. 35 per cent) and the Guelders river area was, by Dutch standards, only moderately so (25–30 per cent).⁶ These regional differences in urbanization in the Low Countries will help us to assess the often-proposed link between urbanization and the transition of the economy and society.

In this investigation, wage labour is defined as economically dependent but legally free contractual labour,⁷ performed for an employer against payment of a wage, either a piece wage or a time wage. Forms of reciprocal exchange – whereby agreements are informally made and the labourer is rewarded in kind or by being allowed to use the employer's capital goods – are included in this definition of wage labour. There is no

fundamental difference between wages paid in money (to be converted into use values) or directly in use values.⁸ This applies particularly to the pre-industrial period, as wage labour was often rewarded with a package of remunerations, in money, kind or the use of capital goods, with this exchange of labour and goods mostly measured in monetary values. All the elements of wage labour mentioned above are thus present. Another possible difficulty in demarcating the blurred boundaries of wage labour may be caused by the fact that independent peasants occasionally worked for wages to supplement what they earned by exploiting their own holding. In the following, I shall try to calculate on a macro-level the share worked in wage labour and the share worked on the own holding, thus splitting the work up into two categories. I shall do the same with, for instance, transporters who owned their boat or cart and worked independently on commission but sometimes also for wages. In proto-industrial activities organized by way of the putting-out system it is sometimes harder to draw the line, but the remuneration, the organization, the possession of the means of production and the degree of dependency mostly offer a rather clear indication of wage labour.

The focus in this investigation is on a quantitative reconstruction of the importance of wage labour. Qualitative aspects are also touched upon, but only in passing. This is not to deny that the latter aspects are crucial for our understanding of the rise of wage labour and its effects. Wage labour may be coupled with unequal power relationships, artificially fixed low wages, all kinds of restrictions, indenture, dependence or even unfreedom.⁹ Types of labour which at first sight look like modern wage labour can thus be very different from it, and it would be wrong to focus on percentages only. Although I shall limit myself to looking at the topic mainly from a quantitative perspective, the further analysis in the final section will at least hint at the social and institutional-political context of wage labour. Another aspect touched upon only briefly here is the sharply differing social and economic backgrounds of the people supplying the wage labour: there were wage labourers living as servants in households, often as part of their life-cycle, as well as peasants with smallholdings performing wage labour in order to supplement their income, and full proletarians completely dependent on wage labour.¹⁰ This is a relevant difference, since it results in different economic strategies. This applies both on the micro-level of the individual household and on the macro-level of the region in question, dominated for instance either by peasants working as part-time wage labourers or by fully proletarianized labourers, resulting in a strongly differing economic development. At the moment, it is difficult or even impossible to reconstruct differences in the backgrounds of the wage labourers on a detailed level, but I shall attempt to

say something about the importance of these different types of wage labour on a macro-level and about the regional differences in this respect. The same applies to the sex and age of the wage labourers, a point left aside here, except for some brief indications.

With these limitations in mind, I shall try to reconstruct the importance of wage labour in the countryside for three regions in the Low Countries. The relatively abundant source material from the sixteenth-century Low Countries is used here to make calculations or estimates. In order to arrive at this quantitative reconstruction only an indirect approach will work, since direct sources on the importance of wage labour in the countryside (such as occupational lists) in the Low Countries before the second half of the seventeenth century are all but completely absent. I shall therefore undertake an investigation on the basis of sources which allow us to calculate or estimate the incidence of wage labour indirectly, such as the fiscal registration of landownership and land use, providing a full overview for these regions, but also accounts of territorial lords, noblemen, religious institutions and water-management boards, providing ample information on wage labour, and some fiscal enquiries, mainly produced as a result of the attempts of the Habsburg government to centralize and standardize fiscality in the Low Countries, from the mid-sixteenth century onwards. In some cases data are lacking or scarce, and assumptions have been made; this is explicitly indicated. Still, even in these cases there are possibilities to test the reliability of these assumptions or estimates, because the various figures relate to each other and thus must show a mutual consistency. Moreover, where possible the findings are contrasted with other available indicators, in order to test their reliability. This does not offer absolute certitude and precision, but it is a first step, one which can be adjusted and improved upon by further research, and thus obviates a continuous building on guesses, wrong indicators and circular arguments.

Since the sources mainly relate to each sector in the rural economy separately, I shall undertake an investigation for each of these sectors, namely agriculture, proto-industries, crafts and services, and para-agrarian work. This will first require a reconstruction of the relative importance of the various sectors in the rural economy of the Low Countries around the middle of the sixteenth century (in Section 2). I shall then undertake an investigation of the importance of wage labour per sector for each of the research areas, using the indirect sources mentioned (in Sections 3–5). This rather lengthy and precise investigation is necessary in order to give substance to the final estimates. These will show that in the Low Countries the importance of wage labour in the countryside was already high in the sixteenth century, even up to 60 per cent of total labour

input, albeit with strong regional differences. In the conclusion (Section 6), I assemble all the findings, in order to come to an overview and some comparative analysis. This analysis shows that the share of wage labour in the countryside was not determined by the degree of urbanization in the region in question, nor by the dominance of a particular non-agricultural sector, but rather by the social and institutional framework in which the rural economy developed, with both this framework and the development having a mainly regional character. This is also reflected in the nature of wage labour and the organization of the labour market in these regions, as becomes evident in the brief comparison offered in the conclusion.

2. POPULATION AND OCCUPATIONAL DISTRIBUTION IN THE RESEARCH AREAS

Population numbers in the countryside of the Low Countries can be estimated with reasonable accuracy thanks to the existence of fiscal sources (tax records and surveys) from the period around the middle of the sixteenth century. In the Guelders river area, some 30,000 people lived in the countryside.¹¹ For our further calculations, the potential labour force is more relevant than total population numbers. The fact that not all potential labourers were employed continuously, because of seasonal unemployment or underemployment, will be left aside here because of lack of information on this point. I shall just concentrate on the potential labour force. It is assumed that all men and women older than 12 were available for labour, and that some children younger than 12 occasionally supplemented adult labour, both in agriculture and in proto-industries, putting the total potential labour force at three-quarters of the population.¹² Thus, in the Guelders river area, this labour force amounted to some 22,500 people. In the central part of Holland, according to extensive registration from about 1560, the total population numbered some 70,000, and the potential labour force in the countryside was thus around 55,000 people.¹³ The total population in the countryside of inland Flanders in this period was rising rapidly, from about 70,000 in 1500 to some 105,000 in 1570.¹⁴ I shall assume here 95,000 people in around 1550, or a potential labour force of about 70,000.

Since what follows involves a separate investigation of wage labour for each sector in the rural economy, it is essential to reconstruct the relative importance of these sectors. The sectors chosen here are agriculture, para-agrarian work (mainly diking and digging, excluding agricultural work), the crafts (including shopkeeping and other services, as well as military and religious services, but excluding agricultural servants) and proto-industries (non-agricultural, market-oriented activities in the countryside,

mainly in textile production). Labour input in the various sectors differed sharply among the regions. Digging and diking were relatively important in both Holland and Guelders, since these regions were continuously threatened with flooding. The share of labour input in this sector is set here at 6 per cent for both regions, which is a rough estimate substantiated by the calculations made below.¹⁵ Inland Flanders did not have to fear any threat from the sea or the rivers, so diking was unimportant here. Digging was almost exclusively done on the farms as part of agricultural work, and is thus calculated as such. Here, small works on watercourses or near riverbeds probably employed no more than 2 per cent of the labour force, but this is only an informed guess, since hard data are lacking.

For the sixteenth century, the share of craftsmen in the labouring population is hard to measure. However, based on the calculations for various other regions in the early modern Netherlands,¹⁶ crafts and services probably accounted for 7–11 per cent of the total rural labour input. Around 1650–1675, this share seems to have been a little higher in the Guelders river area, at about 11 per cent.¹⁷ Included in these figures are two particular segments of the service sector often left out of consideration: people performing religious or military service. In the countryside, the clergy probably made up some 1 per cent of the labour force,¹⁸ at least until the Reformation in Holland and Guelders, which greatly reduced this number. The military sector, where the division into a rural and an urban component is harder to make, employed sharply fluctuating numbers of people. During campaigns, such as those in 1528, 1542–1543, 1567 and subsequent years, several thousand soldiers – or even tens of thousands – may have been employed in each region.¹⁹ Roughly estimated, military services also constituted an average of about 1 per cent of the total labour input.

In Inland Flanders the importance of the crafts and services sector may well have been lower than in Holland and the Guelders river area, because urban privileges and other non-economic forces hindered or even obstructed the development of crafts and services in the countryside. An example is river transport, which was almost completely controlled by bargemen from the city of Ghent. The Ghent shippers guild, which emerged strongly in the late fourteenth century, obtained a virtual monopoly on the Scheldt and Leie rivers and on the Lieve canal, the construction of which was financed in the mid-thirteenth century by the city of Ghent.²⁰ Also transport on smaller rivers was chiefly in the hands of burghers, for instance from Dendermonde and Aalst, where urban bargemen also acquired some privileges or at least could take advantage of the opportunities offered by local or regional regulations.²¹ In view of

the figures available for regions where restrictions were absent, I shall put the share of this sector in inland Flanders at 7 per cent.

The strongest difference in occupational structure between the regions, however, lay in the importance of agriculture and proto-industries. In the Guelders river area, proto-industries were unimportant. A detailed investigation of all the separate types of these activities in the region showed that the sector comprised 600 'man'-years in total.²² Of the 22,500 people forming the potential labour force here, proto-industries thus employed no more than 3 per cent. Agriculture was thus by far the largest sector here, engaging 80 per cent of the rural labour force.

In central Holland, on the other hand, labour input in proto-industries was enormous: 19,000 people were employed all year and 12,500 seasonally, making a total of 25,000 man-years.²³ With a potential labour force of 55,000, this would mean no less than 45 per cent of the total labour input. These estimates for central Holland imply that around the middle of the sixteenth century, agriculture employed only 40 per cent of the rural labour force. This figure is surprisingly low in a European perspective, but it corresponds closely to a recent reconstruction of the distribution of labour input in the various sectors of the Holland economy in 1514.²⁴ On the basis of an inquiry from 1514, van Zanden concluded that in the Holland countryside at that time a mere 40–45 per cent of the labour input went into agriculture. According to this calculation, important sectors were fisheries (20 per cent of the labour input), shipping (10 per cent), textile production (10 per cent), and peat-digging and water-management work (10 per cent). Van Zanden compared these figures with other indicators on a macro-level, by constructing an input–output table and estimating the composition of the GDP of Holland in 1514. He demonstrated that these indicators are consistent with his results from the 1514 inquiry, which thus seem to be reliable. All this, combined with similar results from empirical research, confirms the impression that agriculture had only a limited importance in the Holland countryside, in sharp contrast with the situation in the Guelders river area.

Inland Flanders also had a strong proto-industrial sector, almost solely composed of activities in the textile industry, namely linen-production, preparatory activities for the urban cloth industry and, increasingly, tapestry-production. Labour input in this proto-industrial sector rose here between 1500 and 1570 from 14,000 to 28,000 man-years,²⁵ and can be estimated at 24,000 around 1550. With a potential labour force of some 70,000 people here, the share of labour input in proto-industries was around 34 per cent of the total labour input. This, combined with the estimates for the other sectors, implies that here 57 per cent of the potential labour force was employed in agriculture. The results of these

TABLE 1

Summary of the potential labour forces and the relative importance of the various sectors (%) in the rural economy in the Guelders river area, central Holland and inland Flanders, mid-sixteenth century

	<i>Agriculture</i>	<i>Proto-industries</i>	<i>Crafts/services</i>	<i>Para-agrarian work</i>
Guelders river area	80	3	11	6
Central Holland	40	45	9	6
Inland Flanders	57	34	7	2(?) ^a

^a The question mark indicates an informed estimate for this figure.

estimates/calculations are summarized in Table 1, which clearly shows the strong differences among the regions and confirms their suitability for comparative analysis.

3. WAGE LABOUR IN THE GUELDERS RIVER AREA

Agriculture was by far the most important sector in this Guelders river area, dwarfing the other sectors. In its turn, the agricultural sector in this area was dominated by leased land, since three-quarters of all agricultural land was leased out for short terms, mainly by large landowners. In the period between the mid-fifteenth century and about 1570, this land held at lease was increasingly accumulated by large tenant farmers. As a result, the number of large farms rose dramatically, while the total number of farms decreased by about half. So in this region expropriation was not by way of loss of landownership, but because small and medium-sized tenants were pushed out by large tenant farmers, resulting in this loss of the use of the means of production and of the possibility of exploiting an independent agricultural enterprise. In the westernmost part of the region – which had about 20,000 hectares of agricultural land and 1,500 rural households – around the middle of the sixteenth century, 90 people (6 per cent of the total number of heads of families) had a tenancy (i.e. the amount of land leased by a farmer from one particular landlord) of larger than 35 hectares.²⁶ Next to them, there were about 40 farmers with a tenancy of 25–35 hectares. Moreover, the land of these tenant farmers held in ownership and the land held in lease by them from other landowners are not included in these calculations because of source problems. These figures are thus only minima. In addition to these farmers, this region had several large farms exploited directly by noble or religious landowners. Around 1570, perhaps 40 per cent or more of the agricultural

land in this area was taken up by these large farms, of which there were 180. During this process, most of the middle-sized family farms, which probably dominated the region before the start of this process, disappeared from the scene. Particularly in the sixteenth century, this had become a heavily polarized agricultural society.

It is difficult to say precisely how much wage labour was employed in agriculture here. There are two ways to estimate the importance of wage labour: by way of the degree of proletarianization (whereby countrymen were forced to sell their labour on the market) and by way of the labour input needed on farms (whereby farmers were forced to hire wage labour). The degree of proletarianization was relatively high in the Guelders river area. During the period of the rise of large farms in the sixteenth century, and as a result of the accumulation of land by large tenant farmers, the number of farms in the region decreased by between a third and a half. Because population numbers remained stable in this period, an increasing part of the population had no land at its disposal, or only a small plot. At the same time, other sources of income were limited here. The last common lands had already been privatized and parcelled out in the Guelders river area during the fourteenth century, and so they no longer offered any access to land. Moreover, proto-industrial activities did not develop here. It seems that a large part of the population not only lost the possibility of working a farm independently, but had also become dependent on wage labour in the agricultural sector because of the lack of other sources of income. Perhaps 50 per cent of the households here had little or no land at their disposal; some had less than 2.5 hectares, but most had none at all. Some of these landless or near-landless people were craftsmen, although many of these craftsmen owned or leased some land, and a very few worked in proto-industries. On the other hand, some of the farmers working 2.5–5 hectares of land will also have been forced to perform some wage labour in order to supplement their income, making the total share of people forced to sell their labour still 45–50 per cent.

Next, we look at the labour input needed on the farms. Agricultural labour input was strongly connected to the size of farms, since large farms often specialized in labour-extensive branches of agriculture and used capital investment in order to reduce labour inputs, whereas small peasant farmers often specialized in labour-intensive crops in order to make use of the surplus labour available in their household.²⁷ Precise calculations of the labour input are available only for the late eighteenth century and later.²⁸ In the period between the middle of the sixteenth century and around 1800, labour productivity is generally assumed to have risen by 40–100 per cent.²⁹ Physical yields, on the other hand, increased by only 20–30 per cent, and in this region the increase was even smaller.³⁰ This

TABLE 2
Labour inputs and minimum shares of wage labour on farms in the western part of the Guelders river area, mid-sixteenth century^a

<i>Size of farm</i>	<i>Ave. size (ha.)</i>	<i>Labour input per ha. (man-years)</i>	<i>Total average input per farm (A)</i>	<i>External wage labour needed (B)</i>	<i>No. of farms (C)</i>	<i>A × C</i>	<i>B × C</i>
No land ^b	0	—	—	—	460	—	—
<4 ha.	2	0.9	1.8	—	280	504	—
4–10 ha.	6	0.6	3.6	—	200	720	—
10–20 ha.	14	0.4	5.6	1.6	200	1,120	320
20–40 ha.	28	0.3	8.4	4.4	200	1,680	880
>40 ha.	50	0.2	10.0	6.0	180	1,800	1,080
Total no. of farms							
Total area farmed: 18,640 ha.					1,520	5,824	2,280

^a The penultimate column ($A \times C$) shows the total labour input on all farms in each size category, and the final column ($B \times C$) shows the total external labour input needed on all farms in each size category.

^b Households possessing only a yard with a dwelling.

Sources: These figures are drawn from work on many fiscal sources (tax records and surveys).

could mean that labour input per hectare in the course of the intervening centuries was reduced by about a quarter. On the basis of this assumption, the calculations available for the years around 1800 and the type of mixed agriculture practised in the region, I have surmised that here small farms (less than 4 ha.) used 0.9 man-year per hectare, medium-sized farms (4–10 ha.) 0.6 man-year, upper-medium-sized farms (10–20 ha.) 0.4 man-year, large farms (20–40 ha.) 0.3 man-year and very large farms (larger than 40 ha.) 0.2 man-year per hectare. This means that on the large farms (with their 50 hectares on average), roughly ten man-years were needed whereas the households themselves could supply only four.³¹ Thus, six external wage labourers were needed per farm, or 1,080 in total for all farms in this category in the western part of the Guelders river area. The same calculation is made for all categories of farms in Table 2.

On the basis of this hypothetical calculation of labour inputs, at least 39 per cent of the necessary labour input must have been supplied by external wage labourers. However, this is only a minimum, since even the smallest farms used some external labour at peak moments of the agricultural cycle and here no external labour is calculated for these categories. Also servants living in the household should be added to these external wage labourers: these wage labourers were considered part of the household

and were not listed separately in the fiscal sources. In Table 2, which, as discussed earlier, is based mainly on fiscal sources, they are thus part of the four man-years supplied by the households themselves. In order to assess the importance of wage labour they should be added to the number of external wage labourers needed. Unfortunately, the numerical importance of living-in servants in the sixteenth century is hard to assess, because they are absent from the fiscal sources. However, the figures for the seventeenth and eighteenth centuries,³² the fact that in later centuries the Guelders river area had a relatively high number of living-in servants and the fact that their number was highest on large farms (which dominated this region), all suggest that servants probably made up 10–15 per cent of the total population.³³ These were mainly young men and women, who left home at the age of about fifteen to work in another household as wage labourers, until they were ready to start their own family. This type of wage labour was more part of a life-cycle, and often of a peasant life-cycle, rather than completely proletarian. Of the total labour input in agriculture, perhaps 55–60 per cent was thus performed in wage labour, of which perhaps a quarter was performed by living-in servants, a quarter by people working for wages in order to supplement other means of subsistence and half by proletarian wage labourers.

The accounts of noblemen and religious institutions offer some idea of the way these wage labourers were contracted. A good third of the labourer was contracted per year, a little less than a third per assignment and the rest per day. Part of the labour input in agriculture came from migrant labour, particularly in diking, harvesting, pollarding and planting willows, but also in such labour-intensive tasks as binding hops, transporting dung and sawing wood. Sometimes the migrant workers came from other villages in the region to work in harvesting and also in diking,³⁴ but there were also groups of labourers from regions further away (up to 150 km). Regions explicitly mentioned in the sources as the place of origin of these workers are the Land van Cuijk, the Land van Kessel and the Duchy of Gulik, all of which are situated south-east of the Guelders river area and were typical peasant regions, where no structural transition of the rural economy had taken place.

In the crafts sector, which employed some 11 per cent of the population, at first sight wage labour seems to have been unimportant. Some craftsmen had one or two servants or wage labourers, but most enterprises were small-scale and operated by the labour of their own household. On the other hand, a fair number of craftsmen were employed in wage labour by noblemen and by religious institutions, either as part of their household or in their own homes. Mariënweerd Abbey, for instance, at this time had no fewer than 21 people in the crafts and services sector residing in the abbey

as full-time wage labourers (two brewers, a blacksmith, a cooper and other craftsmen, as well as two secretaries, a barber and an organ-player) and 10 part-time labourers living in the surrounding villages.³⁵ Since no less than about 10 per cent of the population of this region was of noble or semi-noble origin (500 households) and these noblemen no longer had coerced labour or labour services at their disposal, it can be surmised that in total several hundred or perhaps as many as a thousand servants and craftsmen were employed in wage labour by them. Including the small number of servants employed by independent craftsmen, this is about 5 per cent of the total potential labour force.

Two particular branches of the service sector deserve separate examination, as I have noted above: the military and the religious services. Both branches were increasingly characterized by wage labour, at least in most regions. In pastoral care, the relevant division was that between non-resident rectors, often accumulating benefices and prebends, and the vicars, deputies or *mercenarii*. The latter sometimes paid rent for their position, thus being a kind of tenant and working independently, but others were only hiring out their labour to the formal possessor for a fixed wage, forming a kind of religious proletariat.³⁶ For the north of Brabant, adjacent to both Holland and the Guelders river area, it has been observed that some 40 per cent of the pastors in the fifteenth and sixteenth centuries were deputies.³⁷ Also, religious services such as memorial masses were often paid for in piece wages, mostly according to standard tariffs, or by an annual wage, paid to the hired priest. Clear regional patterns in this field, however, had not yet emerged. For the military there is more clarity about regional differences in the rise of wage labour. In the Guelders river area, in contrast to other regions – as will become clear below – military service was still in substantial part done by noblemen, as a form of feudal service, a situation connected to their large numbers and strong position in the region.

Proto-industries were relatively unimportant in this area, engaging no more than roughly 600 man-years, that is, 3 per cent of the total labour force. Only the workers in brick-production, perhaps 100 working only seasonally, were mainly wage labourers. In fishing (200–300?) and in water transport (c. 75) perhaps half of the work was performed by wage labourers, but the other non-agricultural activities (fowling, brewing, butter-production, spinning) were very small-scale and were performed by independent workers or households, who possessed the means of production and worked on their own account. In all, perhaps a third of the total labour in proto-industrial activities consisted of wage labour here.

Para-agrarian work, mainly in digging and diking, must have been important in this waterlogged area transected by several large rivers.

Some of the diking was done by the owners of the land or by tenants, but probably this happened to a lesser extent than it did in some other regions because of the dominance of large landownership and large tenant farms. This situation differs markedly from a rural society dominated by small peasants, who would be able to fulfil their water management obligations by providing their own labour. We can try to estimate how much wage labour was done in diking, by way of the taxes levied for water-management. For the middle of the sixteenth century, the payments of the landowners can be calculated at 3–6 per cent of the lease income, and the contributions by the tenants/land users at 2–5 per cent of the lease price (with the lease forming about one-third of the total output), thus constituting about 2–3 per cent of the total agricultural output of the land.³⁸ These taxes were paid in money and were used to buy material, to hire labourers and to compensate for duties performed, with the expenditures on wages making up perhaps two-thirds of the total.³⁹ However, not all water-management expenses are included in these taxes. The expenses included the costs of dredging the larger rivers and of constructing and maintaining mills and sluices and other devices used in water-management, but not the costs of additional, irregular work on diking, such as that carried out after dike bursts or during dike-renewal or construction projects. Mostly wage labourers did these additional jobs, which should be added to the above calculation. Next to this, there was the regular work on the smaller dikes, which often was apportioned among the users of the neighbouring parcels of land, and the dredging of the smaller watercourses. Most of the smaller landowners and tenants did this work themselves, but on the larger farms it was done by wage labourers. At the farm of Mariënweerd Abbey, 8–15 men from the surrounding villages were hired for some weeks each year to dredge the watercourses.⁴⁰ Based on the scattered data assembled here, it seems reasonable to assume that in total about two-thirds of the labour input in digging and diking was performed by wage labourers. This brings the combined share of wage labour in all four sectors in the Guelders river area to about 57 per cent.

4. WAGE LABOUR IN THE CENTRAL PART OF HOLLAND

Digging and diking, which perhaps engaged 6 per cent of the total labour input in the Holland countryside, employed a high share of wage labour. An idea of the share of labour input and the importance of wage labour in this sector can be obtained from the *Informacie*, a village-by-village inquiry made in 1514.⁴¹ Of the 45 villages in central Holland investigated, only one did the repairs and maintenance of water-management works with its own labour, and one contributed partly in labour, while the

other 43 contributed cash only. This illustrates the strong monetization of water-management obligations that had already occurred 1514; these obligations were almost exclusively fulfilled indirectly, that is, by paying wage labourers to carry them out. Secondly, these data allow us to say something about the size of these monetary contributions, by comparing them to the average lease price at that time. On average the contributions in cash amounted to 6 stivers per hectare, compared to an average lease price of 38 stivers per hectare.⁴² This would mean that these water-management costs amounted to almost a sixth of the average lease price, or 5–6 per cent of gross agricultural output. Also, these amounts can be converted into absolute numbers of man-years, although not all contributions are used for wages only. Thorough investigations into the expenses covered by this money are lacking, but from the accounts it can be inferred that it were mainly used to build and repair sluices, mills and bridges and to pay labourers, carpenters, bricklayers, carters, beadles and administrators.⁴³ It seems that at least two-thirds of the expenses were spent on wages, viz. four stivers per hectare. At an average wage of three stivers per day for an adult male labourer, four stivers means 1.3 days of labour per hectare. Since the region had 120,000 hectares of land, this means 600–700 working years of an adult male, or 1,200–1,400 working years of men, women and children, namely 2 per cent of the potential labour force.

This, however, was only a part of all the water-management obligations. In addition the costs of new sluices, dikes and other larger works, and the costs of catastrophes, should be added to the average contribution in 1514, on which the preceding calculations are based. These were all covered by way of monetary payments, which were used mainly to hire wage labourers. In some cases the employment of wage labourers assumed enormous proportions. For instance, during the repair of the Spaarndam dike in the years 1510 and 1515, many hundreds of labourers were working at any one time.⁴⁴ The workers, paid on an individual basis, were recruited by contractors all over Holland, and particularly in villages dominated by smallholdings, with the peasants apparently combining the exploitation of their own mini-farm with such para-agrarian wage labour. In 1510 and 1515, over 10 per cent of the male labour force of some villages was working at Spaarndam at the same time. Only two categories of dike work were mostly fulfilled without the purchase of additional labour, namely regular work on the smaller dikes, which often was apportioned among the users of the neighbouring parcels of land, and small-scale work on individual holdings, although particularly the larger farmers and urban landowners probably often hired wage labourers to do the jobs. On the basis of these elements, it can be assumed that around the

middle of the sixteenth century at least two-thirds of the digging and diking in central Holland was performed by wage labourers. As in the course of the sixteenth century water-management works became bigger and much costlier, and water-management and taxation were further centralized;⁴⁵ this resulted not only in an increase of monetary tax contributions, but probably also in an even higher degree of monetization and a further rise of wage labour.

In Holland, the crafts sector probably involved relatively few wage labourers. Some craftsmen employed one or two servants, but no more than that. Moreover, sixteenth-century Holland included only a few noblemen (a mere $\frac{1}{2}$ per cent of the population), so there were hardly any craftsmen performing wage labour for noble households. In a few exceptional cases, a nobleman may have employed a large number of craftsmen and servants. For example, around the middle of the fifteenth century Frank van Borselen, a member of the high nobility of Holland, employed 60 people at his principal residence, as well as 40 living around this residence and 25 at his secondary residence,⁴⁶ but people like Frank van Borselen were an exception in Holland. However, there was one particular activity in the services sector in Holland where the importance of wage labour was increasing rapidly in the fifteenth–sixteenth centuries, and that was the military. During this period, starting in the second half of the fourteenth century, there was a clear switch from feudal services and conscripts, the latter originally fulfilling an important role in the military in the Holland countryside, over to hired soldiers.⁴⁷ Ordinary men were increasingly called up only for guard duty, digging and other supporting activities. Real military service was almost fully redeemed by money payments – the *soldij* (soldier-pay) tax – in order to hire mercenaries, with sometimes 1,000–3,000 men employed for several months at a time. These mercenaries received a money wage, which for security reasons was mostly paid in small amounts on a very regular basis, often once a week, although in practice arrears could run high. Many of these men were German, English and later Swiss mercenaries,⁴⁸ often recruited by military entrepreneurs or contractors and forming a very specific type of migrant labourers, being part of the rise of wage labour here.

Religious service can be dealt with succinctly here. It can be assumed that, as elsewhere, the share of wage labour in the profession was substantial, but there is no hard data specifically for Holland.

Around 1550, labour input in the proto-industrial sector amounted to 25,000 man-years, or no less than 45 per cent of the potential labour force in this region. Most labour in proto-industrial activities was originally independent and took place in the peasant household, but in the course of the fifteenth and sixteenth centuries there was a clear process of

accumulation and proletarianization, much more so than in other proto-industrialized regions, for instance inland Flanders.⁴⁹ Wage labour and putting-out were thus already becoming very important in rural industries in Holland during the late Middle Ages. In the sector of rural textile production in Holland, spinners and weavers mostly did not own the raw materials or means of production; these were supplied by merchant-entrepreneurs, many of whom were urban-based.⁵⁰ The producers mainly worked for piece wages. The importance of wage labour was much more pronounced in the typical Holland proto-industrial sectors, such as brick-production, lime-burning, bleaching and peat-cutting, and increasingly also in fishing. Urban entrepreneurs invested heavily in these sectors, which often needed very expensive capital goods, and they exploited these by way of managers and wage labourers.⁵¹ An example is the bleaching sector, with the bleacheries owned mainly by urban merchants, leaving the exploitation to a manager and five men and women per bleachery, all of whom worked for wages.⁵²

Wage labour became dominant also in fishing. First, the lease of fishing rights was increasingly monopolized by wealthy burghers, mainly fish-merchants.⁵³ In addition, ships, nets and other equipment became larger and ever more costly, particularly in the herring fisheries, thus contributing to the process of accumulation, with the ownership of the ships and other means of production coming into the hands of urban investors and the fishing crew increasingly consisting of wage labourers.⁵⁴ Less is known about the importance of wage labour in the transport sector. Probably wage labour was not unimportant, as can be gathered from the hiring of boats and boatmen, carts and cartmen, in the transport of sand, wood, bricks, sods and clay.⁵⁵ The same transporters, however, often owned their boat or cart and worked not only for wages but sometimes also independently on commission.

Common to most branches of proto-industry in Holland was the importance of migrant labour. This was enforced by the seasonal character of the rural industries most characteristic of Holland, with the seasons often overlapping, causing a peak demand for labour. This goes, for instance, for herring-fishing, which had a season starting in July or August and lasting until late October or the beginning of November, and also for peat-digging, which was only performed from March to July since the turves had to be dry before the frost set in.⁵⁶ Bleaching and brick-production also had short seasons: from the beginning of April to the end of September, as rain and later frost made operations impossible.⁵⁷ Since these seasons partly coincided with the busiest period in agriculture, as the mowing, haying and crop-harvesting had to be done mainly in June and July, this resulted in a seasonal labour scarcity. Probably as a result of

this, migrant workers were often employed alongside local people in all of these sectors in Holland. In the peat-sector, where demand for labour was very strong in the short digging-season, numerous people from elsewhere were also employed, notwithstanding some attempts of local authorities to restrict this by way of stipulations embodied in local by-laws.⁵⁸

The rise of migrant labour in Holland, which is often dated to the Golden Age,⁵⁹ thus appears to have had much older roots, and to have been connected partly to the rise of proto-industrial sectors from the fourteenth century onwards. In the following centuries, the number of people involved in migrant labour and its distance from the areas of origin of the labourers increased, also because of the disappearance of small-holders in Holland. Particularly from about 1570 onwards, migrant labourers from within Holland were thus increasingly replaced as seasonal workers by foreign migrant labourers, mainly from peasant regions in the eastern, sandy parts of the Netherlands and Westphalia in present-day Germany.⁶⁰ This situation differs strongly from that in the Flemish region, for instance, where these activities in the countryside hardly involved any seasonal or migrant labour (see Table 3).

The only exception to the importance of wage labour in the Holland proto-industries was the hemp sector, where the cultivation and part of the processing were done by peasants who owned the land, the raw material and the cheap equipment.⁶¹ In all other branches of proto-industry here, wage labour was either substantial or dominant. The preceding estimates, which are based on extensive and detailed research into these activities, suggest that in total two-thirds of the labour input in proto-industries in central Holland was supplied by wage labourers – not only men but also women and children, who for instance assisted in carrying, stacking and turning the turves in peat-cutting, or in the repairing of nets and herring-salting or in the cleaning, combing and spinning of wool.

Compared to the highly agrarian Guelders river area, agriculture had only limited importance in the Holland countryside, engaging no more than 40 per cent of the potential labour input. It does not come as a surprise, therefore, that the degree of landlessness, or at least near-landlessness, was very high here. On the basis of the fiscal sources from the years around 1560, the degree of loss of landownership can be calculated rather precisely, although not all tax lists record the households without any land or those living in houses with a low rental value, being most likely also the ones with no land.⁶² The records with a complete registration show that 25 per cent of the households in the Holland countryside had no land at all, and that an additional 33 per cent had less than 4 hectares each.⁶³ These figures again confirm the low importance

TABLE 3
*Estimates of labour inputs (in man-years) and shares of wage labour
 in the main branches of proto-industry in Holland^a*

	<i>Labour input</i>	<i>Share of wage labour (%)</i>	<i>Man-years in wage labour</i>
Brick-making ^b	1,000	100	500
Lime kilns	500	100	500
Bleaching ^b	150	95	71
Herring-fishing ^b	4,000	90	1,800
Peat-digging ^b	6,000	80	2,400
Coastal fishery ^b	[1,200]	75	450
Other fishery	[2,000]	75	1,500
Woollen industry	3,000	75	2,250
Linen industry	1,500	75	1,125
Peat transport	4,000	60	2,400
Other transport	[2,000]	60	1,200
Shipbuilding	750	60	450
Brewery	[800]	50	400
Cheese-making	[3,000]	40	1,200
Hemp-processing	[1,500]	15	225
Total, all-year labour input	19,050		
Total, seasonal labour input	12,350		
Total man-years	25,225 ^c	65	16,471

^a Square brackets signify less certain estimates.

^b Seasonal labour (= 6 months of the year).

^c Total of all-year labour input + half of the seasonal labour input (= 6 months).

Source: Bas van Bavel, 'Early proto-industrialization in the Low Countries? The importance and nature of market-oriented non-agricultural activities in the countryside in Flanders and Holland', *Revue Belge de Philologie et d'Histoire* 81: 4 (2003).

agriculture must have had in the Holland countryside. Most of these semi-proletarianized countryfolk must have worked in proto-industrial activities, although they probably also performed some wage labour in agriculture. It must have been particularly attractive to offer one's services as an agricultural labourer at harvest time, when there were ample employment opportunities and relatively high earnings to be had. This, however, is hard to ascertain. In this specific case, the degree of loss of landownership thus reveals little about the importance of wage labour in agriculture.

Then there is the second way of estimating this, namely by way of the labour input needed on farms in view of the structure of the agricultural sector. It is important to note that agriculture in Holland around the middle of the sixteenth century was undergoing transition. The

countryside here still shared many traits of the peasant economy that characterized the Holland countryside in the Middle Ages, with small peasant farms on freehold land and an intensive agriculture going hand in hand with the fragmentation of farms. However, in some parts of Holland there were already elements of the new agricultural sector, with large tenant farms accumulating ever more leased land. There was thus a mixed situation, both within villages and between the different sub-regions of Holland. In general, the proportion of large farms was clearly less than it was in the Guelders river area: only 2–3 per cent of the households in central Holland had a farm larger than 34 hectares, and 8 per cent had one of 17–34 hectares. Thus, according to these figures, the share of external wage labour in agriculture must have been lower in Holland than in the Guelders river area. This can also be seen from the following calculations, made for the minimum external labour input for 1,000 hectares of agricultural land in central Holland, starting from the above-assumed labour input per hectare and from the fact that the rural population density here was 85 people per square kilometre of agricultural land. It is also assumed that the average size of households in Holland was a little smaller than it was in the Guelders river area, mainly as a result of the small number of servants living in the households here. Figures from the beginning of the seventeenth century show that at the time only 6 per cent of the population worked as living-in servants, compared to 10–15 per cent in the Guelders river area.⁶⁴ The calculations in Table 4 are based on an average size of five people per household in rural Holland (=3.7 people older than 12). According to this calculation, the minimum share of external wage labour in agriculture in Holland was about 20 per cent (total average 83 man-hours out of 413). The external labour inputs at peak times or other incidental wage labour on the smaller farms should be added to this. Also living-in servants should be added, though at 6 per cent of the population their number was relatively low here. If we assume that about two-thirds of their labour, or perhaps more, was used in agriculture, then in total a good 30 per cent of agricultural labour in Holland in the mid-sixteenth century was supplied by wage labourers.

5. WAGE LABOUR IN INLAND FLANDERS

Proto-industries in inland Flanders, which employed some 34 per cent of the potential labour force, show sharp differences in the importance of wage labour in the various branches of industry. In the linen industry the units of production were small, consisting of peasant households working at home. These peasants combined linen production with the exploitation of their smallholdings, most of which were of between 1 and 5 hectares.

TABLE 4
Labour inputs (in man-years) and minimum shares of wage labour on farms in the central part of Holland, mid-sixteenth century

Size of farm	Ave. size (ha.)	Labour input per ha. (man-years)	Total average input per farm (A)	External wage labour needed (B)	No. of farms (C)	$A \times C$	$B \times C$
No land ^a	0	—	—	—	42	—	—
<4 ha.	1.5	0.9	1.4	—	57	80	—
4–9 ha.	5.5	0.6	3.3	—	32	106	—
9–17 ha.	12	0.4	4.8	1.1	21	101	23
17–34 ha.	22	0.3	6.6	2.9	14	92	41
>34 ha.	42	0.2	8.4	4.7	4	34	19
Total man-hours/farm						413	83
Total no. of farms					170		
Total area farmed: 989 ha.							

^a Households possessing only a yard with a dwelling.

Sources: as in Table 2.

The means of production, which were not costly, were mostly owned by the producers.⁶⁵ In fact, producers in this region often used the flax they had grown through labour-intensive cultivation of their own holdings, although in some cases flax was also imported from other regions. In the latter case it was mostly bought by the producers. Wage labour played only a marginal role. Occasionally the weaving was put out by large farmers, who cultivated flax and had their wives and daughters spin the yarn, in order to have it subsequently woven by a wage-labourer – either a living-in servant or a peasant hiring out his labour.⁶⁶ This, however, was an exceptional situation: most producers worked independently and for their own account, using their own capital. Most of them were small peasants, organizing the cultivation, processing, spinning and weaving of the flax within their own household.

The rural activities in the woollen industry were almost entirely limited to the preparatory phases, such as the carding, combing and spinning of the wool, as a result of the suppression of cloth weaving in the countryside by the Flemish cities. In these rural activities all kinds of production structures existed side by side, but on the whole they were organized in a putting-out system.⁶⁷ In most cases, the production stages that were performed in the countryside were characterized by a certain dependency of the producers on the entrepreneurs, who often supplied the raw material and paid the producers a piece wage. The producers, though, working at

home, often owned some means of production, at least some of the cheap tools, and sometimes retained some independence. However, notwithstanding the diversity in organizational forms, in general the putting-out system seems to have been dominant in the Flemish rural woollen industry. Also, both the role of wage labour and the degree of dependency on merchant-entrepreneurs were larger than in the Flemish linen industry.

The influence of entrepreneurs was even stronger in the tapestry sector. The necessary stocks of raw materials and semi-manufactured products, the risks, the high prices and the long production periods made capital an all-important factor in this sector.⁶⁸ Often the relatively expensive equipment and the costly dyed yarn were advanced or leased out by the tapestry masters to the weavers.⁶⁹ Even so, many tapestry-workers incurred debts and owed money to an entrepreneur, becoming bound to their employer. In the sixteenth century, producers in the countryside had clearly become subject to urban capital. Many tapestry-weavers from the villages had to come to their masters in the city of Oudenaarde each Sunday to deliver their products, collect their money (a piece wage) and receive new wool and yarn.⁷⁰ In this sector, the labour force consisted mainly of wage labourers, not independent producers. Many weavers worked for piece wages, and, additionally, the tapestry-workers themselves often employed some hands. Although the number of journeymen was limited formally to three per tapestry master, the number of other employees was unrestricted and various forms of subcontracting were used. All in all, one can observe the emergence of hierarchical concentrations, dominated by a few urban entrepreneurs. Next to the influence of capital, however, coercive power was important in the Flemish tapestry sector. The most notable example of this was the attempts made by cities and/or urban guilds to bring the rural labour force under their control, which led to a struggle between the cities of Oudenaarde and Geraardsbergen over their grip on the tapestry-workers in the Land van Aalst in the years around 1540.⁷¹ Also, masters had a grip on the rural workers by way of trade restrictions, production regulations and, in some cases, their outstanding debts.

Thus, clear differences in the importance and nature of wage labour existed between the various sectors of Flemish proto-industries. The estimated figures (estimated roughly in the case of the woollen industry) are presented in Table 5, which shows an average share of wage labour in this sector of 28 per cent. For inland Flanders, data on the organization of para-agrarian work, mainly in water management, are almost completely lacking. It can be assumed, however, that wage labour played only a marginal role. This was the result, primarily, of the small scale of these works. In this region, which had no large dikes or artificial watercourses,

TABLE 5
*Labour inputs and estimated shares of wage labour in various sectors
of proto-industry in inland Flanders, c. 1570*

<i>Sector</i>	<i>Man-years</i>	<i>Wage labour (5)</i>
Linen industry	19,000	5
Woollen industry	3,000	50(?) ^a
Tapestry industry	6,000	90
Total/Average	28,000	28

^a The question mark indicates an informed estimate for this figure.

Sources: as in Table 2.

large groups of labourers were not needed in this sector. Also, since expensive sluices and mills were not needed, the costs of water management were low, and thus it was not necessary to establish a tax system for it, of the sort which formed an important element in the monetization of water-management in Holland and in the Guelders river area. In view of the property structure in rural inland Flanders, with its multitude of small peasants, probably most of the small-scale water management work was done by the peasants themselves, using the abundance of labour within their households.

In the crafts and service sector, the share of wage labour probably remained very limited. Craft production remained very small-scale in the Flemish countryside, mainly because of urban privileges which suppressed the rural crafts sector and stimulated the urban one. This can be observed in, for instance, brewing, with the smaller cities (such as Aalst and Geraardsbergen), receiving privileges to suppress breweries in their immediate surroundings, or at least to tax them with heavy excises.⁷² Since larger artisans in particular employed wage labourers, and precisely these were targeted by urban policies, the importance of wage labour in this sector remained small.

Military service was one of the few sectors in inland Flanders in which the importance of wage labour increased substantially in the fifteenth and sixteenth centuries. In the high and late Middle Ages, rural and (particularly) urban militias had been important here, but the Dukes of Burgundy increasingly started to rely on mercenaries,⁷³ who were recruited by military entrepreneurs mainly in Switzerland and the south of Germany, thus also serving the dukes' desire to become more independent of the Flemish cities. From then on, the militias were used only in dire circumstances and merely as auxiliary troops.

The agricultural sector in inland Flanders was characterized by small peasant-owned holdings, which were increasingly subdivided and thus fragmented, specializing mainly in labour-intensive crops. In this Flemish ocean of smallholdings, there were only a few larger farms; most villages had only one or two. These were often created by absentee large land-owners for reasons of prestige and leased out to large tenants, often to those whose family had had a personal relationship with the owner for generations. The tenants exploited their farms by making use of the cheap labour provided by the numerous peasants. This hiring of labour occurred mostly within a mutual relationship of reciprocal exchange, with labour remunerated by loans or the use of the employer's capital goods, such as horses, ploughs, wagons or a bull.⁷⁴ The labour relationship involved hardly any payments in cash. This particular type of wage relation was also characterized by a very personal and unequal relationship between employer and labourer, often made even more unequal because many peasant-labourers became indebted to their employer, which created a kind of debt bondage. Most of this labour came from within the same village; this is in contrast to Holland and the Guelders river area, where it was common for outsiders – even people from other regions – to be hired as labourers. Also, peasants in inland Flanders mostly hired themselves out together with their family members. In this respect, too, labour here remained structured around the peasant household and not around individual labourers.

Again, I shall use two ways to estimate the importance of wage labour here, starting with the degree of landlessness. This was rather limited here compared to the two other regions, as is shown by the extensive fiscal administration records from around 1570.⁷⁵ Some 20 per cent of households either did not cultivate any land or had only a garden-like holding. This region was characterized rather by smallholdings of 0.5–4 hectares: 55 per cent of the households fell into this category. These households often combined their smallholding with proto-industrial activities and other sources of income, such as incidental wage labour, gleanings, begging and charity.

On the basis of the same data on farm sizes, it is also possible to calculate the minimum of external labour input needed for a hypothetical 1,000 hectares of agricultural land in inland Flanders. This calculation is based on the fact that the rural population density here was a staggering 120 persons per square kilometre of agricultural land. The labour input per hectare assumed above is increased here by 10 per cent, because of the very labour-intensive character of agriculture in inland Flanders, with grain cultivation in a dominant position of and intensive growing of industrial crops. Even on the somewhat larger farms it was probably

TABLE 6
*Labour inputs and minimum shares of wage labour on the farms in
 inland Flanders, c. 1570*

<i>Size of farm</i>	<i>Ave. Size (ha.)</i>	<i>Labour input per ha. (man-years)</i>	<i>Total average input per farm (A)</i>	<i>External wage labour needed (B)</i>	<i>No. of farms (C)</i>	<i>A × C</i>	<i>B × C</i>
<1 ha.	0.4	1.3	0.5	—	93	47	—
1–4 ha.	2.0	1.0	2.0	—	93	186	—
4–9 ha.	5.5	0.65	3.6	—	28	101	—
9–17 ha.	12	0.45	5.4	1.7	11	59	19
17–34 ha.	22	0.3	6.6	2.9	7	46	20
> 34 ha.	42	0.2	8.4	4.7	8	67	37
Total no. of farms					240	506	76
Total area farmed: 999 ha.							

Sources: as in Table 2.

attractive to apply more intensive agricultural methods, in view of the cheap labour supplied by the mass of peasant-labourers.⁷⁶ Next to this, it is assumed that the average size of a household in inland Flanders was a little smaller than in the Guelders river area, mainly on account of the small number of servants living in the households here. Probably 6–8 per cent of the population consisted of living-in servants.⁷⁷ The calculations in Table 6 are based on an average size of 5 persons per household (= 3.7 persons older than 12).

These show that the minimum amount of external wage labour needed here was only 15 per cent of the total labour input (total average 76 man-hours out of 506). Some external labour at peak times should be added to it, although peasants in this region often avoided making use of this, preferring to meet peak demand for labour by way of internal labour buffers, in other words by shifting the use of labour available within their own household. The labour provided by servants should also be added to this percentage. Assuming that two-thirds of the labour provided by servants was used in agriculture and one-third in proto-industries, this brings the total of wage labour in the agricultural sector in inland Flanders to some 22 per cent. Most of this was provided by peasants as part of an income-pooling strategy, with various family members combining all kinds of sources of income, such as proto-industrial activities, charity, occasional wage labour and the exploitation of a smallholding. Migrant labour was unimportant in this region, as was fully proletarianized wage labour.

TABLE 7
*Shares of different sectors in the total labour input in the countryside
and estimated shares of wage labour per sector in the three research
areas, mid-sixteenth century: summary*

	<i>Holland</i>		<i>Guelders river area</i>		<i>Inland Flanders</i>	
	<i>Share of labour (%)</i>	<i>Wage labour (%)</i>	<i>Share of labour (%)</i>	<i>Wage labour (%)</i>	<i>Share of labour (%)</i>	<i>Wage labour (%)</i>
Craftsmen	9	3(?) ^a	11	5	7	2(?)
Proto-industry	45	29	3	1	34	10(?)
Para-agrarian work	6	4	6	4	2(?)	0
Agriculture	40	12	80	47	57	13
Total wage labour (%)		48		57		25
Non-wage labour		52		43		75
Total		100		100		100

^a Question marks indicate informed estimates for these figures.

6. CONCLUSIONS

Based on the above, it is possible to calculate what shares of rural labour were performed as wage labour in these three regions around the middle of the sixteenth century. For instance, the proto-industrial sector in Holland engaged some 45 per cent of the total labour input, of which about 65 per cent was supplied by wage labourers (= 29 per cent of total labour input). This calculation has been made for all sectors; the results are summarized in Table 7. These results lead to the assumption that in the central part of Holland almost half of all rural labour was performed as wage labour, and in the Guelders river area far more than half, but in inland Flanders only a quarter.

The share of wage labour in the Guelders river area was thus higher than in more urbanized regions such as Holland and inland Flanders. This hints at the fact that the determining factor in the rise of rural wage labour was the development or transition of the economy and society towards capitalist structures, and not the degree of urbanization, in a region. Perhaps this need for a nuancing of the role of cities in the development of wage labour even applies to the cities themselves: until more research on this point has been done for urban economies, it must remain an open question whether the cities in these regions had a higher share of wage

labour than the countryside had. Figures from other parts of Europe suggest that this was not necessarily the case.⁷⁸ But apart from this, the findings in this article provide reasons to rethink the often supposed link between urbanization and wage labour.

These calculations also substantiate my earlier quantitative reconstruction of the rise of rural capitalism in the Low Countries. In the Guelders river area, which was among the first regions in the Low Countries to undergo a rural transition towards capitalism, and in Holland, which followed shortly after, about half of all rural labour around the middle of the sixteenth century was performed by wage labourers. However, differences in the nature of wage labour between the two regions were very strong, as a result of the specific route of the transition. The above shows a high proportion of proletarianized labourers working in agriculture on large farms in the Guelders river area as opposed to a high proportion of semi-proletarianized peasants working in proto-industries in Holland. However, a common feature of the two regions was the share of wage labour which was, in both cases, already very high around 1550. It can be surmised that this share was much lower in several other parts of the Low Countries. In inland Flanders, it was much lower. There, the rise of proto-industries, although their importance was substantial and they were strongly market-oriented, did not lead to a transition of the rural economy or to a rise of wage labour.⁷⁹ This applies even more to agriculture in inland Flanders, which remained mainly subsistence-oriented. Amidst the sea of small peasant holdings there were some large farms using the cheap labour offered by the impoverished peasants, but these were an exception. A total of no more than a quarter of the rural labour input was in the form of wage labour. Despite the commercialization of some rural sectors, the very strong urbanization and the presence of markets, no transition and no substantial rise of wage labour took place here, in sharp contrast to Holland and the Guelders river area.

These results thus also show that the dominance of one or another sector in the rural economy in itself reveals nothing about the importance of wage labour. A strong proto-industrial sector could be characterized either by a high importance of wage labour, as in Holland, or by a low importance, as in inland Flanders. The same applies to agriculture, which could be characterized by a minor role of wage labour, as in inland Flanders, or dominated by wage labour, as in the Guelders river area. What determined the rise of wage labour in a particular region was thus not necessarily the growth of industries, the presence of cities or a small importance of agriculture, but structural changes in the economy, be it urban or rural, agricultural or industrial.

There are some other notable elements. A specific element of wage labour in the northern parts of the Low Countries was the important role of migrant labour. This must already have been very important in these regions in the sixteenth century: in digging and diking, but also in harvesting, threshing, mowing, pollarding, transporting and sawing (in the Guelders river area), and in peateries, fisheries, brick-production and other rural industries (in Holland).⁸⁰ The rise of migrant labour in Holland, which is often dated to the Golden Age,⁸¹ appears to have had much older roots, connected to the rise of proto-industrial sectors, the transition of the rural economy towards capitalism, the strong demand for wage labour and the high seasonal peaks in the demand for labour in these regions. The migrant labourers working here and in the Guelders river area were attracted mainly from the peasant regions to the east and south-east, namely the eastern and south-eastern parts of the Netherlands and across the present-day German border, some 50–200 kilometres away. In inland Flanders, migrant labour was much less important. Not only was external labour (outside the household) unimportant here, but most of it was exchanged within the village.

In other respects, too, there were clear differences between the Guelders river area and Holland, on the one hand, and other parts of north-western Europe on the other. For instance, the degree of full-time proletarianized labour must have been much larger here than elsewhere. In inland Flanders, additional labour was mainly provided by peasants living on their own smallholding. In England, too, the share of rural labour performed by wage labourers (a quarter to a third of all rural labour) could be supplied to a large extent by servants and semi-proletarianized labourers. In particular the role of servants was important here, with probably one-third to one-half of hired labour in early modern English agriculture supplied by servants alone.⁸² These were mainly young men and women who left home at about fifteen to work in another household as wage labourers, until they were ready to start their own family. This type of wage labour was more part of a life-cycle, and often of a peasant life-cycle, and not completely proletarian. Much of the remaining wage labour in English agriculture was performed by peasants as part-time wage labour.⁸³ This contrasts with the two northern parts of the Low Countries under discussion, where perhaps as much as half of all wage labour was performed by proletarians. This strong proletarian element in wage labour applies more to the Guelders river area than to Holland, where a larger part of the rural population had at least a smallholding, resulting in a labour cycle which combined work on the small farm with proto-industrial work (often for wages) and wage labour on larger farms.⁸⁴ In Holland, on the other hand, the number of living-in servants

was probably much lower, contributing to a higher share of external wage labour.

The preceding discussion invites speculation about the nature of the wage relationship and the organization of the labour market, although this must remain concise and rather a call for further research. In the Guelders river area and in Holland, the wage relationship seems to have been less personal than it was elsewhere, or sometimes even impersonal, partly because of the much wider area of recruitment of the labourers. Arrangements between employer and labourer were formal and based on the payment of a money wage, which was paid regularly, for instance on a daily, weekly or monthly basis. This regular payment is reflected indirectly in the massive minting of silver coins that were suited to small wage payments. In the period 1562 to c. 1580 (and in the south, to c. 1590), more than 10 million coins of the value of one-fifth of a Philip dollar were minted in the Low Countries, and these coins were roughly equal to the daily wage of a skilled labourer.⁸⁵ Also, labour contracts in Holland and in the Guelders river area were mostly formal and short-term, namely verbal agreements for the day or written one-year contracts without any further obligations after their expiration. In inland Flanders, on the other hand, the wage relationship was mostly personal and informal and was often based on a reciprocal exchange of services and capital goods. Also, in Holland and in the Guelders river area wage labour seems to have been relatively free. In both regions there were hardly any restrictions on the mobility of labour, no restrictions on wages, no fixation of maximum wages, no indentured labour and no vestiges of manorial unfreedom. This contrasts sharply with the situation in other parts of sixteenth-century north-western Europe.

In England, for instance, the power of former manorial lords over the local population lingered on for much longer, and national legislation – such as the Ordinance of Labourers (1349), the Statute of Labourers (1351), the Statute of Cambridge (1388/89) and the Statute of Artificers (1563) – restricted labour mobility and determined maximum wage rates.⁸⁶ Although these statutes were not always fully or effectively enforced in practice, they still affected the position of labourers and reduced their possibilities and freedom. In general, labourers and servants in England were subjected to the authority of their master, and to all kinds of restrictions and elements of indenture.⁸⁷ In inland Flanders, central legislation on this point was less prominent, although the urban governments had a strong tradition of intervention in the labour market – often associated with the strong position of the guilds⁸⁸ – but here, too, wage relations in the countryside were mainly characterized by a personal relationship, and by inequality and the dependence of the wage labourer

on the employer, often backed by the non-economic power of the latter. This can be observed, for instance, in the relations between large landowners and their tenants on the one hand and small peasants hiring their labour to both on the other. The small peasants were often dependent on their employer on account of their outstanding debts and the use of his capital goods, but also because of his dominant social and legal position within the village community. The same applies to several sectors of proto-industries, with the power of the mainly urban-based employers over rural labourers often being buttressed by urban privileges, restrictions and non-economic market forces.

The differences between Flanders (and perhaps also some other regions in the south of the Low Countries) and the regions in the north-west of the Low Countries are also reflected in the sixteenth-century debate on the fixing of wage levels. It is telling, perhaps, that around 1560 some authorities and provinces in the southern parts of the Low Countries started to propose maximum wages, or were planning to do so. These attempts were resisted by the authorities in the northern parts of the Low Countries, such as Holland and Utrecht.⁸⁹ As the Utrecht city government stated: 'Wage formation is entirely God's work, onto which man should certainly not impose', which can be considered as an early plea for a free functioning of the labour market. This position was often combined with measures to increase the supply of labour in the market, for instance by reforming poor relief, prohibiting begging and vagabondage and discouraging voluntary unemployment. It was exactly in these regions that new and often harsh politics in this field first took root.⁹⁰ This cannot be seen in isolation from the early importance of wage labour, the strong importance of proletarianized labour and probably also the freedom offered by the labour market, with these measures forming an alternative way to keep wages relatively low. This relationship needs further analysis. It is clear, however, that Holland and especially the Guelders river area already witnessed a strong position of modern wage labour in the countryside in the sixteenth century. A large and mainly proletarianized labour force was present here, dependent on a money wage for the majority of its income and supplemented by temporary labourers from other regions. These findings cannot be generalized for the Low Countries as a whole, as is shown by the case of inland Flanders. Differences in this respect were very sharp even within such a small and highly urbanized area as the Low Countries. This invites further analysis of the wider social, economic and institutional determinants of the rise of wage labour, preferably on a regional comparative basis.

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ENDNOTES

- 1 Bruce M. S. Campbell, 'Measuring the commercialisation of seigneurial agriculture c. 1300', in Richard H. Britnell and Bruce M. S. Campbell eds., *A commercialising economy: England 1086–c. 1300* (Manchester, 1995), 132–93.
- 2 Jane Whittle, *The development of agrarian capitalism: land and labour in Norfolk, 1440–1580* (Oxford, 2000), 227–31; Christopher Dyer, *Standards of living in the later Middle Ages: social change in England, c. 1200–1520* (Cambridge, 1989), 211–14, and Rodney Howard Hilton, 'Some social and economic evidence in late medieval English tax returns', in his *Class conflict and the crisis of feudalism: essays in medieval social history* (London, 1985), 253–67, esp. pp. 261–7.
- 3 Bas J. P. van Bavel, 'The transition in the Low Countries: wage labour as an indicator of the rise of capitalism in the countryside, 14th–17th centuries', paper delivered at 'Rodney Hilton's Middle Ages' (conference held at Birmingham, 2003), the proceedings to be edited by Peter Coss, Christopher Dyer and Chris Wickham (forthcoming).
- 4 Erik Thoen, 'A "commercial survival economy" in evolution': the Flemish countryside and the transition to capitalism (Middle Ages–19th century)', in Peter C. M. Hoppenbrouwers and Jan Luiten van Zanden eds., *Peasants into farmers? The transformation of rural economy and society in the Low Countries (Middle Ages–19th century) in the light of the Brenner debate* (CORN publication series, 4) (Turnhout, 2001), 102–57, esp. pp. 111–38.
- 5 Bas J. P. van Bavel, 'Agrarian change and economic development in the late medieval Netherlands', paper delivered at 'Agrarian change and economic development in Europe before the Industrial Revolution' (Ghent, 2002), to be edited by Robert Brenner, Erik Thoen and Jan de Vries (forthcoming).
- 6 W. P. Blockmans et al., 'Tussen crisis en welvaart. Sociale veranderingen 1300–1500', *Algemene Geschiedenis der Nederlanden* 4 (1980), 42–86, esp. pp. 44–5.
- 7 Although the voluntary, free character of pre-industrial labour must often be nuanced; see Section 6 below.
- 8 P. van den Eeckhout, 'Wage formation: some more problems', in Peter Scholliers ed., *Real wages in 19th and 20th century Europe* (New York, 1989), 40–7.
- 9 See C. Lis and H. Soly, 'Policing the early modern proletariat, 1450–1850,' in David Levine ed., *Proletarianization and family history* (Orlando, 1984), 163–228, esp. pp. 170–2, or Robert J. Steinfeld, *The invention of free labor: the employment relation in English and American law and culture, 1350–1870* (Chapel Hill, 1991) esp. pp. 3–10.
- 10 Ad Knotter, 'Problems of the "family economy": peasant economy, domestic production and labour markets in pre-industrial Europe', in Maarten Prak ed., *Early modern capitalism: economic and social change in Europe, 1400–1800* (London and New York, 2001), 135–60, esp. pp. 142–7.
- 11 Calculated on the basis of figures from around 1500: see R. W. M. van Schaïk, *Belasting, bevolking en bezit in Gelre en Zutphen, 1350–1550* (Hilversum, 1987), 163–6 and 275–6.

- 12 See A. M. van der Woude, *Het Noorderkwartier. Een regionaal historisch onderzoek in de demografische en economische geschiedenis van westelijk Nederland van de late middeleeuwen tot het begin van de negentiende eeuw* (Wageningen, 1972), 77–85, for calculations of the share of population younger than 12/14 years.
- 13 A rough estimate based on the population figures collected by J. C. Naber, *Een terugblik. Statistische bewerking van de resultaten van de informatie van 1514* (Haarlem, 1970), esp. pp. 36–8, and Jan de Vries, *The Dutch rural economy in the Golden Age, 1500–1700* (New Haven and London, 1978), 86–7.
- 14 Jozef de Brouwer, *Demografische evolutie van het Land van Aalst, 1570–1800* (Brussel, 1968), 108–11 and 140–54, and 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, eind 13^{de} – eerste helft 16^{de} eeuw* (Ghent, 1988), 36–40 and 155–64.
- 15 See the calculations based on the taxes for water management in Sections 3 and 4, and also Jan Luiten van Zanden, ‘Taking the measure of the early modern economy: historical national accounts for Holland in 1510/14’, *European Review of Economic History* 6 (2002), 131–63, Tables 1 and 3 (4 per cent in 1514).
- 16 H. K. Roessingh, ‘Beroep en bedrijf op de Veluwe in het midden van de 18^e eeuw’, *A. A. G. Bijdragen* 13 (1965), 181–274, esp. pp. 209 and 212–30: c. 8 per cent, and Jan de Vries and Ad van der Woude, *The first modern economy. Success, Failure, and Perseverance of the Dutch economy, 1500–1815* (Cambridge, 1997), 510–29.
- 17 Paul Brusse, *Overleven door ondernemen. De agrarische geschiedenis van de Over-Betuwe, 1650–1850* (A. A. G. bijdragen 38, 1999), 80–6. For the additional craftsmen in the noble households, particularly numerous in the Guelders river area, see also Section 3 below.
- 18 Van Schaïk, *Belasting, bevolking en bezit*, 136–8 and 296–300.
- 19 The Spanish army in the Low Countries, which was maintained here from 1567 onwards, amounted to an average of some 65,000 military personnel; see Geoffrey Parker, *The army of Flanders and the Spanish road, 1567–1659: the logistics of Spanish victory and defeat in the Low Countries’ wars* (Cambridge, 1972), 271.
- 20 David Nicholas, *Town and countryside: social, economic and political tensions in fourteenth-century Flanders* (Bruges, 1971), 125–30, and Johan Decavele and Rene de Herdt, *Gent op de wateren en naar de zee* (Antwerpen/Gent, 1976), 35–49 and 125–46.
- 21 Peter Stabel, *De kleine stad. Bevolkingsdynamiek en economische functies van de kleine en secundaire stedelijke centra in het Gentse kwartier (14^{de}–16^{de} eeuw)* (Brussels, 1995), 248–50, and ‘Schipper, wagenvoerders en kruiers. De organisatie van de stedelijke vervoersector in het laatmiddeleeuwse Vlaanderen’, in *Bijdragen tot de geschiedenis* 82 (1999), 159–85, esp. pp. 172–3 and 179–81.
- 22 Bas J. P. van Bavel, ‘Proto-industrie tussen de Gelderse rivieren? Eerste verkenning naar de niet-agrarische, marktgerichte activiteiten op het platteland van het Gelderse rivierengebied, 1300–1600’, *Bijdragen en mededelingen Gelre* 93 (2002), 55–78.
- 23 Bas van Bavel, ‘Early proto-industrialization in the Low Countries? The importance and nature of market-oriented non-agricultural activities in the countryside in Flanders and Holland’, *Revue Belge de Philologie et d’Histoire* 81:4 (2003), 1109–65, esp. p. 1143.
- 24 Van Zanden, ‘Taking the measure’, 137–8 and 147–8.
- 25 Van Bavel, ‘Early proto-industrialization in the Low Countries?’, 1124.
- 26 B. J. P. van Bavel, *Transitie en continuïteit. De bezitsverhoudingen en de plattelands-economie in het westelijke gedeelte van het Gelderse rivierengebied, ca. 1300–ca. 1570* (Hilversum, 1999), 574–6 and 584.

- 27 Bas J. P. van Bavel, 'People and land: rural population developments and property structures in the Low Countries, c. 1300–c. 1600', *Continuity and Change* 17 (2002), 9–37, esp. pp. 25–9.
- 28 See Robert C. Allen, *Enclosure and the yeoman* (Oxford, 1992), 215–16, and 'The two English agricultural revolutions, 1450–1850', in Bruce M. S. Campbell and Mark Overton eds., *Land, labour and livestock: historical studies in European agricultural productivity* (Manchester, 1991), 236–54, esp. pp. 249–50; Ronald Hubscher, 'La petite exploitation en France: reproduction et compétitivité (fin XIXe siècle–début XXe siècle)', *Annales ESC* 40 (1985), 3–34; and Eric Vanhaute, 'Agrarian labour and food production in a peripheral region: agricultural dynamics in the Antwerp Campine in the "long" nineteenth century', *Histoire et mesure* 12 (1997), 143–64, esp. pp. 148–55.
- 29 Allen, 'The two English agricultural revolutions', 239.
- 30 Bas J. P. van Bavel, 'Arable yields and total arable output in the Netherlands from the late Middle Ages to the mid-19th century', in Bas J. P. van Bavel and Erik Thoen eds., *Land productivity and agro-systems in the North Sea Area (Middle Ages – 20th century): elements for comparison* (CORN publication series, 2) (Turnhout, 1999), 85–112, esp. pp. 102–3 and 108.
- 31 Namely on average 5.5 persons per household (including the living-in servants), of whom four were older than 12 years of age.
- 32 Roessingh, 'Beroep en bedrijf', 243–4 (Veluwe region: 19 per cent of population over 10 years of age), and B. H. Slicher van Bath, *Een samenleving onder spanning. Geschiedenis van het platteland in Overijssel* (Assen, 1957), 109–15 (Overijssel: 13 per cent). See also in general A. J. Schuurman, *Historische demografie. Bevolkings- en gezinsgeschiedenis* (Zutphen, 1991), 29.
- 33 This share was highest on the larger farms, contributing to the larger size of households on these farms, but since both servants and externally hired labourers were wage labourers this does not affect the calculation of the importance of wage labour.
- 34 B. J. P. van Bavel, *Goederenverwerving en goederenbeheer van de abdij Mariënweerd, 1129–1592* (Hilversum, 1993), 415–16 and 428–9.
- 35 Van Bavel, *Mariënweerd*, 428–30.
- 36 L. van Tongerloo, 'Pastoors in veelvoud', in H. ten Boom et al. eds., *Utrechters entreeux. Stad en Sticht in de eeuw van de Reformatie, 1520–1620* (Delft, 1992), 75–111.
- 37 A. J. A. Bijsterveld, *Laverend tussen kerk en wereld. De pastoors in Noord-Brabant, 1400–1570* (Amsterdam, 1993), 61–5.
- 38 Van Bavel, *Mariënweerd*, 377–9 and 385. See also p. 473 for the share of the total output paid as lease.
- 39 See more on this in Section 4 below.
- 40 Van Bavel, *Mariënweerd*, 428–9.
- 41 R. Fruin ed., *Informacie up den staet faculteit ende gelegenheit van de steden ende dorpen van Holland ende Vrieslant* (Leiden, 1866); relevant here are pp. 254–402.
- 42 J. Kuys and J. T. Schoenmakers, *Landpachten in Holland, 1500–1650* (Amsterdam, 1981), 58.
- 43 See for instance J. H. M. Sloof et al., *De oudste ambachtsrekeningen van Voorhout, 1440, 1443, 1459, 1548 and 1582* (Voorhout, 1999), esp. pp. VIII–XI and 6–9.
- 44 P. J. E. M. van Dam, 'Gravers, ofzetters en berriedragers. Werkgelegenheid aan de Spaarndammerdijk omstreeks 1510', in *Tijdschrift voor sociale geschiedenis* 18 (1992), 447–8, esp. pp. 453–7 and 464–9, and Jan de Vries, 'The labour market', in Karel Davids and Leo Noordeggraaf eds., *The Dutch economy in the Golden Age: nine studies* (Amsterdam, 1993), 55–78, esp. pp. 59–60. For the taxation levied by the 'high dike

- reeve' of Rijnland, which rose steeply after c. 1550, see M. H. V. van Amstel-Horak and R. W. G. Lombarts, *Regestenboek van het hoogheemraadschap van Rijnland* (Leiden, 1992), 313–17.
- 45 P. J. E. M. van Dam, 'Digging for a dike: Holland's labor market ca. 1510', in Peter C. M. Hoppenbrouwers and Jan Luiten van Zanden eds., *Peasants into farmers? The transformation of rural economy and society in the Low Countries (Middle Ages–19th century) in the light of the Brenner debate* (CORN publication series, 4) (Turnhout, 2001), 220–55, esp. p. 226, and 'Ecological challenges, technological innovations: the modernization of sluice building in Holland, 1300–1600', *Technology and culture* **43** (2002), 500–20.
- 46 A. A. Arkenbout, *Frank van Borselen. Het dagelijks leven op zijn hoven in Zeeland en het Maasmondgebied* (Rotterdam, 1994), 76–7 and 119–20.
- 47 H. P. H. Jansen and P. C. M. Hoppenbrouwers, 'Military obligation in mediaeval Holland: the burden of the host', *Acta historiae Neerlandicae* **13** (1980), 1–24, and J. A. M. Y. Bos-Rops, *Graven op zoek naar geld. De inkomsten van de graven van Holland en Zeeland, 1389–1433* (Hilversum, 1993), 46–7, 99–103, 143–6, 179–82 and 217–20.
- 48 For the late sixteenth century see Olaf van Nimwegen, 'Het Staatse leger en de militaire revolutie', *Bijdragen en Mededelingen betreffende de Geschiedenis der Nederlanden* **118** (2003), esp. pp. 501–7.
- 49 See Below, Section 5.
- 50 Van Bavel, 'Early proto-industrialization in the Low Countries?', 1151–2, and de Vries, *The Dutch rural economy*, 68.
- 51 See van Bavel, 'Early proto-industrialization in the Low Countries?', 1152–61; W. J. Diepeveen, *De vervening in Delfland en Schieot het einde der zestiende eeuw* (Leiden, 1950), 86–90; and Hanno Brand, *Over macht en overwicht. Stedelijke elites in Leiden (1420–1510)* (Louvain and Apeldoorn, 1996), 184–7.
- 52 S. C. Regtdoorzee Greup-Roldanus, *Geschiedenis der Haarlemmer bleekerijen* (The Hague, 1936), 33–4 and 149–50.
- 53 Petra J. E. M. van Dam, *Vissen in veenmeren. De sluitsvisserij op aal tussen Haarlem en Amsterdam en de ecologische transformatie in Rijnland, 1440–1530* (Hilversum, 1998), 171–89.
- 54 H. A. H. Kranenburg, 'Het visserijbedrijf van de Zijdenaars in de 15^e en 16^e eeuw', *Tijdschrift voor geschiedenis* **62** (1949), 321–33, esp. pp. 329–32, and Adri P. van Vliet, 'Zeevarenden op de vissersvloot, 1580–1650', in *Tijdschrift voor sociale geschiedenis* **22** (1996), 241–59, esp. pp. 247–50 and 256–7.
- 55 De Vries, 'The labour market', 59.
- 56 Florike Egmond, *Een bekende Scheveninger. Adriaen Coenen en zijn Visboek van 1578* (The Hague, 1997) 112, and G. Borger, 'Draining–digging–dredging: the creation of a new landscape in the peat areas of the Low Countries', in J. T. A. Verhoeven ed., *Fens and bogs in the Netherlands: vegetation, history, nutrient dynamics and conservation* (Dordrecht, 1992), 131–71, esp. p. 152.
- 57 Jan Lucassen, *Naar de kusten van de Noordzee. Trekarbeid in Europees perspectief, 1600–1900* (Gouda, 1984), 93, 95, 102 and 107.
- 58 Diepeveen, *De vervening*, 90–1.
- 59 See Lucassen, *Naar de kusten van de Noordzee*, 159–71, and J. L. van Zanden, *The rise and decline decline of Holland's economy: merchant capitalism and the labour market* (Manchester, 1993), 157–67.
- 60 Van Zanden, *The rise and decline*, 158–9.
- 61 Van Bavel, 'Early proto-industrialization in the Low Countries?', 1155.

- 62 Van der Woude, *Het Noorderkwartier*, 64–5, and J. A. M. Y. Bos-Rops, ‘De kohieren van de gewestelijke belastingen in Holland, 1543–1579’, *Holland* **29** (1997), 18–36, esp. pp. 23–35 and 29.
- 63 De Vries, *Dutch rural economy*, 63, H. A. Enno van Gelder, *Nederlandse dorpen in de 16e eeuw* (Amsterdam, 1953), 15–18, 22–4, 32–8, 78–9 and 87–9, J. J. Voskuil, *Kohieren van de tiende penning van Overschie 1561 en Twisk 1561* (Amsterdam, 1982), 34–40, and my own calculations on the basis of C. K. Kwakkelstein, ‘De honderdste penning van Nootdorp (Delfland) 1569’, *Ons Voorgeslacht* **49** (1994), 129–38, and ‘De honderdste penning van Nieuwveen (Delfland) 1569’, *Ons Voorgeslacht* **49** (1994), 26–34.
- 64 A. M. van der Woude, ‘Demografische ontwikkeling van de noordelijke Nederlanden, 1500–1800’, *Algemene Geschiedenis der Nederlanden* **5** (1980), 102–68, esp. p. 158.
- 65 See Thoen, ‘A “commercial survival economy” in evolution’, 120–2.
- 66 Thoen, *Landbouweconomie*, 1001–2.
- 67 Rudolf Holbach, *Frühformen von Verlag und Grossbetrieb in der gewerblichen Produktion (13.–16. Jahrhundert)* (VSWG Beihefte 110; Stuttgart, 1994), 61 and 151–3, and van Bavel, ‘Early proto-industrialization in the Low Countries?’, 1147–8.
- 68 M. Vanwelden, *Het tapijtweversambacht te Oudenaarde, 1441–1772* (Oudenaarde, 1979), 82 and 100–1.
- 69 Vanwelden, *Het tapijtweversambacht te Oudenaarde*, 46–7 and 82, and Peter Stabel, ‘Urban markets, rural industries markets, and the organisation of labour in late medieval Flanders: the constraints of guild regulations and the requirements of export oriented production’, in Bruno Blondé et al. eds., *Labour and labour markets between town and countryside (Middle Ages–19th century)* (CORN publication series, 6) (Turnhout, 2001), esp. pp. 150–3.
- 70 Florent van Ommeslaeghe, *De Oudenaardse wandtapijten wandtapijten en hun wevers in hun historisch kader* (Oudenaarde, 1996), 122.
- 71 E. Roobaert, ‘Het legwerkersambacht in het Land van Aalst, vooral te Geraardsbergen van ca. 1554 tot ca. 1564’, *Artes textiles* **4** (1957/58), 39–53, esp. pp. 44–7.
- 72 Stabel, *De kleine stad*, 141 and 238–40. For a similar situation in the Flemish transport sector, see above, Section 2.
- 73 Etienne Rooms, ‘Bezoldiging, bevoorrading en inkwartiering’, *Bijdragen en mededelingen betreffende de Geschiedenis der Nederlanden* **118** (2003), esp. pp. 520–9.
- 74 For the eighteenth century see Thijs Lambrecht, ‘Reciprocal exchange, credit and cash’, *Continuity and Change* **18** (2003), 237–61, esp. pp. 242–6. There is no reason to suspect that this situation was fundamentally different around the middle of the sixteenth century.
- 75 See Thoen, *Landbouweconomie*, 862–6, C. de Rammelaere, ‘Bijdrage tot de landbouwgeschiedenis in Zuid-Oostvlaanderen, 1570–1790’, *Handelingen der Maatschappij voor Geschiedenis en Oudheidkunde te Gent* **16** (1962), 21–40, and H. van den Abbeele, ‘De penningkohieren als sociaal-economische bron: het Land van Waas omstreeks 1571’, unpublished thesis at the University of Ghent (1985), incorporated in Thoen, ‘A “commercial survival economy” in evolution’, 114–16.
- 76 Thoen, ‘A “commercial survival economy” in evolution’, 111–15.
- 77 C. Vandenbroeke, ‘Prospektus van het historisch-demografisch onderzoek in Vlaanderen’, *Handelingen van het genootschap voor geschiedenis* **113** (1976), 1–85, esp. pp. 15–21, and Lieve Jaspers and Carine Stevens, *Arbeid en tewerkstelling in Oost-Vlaanderen op het einde van het Ancien Regime. Een socio-professionele en demografische analyse* (Ghent, 1985), 129–38 (8 per cent in this region around 1800).
- 78 Dyer (*Standards of living*, 214) asserts that in England around 1525 the share of the population mainly dependent on wages was as high in the countryside as it was in the

- small and medium-sized cities; only big cities had a higher share. See also Karlheinz Blaschke, *Bevölkerungsgeschichte von Sachsen bis zur industriellen Revolution* (Weimar, 1967), 183–91: in Saxony around 1550 the share of proletarians in the countryside was estimated at 26 per cent and in the cities 18 per cent.
- 79 See Thoen, ‘A “commercial survival economy” in evolution’, and van Bavel, ‘Early proto-industrialization in the Low Countries?’.
- 80 Van Bavel, *Mariënweerd*, pp. 415–16 and 428–9, and ‘Early proto-industrialization in the Low Countries?’, esp. pp. 1156–7.
- 81 See note 59, above.
- 82 Ann Kussmaul, *Servants in husbandry in early modern England* (Cambridge, 1981), 3–4 and 11.
- 83 Whittle, *The development of agrarian capitalism*, 227–31 and 236.
- 84 Lucassen, *Naar de kusten van de Noordzee*, 122–4 and 164–8.
- 85 Jan Lucassen, in ‘Wage payments and currency circulation in the Netherlands from 1200–2000’, unpublished paper delivered at The Hague, 2002, was one of the first to have explored the relationship between the minting of coins and the rise of wage labour (pp. 21–3).
- 86 Donald Woodward, ‘The background to the Statute of Artificers: the genesis of labour policy, 1558–63’, *Economic History Review* 33 (1980), 32–44.
- 87 See Steinfeld, *The invention of free labor*, esp. pp. 63–6 and 97–9.
- 88 J. A. van Houtte and Raymond van Uytven, ‘Wirtschaftspolitik und Arbeitsmarkt in den Niederlanden vom Spätmittelalter bis zur Schwelle des Industriezeitalters’, in Herman Kellenbenz ed., *Wirtschaftspolitik und Arbeitsmarkt* (Munich, 1974), 48–58.
- 89 C. Verlinden and J. Craeybeckx, *Prijzen- en lonenpolitiek in de Nederlanden in 1561 en 1588–1589* (Brussels, 1962), 10–12, 76–90 and 105–8.
- 90 See Catharina Lis and Hugo Soly, *Poverty and capitalism in pre-industrial Europe* (Brighton, 1982), 82–96, and Lex Heerma van Voss, ‘The embarrassment of poverty: why do the proverbial welfare states border on the North Sea?’, in Ad Knotter et al. eds., *Labour, social policy and the welfare state* (Amsterdam, 1997) 17–35, the latter stressing factors other than those highlighted here.