

## POPULATION GROWTH AND SOCIAL STRUCTURE IN A MARKET-ORIENTED AGRICULTURAL ECONOMY IN THE NETHERLANDS 1750-1820

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**Resumen:** Desde mediados del siglo XVIII, el crecimiento de la población rural de la Europa occidental se aceleró. Los efectos del incremento de la presión poblacional sobre la estructura social podían llegar a ser destacables, tal y como se pondrá de manifiesto en este artículo sobre Groningen, un ámbito agrícola de suelos arcillosos que formaba parte de una próspera área de la costa holandesa, donde la agricultura de mercado jugó un decisivo papel en la determinación de su destino ya en el siglo XVIII. En dicho ámbito, el crecimiento de la población fue de la mano de una ligera caída de la productividad del trabajo agrícola, amén de estimular una concentración en la agricultura pese a la práctica de una división igualitaria de la herencia. Además, el número de granjas se redujo a la par que su tamaño medio crecía, lo que nos está sugiriendo que en este contexto podían estarse produciendo importantes cambios económicos a nivel agrícola. Los granjeros que disponían de grandes explotaciones se aprovecharon del aumento de los precios agrarios y del creciente valor de sus derechos sobre el uso de la tierra. El crecimiento de la población creaba de este modo desigualdades económicas, proletarización y un incremento de la movilidad social descendente. Con una movilidad social ascendente cada vez menos propicia para la clase trabajadora, la edad media de matrimonio cayó, reforzando el crecimiento de la población a finales del XVIII. La economía de mercado imperante en esta zona, más que distribuir de forma equitativa los efectos adversos de la presión demográfica, produjo una creciente diferenciación social y económica.

**Palabras clave:** campo, demografía histórica, movilidad social, proletarización.

**Abstract:** From the middle of the eighteenth century onwards rural population growth in Western Europe accelerated. The effects of increasing population pressure on social structure, as this article shows for the Groningen clay soil area, could be profound. As part of the prosperous coastal Dutch area, the agricultural market played a decisive role in determining

one's fate in the eighteenth century already. In the Groningen clay soil area, population growth provoked a slight fall in the agricultural labour productivity, as well as stimulated concentration in agriculture despite the practise of equal inheritances. The number of farms fell while their average size increased, suggesting that important economies of scale could be obtained. Large farmers profited from rising agricultural prices and an increase in the value of their right to use the land. Population growth thus created growing economic inequality, proletarianization, and increasing downward social mobility. With upward social mobility diminished for the working class, average ages at marriage fell, reinforcing population growth at the end of the eighteenth century. Rather than distributing the adverse effects of population pressure equally, the market-oriented economy in the Groningen clay soil area produced increased economic and social differentiation.

**Key words:** countryside, historical demography, social mobility, proletarianisation

## Introduction

In the eighteenth century throughout Western Europe population began to rise more quickly as a result of falling mortality and rising fertility.<sup>1</sup> This development can be seen as the start of the 'Demographic Transition' resulting in very low fertility and mortality at the end of the twentieth century.<sup>2</sup> The eighteenth century decrease in mortality can be attributed in part to better feeding practices, especially because potatoes, now abundant on the menu, helped to diminish infectious diseases. Other less convincing explanations like a decrease in warfare, better transport, better medical care, improved poor relief and improved domestic hygiene and housing have been mentioned also.<sup>3</sup> The rise in fertility due in part to a lower age at marriage for girls, still is not explained very convincingly. Richard Smith suggests that - next to proto-industrialisation which allowed a married couple to make a living at a relatively young age - the decrease in the availability of work for unmarried women stimulated early marriages in England.<sup>4</sup>

<sup>1</sup> J. de Vries, *Economy of Europe in an age of crisis* (London, New York, Melbourne 1976) 4-12; T. McKeown, *The modern rise of population* (London 1976); H. van der Wee and E. Aerts, *De economische ontwikkeling van Europa 950-1950* (Leuven 1982) 108-110; J. de Vries, *European urbanization 1500-1800* (London 1984) 43-48

<sup>2</sup> I. Devos and L. Kennedy (eds.), *Marriage and rural economy. Western Europe since 1400* (Turnhout 1999) passim.

<sup>3</sup> M.W. Flinn, *The European demographic system, 1500-1820* (Baltimore 1982) 91-101; P. Razzel, 'The growth of population in eighteenth-century England. A critical reappraisal', *Journal of Economic History*, 53 (1993) 743-771.

<sup>4</sup> R. Smith, 'Relative prices, forms of agrarian labour and female marriage patterns in England, 1350-1800', in: Devos and Kennedy (eds.), *Marriage and rural economy*, 19-47, esp. 32-41.

European population growth was accompanied by increasing urbanisation. However, most inhabitants still lived in the countryside. Table 1 shows that during the seventeenth century rural population in large parts of Europe hardly grew, because of the initial fall in numbers in the first half of the century. In Spain and Germany the total number of inhabitants in the countryside between 1600 and 1650 even decreased due to severe warfare and economic depression. Developments in The Netherlands were rather different with a considerable rise in population in the first half and stagnation in the second half of the seventeenth century.

Table 1:  
Rural population in Western, Central and Mediterranean Europe, 1600-1850 (millions)

|                                 | 1600            | 1650            | 1700            | 1750         | 1800         | 1850         |
|---------------------------------|-----------------|-----------------|-----------------|--------------|--------------|--------------|
| The Netherlands                 | 1.1             | 1.3             | 1.3             | 1.3          | 1.5          | 2.1          |
| Belgium                         | 1.3             | 1.6             | 1.5             | 1.8          | 2.4          | 3.5          |
| Scandinavia                     | 2.0             | 2.5             | 2.8             | 3.4          | 4.8          | 7.4          |
| Great Britain                   | 5.1             | 6.1             | 5.6             | 6.3          | 8.7          | 12.6         |
| Ireland                         | 1.4             | 1.8             | 2.7             | 3.0          | 4.9          | 5.9          |
| Germany & Switzerland           | 16.3            | 12.5            | 15.4            | 17.3         | 24.8         | 32.9         |
| France                          | 17.9            | 18.6            | 17.3            | 19.7         | 24.6         | 30.6         |
| Italy                           | 11.1            | 9.7             | 11.5            | 13.1         | 15.2         | 19.1         |
| Spain                           | 7.2             | 6.4             | 6.8             | 8.1          | 9.3          | 12.4         |
| Portugal                        | 0.9             | 1.0             | 1.8             | 2.1          | 2.6          | 3.3          |
| Total                           | 64.4            | 61.4            | 66.7            | 76.2         | 98.8         | 129.9        |
| <i>Groningen clay soil area</i> | <i>c. 0.055</i> | <i>c. 0.055</i> | <i>c. 0.052</i> | <i>0.046</i> | <i>0.053</i> | <i>0.086</i> |

Source: Calculated from De Vries, *European Urbanization*, 36-37, 39, 45. Groningen clay soil area: census-data; before 1750 rough estimates based on various tax-data.

From 1700 onwards rural population growth in Europe, with the interesting exceptions of Ireland, Portugal and Italy, clearly accelerated continuously (table 2). In the wealthy Dutch provinces after 1700 growth resumed at a very slow pace, to accelerate around 1800. In most countries population growth also increased every half century until 1850. Nearly everywhere the countryside entered a phase of fierce population growth somewhere in the period 1700-1850. In this, in general pre-industrial, period the economy of the countryside had an agricultural base mainly, although in quite some regions proto-industrialisation rose to importance. Clearly, if agriculture is the major means of subsistence, population growth can not easily transform into economic growth due to a decrease in the land-labour ratio.

Table 2:

Average yearly rural population growth in Western, Central and Mediterranean Europe, 1600-1850

|                                 | 1600-1650      | 1650-1700       | 1700-1750       | 1750-1800      | 1800-1850      |
|---------------------------------|----------------|-----------------|-----------------|----------------|----------------|
| The Netherlands                 | 0.3%           | -0.1%           | 0.1%            | 0.2%           | 0.7%           |
| Belgium                         | 0.4%           | -0.1%           | 0.3%            | 0.6%           | 0.8%           |
| Scandinavia                     | 0.5%           | 0.2%            | 0.4%            | 0.7%           | 0.9%           |
| Great Britain                   | 0.3%           | -0.2%           | 0.2%            | 0.6%           | 0.7%           |
| Ireland                         | 0.5%           | 0.8%            | 0.2%            | 1.0%           | 0.4%           |
| Germany & Switzerland           | -0.5%          | 0.4%            | 0.2%            | 0.7%           | 0.6%           |
| France                          | 0.1%           | -0.1%           | 0.3%            | 0.4%           | 0.4%           |
| Italy                           | -0.3%          | 0.3%            | 0.3%            | 0.3%           | 0.5%           |
| Spain                           | -0.2%          | 0.1%            | 0.4%            | 0.3%           | 0.6%           |
| Portugal                        | 0.1%           | 1.1%            | 0.3%            | 0.5%           | 0.4%           |
| Total                           | -0.1%          | 0.2%            | 0.3%            | 0.5%           | 0.5%           |
| <i>Groningen clay soil area</i> | <i>c. 0.0%</i> | <i>c. -0.1%</i> | <i>c. -0.2%</i> | <i>c. 0.3%</i> | <i>c. 1.0%</i> |

Source: Calculated from the figures presented in table 1.

The problems confronting a society adapting its economy to a growing number of inhabitants is the scope of this article. We will investigate what population growth meant for people in a relatively modern market-oriented agricultural economy. The Groningen clay soil area is very well suited to study these consequences because it is a rather homogenous region with very clear capitalistic features.<sup>5</sup> The countryside was characterised by medium and large scale farms and a considerable amount of married but landless labourers, a deeply rooted money economy and equal inheritance for all children. Specialisation resulting in a relatively large number of people working in handicrafts and services for the local market and the absence of settlements with more than 2,500 inhabitants - most were between 100 and 1,000 - contributed to its homogeneousness. In the period 1750-1820 population rose with more than 40%, by no means exorbitant compared to other parts of Western Europe in the same period (table 2). Nonetheless, it will be shown that in this region impressive social changes were set in motion by growing population in the region itself and elsewhere. This process continued throughout the nineteenth century.

<sup>5</sup> R.F.J. Paping, *Voor een handvol stuivers. Werken verdienen en besteden: de levensstandaard van boeren, arbeiders en middenstanders op de Groninger klei, 1770-1860* (Groningen 1995).

Map of the Dutch provinces around 1820, with the Groningen clay soil area marked



In the eighteenth century, the Groningen clay soil area stands out as one of the most modern rural economies in the world. Comprising the coastal half of the province of Groningen in the north of the Netherlands, it was part of the rich Dutch coastal regions with Holland as its centre. Already before the war of independence against Spain (1568-1648) the Dutch coastal area had very modern characteristics.<sup>6</sup>

<sup>6</sup> J. de Vries, *The Dutch rural economy in the golden age 1500-1700* (New haven/London 1974); J. de Vries and A. van der Woude, *The first modern economy. Failure and perseverance of the Dutch economy, 1500-1815* (Cambridge 1997); A. Maddison, *Dynamics forces in capitalist development* (Oxford/New York 1991) 3-35; D. Landes, *The wealth and poverty of nations. Why some are so rich and some so poor* (New York/London 1998) chapter 10; J.L. van Zanden, *The rise and decline of Holland's economy* (Manchester/New York 1993) 19-41; P. Hoppenbrouwers and J.L. van Zanden, *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* (Turnhout 2001).

Here, during this so-called '80-year war' population, welfare and economic power increased rapidly.<sup>7</sup> However, in the last decades of the seventeenth century the Dutch coastal provinces were confronted with economic stagnation and falling population numbers. This contrasted sharply with the less wealthy interior provinces, where demographic development was more in line with nearby Germany. The fall in population lasted until somewhere between 1750 and 1800. In the northern provinces of Groningen and Friesland, population started to increase again around 1750, to accelerate around 1785-1790. Holland followed somewhat later.<sup>8</sup>

In this article we will investigate the consequences of such a rather sudden rise in population in this relatively modern, but economically stagnant rural region characterised by a market-oriented agriculture. We will concentrate on the first phase of population growth during the period 1750-1820. After depicting the demographic and agricultural developments, we will examine what happened to the social structure, unemployment and social mobility.

## Population

During the last decades of the seventeenth century the Groningen clay soil area experienced a serious decrease in population owing to dismal market circumstances (falling agricultural prices) reinforced by non-plague epidemics and a few floods washing away some 3,000 inhabitants. These negative effects out-weighted the disappearance of the plague after the sixties of the seventeenth century. Most important for the demographic development was the appearance of malaria. Endemic in these regions until 1750, it pushed up the death rate to above 40 or even 50 persons per 1.000 in more than half the years.<sup>9</sup> Fortunately, after 1750 malaria began to take fewer casualties and after a last bad period in 1779-1784 lost its importance as a constant cause of a high death rate. These developments seem to fit very well into the ideas of Habakkuk who attributed the European fall in mortality to more favourable climatic circumstances.<sup>10</sup> In Groningen, the improved drainage of agricultural land resulting in the near disappearance of permanent brackish water behind the dikes also played a major role. However, hot summers after a serious flooding of the land resulted in the return of the malaria midge, taking a heavy death toll in 1807-1809 and again in 1826-1827, 1847-1848 and 1857-1861.

<sup>7</sup> J.I. Israel, *The Dutch Republic. Its rise, greatness, and fall 1477-1806* (Oxford 1995) 241-327.

<sup>8</sup> B. Slicher van Bath, 'Historical demography and the social and economic development of the Netherlands', in: D.V. Glass and R. Revelle (eds.), *Population and social change* (London 1972) 334-338.

<sup>9</sup> R. Paping, 'Sterfte en overledenen in het Groningse landschap Hunsingo tot en met 1811', in: P.J.C. Elema and H.J.E. Hartog, *De overledenen van Hunsingo 1806-1811* (Groningen 2001) 15-16.

<sup>10</sup> H.J. Habakkuk, *Population growth and economic development since 1750* (Leicester 1971) 27-29, 50.

The high death rate in the Groningen clay soil area and the accompanying population fall did not stimulate migration towards the region in the period 1670-1750. Due to a deteriorating economic situation and the resulting low demand for labour, consumer and investment products, the region was not attractive as a destination for labourers looking for work, or for artisans who wanted to set up a small business. Only a few Germans from Eastern Friesland (mainly farm labourers) and Westfalia (mainly tailors, weavers, carpenters and salesmen) settled in this region, while on the other hand the flow of people towards the nearby city of Groningen - 24,000 inhabitants in 1795 - and to a lesser extent towards Holland (Amsterdam) did not disappear completely. Emigration to other destinations was not very attractive for the Groningen inhabitants, because of the economic backwardness of these regions as compared with the Dutch coastal region. Only after 1845 Northern America became a popular destination, especially for farm labourers.<sup>11</sup>

Table 3: Population development of the Groningen clay soil area 1750-1850 (numbers)

|            | 1750   | 1770   | 1795   | 1810   | 1820   | 1850   |
|------------|--------|--------|--------|--------|--------|--------|
| Population | 46.000 | 47.000 | 51.000 | 58.000 | 66.000 | 86.000 |

Source: estimated from census data; for 1750 and 1770 estimates based on micro population and tax data.

After 1750, falling death rates led to a hesitant recovery of the number of inhabitants. However, it was not until after the malaria epidemic of 1779-1784 before population began to rise more quickly - in years with normal mortality with about 1% per year. At first glance population growth seems related to a fall in mortality mainly, but there are some indications for higher marital fertility and a fall in average age at first marriage also to explain the renewal of population growth.

Table 4: Average age at first marriage in the Groningen clay soil area, people born 1721-1851

| Birth year | Males | N   | Females | N   |
|------------|-------|-----|---------|-----|
| 1721-1740  | 31.0  | 193 | 27.1    | 202 |
| 1741-1760  | 30.9  | 164 | 27.8    | 190 |
| 1761-1780  | 29.6  | 206 | 26.6    | 268 |
| 1781-1800  | 27.7  | 240 | 25.2    | 313 |
| 1811-1814  | 29.3  | 191 | 26.9    | 221 |
| 1831-1832  | 28.6  | 190 | 26.6    | 247 |
| 1850-1851  | 27.9  | 190 | 26.0    | 219 |

Source: 1721-1800: Database Roman Catholics Groningen; 1811-1851: P. Kooij and A. Mennes-van Zeijst, 'Demographic behaviour in the Groningen clay area. The results of cohort analysis, in: Kooij (ed.), *Where the twain meet*, 190.

<sup>11</sup> R. Paping, 'Family strategies concerning migration and occupations of children in a market-oriented agricultural economy', *The History of the Family. An International Quarterly* (2004).

As table 4 shows, average age at marriage was high in the Groningen clay soil area around 1750 compared to international standards. On average males married at the age of 31, females around the age of 27-28. For instance, in Belgian Flanders males married on average at 28 years, and females at 26-27 years.<sup>12</sup> In the eighteenth century average age at marriage for women was relatively stable at around 23, to rise sharply to 27-28 years in the middle of the nineteenth century, presumably in relation with the Great Famine caused by the potato blight.<sup>13</sup> However, the reported high age at marriage around 1750 in the Groningen clay soil area was by no means extraordinary. In the second half of the eighteenth century in Scania (Sweden) men married on average at the age of 32 and women at the age of 28, and even later in the preceding century.<sup>14</sup> This was a specific regional pattern, because for Sweden as a whole average age at marriage can be estimated at only 28 for men and 27 for women.

Interestingly, the fall in age at marriage in the Groningen clay soil area after 1780 did not continue after 1830/1835. The wedding for boys and girls born in the period 1781/1800 (taking place approximately between 1800 and 1835) occurred at an earlier age than for any other previous generation. Hence, the initial acceleration of population growth is explained by a fall in marriage age, but the prolonged growth during the nineteenth century is not. We will not dwell on the developments in the age at marriage elsewhere in Europe any longer, because there seems to have been no general pattern. In Sweden and Belgium age at marriage was rising somewhat until 1800, while England showed a clear fall from about 27 for men and 25 for women shortly before 1750 to 25 for men and 24 for women in the first decades after 1800.<sup>15</sup> These data suggest that falling age at marriage was not the prime mover of accelerating population growth in Europe after 1750. Next to falling mortality, other factors like increased marital fertility and declining celibacy might have been important.

### **Agricultural development: productivity and prices**

One of the most dangerous effects of population growth in the countryside is a Malthusian fall in labour productivity. According to the 'Law of Diminishing Marginal Returns of Labour', increased labour input and a constant size of the (ag-

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<sup>12</sup> I. Devos, 'Marriage and economic conditions since 1700: the Belgian case', in: Devos and Kennedy (eds.), *Marriage and rural economy*, 105, 118-123.

<sup>13</sup> L. Kennedy, 'Marriage and economic conditions at the West European periphery: Ireland, 1600-2000', in: Devos and Kennedy (eds.), *Marriage and rural economy*, 94.

<sup>14</sup> C. Lundh, 'Marriage and economic change in Sweden during the 18th and 19th century', in: Devos and Kennedy (eds.), *Marriage and rural economy*, 223, 226-227.

<sup>15</sup> Smith, 'Relative prices', 26.



ricultural) land will not result in an equal rise in production. Boserup suggested that population pressure will stimulate innovation and, in particular, the implementation of more labour intensive production methods. Although innovation in this way could reduce the adverse effects of considerable population growth, new technologies often only offered a partial compensation, especially before the second half of the nineteenth century.

As mentioned before, the Groningen agricultural system was very market-oriented. Farmers did not produce for their self provision but to sell most of their product in the market. Hardly any waste land was left; therefore the expansion of the agricultural acreage by nearly 10% between 1750 and 1820 was possible only through large-scale land reclamation along the coast. Some one third of the acreage was used for arable farming, the remainder for dairy and cattle-breeding mainly. In addition to oats, barley, cole- and rape-seed cultivated in large quantities, the region produced wheat as well as some rye, beans (fodder) and potatoes. The grain merchant Mattheus Hefting from Appingedam had stored 2,273 hl. of oats locally, while he also owned 231 hl. rye, 18 hl. wheat, 100 hl. beans and 127 hl. buckwheat in Amsterdam. On top of that he owned the half of five shiploads full of oats stored in London, worth some 20,000 guilders. Cole-seed and barley were also exported in huge amounts from the Groningen clay soil area. Stock farming - although seemingly using more land - was of less importance. Animal husbandry largely served to produce the manure arable farming needed to secure a high(er) production per hectare.<sup>16</sup> A considerable part of the grassland was used to pasture horses. Nevertheless, every farm produced a surplus in butter. Cattle, four or five year-old so-called "Holland cows" and two or three year old oxen were generally exported to Holland. The breeding of pigs and sheep was less important.

It is difficult to paint a reliable picture of the size of eighteenth century agricultural output, because official statistics on arable production start in 1817 only, and for livestock data on the number of cows, sheep, horses and pigs are available for a few years in the first half of the nineteenth century only. Fortunately, scrutinising accounts for some 40 farms enabled us to estimate agricultural production per hectare from 1765 onwards. Taking into account the increase in land, it is possible to estimate the development of agricultural labour productivity for the last decades of the eighteenth century.<sup>17</sup> With minor changes in total labour input only, short term

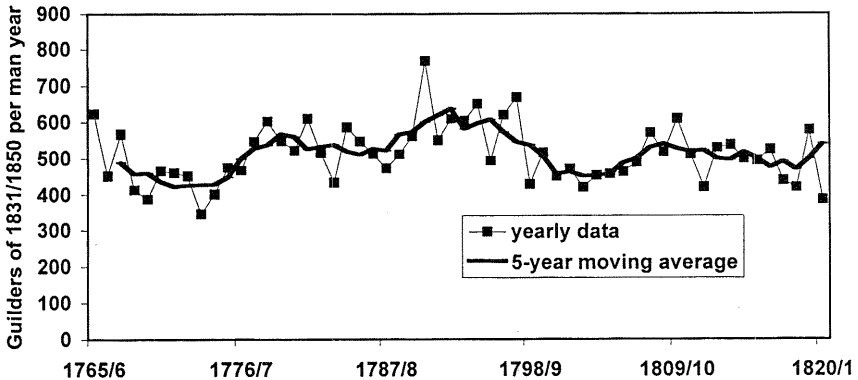
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<sup>16</sup> P.R. Priester, *De economische ontwikkeling van de landbouw in Groningen 1800-1910* (Wageningen 1991).

<sup>17</sup> R. Paping, 'De agrarische productie in Groningen 1762-1862: een alternatieve schattingsmethode', *NEHA-Jaarboek voor economische, bedrijfs- en techniekgeschiedenis*, 58 (1995) 195-216.

changes in labour productivity are indicative for changes in short term total agrarian production.

Graph 1: Estimated agricultural labour productivity in the Groningen clay soil area, 1765-1820



The large volatility of the agricultural production is the first thing to be noted in graph 1. Production could quite easily fall or rise by some 20% to 40%. In the long run labour productivity was rather stagnant, with a rise until around 1795, and a fall afterwards continuing until around 1820. The rise up to 1795, however, does not reflect a long term structural increase. Between 1766 and 1773 a heavy livestock plague hit the Groningen countryside, killing the majority of the cattle. Livestock production fell to less than half its normal level. Before 1766 therefore, per capita agricultural production must have been considerably higher, presumably somewhere around or even above 600 guilders. After 1795, per capita production fell to an average of less than 500 guilders or even less, only to rise temporarily in the decade after 1820.<sup>18</sup> Per capita agricultural production figures falling some 20% clearly reflect the adverse effects of population growth in the Groningen clay soil area from the middle of the eighteenth century onwards. A population increase with 40 % and for cultivated land with some 8% resulted in a rise of agricultural production with some 25% only between 1765 and 1820.<sup>19</sup> Assuming equal weights for land and labour in a Neo-Classical production function and ignoring other capital, this suggests technological stagnation in the second half of the eighteenth century.

<sup>18</sup> Estimated agricultural production per capita in guilders of 1831/1850: 1765/66 f 624; 1766/76 f 442; 1776/1786 f 539; 1786/1796 f 574; 1796/1806 f 495; 1806/1816 f 518; 1816/1821 f 469; 1821/1831 f 541; 1831/1841 f 497; 1841/1851 f 452; 1851/1861 f 464.

<sup>19</sup> The amount of available land per capita fell from 2.1 hectare to 1.6 hectare per capita between 1760 and 1820.

Within agriculture in the second half of the eighteenth century the law of Decreasing Marginal Returns of Labour was working throughout Western Europe, forcing food prices to rise in reaction to population growth. Rising prices were reinforced by a relatively large increase in non-agrarian urban population. During the Napoleonic period and its direct aftermath (1794-1817) in particular, agricultural prices were very high. In some years the prices were double they had been around 1750 (see also table 10). The renewed influx of grain from Eastern Europe was needed to bring down prices.

### **Farm size and occupational structure**

In Groningen, most farmers cultivated more than 5 hectare - smaller farms were quite unusual - most labourers had at their disposal very tiny gardens only to grow some vegetables, beans and potatoes. Plots of land less than 5 hectares, were used mainly by the middle classes (artisans, shopkeepers and the like), but were not large enough to feed a family. Despite the rise in population, the number of farms in the Groningen clay soil area actually fell in the second half of the eighteenth century (table 5). Despite equal inheritance, in France for instance a powerful incentive for dividing a farm into smaller farms, Groningen farmers preferred to hand down their farms as a whole. In this money economy farmers preferred to leave their farm to one of the children, compensating the others with inheritances in money. A further obstacle to dividing up a farm can be found in the structure of land ownership. Division of the land belonging to a farm was a prerequisite for splitting up the farm. Farmers, although de facto owners of the land, needed the consent of the legal owners to divide their farm into two or more smaller farms. Splitting up, therefore, was legally complex as well as economically unsound. In fact, the opposite took place: economies of scale promoted increasing farm size at the expense of smaller farms. Especially the number of small farms comprising 5 to 20 hectare decreased: most were bought by middle-sized or large farmers. The same process occurred within the group of middle-sized farms. A substantial part of these farms managed to acquire land and thus to grow, others fell to insignificance. The history of a few farms in this period can be illuminating.

In 1762 Tonnis Berends and his wife sold a farm comprising 19.9 hectare in the village of Uithuizen for the sum of 1,500 guilders to Ritse Jans and Maria Jans, married two years before. At their death the farm was sold by the guards of their children to their newly-wed uncle Pieter Jans for 3,560 guilders in 1782. After his death, his widow remarried with Okke Reinders in 1793. When they ran into financial problems, their creditors sold the farm for 5,701 guilders to a local physician and his

wife in 1796. In 1798-1799 this physician sold most of the land belonging to the farm for a total of 5.288 guilders, mainly to farmers who thus increased the size of their land. Our physician kept some 4 hectares for himself, presumably to graze his horse and some cows.

Table 5: Farm size in the Groningen clay soil area, 1755-1816

|                      | 1755  | 1816  | 1816 as % of 1755 |
|----------------------|-------|-------|-------------------|
| 5-10 hectare         | 676   | 518   | 77%               |
| 10-20 hectare        | 854   | 596   | 70%               |
| 20-30 hectare        | 663   | 636   | 95%               |
| 30-40 hectare        | 582   | 557   | 96%               |
| 40-50 hectare        | 332   | 386   | 116%              |
| 50-60 hectare        | 170   | 185   | 109%              |
| More than 60 hectare | 83    | 214   | 258%              |
| Total (N)            | 3,360 | 3,092 | 92%               |

Source: Paping, *Voor een handvol stuivers*, 71.

The growth in size of some farms can also be attributed to land reclamation. In 1755 the Ikema-farm in Kloosterburen was taxed for 17.4 hectare, while according to a source in 1770 another 13.9 hectare was lying outside the dike. Land reclamation in the next decades brought this land within the dike, and the farm size increased to a stated 31.2 hectare in 1806.

The result of population growth, combined with a diminishing number of farms was proletarianisation. During the period 1750-1820 the number of farm labourers nearly doubled, with the largest increase after 1800. By then, there were more landless labourers than farmer families already, a situation which made Groningen unique. The rural labouring classes continued to grow rapidly until around 1880. By the end of the nineteenth century labourers outnumbered farmers with a factor three in the Groningen clay soil area.<sup>20</sup> Proletarianisation, however, occurred in the agricultural sector only, services and industry remained to be dominated by small size trades, employing at best only one to three juveniles. A substantial labouring class outside agriculture appeared at the end of the nineteenth century only, when at last industrialisation began to have some effects in the Groningen clay soil area. Interestingly, population growth in the Groningen clay soil area from 1770 to 1820 created a demand for consumer and investment goods large enough to let the service and industry sector grow in pace.

<sup>20</sup> R. Paping and G. Collenteur, 'The economic development of the clay area of Groningen 1770-1910: Income and socio-economic groups', in: P. Kooij (ed.), *Where the twain meet. Dutch and Russian regional development in a comparative perspective* (Groningen/Wageningen 1998) 39.

Table 6: Occupational structure of heads of  
households in the Groningen clay soil area, 1770-1820 (estimates)

|      | Farmers |     | Labourers |     | Industry |     | Services |     |
|------|---------|-----|-----------|-----|----------|-----|----------|-----|
|      |         |     |           |     |          |     |          |     |
| 1770 | 3,037   | 32% | 2,435     | 26% | 2,036    | 21% | 2,042    | 21% |
| 1800 | 2,857   | 27% | 3,284     | 31% | 2,289    | 21% | 2,293    | 21% |
| 1820 | 2,815   | 22% | 4,566     | 35% | 2,722    | 21% | 2,785    | 22% |

Heads of families and their partners made up a substantial part of the labour force. The wives of farmers and farm labourers also were active as agrarian workers mainly, while wives of artisans and tradesmen often helped their husband. High age at marriage resulted in a considerable part of the labour force being young and unmarried. Some of these youngsters could be employed in the family firm, but for many this was not feasible because the firm offered no employment. Children from the age of 12 to 14 onwards already had some possibility to be employed as live-in farm hands or maids. Artisans, salesmen, schoolmasters and preachers quite often also had domestic personnel. Sometimes large farms and wealthy artisans needed these servants structurally. But they could also be used to fill in temporary positions, for example to replace a deceased husband or wife, or to provide labour for a household whose children were still too young. The servant system allocated available, but superfluous labour in some household economies to other households with (temporary or structural) shortages. Unfortunately, for the eighteenth century we do not have data to estimate the magnitude of domestic personnel exactly, but it must have been more than 10% of total population. Therefore, working as a live-in servant was part of the lifecycle for the majority of the labour force.

Large farms indeed had several live-in servants, nearly always hired for one year running from May to May or from November to November. For several reasons, however, there was not much continuity among these servants (table 7). When growing older, servants expected to earn a higher money wage, but normally farmers hesitated to pay much more than previous. They needed servants with specific qualities (experience and labour power) related to their farm and household structure. Larger farms, therefore, had several positions for servants. For example, the farm Eendnest (43 hectares) normally employed three male servants, decreasing in age from the elder one via the middle one to the youngest servant. Starting in 1764 this farmer also hired a very young servant, which he called boy or in Dutch “vent”. As the farmer was not inclined to promote his servants to a higher position, securing work with a different farmer enabled Sijmen Mennes and Sicke to obtain a higher (and better paid) position. This too was the case for both female servants. Continuity was even less among the maids - with the exception of Anje no maid stayed for more

than one year, which resulted in the farmer employing ten girls for two positions in six years. As a result of these capitalistic labour relations no really stable paternalistic relation between the farmer family and its servants could arise. Although they lived and ate together for a year farmers did not develop a paternalistic responsibility for their labourers as existed elsewhere, for example in Southern Europe.<sup>21</sup>

Table 7: Yearly wages in guilders for servants living at the farm Eendnest in Garsthuizen, 1760-1766

|                      | 1760/61 | 1761/62 | 1762/63 | 1763/64 | 1764/65 | 1765/66 |
|----------------------|---------|---------|---------|---------|---------|---------|
| MALE:                |         |         |         |         |         |         |
| Freerk Meertens      | 80      | 86      | 88      |         |         |         |
| Jacob Pieters        | 43      |         |         |         |         |         |
| Albert               | 19½     |         |         |         |         |         |
| Jouke Jacobs         |         | 63      |         |         |         |         |
| Sicke                |         | 50      |         |         | 70      |         |
| Sijmen Mennes        |         |         | 65      |         | 85      | 88      |
| Pieter               |         |         | 50      |         |         |         |
| Claas Jacobs         |         |         |         | 84      |         |         |
| Harm Willems         |         |         |         | 45      |         |         |
| Roelef Harmens       |         |         |         |         | 50      | 55      |
| Youngest hand "vent" |         |         |         |         | 14      | 18      |
| Middle hand          |         |         |         |         |         | 68      |
| FEMALE:              |         |         |         |         |         |         |
| Trijnie              | 33      |         |         |         |         |         |
| Trijne Sickes        | 24      |         |         |         |         |         |
| Anje                 |         | 28½     | 31½     |         |         | 33½     |
| Fennie               |         | 22½     |         |         |         |         |
| Mejske               |         |         | 25½     |         |         |         |
| Bouke Pieters        |         |         |         | 33      |         |         |
| Stijne               |         |         |         | 27      |         |         |
| Jantien              |         |         |         |         | 33      |         |
| Grietie              |         |         |         |         | 27      |         |
| Geertien             |         |         |         |         |         | 25½     |

Source: privately owned wage book of Eendnest; copy with the authors.

<sup>21</sup> I. Dubert, 'Domestic service and social modernization in Urban Galicia 1752-1920, *Continuity and Change*, 14 (1999) 207-208; G. Da Molin, 'Family forms and domestic service in Southern Italy from the seventeenth to the nineteenth centuries', *Journal of Family History*, 15 (1990) 503-527.

Young people, males in particular, were in theory able to save quite some money during their life as live-in servants. Their yearly wages at least seem to have been enough to save and buy a decent house for some 300-500 guilders at the moment they wanted to get married at the age of 28-30. In practice, however, most of their money income in the period prior to their wedding seems to have been spent on cloths and drinks, while many a young servant also had to pay part of their money wage to their parents.

### Ages at marriage, wages and farmers wealth

Part of the population development in the Groningen clay soil area can be explained by pointing at the late age at marriage in all occupational groups for both men and women born before 1760 compared to those born after 1780. Behind this general pattern distinct social differences were hidden. Initially, in general farmers' daughters married at the youngest age, followed by daughters originating from industry and service families. Labourers' daughters were relatively old at their wedding. Interestingly, around the end of the eighteenth century these positions changed completely, with farmers' daughters marrying at a later age than those of labourers. In the nineteenth century late age at marriage for farmers' wives perhaps also was practised to restrict fertility and thus to avoid splitting inheritances in too many parts. For labourer's daughters only the fall in age at marriage with about two years in the first decades of the nineteenth century -when the marriages of girls born between 1780 and 1800 took place- turned out to be a structural phenomenon (table 8).

Table 8: Age at first marriage for daughters from different occupational groups, born 1721-1872 in the Groningen clay soil area

|           | Farmers |     | Labourers |     | Other |     |
|-----------|---------|-----|-----------|-----|-------|-----|
|           | Age     | N   | Age       | N   | Age   | N   |
| 1721-1740 | 26.9    | 93  | 27.7      | 52  | 26.9  | 57  |
| 1741-1760 | 26.2    | 77  | 30.3      | 35  | 28.2  | 78  |
| 1761-1780 | 26.0    | 110 | 27.2      | 57  | 27.0  | 101 |
| 1781-1800 | 24.0    | 92  | 26.1      | 65  | 25.3  | 156 |
| 1830-1872 | 27.1    | 116 | 26.0      | 303 | 26.7  | 418 |
| 1721-1872 | 26.1    | 488 | 26.6      | 512 | 26.6  | 810 |

Source: 1721-1800 Database Groningen Roman-Catholics; 1830-1872 (all denominations): G. Collenteur and R. Paping, 'Age at first marriage in eighteenth and nineteenth-century Russia and the Netherlands: tradition or economic and social circumstances?' in: P. Kooij and R. Paping (eds.), *Where the twain meet again. New results of the Dutch-Russian project on regional development 1780-1917* (Groningen/Wageningen 2004).

More or less the same development took place for men (table 9). Age at marriage for sons of labourers went down with some four years, while sons of farmers and those of fathers active in industry or services married approximately three years younger. Differences in age at marriage between sons and daughters of labourers were quite small during the eighteenth and nineteenth century.<sup>22</sup> But in sharp contrast with their sisters, around 1750 sons of labourers married at the youngest age. With an average age at marriage well above 30, sons of established farmers, artisans and salesmen in the eighteenth century clearly were reluctant to marry young. Again remarkable are the very young brides and grooms born between 1781 and 1800; for this generation there seems to have been far less reason to postpone marriage. Later on, in the nineteenth century, the age at marriage increased again, although it did not return to the high levels of around 1750. Labourers' sons in particular, continued to marry quite young, a phenomenon they shared with their sisters.

Table 9: Age at first marriage for sons from different occupations, groups born 1721-1872 in the Groningen clay soil area.

|           | Farmers |     | Labourers |     | Other |     |
|-----------|---------|-----|-----------|-----|-------|-----|
|           | Age     | N   | Age       | N   | Age   | N   |
| 1721-1740 | 31.1    | 94  | 29.2      | 35  | 31.9  | 64  |
| 1741-1760 | 31.8    | 51  | 29.5      | 28  | 30.9  | 65  |
| 1761-1780 | 29.4    | 85  | 28.9      | 43  | 30.1  | 78  |
| 1781-1800 | 28.4    | 76  | 24.9      | 34  | 28.0  | 130 |
| 1830-1872 | 30.1    | 104 | 26.7      | 238 | 28.9  | 363 |
| 1721-1872 | 30.1    | 410 | 27.2      | 378 | 29.3  | 700 |

Source: See table 8.

In the eighteenth century labourers' daughters were marrying rather old and farmers' daughters rather early, but in the nineteenth century the situation was reversed. We shall argue that for a labourer postponing his marriage was less important around 1800, because a little farm or even a house by then had become impossible to obtain by working as a live-in servant a few years longer. On the other hand, for a farmer's son or daughter postponing marriage had become more important, because of the increased need for capital to acquire a farm, or to continue their parents' farm. But perhaps this group also postponed their marriages to restrict the number of their children. Changes in marriage strategy within different social groups were strongly related to economic developments which took place on a macro level.

<sup>22</sup> An explanation may be found in a surplus of young women, see below.



As mentioned before, in the middle of the eighteenth century all over Western-Europe farm prices again began to rise in reaction to accelerating population growth nearly everywhere. The value of farm products, of course, was immensely important for the economies of capitalistic rural regions like the Groningen clay soil area. It determined the terms of trade with which the agricultural surplus was exchanged for all kinds of more or less industrial products (textiles), groceries (sugar), raw materials (wood) and fuel (peat). This extra-regional trade had to result in a money surplus in the region to pay for taxes (mainly spend outside the region) and rents (largely owned by people living outside the region).

Table 10: Real land prices and real wages, harvest years, 1762-1820; deflated with agricultural prices (1770/1780 is 100)

|           | Agri-cultural prices | Land price per hectare | Real wage for female farm servants | Real wage for male farm servants | Real wage for married male farm labourers | Real wage for master carpenters |
|-----------|----------------------|------------------------|------------------------------------|----------------------------------|---|---------------------------------|
| 1762/1770 | 92                   | 107                    | 108                                | 104                              | 107                                       | 106                             |
| 1770/1780 | 100                  | 100                    | 100                                | 100                              | 100                                       | 100                             |
| 1780/1790 | 108                  | 98                     | 102                                | 98                               | 92  | 94                              |
| 1790/1800 | 128                  | 98                     | 98                                 | 96                               | 81  | 85                              |
| 1800/1810 | 162                  | 100                    | 96                                 | 88                               | 65  | 83                              |
| 1810/1820 | 156                  | 101                    | 108                                | 99                               | 82  | 94                              |

Source: Calculated from Paping, *Voor een handvol stuivers*; Paping, 'Agrarische productie', G.A. Collenteur and R.F.J. Paping 'De arbeidsmarkt voor inwonend boerenpersoneel in het Groningse kleigebied 1830-1920', *NEHA-Jaarboek voor economische, bedrijfs- en techniekgeschiedenis*, 60 (1997); Priester, *De economische ontwikkeling*, 518.

Surprisingly, the real price of land did not increase in this period of population growth, possibly also due to some large land reclamation projects. The only sign of land scarcity was the impressive relative price rise compared to wages for adult male labourers. However, land prices in the Groningen clay soil area developed a bit more complicated than can be interfered from table 10. In the course of the eighteenth century, major changes took place in the legal conditions on which land was rented to farmers. In the seventeenth century farmers leased their land for a period of six years but at the same time owned the buildings on the land, which made it difficult to expel them legally after the expiring date. As a result, during the period of relatively low prices prior to 1750, land rents in practice became fixed on a very high level given the then current low price level. In the period 1750-1780, farmers paid considerable sums of money to the land owners for contracts stating that the height of the rent was everlasting and that the inheritable right to use the land could be sold to anyone. The consequences of this legal consolidation of fixed rents will be clear: from the second half

of the eighteenth century onwards almost all benefits from rising land prices were reaped by the farmers. The market value of the right to use the land could increase by a factor five or more while rents remained constant. In this way, in the course of the nineteenth century farmers became de facto owners of the land they used.

The growing labour force and a fall in agricultural labour productivity resulted in the second half of the eighteenth century in a clear downward trend in real wages for male farm labourers and - to a lesser extent - of artisans like carpenters. Consequently, the standard of living for working class families strongly deteriorated in the first decades of the nineteenth century.<sup>23</sup> What catches the eye, however, is the relatively favourable development of the wages for live-in farm servants. Their fall in real wage was substantially lower than that for married labourers or carpenters. Real wages for farm maids indicate that, for Groningen at least, Richard Smith is not right in suggesting that the fall in female age at marriage was due to a fall in employment for unmarried females. Rather, it was the opposite: intensification in agriculture and growing wealth for farmers resulted in a fast increase in demand for live-in farm personnel precisely at a time when falling age at marriage limited the number of girls available for such jobs.

To calculate the number of female servants with any precision is a hazardous task. For 1829, the number of female farm servants can be estimated at 3,200 against 4,300 farm-hands, which means 4.5% of total population of 71,000.<sup>24</sup> At that moment average age at marriage for girls from labourer families was about 26, while around 1750 it stood at about 28. If we take 14 as the average age a girl started to work as a servant, a rough estimate of the number of maids working on farms in 1750 would be 2,400. Between 1750 and 1830 total population rose with 50%, but our estimate suggests only a one third increase in the number of farms maids. In this respect, it is not strange that wages for maids expressed in agricultural prices did not fall in this period. They developed rather favourable when compared with wages for both male and female non-resident workers. Daily wages for married female labourers rose with less than a quarter - from about 35 cents in the period 1770-1794 to 42-44 cent in the period 1802-1819. By comparison, yearly wages for maids increased more than 60% from an average of 29 guilders in the period 1770-1779 to 47 guilders in the period 1810-1819 (in addition to free board and lodging).<sup>25</sup>

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<sup>23</sup> Paping and Collenteur, 'The economic development'; Paping, *Voor een handvol stuivers*, passim.

<sup>24</sup> R. Paping, 'Demand and supply for live-in farm servants 1760-1920: the case of Groningen (The Netherlands)', Paper September 2003 Munich workshop 'domestic work', to be published in *Historia Agraria*.

<sup>25</sup> Paping, *Voor een handvol stuivers*, 348.

Table 11: Working days for male and female non-resident labourers on several farms in Groningen

| Period    | farm                    | males      | females  | % female |
|-----------|-------------------------|------------|----------|----------|
| 1773-1775 | Jacob Heeres, Den Andel | 345 days   | 32 days  | 9%       |
| 1803      | clergyman, Midwolda     | 148 days   | 33 days  | 22%      |
| 1803-1804 | Rentje Jans, Den Andel  | 202 days   | 21 days  | 10%      |
| 1816-1820 | Family Bouman, Beerta   | 1,890 days | 606 days | 32%      |

Source: R.F.J. Paping, 'Vaste en losse arbeiders en de werkloosheid op de Groninger klei 1760-1820', *NEHA-Jaarboek voor economische, bedrijfs- en techniekgeschiedenis*, 57 (1994) 156.

The question therefore, still remains unanswered: why did girls around 1800 marry younger than before? Previously, it was shown that to marry young was not very attractive. As a farm servant an unmarried adult woman could earn a fair amount of money, some 60 guilders a year and enjoyed free board and lodging on top of that. A married female day-labourer working 300 days could earn 130 guilders, but in this case she had to pay for her own food and housing. But she could not find work the whole year through. At best a non-resident female labourer found work during the harvest season from May to August (table 11) only. The remainder of the year she had to look for scarce cleaning jobs or turn to spinning or knitting, activities that rarely earned more than 15 cents a day. Therefore, for a girl the decision to marry meant a substantial fall in income, making a wedding an economically very unattractive decision for the lower classes depending on wage income. Postponing the marriage created a possibility to save money, which could be used to buy a house or, even better, a small farm.

Precisely this prospect disappeared around 1800. Small farms became very expensive in the last decades of the eighteenth century and even more so in the Napoleonic period. The system of fixed rents in combination with rising prices drove up the price for a farm with the right to use a certain amount of land to more than 1.000 guilders. In 1764, for example, in the village of Bedum a small farm with the use of 5.8 hectares and a fixed rent of 24 guilders was sold for 625 guilders. By contrast, in 1809 in the same village a plot of land of 2.7 hectare without a farm-stead but with a fixed rent of 9 guilders changed hands for a price of 1,433 guilders. Because rents were fixed, not the rent-owner but the user of the land profited from rising (nominal) land prices, so the price for the right to use land soared. In the meantime the real value of the owners' right to receive an annual fixed rent nearly halved.

So, in the early nineteenth century, a sum of at least 3.000 guilders was required to buy even a small farm. For wage-owners such an amount of capital was impossible to save, and without the prospect of a sizeable inheritance, no-one would take

the risk of lending this sum to a young couple. Taking into account that equipment, seed, and livestock had to be bought also, for wage workers owing a small farm had become a far away dream (table 12). The difference in wealth between farmers and labourers grew to enormous proportions in just a few decades, because of the rise in farm prices. Nonetheless, in 1810 two thirds of the Groningen labourer families were still able to finance a house of their own, although with an increasing amount of borrowed money. The relatively high gross and low net wealth of labourer families, bear witness to this situation (table 12). Increasing difficulties to find an appropriate money-lender changed this situation completely over the next decades, with in 1862 only 39% of the labourer families owning their own house.<sup>26</sup>

Table 12: Median wealth in the Groningen clay soil area, 1770-1811 (guilders)

|           | 1770-1782 |       |        | 1805-1811 |       |        |
|-----------|-----------|-------|--------|-----------|-------|--------|
|           | gross     | net   | number | gross     | net   | number |
| Farmers   | 4,033     | 2,244 | 83     | 14,438    | 8,908 | 48     |
| Labourers | 256       | 140   | 74     | 369       | 63    | 38     |
| Others    | 1,354     | 422   | 80     | 2,232     | 606   | 37     |

Source: Paping, *Voor een handvol stuivers*, 199; estimates based on inventories.

By 1800 then, for children of poor families to postpone their marriage no longer made any sense. It would not help them achieve upward social mobility, so why wait? A fall in age at marriage was the result. Although difficult to assess, cultural reasons also might have been influential in the fall in age at marriage, because the amount of illegitimate children was rising in the same period.<sup>27</sup> Shorter suggested this development might stem from a radical change in the conception of marriage with sexual attraction becoming more important,<sup>28</sup> - an idea that has met with little approval until now. On the other hand, in the Groningen clay soil area girls and young women might have been induced to a more risky behaviour in their hunt for a partner. In the eighteenth century, there seems to have been a large surplus of women waiting to be wed. This surplus, resulting from a lower child and adolescent mortality for females, was only partly compensated by an increased influx of males from Germany and elsewhere.

<sup>26</sup> Paping, *Voor een handvol stuivers*, 209.

<sup>27</sup> V.C. Sleebe, *In termen van fatsoen. Sociale controle in het Groningse kleigebied* (Groningen 1994) 407-413; Paping, 'Papisten in de Ommelanden'.

<sup>28</sup> E. Shorter, *The making of the modern family* (New York 1975).

## Social mobility

Population growth not accompanied by a proportional increase in land or capital can be very detrimental to the economic opportunities open to individuals in the course of their life. Precisely this seems to have been the case, not only in rural Groningen but possibly also elsewhere in Western Europe. For the larger part of the Groningen clay soil area we have at our disposal a database on the social mobility of the Roman Catholics.<sup>29</sup> For some 7% of total population we are able to focus on changes in social circumstances due to population growth. Unfortunately, Roman Catholics were not completely representative for the whole population. The majority of the Roman Catholics had been living in the Groningen clay soil area for generations, but in each generation they were supplemented by German immigrants from nearby Catholic Westphalia mainly. This region was economically less advanced and experienced fierce population growth, which stimulated large scale migration to the Dutch coastal area from the sixteenth to the nineteenth century. Thus, among the Groningen Roman Catholics many had German parents or grandparents. That would not be a problem, had these immigrants not have had a specific occupational pattern. Unfortunately, due to the influx from Germany, Roman Catholics were over-represented among weavers, tailors and carpenters. On the other hand, relatively few labourers were Roman Catholic, because the lower classes in the Groningen rural population turned Protestant in the first half of the seventeenth century.

During this difficult period, in which the celebration of the Roman faith was severely suppressed, only more affluent farmers and artisans and shopkeepers could afford to remain Roman Catholic.

The under representation of sons and daughters from Roman Catholic labourers and the over representation of those from farmers had more general reasons also. Within each generation mortality rates for children and adults living within farmer families were lower than those for labour families. The average age at marriage for farmers' daughters also was lower and the marriage fertility for farmers somewhat higher. Hence, farmer families were nearly twice as reproductive as labourer families, with artisans and the like taking a middle position.<sup>30</sup>

The number of Roman Catholic children born in the Groningen clay soil area for which marriage data is available reflects the general population trend. In our database their number fell from a relatively high 398 in the period 1721-1740, to 341 in

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<sup>29</sup> Only the Oldambt, approximately 20% of the region, were nearly no Roman Catholics were living was left out.

<sup>30</sup> Paping, 'Papisten in de Ommelanden'.

1741-1760 when population was at its lowest level, to rise quickly afterwards to 476 in 1761-1780 and even 557 in the period 1781-1800. The increase in total number was somewhat higher for Roman Catholics than for other groups due to the influx of German weavers and tailors in the second half of the eighteenth century.

Table 13: Social mobility among married Roman Catholics born in the Groningen clay soil area 1721-1800

|                              | Birth year | Total children N | emigrants N | became farmer (%) | became middle class (%) | became labourer (%) |
|------------------------------|------------|------------------|-------------|-------------------|-------------------------|---------------------|
| Farmers' children            | 1721-1740  | 189              | 5           | 67%               | 17%                     | 16%                 |
|                              | 1741-1760  | 130              | 7           | 63%               | 25%                     | 12%                 |
|                              | 1761-1780  | 195              | 12          | 65%               | 22%                     | 13%                 |
|                              | 1781-1800  | 168              | 9           | 59%               | 21%                     | 19%                 |
| Children from middle classes | 1721-1740  | 123              | 20          | 12%               | 74%                     | 15%                 |
|                              | 1741-1760  | 146              | 19          | 7%                | 77%                     | 16%                 |
|                              | 1761-1780  | 179              | 35          | 10%               | 70%                     | 19%                 |
|                              | 1781-1800  | 288              | 32          | 5%                | 72%                     | 23%                 |
| Labourers' children          | 1721-1740  | 86               | 3           | 23%               | 20%                     | 57%                 |
|                              | 1741-1760  | 65               | 7           | 16%               | 34%                     | 50%                 |
|                              | 1761-1780  | 102              | 6           | 6%                | 19%                     | 75%                 |
|                              | 1781-1800  | 101              | 10          | 3%                | 38%                     | 58%                 |

Source: Database Groningen Roman Catholics.

Table 13 shows that the number of Roman Catholic farmer's children did not rise structurally during the eighteenth century, reflecting the diminishing number of farms. Due to the immigration of German artisans the number of middle class children reaching marriageable age increased enormously, whereas the number of such children from labourer families showed a fast increase after the middle of the eighteenth century only.

Unfortunately, the number of children from labourer families is rather small, which makes it difficult to present reliable conclusions. One pattern, however, is completely clear: where children of labourer families, born in the period 1721-1740, had a chance of nearly 25% to obtain a farm, for those born between 1761 and 1800 the likelihood to obtain a farm was very small. As argued before, by then for someone from the labouring classes a farm had become too expensive to buy. Wage levels were

way too low when compared with prices for farms for savings to be useful to buy a farm. Only through a large inheritance or a favourable (socially unequal) marriage children from labourer families could hope to acquire a farm. An example of the last phenomenon is provided by Harm Jans (1776-1840), son of an Uithuizen cottager using 2.7 hectare. In 1804 he married the substantially older farmer's daughter Deborah Eedes (1769-1847) and together they received her parents' farm with 22 hectare in Uithuizen.

Their specialised skills turned the middle class into a relatively closed social group. Some three fourth of their children in turn achieved an occupation as an artisan or salesman - or married a husband with such an occupation. The chances for these children to acquire a farm, already quite restricted, fell again a little during the second half of the eighteenth century. Their chances to become a labourer, however, increased. Thus, within the group of children born in middle class families, upward intergenerational social mobility decreased and downward social mobility increased.

The story was not very different for children from farmers' families. Their possibilities to acquire a farm also decreased slightly, and as a result more of these children found their way into the petty middle class or into the working class. Considering that the middle-sized and large farmers were the wealthiest part of the population, we again have to assume a tendency towards increasing downward social mobility. Presumably, children from a rich farmer could afford to buy a smaller farm, thus diminishing the chances for less wealthy farmers. Sometimes all children of a small farmer were forced to make a living as farm labourer, small artisan or shopkeeper. Pieter Jans and Jemme Lubberts' five children provide an example of this downward social mobility. From 1757 till 1786 the family occupied a small farm of 11.6 hectare in Zuurdijk. Their only son became labourer, two daughters married a labourer, one married a carpenter and their oldest daughter ended her life unmarried as a 70-year old maid. The story of the prosperous farmers Julle Jans and Lijsabeth Freerks and their four daughters and four sons is illuminating also. From 1755 to 1803 the family used 42 hectares in Kloosterburen. Out of their eight children seven acquired farms of their own, one married a wealthy shopkeeper and, when widowed, a miller. However, two of their sons and one of their daughters held farms considerably smaller than their parental home.

Table 14: Occupations after marriage, Roman Catholic children born in the Groningen clay soil area 1721-1800

|           | Farmers | Middle Class | Labourers | Departed | Total |
|-----------|---------|--------------|-----------|----------|-------|
| 1721-1740 | 153     | 125          | 92        | 28       | 398   |
| 1741-1760 | 95      | 149          | 64        | 33       | 341   |
| 1761-1780 | 140     | 159          | 124       | 51       | 476   |
| 1781-1800 | 110     | 254          | 142       | 53       | 557   |

Source: Database Groningen Roman Catholics.

During the period of population growth from 1750 tot 1820 the number of farmers fell, whereas the number of labourers rose substantially. Even among Roman Catholics, with their over representation amongst farmers, children born at the end of the eighteenth century had far more chance to end up as a labourer than as a farmer (table 14). Increasing downward and decreasing upward social mobility was the result. The adverse effects of this trend, however, were mitigated by the existence of a large middle class in this specialised market economy. The rural middle classes still provided possibilities for upward social mobility for labourers. At the same time they offered an escape route for farmers' children trying to avoid painful downward social mobility into the working class.

### Concluding remarks

Our research clearly showed the enormous consequences population growth has in an eighteenth century market economy and for its social structure in particular. A growing population provokes rising prices with many different distributional effects. However, these rising prices do not necessarily have to originate in population growth in the region itself, but may also be triggered by a more general (European) population growth. In both cases the result is an increase in demand for food products, in the eighteenth century difficult to meet by an increase in supply because of slow technological development and decreasing marginal returns of labour in agriculture. In the Groningen clay soil area growing population was indeed accompanied by growing agricultural production, but not enough so to keep labour productivity on the same level. As a result real wages fell, while real rents remained constant due to the growing scarcity of land.

The development in the number of farms provides an answer to the question whether population growth stimulated the breaking up of large farms into smaller holdings. Contrary to experiences in, for example, eighteenth century France, the number of farms in the Groningen clay soil area fell, resulting in large farms growing



in size. Equal inheritances in this market economy did not stimulate the division of farms at all. Apparently, for large farmers their scale advantages resulted in a very strong capital position. Accordingly, despite their large families, the majority of their children could acquire a farm. Clearly, maintaining or even increasing their social position by wealthy farmers went at the expense of smaller farmers, who frequently did not have the capital to even keep a farm into the family. Evidently, their children suffered from downward social mobility. Children from labourer families experienced downward social mobility also. Around 1800 high prices for land almost completely excluded them from buying a farm, while this still happened frequently around 1750. In contrast with the middle of the eighteenth century, saving capital by working for wages by 1800 no longer offered a prospect on upward social mobility. Farms simply had grown to be too expensive weighted against their wage level.

Labourers, as well as other social groups reacted with a fall in average age at marriage, reinforcing the population growth originally due to a fall in mortality. This was a rather peculiar outcome since for unmarried live-in servants only, real wages were constant between 1760 and 1820 - real wages for other labourers fell, sometimes substantially. Probably in part a consequence of falling age at marriage, reinforced by growing average farm-size and growing welfare for middle-sized and large farmers, the rising demand for live-in servants goes a long way in explaining the relatively favourable development of real wages for unmarried live-in servants.

For England it has been suggested that growing rural inequality had something to do with primogeniture only. Our findings for the Groningen clay soil area are not in line with this suggestion. Neither does the result of population growth and equal inheritances have to be fragmentation of land use, as was the case in eighteenth century French. A smoothly working market for land, as in the Groningen clay soil area, offered ample opportunities for large farms to grow at the expense of small farms because larger farms were able to rip the fruits of increased demand for food in a market economy.