

# The Black Death: window of opportunity or disaster? Demographic growth, stagnation and decline in the County of Hainaut (1349-1541)<sup>1</sup>

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**Abstract.** Historians have observed a strong degree of divergence in population trends after the Black Death across Europe. A comprehensive explanation for this divergence is still missing and previous scholarship has cited the importance of either endogenous or exogenous factors. The most prominent exogenous factor cited in the literature is regional variation in the impact of the Black Death and repeat plague outbreaks, while explanations referring to the effect of endogenous factors have pointed to the role of fertility as a prime mover in long-term demographic developments instead. This article will use the County of Hainaut in the southern Low Countries as a case study to analyze the effect of endogenous socio-institutional factors on diverging regional population developments. However, by using data from a single (nearly) continuous source of mortmain accounts, this analysis will also take into account long-term mortality trends. This article concludes that diverging regional population trends after the Black Death in the County of Hainaut are mostly due to endogenous societal factors and not differentials in exogenous mortality trends in the long-run.

**Keywords:** Black Death; plague; Low Countries; demography; fertility and mortality rates; migration

## [es] La Peste Negra: ¿ventana de oportunidad o desastre? Crecimiento, estancamiento y declive demográfico en el condado de Hainaut (1349-1541)

**Resumen.** Los historiadores han observado un fuerte grado de divergencia en las tendencias de población después de la Peste Negra en toda Europa. Todavía falta una explicación completa de esta divergencia y estudios anteriores han citado la importancia de factores endógenos o exógenos. El factor exógeno más prominente citado en la literatura es la variación regional en el impacto de la peste negra y los brotes repetidos de peste, mientras que las explicaciones que se refieren al efecto de los factores endógenos han señalado el papel de la fertilidad como motor principal en los desarrollos demográficos a largo plazo, en cambio. Este artículo utilizará el condado de Hainaut en los Países Bajos del sur como un estudio de caso para analizar el efecto de los factores socio-institucionales endógenos en los desarrollos demográficos regionales divergentes. Sin embargo, al usar datos de una fuente única (casi) continua de cuentas “manos muertas”, este análisis también tendrá en cuenta las tendencias de mortalidad a largo plazo. Este artículo concluye que las tendencias divergentes de la población regional después de la Peste Negra en el condado de Hainaut se deben principalmente a factores sociales endógenos, y no a diferencias en las tendencias de mortalidad exógena a largo plazo.

**Palabras clave:** Pesta negra; Plaga; Países Bajos; demografía; tasas de fecundidad y mortalidad; migración

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## 1. Introduction

Historians have observed considerable differences in the timing of demographic recovery between di-

fferent regions in Europe after the Black Death. These differences persisted not just a few decades after the mid-fourteenth century, but continued for centu-

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ries.<sup>3</sup> A comparison has been made between England, which only reached pre-plague population levels in the eighteenth century, and parts of the Low Countries which already recovered during the fifteenth century.<sup>4</sup> Demographic divergence also occurred on a smaller geographical scale and even adjacent regions within the Low Countries –with seemingly very similar agrarian potential– could experience sharply diverging population trends.<sup>5</sup> For example, while inland Flanders and the County of Holland experienced demographic recovery in the course of the fifteenth– and sixteenth centuries; coastal Flanders, the Guelders river area and Artois experienced long-term stagnation lasting until the eighteenth century.<sup>6</sup> Although these diverging population trends are well established in the literature, there is no consensus regarding the underlying causes.

Previous historiography explained late medieval population trends by recourse to the neo-Malthusian model.<sup>7</sup> Basic Malthusian reasoning holds that population numbers grow exponentially while agricultural productivity only increases linearly. If left unimpeded the population eventually outgrows the agricultural capacity to feed itself, a situation that would result in disaster. According to Malthus, positive checks such as famine, disease and warfare invariably followed in the wake of overpopulation to push population levels down to within the margins of available resources. This model resembles the pattern of late medieval population developments on the European countryside. Between the tenth– and the thirteenth centuries, the European population had more than doubled and agricultural resources were increasingly put to the test. By the early fourteenth century overpopulation resulted in Malthusian catastrophe as the Great Famine swept across northern Europe. The Black Death, which fo-

llowed some decades later, has been interpreted as part of an unavoidable Malthusian crisis, striking a malnourished population more susceptible to disease.

However, when considering the impact of the Black Death and the population developments that followed, the neo-Malthusian model falls short of the mark.<sup>8</sup> First, most historians interpret plague as an exogenous shock, one that is not linked to famine caused by Malthusian pressures on agricultural resources.<sup>9</sup> Second, Malthusian logic cannot explain the strong regional divergence in demographic recovery seen across Europe after the Black Death.<sup>10</sup> Those who survived the onslaught of the disease enjoyed a relative abundance of land, higher wages, rising living standards and improved diets.<sup>11</sup> Factors that should have stimulated population growth. However, while some regions experienced quick demographic recovery, others underwent long-term stagnation or further decline.<sup>12</sup> The neo-Malthusian model fails to explain why population recovery took so long to materialize in some regions and historians have looked for explanations beyond this traditional framework.

Long-term demographic stagnation in England has been explained in two different –yet not contradictory– ways. One explanation is that the exogenous shock of repeat plague outbreaks counteracted the effect of rising birth rates, while a second line of reasoning focuses on the role of endogenous processes within society that stunted population growth. The general narrative, for England, is that labour shortages after the Black Death enticed a higher share of young women into the labour market which raised the average age at first marriage and reduced birth rates.<sup>13</sup> Conversely, swift demographic recovery in parts of the Low Countries has been explained by the combined effect of a mild plague shock and endogenous

<sup>3</sup> For diverging economic developments: Robert Allen, “The great divergence in European wages and prices from the Middle Ages to the First World War”, *Explorations in economic history* 38, no. 4 (2001): 411-447, <https://doi.org/10.1006/exeh.2001.0775>

<sup>4</sup> Paolo Malanima, “The economic consequences of the Black Death” in *L’impatto della ‘peste antonina’*, ed. E. Lo Cascio (Bari, 2012), 314-315.

<sup>5</sup> Bas van Bavel, “People and land: rural population developments and property structures in the Low Countries, c. 1300–c. 1600”, *Continuity and Change* 17, no. 1 (2002): 10, <https://doi.org/10.1017/S0268416002004046>

<sup>6</sup> Bas van Bavel, *Manors and markets: Economy and society in the Low Countries 500-1600*. (Oxford: Oxford University Press, 2010), 282-283; Erik Thoen and Tim Soens, “The family or the farm: a Sophie’s choice? The late medieval crisis in the former County of Flanders.”, in *Crisis in the later middle ages: beyond the Postan-Duby paradigm*, ed. John Drendel (Brepols Publishers, 2015), 195-224.

<sup>7</sup> Michael Postan, *The medieval economy and society: an economic history of Britain, 1100-1500*. (California: University of California Press, 1973); Emmanuel Le Roy Ladurie, “L’histoire immobile” *Annales. Histoire, Sciences Sociales* 29, no. 3 (1974): 673-692. <https://www.jstor.org/stable/27579319>

<sup>8</sup> Noted in: van Bavel, “People and land”.

<sup>9</sup> David Herlihy and Samuel H. Cohn, *The Black Death and the transformation of the West*. (Harvard: Harvard University Press, 1997), 38; Stephan Epstein, *Freedom and growth: the rise of states and markets in Europe, 1300-1750*. (Routledge, 2000), 54; Jan Luiten van Zanden, “The skill premium and the ‘Great Divergence’”, *European Review of Economic History* 13, no. 1 (2009): 136, <https://doi.org/10.1017/S1361491609002408>

<sup>10</sup> Stephan Epstein, “The late medieval crisis as an “integration crisis”” in *Early Modern Capitalism*, ed. Maarten Prak (Routledge, London, 2000), 25-50.; van Bavel, “People and land”, 10.

<sup>11</sup> For wages: Allen, “The Great Divergence”; Alexandra De Pleijt and Jan Luiten van Zanden, “Accounting for the “Little Divergence”: What drove economic growth in pre-industrial Europe, 1300–1800?”, *European Review of Economic History* 20, no. 4 (2016): 389, <https://doi.org/10.1093/ereh/hew013>. For land-labour ratios: Joan Thirsk, *Alternative agriculture: a history: from the Black Death to the present day*. (Oxford: Oxford University Press, 1997), 7-9. For improved diet: Massimo Montanari, *La fame et l’abondance: histoire de l’alimentation en Europe*. (Seuil, 1995), 104-109. For the Low Countries: Tim Soens and Erik Thoen, “Vegetarians or carnivores? Standards of living and diet in late medieval Flanders”, in *Le interazioni fra economia e ambiente biologico nell’Europa preindustriale: secc. XIII-XVIII-economic and biological interactions in the pre-industrial Europe from the 13th to the 18th centuries* (Firenze: Firenze university Press, 2010), 495-527.

<sup>12</sup> Bruce Campbell, “Population Pressure, Inheritance, and the Land Market in a Fourteenth-Century Peasant Community” in *Land, kinship and life-cycle*, ed. Richard Smith (Cambridge, 1984), 128; Stephan Epstein, “Cities, regions and the late medieval crisis: Sicily and Tuscany compared”, *Past & Present* 130 (1991): 9, <https://www.jstor.org/stable/650776>

<sup>13</sup> Mark Bailey, “Introduction: England in the age of the Black Death”, in *Town and Countryside in the Age of the Black Death: essays in honour of John Hatcher*, eds. Mark Bailey and Stephen Rigby (Brepols Publishers, 2011), xx.

societal factors that stimulated population growth.<sup>14</sup> The most prominent of these endogenous factors, were those that ensured broad population groups had direct access to land and resources through region-specific inheritance systems, property structures and employment opportunities.<sup>15</sup>

While endogenous factors have been explored extensively in the literature, exogenous factors are less well understood. For the late medieval period, quantifiable indicators for long-term mortality trends are scarce due to the paucity of demographic sources.<sup>16</sup> It therefore remains difficult to study the relative importance of exogenous and endogenous factors in defining diverging population trends.<sup>17</sup> The exact relationship between these two factors is often assumed rather than empirically tested. For the Low Countries, this is especially problematic as the mild impact of plague –deemed so vital for demographic recovery– is possibly a misconception. Instead, it has been hypothesized that endogenous processes of recovery rather than mild plague mortality, accounted for the rapid demographic recovery in parts of the Low Countries.<sup>18</sup>

This article explores this hypothesis by testing the relative importance of (a) exogenous and (b) endogenous factors to explain diverging population trends in the countryside of Hainaut during the late Middle Ages.<sup>19</sup> The County of Hainaut was selected as a case study because: (a) it was home to regions that underwent sharply contrasting economic and demographic developments, (b) population figures for the entire County are available at regular intervals starting in 1365 and (c) mortality data are available from a single, nearly continuous source (mortmain records) for most of the County from 1349 onwards.

In the following section, I will discuss endogenous factors that have been identified in the literature as highly influential in shaping diverging demographic trajectories within the Low Countries. In section 3 these factors are used as criteria to delineate different regions within

Hainaut. Next (section 4), I will present long-term mortality data for clusters of select localities within these distinct regions to ascertain to what degree exogenous shocks could have influenced long-term population developments. In section 5 the hearth counts for the County of Hainaut are introduced and outlined per region to give an overview of population developments between 1365 and 1541. This population data is then compared to the findings of sections 3 and 4 to determine the relative importance of endogenous and exogenous factors in shaping demographic trajectories in Hainaut. Finally, in section 6, I will present the overall conclusion.

## 2. Endogenous factors

Endogenous societal factors have been explored extensively in the literature to explain the striking regional diversity in both socio-economic systems and population trends in the Low Countries during the pre-modern period.<sup>20</sup> Authors have noticed that regions showing comparatively quick demographic recovery share a number of key endogenous factors inherent to their socio-institutional frameworks.<sup>21</sup> Here I focus on three of the most prominent factors that have been identified in previous research: property structures, inheritance systems and employment opportunities.

### 2.1. Property structures and inheritance systems

In his study on the link between property structures and diverging population trends in the late medieval Low Countries, Bas van Bavel concluded that in regions dominated by peasant smallholders –characterized by an equitable distribution of land– land users claimed strong rights to land. This allowed smallholders to divide their farms among their offspring and led to a fragmentation of holdings. The opportunity for children to gain access to land was further abetted by customary law, which ten-

<sup>14</sup> Şevket Pamuk, “The Black Death and the origins of the ‘Great Divergence’ across Europe, 1300–1600”, *European Review of Economic History* 11, no. 3 (2007): 308, <https://doi.org/10.1017/S1361491607002031>. Claimed for Holland specifically in: Bas van Bavel and Jan Luiten van Zanden, “The jump-start of the Holland economy during the late-medieval crisis, c. 1350–c. 1500 1”, *The Economic History Review* 57, no. 3 (2004): 515, <https://doi.org/10.1111/j.1468-0289.2004.00286.x>; Jan Luiten van Zanden, “A third road to capitalism? Proto-industrialization and the moderate nature of the late medieval crisis in Flanders and Holland, 1350–1550”, in *Peasants into Farmers? The Transformation of Rural Economy and Society in the Low Countries (Middle Ages-19th Century) in Light of the Brenner Debate*, ed. Peter Hoppenbrouwers and Jan Luiten van Zanden (Brepols Publishers, 2001), 90.

<sup>15</sup> van Bavel, “People and land”. Explanations for demographic divergence are paralleled in the wider literature. For variations in plague mortality: Pamuk, “The Black Death”, 293; John Hatcher, *Plague, population and the English economy 1348–1530* (Macmillan International Higher Education, 1977); Barbara Harvey, *Living and Dying in England 1100-1540: The Monastic Experience* (Clarendon Press, 1993), 145. For endogenous factors: David Herlihy, *Medieval and Renaissance Pistoia: the social history of an Italian town, 1200-1430* (Newhaven-yale, 1967), 117. On fertility: Lawrence Poos, *A rural society after the Black Death: Essex 1350-1525* (Cambridge University Press, 2004), 113. On delayed marriage and inheritance practices: Edward Wrigley and Roger Schofield, *The population history of England 1541-1871* (Cambridge University Press, 1989). For female labour: Peter Goldberg, *Women, work, and life cycle in a Medieval economy: Women in York and Yorkshire c. 1300-1520* (Oxford University Press, 1992).

<sup>16</sup> Joris Roosen, “Severity and selectivity of the black Death and recurring plague in the southern Netherlands (1349-1450)”, *TSEG-The Low Countries Journal of Social and Economic History* 14, no. 4 (2017): 27, <https://doi.org/10.18352/tseg.986>

<sup>17</sup> Poos, *A rural society*, 111.

<sup>18</sup> Joris Roosen and Daniel Curtis, “The ‘light touch’ of the Black Death in the Southern Netherlands: an urban trick?”, *The Economic History Review* 72, no. 1 (2019): 21, <https://doi.org/10.1111/ehr.12667>

<sup>19</sup> Gérard Sivéry, *Structures agraires et vie rurale dans le Hainaut à la fin du Moyen-Age* (Presses Université Septentrion, 1977), 9-15.

<sup>20</sup> Tim Soens, Peter Stabel and Tineke Van de Walle, “An Urbanised Countryside? A Regional Perspective on Rural Textile Production in the Flemish West Quarter (1400 1600)”, in *Economics, Public Finances, and the Impact of Institutional Changes in Interregional Perspective: The Low Countries and Neighbouring German Territories (14th-17th Centuries)*, eds. Marc Boone and Anne Laure van Bruaene (Brepols Publishers, 2015), 35-59.

<sup>21</sup> van Bavel, *Manors and markets*, 9 & 396.

ded to favour partible inheritance.<sup>22</sup> As a result, children gained access to (at least) a small piece of land which allowed them to support a household at a relatively early age. It engendered a demographic regime defined by early marital age, high nuptiality, strong population growth and a high population density.<sup>23</sup>

By contrast, regions dominated by large tenant farmers—characterized by an inequitable distribution of land—had a demographic regime defined by late marital age, depressed population growth and low population density.<sup>24</sup> Land users in this type of region often had a weak grip on the land and were forced to compete for short-term leasehold.<sup>25</sup> While successful tenant farmers were able to accumulate and consolidate large holdings, this came at the expense of smaller farmers who lost access to land. Having invested heavily in the consolidation of their holding, large tenant farmers were reluctant to subdivide their land among their offspring and inheritance practices in these regions usually favoured monogeniture. As a result, most children only acquired land at a comparatively late age, or not at all.

## 2.2. Employment opportunities

Regions in the Low Countries, that were characterized by an inequitable distribution of land, did not invariably struggle to maintain their rural population numbers. Daniel Curtis has argued that these regions could experience favourable demographic trends, if the rural economy was flexible enough to allow sufficient employment opportunities to develop. The two most prominent factors he identified, are wage labour and proto-industry.<sup>26</sup> Wage labour is defined as economically dependent yet legally free contractual labour, performed for an employer in exchange for a payment in money or in kind.<sup>27</sup>

During the late Middle Ages there were strong regional differences in both the importance and the type of rural wage labour in the Low Countries.<sup>28</sup> For instance, demand for agricultural labourers—employed on a per-

manent or seasonal basis—was higher in regions engaged in commercial grain production than in regions engaged in labour-extensive animal husbandry.<sup>29</sup> To win the competition for leasehold, large tenant farmers operated on a capitalistic basis to maximize their profits. They often achieved this by specialising in labour-extensive types of agriculture and livestock farming, thereby reducing the cost of labour input.<sup>30</sup> As smaller tenants were out-competed on the land market in these regions, they lost the opportunity to work a farm independently and became increasingly dependent on wage labour to survive.<sup>31</sup> However, this option was gradually closed off in regions where the rural economy became increasingly oriented towards labour extensive forms of farming.<sup>32</sup> It has also been argued that women found relatively more employment opportunities than men in the labour-extensive pastoral sector after the Black Death. This resulted in a so-called pastoral marriage pattern which negatively affected fertility by increasing the average marriage age.<sup>33</sup> On the other hand, seasonal wage labour performed by smallholders could ensure the viability of households even in regions where holdings were too small to be self-sufficient as a result of ongoing fragmentation.<sup>34</sup>

A second type of employment opportunity that could influence population trends is proto-industry.<sup>35</sup> It is defined here as a regional concentration of rural small-scale industrial activities, in which the producers are semi-independent peasants who own at least part of the tools and raw materials, and who combined small-scale industry with agriculture.<sup>36</sup> Proto-industrial demographic patterns are mostly attributed to an internal dynamic in which proto-industry led to population growth and thus a constant supply of labour which, in turn, caused proto-industry to expand even further.<sup>37</sup> According to Hans Medick this resulted in a self-sustained growth-process that was primarily the result of surplus births but to a lesser degree also in-migration from other regions.<sup>38</sup> Proto-industry enabled population growth in two important ways. First, it supplemented the earning from

<sup>22</sup> Ibid. 245.

<sup>23</sup> van Bavel, “People and land”.

<sup>24</sup> Daniel Curtis, “The impact of land accumulation and consolidation on population trends in the pre-industrial period: two contrasting cases in the Low Countries”, *Historical Research* 87, no. 236 (2014), <https://doi.org/10.1111/1468-2281.12050>.

<sup>25</sup> Sivéry, *Structures agraires*, 457.

<sup>26</sup> Curtis, “The impact of land accumulation”.

<sup>27</sup> Definition based on: Bas van Bavel, “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” *Continuity and change* 21, no. 1 (2005): 39, <https://doi.org/10.1017/S0268416005005631>

<sup>28</sup> Ibid. 37.

<sup>29</sup> Ad Knotter, “Problems of the family economy: peasant economy, domestic production, and labour markets in pre-industrial Europe.” in *Early modern capitalism: economic and social change in Europe, 1400-1800*, ed. Maarten Prak (Routledge, 2000), 142-147.

<sup>30</sup> van Bavel, “People and land”, 27-28.

<sup>31</sup> Bas van Bavel, “The transition in the Low Countries: wage labour as an indicator of the rise of capitalism in the countryside, 1300–1700”, *Past and Present* 195, no. 2 (2007): 296, <https://doi.org/10.1093/pastj/gtm036>

<sup>32</sup> van Bavel, “People and land”, 31.

<sup>33</sup> Nico Voigtländer and Hans-Joachim Voth, “How the West” Invented” fertility restriction”, *American Economic Review* 103, no. 6 (2013), DOI: 10.1257/aer.103.6.2227.

<sup>34</sup> van Bavel, “Rural wage labour”, 60.

<sup>35</sup> van Zanden, “Third road to capitalism?” 99.

<sup>36</sup> Bas van Bavel, “Early proto-industrialization in the Low Countries? The importance and nature of market-oriented non-agricultural activities on the countryside in Flanders and Holland”, *Revue belge de philologie et d’histoire* 81, no. 4 (2003).

<sup>37</sup> Franklin Mendels, “Proto-industrialization: the first phase of the industrialization process”, *The journal of economic history* 32, no. 1 (1972), <https://www.jstor.org/stable/2117187>; van Zanden, “Third road to capitalism?” 99.

<sup>38</sup> Hans Medick, “The proto-industrial family economy: The structural function of household and family during the transition from peasant society to industrial capitalism”, *Social history* 1, no. 3 (1976), <https://www.jstor.org/stable/4284642>, 82-83.

cultivation on small holdings allowing smaller farms to become viable and lessening the need to delay marriage until enough land had been acquired.<sup>39</sup> Second, it enabled smallholders to employ the surplus labour of all household members which meant having a large number of children was a potential advantage.<sup>40</sup> The literature describes proto-industrial regions as characterized by strong population growth, high population densities and the presence of peasant smallholders.<sup>41</sup>

### 3. Delineating Hainaut regions

Using the three endogenous factors –property structures, inheritance systems and employment opportunities– outlined above, it is possible to delineate three different socio-institutional regions within the County of Hainaut. To avoid inductive reasoning, these regions have not been demarcated on the basis of their demographic trajectories after the impact of the Black Death.<sup>42,43,44</sup>

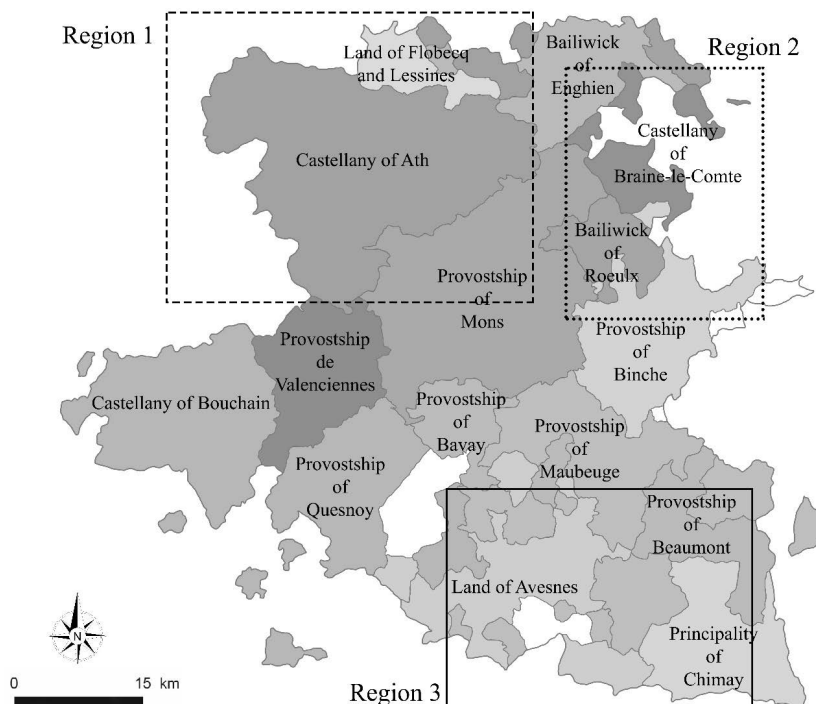


Fig. 1. Map of the County of Hainaut during the late Middle Ages with indication of administrative districts (shades of grey) and delineated socio-institutional regions.

#### 3.1. Northwest Hainaut (region 1)

The first of the three regions under consideration, is the northwest of Hainaut. Although it consisted out of a larger area that included the district of Flobecq-Lessines and the north-western part of the Mons district, it is best represented by the district of Ath.

During the late medieval period, this region had a system of social property relations dominated by peasant smallholders similar to inland Flanders and Holland. Land users had a strong grip on the land and were able to subdivide their holdings among their offspring. Customary law favoured partible inheritance since the twelfth century, which ensure all children –at least potentially– had access to a plot of land after the death of their parents.<sup>41</sup> Both the inheritance

system and the strong rights to land offered offspring the prospect of owning land to secure the survival of newly established households, which in turn lowered the average marital age.<sup>42</sup> During the demographic boom of the twelfth+– and thirteenth centuries, this resulted in an ongoing fragmentation of holdings. For instance, in 1267 in the village of Herchies around 60 per cent of holdings were smaller than 2 hectares, and 80 per cent below 4.5 hectares.<sup>43</sup> Although the Black Death and recurring plague temporarily reduced the need to split up holdings, fragmentation gained momentum again during the second half of the fifteenth century. At that time, the average size of a holding in the northwest was around 1.25 hectares, indicating a dominance of peasant smallholders.<sup>44</sup> These circumstances

<sup>39</sup> van Bavel, “People and land”, 26-27.

<sup>40</sup> Medick, “The proto-industrial family economy”, 291-315.

<sup>41</sup> Peter Hoppenbrouwers, “Doorgifte van erfgoed op het laat-middeleeuwse platteland.” *Madoc. Tijdschrift over de Middeleeuwen* 8 (1994), 94; Jean Yver, “Les deux groupes de Coutumes du Nord (Première partie)”, *Revue du Nord* 35, no. 140 (1953), 26. On partible inheritance in northwest Hainaut: John Gilissen, “Le privilège de masculinité dans le droit coutumier de la Belgique et du Nord de la France”, *Revue du Nord* 43, no. 170 (1961), 208.

<sup>42</sup> van Bavel, “People and land”, 19.

<sup>43</sup> Gérard Sivéry, “Herchies, un village du Hainaut (1267-1314)”, *Revue du Nord* 52, no. 206 (1970): 309-330; Sivéry, *Structures agraires*, 316-317.

<sup>44</sup> Sivéry, *Structures agraires*, 317, 538 & 571.

showed a great degree of continuity and by the end of the nineteenth century more than three quarters of holdings in the northwest were smaller than one hectare.<sup>45</sup> This closely mirrors the situation in the Land of Schorisse in inland Flanders, an area directly neighbouring the northwest of Hainaut.<sup>46</sup> In 1571 about 70.5 per cent of the land there was owned by peasant smallholders and almost half of all holdings was smaller than 1 hectare.<sup>47</sup> Here too, long-term continuity manifested itself and by 1790 over 55 per cent of holdings were smaller than one hectare in the villages of Schorisse and Sint-Kornelis-Horebeke.<sup>48</sup> Although leasehold had been introduced at an early stage in Hainaut, it spread comparatively slowly throughout the region and never led to the process of land accumulation that occurred in the Guelders river area or coastal Flanders.<sup>49</sup> Some larger holdings had nonetheless emerged during the Middle Ages and co-existed with a sea of smallholders, similar to the situation in inland Flanders.<sup>50</sup> This had important implications for the employment opportunities in this region.

The rural economy in the northwest was mostly oriented towards grain production and the markets of Mons and Ath –alongside that of Valenciennes– played a pivotal role in Hainaut’s grain exports.<sup>51</sup> Initially, arable land was divided into large irregular block-shaped parcels, but as holdings were fragmented during the fifteenth century, arable land was divided into narrow strips that were tilled individually.<sup>52</sup> Confronted with an ongoing subdivision of holdings and declining agricultural profitability, smallholders needed a way to supplement their income. One option was performing wage labour during seasonal peak moments on the large holdings that existed in the region.<sup>53</sup> This is reminiscent of the smallholder peasants in inland Flanders who lived in co-dependency with large tenant farmers, trading their labour for grain and credit.<sup>54</sup> Proto-industry, espe-

cially the production of linen in combination with the labour-intensive cultivation of flax, became increasingly more important for smallholders in the northwest during the late medieval period. During the thirteenth century a thriving rural linen industry had developed in inland Flanders, Artois and northern Hainaut.<sup>55</sup> It relied on cheap and specialized labour which was supplied by the masses of smallholders engaged in subsistence farming.<sup>56</sup> Important linen centers were Lessines, Ath, Chièvres in northwest Hainaut.<sup>57</sup> The combination of intensive agriculture on small plots of land and proto-industry remained characteristic for the northwest until the end of the nineteenth century.<sup>58</sup>

### 3.2. Northeast Hainaut (region 2)

The second region is the northeast of Hainaut. This region is represented best by the district of Braine-le-Comte as its heartland, but was made up of a larger area that encompassed the eastern part of the Mons district, the district of Roelux and the northern part of the Binche district.

This region was dominated by large farms that were held in hereditary tenure called ‘*mainferme*’ or ‘*censive*’ in contemporary sources. During the high Middle Ages, farmers had accumulated and consolidated holdings in this region that were on average larger than twenty hectares. In the late fourteenth century the dominance of this type of holding has been attested in several villages in the district of Braine-le-Comte and the area surrounding the town of Soignies, with some as large as 75 hectares.<sup>59</sup> These holdings remained a stable feature in the northeast throughout the late medieval and early modern period. One example is the village of Ittre, situated some ten kilometres west of Braine-le-Comte, where by the late eighteenth century two-third of the holdings were still larger than seventeen hectares.<sup>60</sup> Two endogenous factors explain this long-term continuity in property

<sup>45</sup> Jan Craeybeckx, “De agrarische depressie van het einde der XIXe eeuw en de politieke strijd om de boeren I”, *Belgisch tijdschrift voor nieuwste geschiedenis* 4 (1973), 196. In inland Flanders, the subdivision of holdings continued after the late Middle Ages. See: Erik Thoen, “Social agrosystems as an economic concept to explain regional differences. An essay taking the former County of Flanders as an example (Middle ages-19 th century)”, in *Landholding and Land Transfer in the North Sea Area (Late Middle Ages – 19th Century)*, eds. by Peter Hoppenbrouwers and Bas van Bavel (Brepols Publishers, 2004), 54.

<sup>46</sup> A region dominated by peasant smallholders, an ongoing fragmentation of holdings and a vibrant proto-industrial linen sector. De Rammelaere, “Bijdrage tot de Landbouwgeschiedenis in Zuid-Oostvlaanderen (1570-1790)”, *Handelingen der Maatschappij voor Geschiedenis en Oudheidkunde te Gent* 16, no. 1 (1962), 21.

<sup>47</sup> Hans van Gelder, *Nederlandse dorpen in de 16e eeuw* (Amsterdam, 1953), 43-44.

<sup>48</sup> De Rammelaere, “Bijdrage tot de landbouwgeschiedenis”.

<sup>49</sup> Sivéry, *Structures agraires*, 457 & 563; van Bavel, “People and land”, 21-22.

<sup>50</sup> Jean-Marie Cauchies, “Servitudes et temps de guerre (1480): Notre-Dame de Pamele (Maagdendale) et ses fermes d’Ellezelles et de Flobecq”, *Revue du Nord* 356-357, no. 3 (2004), <https://doi.org/10.3917/rdn.356.0785>

<sup>51</sup> Gérard Sivéry, “Les profits de l’éleveur et du cultivateur dans le Hainaut a la fin du Moyen Age”, *Annales. Histoire, Sciences Sociales* 31, no. 3 (1976).

<sup>52</sup> Sivéry, *Structures agraires*, 107. For other regions: van Bavel, *Manors and markets*, 38. Gérard Sivéry, “Les profits de l’éleveur et du cultivateur dans le Hainaut a la fin du Moyen Age”, *Annales. Histoire, Sciences Sociales* 31, no. 3 (1976).

<sup>53</sup> van Bavel, “Rural wage labour”, 64.

<sup>54</sup> For the eighteenth century, see: Thijs Lambrecht, “Reciprocal exchange, credit and cash: agricultural labour markets and local economies in the southern Low Countries during the eighteenth century”, *Continuity and Change* 18, no. 2 (2003): 237-261. <https://doi.org/10.1017/S0268416003004624>

<sup>55</sup> van Bavel, *Manors and markets*, 345.

<sup>56</sup> *Ibid.* 367-368.

<sup>57</sup> Sivéry, *Structures agraires*, 438.

<sup>58</sup> Craeybeckx, “De agrarische depressie”, 196.

<sup>59</sup> Sivéry, *Structures agraires*, 314 & 341.

<sup>60</sup> Christian Vandembroeke, *Agriculture et alimentation* (Centre belge d’histoire rurale, 1975) 59; Fulgence Delleaux, “Diffusion et application des méthodes culturales flamandes dans les anciens Pays-Bas méridionaux au xviiiè siècle”, *Revue historique* 1 (2010): 27-58.

structures. On the one hand, holdings were less easily split up than in the northwest because inheritance practices here favoured monogeniture.<sup>61</sup> On the other hand, it is also likely that tenant farmers employed a specific consolidation strategy to ensure their holding remained intact, similar to the situation in coastal Flanders.<sup>62</sup>

The large farms in the northeast were oriented towards large scale commercial grain production on vast blocks of arable land. Unlike in the northwest, this type of landscape remained dominant throughout the late medieval period, indicating the long-term continuation of large-scale grain production. Large farms required both a permanent staff and additional seasonal labour which resulting in the emergence of a specialized labour force in the northeast.<sup>63</sup> These agricultural labourers only had a limited amount of arable land at their disposal and became increasingly dependent on wage labour. However, formal wage labour was not the only employment opportunity available to them. Agricultural labourers could also turn to the bolstering proto-industry, which had started to developed in this region since the late thirteenth century, to ensure their livelihood.<sup>64</sup> Enghien, Soignies, Braine-le-Comte and Binche developed into vibrant proto-industrial towns in this region.

### 3. Southeast Hainaut (region 3)

The third and final region is the southeast of Hainaut. It coincides with the area east of the river Sambre, encompassing most of the districts of Beaumont and Chimay as well as the southern parts of the districts of Maubeuge and Bavay, but is best represented by the district of Avesnes. While the northwest and northeast regions exhibited a degree of continuity in both property structures and rural economy before and after the Black Death, the situation was noticeably different in the southeast.

Strong village communities had developed here during the second half of the twelfth century, indicative of the weak position of both local lordship and ecclesiastical institutions.<sup>65</sup> In the southeast, land users enjoyed strong property rights and land was mostly held in hereditary tenure.<sup>66</sup> After the depopulation following the Black Death, short-term leasehold was introduced on many of these lands, which allowed a process of land accumulation and consolidation to set in.<sup>67</sup> During the

late Middle Ages, the southeast transitioned from a region dominated by peasant smallholders to one dominated by medium to large tenant farms between 10 and 40 hectares in size.<sup>68</sup> The dominance of these holdings continued into the early modern period. For example, by the mid-eighteenth century 23 per cent of holdings in the village of Avesnelles were between 10 and 40 hectares. This shift in property structures after the Black Death made it difficult for children to inherit land after their parents had died.<sup>69</sup>

Coinciding with these changes in property structures, the rural economy also went through an important transition phase. Before the Black Death a system of mixed farming had developed, in which cereal cultivation was combined with livestock breeding. Even small-scale peasants had the opportunity to rear livestock as they could rely on the numerous commons present in the region.<sup>70</sup> This situation changed drastically after the Black Death, when the intense demographic shock shifted the focus toward a more labour extensive pastoral economy. However, this shift was not caused by changes in land-labour ratios alone. After the mid-fourteenth century, Hainaut witnessed both a declining profitability of grain trade and a change in the consumption pattern.<sup>71</sup> After the Black Death, both artisans and labourers enjoyed greater disposable real incomes which resulted in an increased demand for meat. Important markets for livestock, cheese and meat emerged during this period in the towns of Prisches and Landrecies, in the Avesnes district.<sup>72</sup>

The rise of the pastoral economy created a growing need for large tracts of land to pasture livestock. This sparked-off an enclosure movement in which commons, previously used as pasture by members of the village communities, were leased out to well-to-do farmers.<sup>73</sup> Enclosure gained momentum at the end of the fifteenth century and gave rise to the bocage landscape that is still characteristic for the Avesnois region today.<sup>74</sup> The growing demand for pasture was also answered by a process in which land users turned arable land into meadows. This often happened without the prior consent of ecclesiastical institutions who lost tithe revenues on these lands and is again indicative of the power of the village communities.<sup>75</sup> This process started shortly after the Black Death and by the fifteenth century around half the arable land

<sup>61</sup> Gilissen, "Le privilège de masculinité", 207-212.

<sup>62</sup> Thoen and Soens, "Family or the farm".

<sup>63</sup> Sivéry, *Structures agraires*, 107, 314 & 538.

<sup>64</sup> van Bavel, *Manors and markets*, 345.

<sup>65</sup> Sivéry, *Structures agraires*, 278, 200.

<sup>66</sup> *Ibid.* 133 & 261-262.

<sup>67</sup> *Ibid.* 457-458.

<sup>68</sup> Jean-Pierre Jessenne and Dominique Rosselle, "L'histoire rurale de la France du Nord de la fin du Moyen Âge au xxe siècle", *Revue du Nord* 2 (2008), 314-318, <https://doi.org/10.3917/rdn.375.0303>

<sup>69</sup> Gilissen, "Le privilège de masculinité", 208.

<sup>70</sup> Sivéry, *Structures agraires*, 75.

<sup>71</sup> Sivéry, "Les profits de l'éleveur".

<sup>72</sup> Thoen and Soens, "Vegetarians or carnivores".

<sup>73</sup> Sivéry, *Structures agraires*, 504.

<sup>74</sup> *Ibid.* 80, 133 & 147

<sup>75</sup> *Ibid.* 618; Fulgence Delleaux, *Les censiers et les mutations des campagnes du Hainaut français: la formation originale d'une structure socio-économique (fin XVIIe-début XIXe siècle)* (Presses universitaires de Namur, 2012), 132.

present in the region around 1300 had been turned into pasture.<sup>76</sup> The southeast would remain a pastoral region well into the eighteenth century.<sup>77</sup>

#### 4. Exogenous factors: plague mortality

Historians have long believed that a mild impact of the Black Death –in combination with endogenous factors– was instrumental for the quick demographic recovery in several regions of the Low Countries. For example, to explain the swift population recovery in the County of Hainaut, Emmanuel Le Roy Ladurie, wrote ‘*the less severe the fall, the less steep the climb back*’.<sup>78</sup> Early research even claimed the Black Death had left large parts of the Low Countries unscathed, based on the absence of sources mentioning a mortality crisis.<sup>79</sup> Although subsequent publications have demonstrated that plague was present during the mid-fourteenth century, the impact was deemed comparatively mild. However, ongoing archival research has now provided compelling evidence that the Black Death was probably no less severe in the Low Countries than in other parts of Western Europe.<sup>80</sup>

Even though we can therefore deemphasize the role of mild plague mortality, the relative importance of the endogenous and exogenous factors that drove diverging population recovery in the Low Countries remains ill-understood. Most historians agree that, to understand long-term demographic trends, we need to account not just for the impact of the Black Death but for the combined effect of recurring plague outbreaks.<sup>81</sup> In the absence of direct mortality data, comparative studies have often assumed that plague mortality was distributed randomly –but in the long-run– equally between neighbouring regions. For example, in his study on Sicily and Tuscany Epstein stated that “*no one region would on average and in the long run be hit more severely than any other*”.<sup>82</sup> Similarly, for the Low Countries it has been claimed that diverging demographic patterns after the Black Death cannot be attributed to exogenous epidemiological factors. As such, endogenous factors have been used to explain why ‘*some regions [...] saw a dramatic decrease in population in the later Middle Ages while others did not*’.<sup>83</sup> However, there is cu-

rently no strong empirical evidence to prove that plague mortality was indeed similar across regions in the Low Countries. It therefore remains difficult to empirically test the relative importance of endogenous and exogenous factors that drive post-Black Death population trends.

To overcome this hurdle, this article presents long-term mortality data for the three regions of Hainaut that have been delineated above. The County of Hainaut provides a unique case study as around ten to fifteen percent of the population owed a type of heriot or death-duty to the County, called *mortmain*.<sup>84</sup> This taxation consisted of the best movable possession of the deceased and was levied on a wide range of people, ranging from poor beggars to wealthy artisans. Starting in 1349, the *mortmain* accounts recorded the number of deaths for individual localities and districts over the whole of Hainaut. By analysing these deaths, this article is able to provide a nearly continuous source of long-term mortality trends for the three delineated regions for the period 1349-1505. In order to compare long-term mortality trends between the three regions in Hainaut, I constructed region-specific clusters of localities for which the yearly number of deaths can be traced for the entire period 1349-1505. This provides a standardized and comparable source of long-run mortality data.

There are a number of limitations to the *mortmain* accounts that need to be addressed. For instance, because the powerful village communities in the district of Avesnes resisted the count’s right to levy *mortmain*, the accounts did not record any deaths in the core-area of the southeast of Hainaut.<sup>85</sup> In order to gain insight in the mortality trends in the southeast, I have constructed a cluster of eleven localities on the southern borders of the districts of Bavay and Maubeuge.<sup>86</sup> These localities are part of the northernmost boundaries of the southeast region and are directly adjacent to the Avesnes district. It can therefore be assumed that this cluster is a reliable proxy for long-term mortality trends in the whole of the southeast. The regional clusters for the northwest and northeast, on the other hand, do offer data for the central areas of these regions. For the northwest, the cluster consists of twenty-six locali-

<sup>76</sup> Sivéry, *Structures agraires*, 81-83.

<sup>77</sup> Delleaux, *Les censiers et les mutations*, 27.

<sup>78</sup> Emmanuel Le Roy Ladurie, *The French Peasantry, 1450-1660* (University of California Press, 1987), 98.

<sup>79</sup> On the general scarcity of demographic sources for the late Middle Ages: Christiane Klapisch-Zuber, “Plague and family life.” in *The new Cambridge medieval history: c. 1300-c. 1415*, ed. Michael Jones (Cambridge University Press, 2008), 124-154.

<sup>80</sup> For a full overview of relevant literature: Roosen and Curtis, “The light touch”. A view supported in: Thoen and Soens, “Family or the farm”, 195.

<sup>81</sup> Guy Fourquin, *Les campagnes de la région parisienne à la fin du Moyen Âge: du milieu du XIII. siècle au début du XVI. siècle* (Paris, 1964), 291-331. For the Low Countries: Wim Blockmans, “The social and economic effects of plague in the Low Countries: 1349-1500”, *Revue belge de philologie et d’histoire* 58, no. 4 (1980): 834.

<sup>82</sup> Epstein, “Cities, regions”, 17.

<sup>83</sup> Erik Thoen and Tim Soens, “The Low Countries, 1000-1750”, in *Struggling with the environment: land use and productivity*, eds. Erik Thoen and Tim Soens (Brepols Publishers, 2015), 221.

<sup>84</sup> Archives Départementales du Nord, Lille (hereafter ADN), Lille B, 12122-12273; Algemeen Rijksarchief Brussel (hereafter ARB), I, 004, 17867-73. For an overview of these documents, their content and usefulness for demographic research see: Roosen, “Severity and Selectivity”.

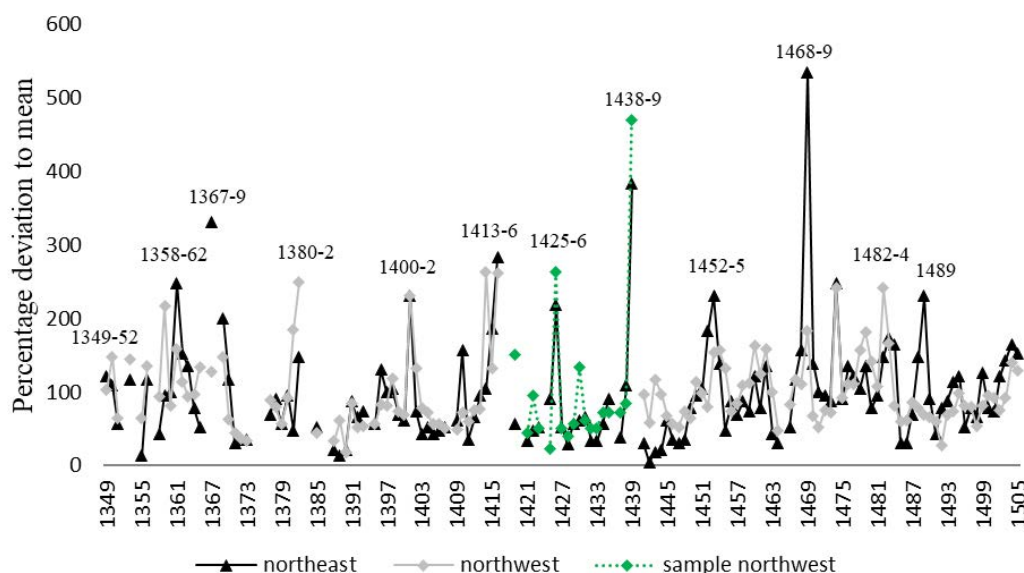
<sup>85</sup> Sivéry, *Structures agraires*, 272.

<sup>86</sup> Southeast proxy-sample: District of Maubeuge: Boussois, Kieuraing, Recquignies. District of Bavay: Audignies, Bellignies, Hon, Hergies, Houdain, Le Flamengrie, Mecquignies, Obies.



ties spread over the districts of Ath, Flobecq-Lessines and Mons. While the cluster for the northeast is more restricted in size with only ten localities spread over the districts of Braine-le-Comte, Mons and Roelux.<sup>87</sup> There is, however, a noticeable gap in the data for the northwest as the entire district of Ath is missing from the mortmain accounts between 1417 and 1440. To overcome this hurdle, I compiled a subsample of five localities (from the larger northwest cluster) on the north-western border of the district of Mons to provide an estimate of the mortality trends in the entire northwest for this period.<sup>88</sup> It should also be noted that the mortmain accounts underestimate mortality for the Black Death due to both (a) the administrative disruption during this period and (b) the poor physical condition of the documentation for 1349-1350.<sup>89</sup> No corrective was applied to the mortality data for the Black Death as it is assumed this underestimation affected all regions equally.

The graphs below show the long-term mortality trends in the northeast, northwest and southeast for the period from the Black Death to the beginning of the sixteenth century. In order to make the data more easily comparable between the three regions, which have varying numbers of absolute deaths, I have calculated the percentage deviation in the number of yearly deaths per regional cluster respective to the mean number of deaths for the period 1349-1505 for each corresponding region. Graph 1 indicates that, apart from a few outliers, mortality trends in the northwest and northeast were roughly similar between 1349-1416 and 1441-1505. The same seems to be true for the period 1417-1440 for which only a limited subsample is available for the northwest. Graph 2 adds further credence to the notion that long-term mortality trends were similar between all three regions in Hainaut, as the southeast appears to have experienced mortality peaks very similar to those in the northwest and northeast.



Graph 1: mortality trends in northwest and northeast, percentage deviation to mean. Including a subsample of locations in northwest Hainaut for the period 1417-1440. (dates indicate identified plague outbreaks in the Low Countries)

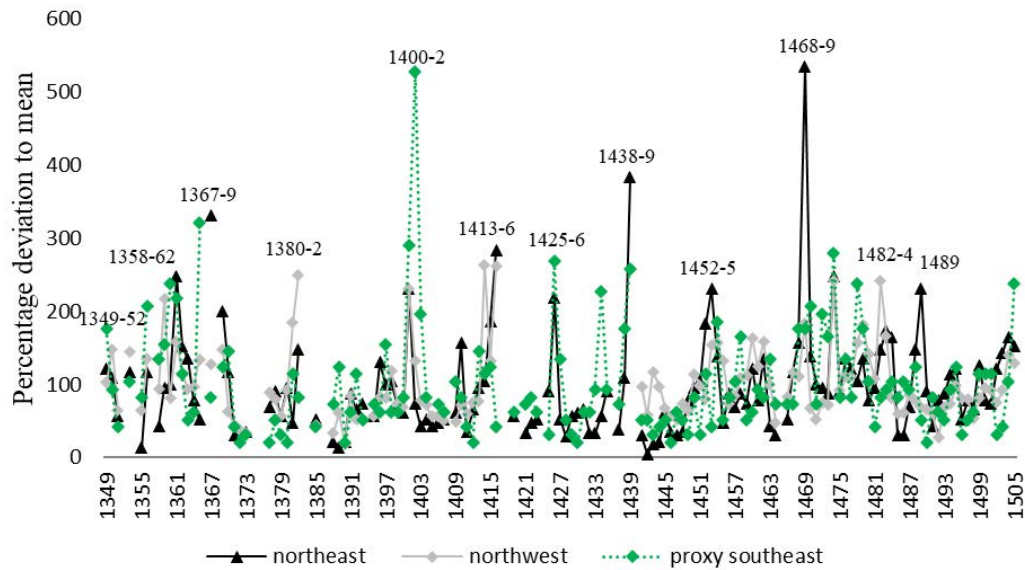
Sources: ADN, B 12122-12226; ARB, I, 004, 17867-73.

<sup>87</sup> Northwest sample: District of Ath: Arbre, Attre, Biévène, Brugelette, Cambron-Casteau, Gibecq, Hellebecq, Isières, Lanquesaint, Maffle, Mainvault, Mévergnies-Les-Lens, Moulbaix, Rebaix, Silly, Villers-Notre-Dame, Villers-Saint-Amand, Wannebecq. District of Flobecq Lessines: Ellezelles, Flobecq, Ogy. District of Mons: Cambron-Saint-Vincent, Erbaut, Herchies, Jurbise, Lens. Northeast sample: District of Braine-le-Comte: Braine-le-Câteaux, Ecaussinnes, Feluy, Haut-Silly, Quenast. District of Mons: Chaussée-Notre-Dame, Horrues, Neufvilles. District of Roelux: Mignault, Naast. Erik Thoen and Tim Soens, "The Low Countries, 1000-1750", in *Struggling with the environment: land use and productivity*, eds. Erik Thoen and Tim Soens (Brepols Publishers, 2015), 221.

<sup>88</sup> The localities in the subsample are: Cambron-Saint-Vincent, Erbaut, Herchies, Jurise and Lens.

<sup>89</sup> For a full analysis of this underestimation, see: Roosen and Curtis, "The light touch".

Graph 2: mortality trends in northwest, northeast and proxy localities for southeast, percentage deviation to mean. (dates indicate identified plague outbreaks in the Low Countries)



Sources: ADN, B 12122–12226; ARB, I, 004, 17867–73.

There are a few exceptions when plague mortality was clearly more severe in one of the three regions. A first deviation was the 1400-1402 plague outbreak which seems to have affected the southeast disproportionately. Six decades later, this was paralleled by the plague outbreak of 1468-1469 when the northeast suffered much higher mortality than the other two regions. While for the northwest, the 1380-1382 and 1438-1439 plague outbreaks seem to have been comparatively more severe. Throughout the entire 1349-1505 period, several smaller differences in mortality levels can be seen between the three regions. However, no isolated mortality event seems either severe or long-lasting enough to be responsible for steering population developments in the long-run. In summary we can conclude that *if* long-term diverging population trends occur between the three regions, this should not be ascribed primarily to differences in mortality rates.

## 5. Rural population developments

Demographic trends for Hainaut can be derived from the frequently conducted hearth counts that are available from the mid-fourteenth century onwards. These documents were painstakingly compiled by Maurice Arnould and provide a ready source of census data.<sup>90</sup> As the income derived from direct exploitation of their domains became insufficient, the counts of Hainaut relied increasingly on direct taxation and to this effect, a rural hearth tax was instituted in 1365. The amount of taxes owed by each of the fifteen administrative

districts of the County was subdivided among the individual localities. Within these localities all the hearths were counted to divide the burden of taxation over the inhabitants. Only the very poor, the nobility and high-ranking clergy were exempt from taxation in the countryside.<sup>91</sup> More conspicuous is the absence of cities which were not subject to hearth tax, leaving their population unrecorded.<sup>92</sup> For the countryside, however, these documents offer a relatively full overview of late-medieval population numbers. The raw hearth figures were multiplied with a coefficient of five to provide an estimation of the total population, in line with previous research on rural hearth sizes in the Low Countries and northern France during the late medieval period.<sup>93</sup>

The taxation system did not change from the second half of the fourteenth century until the third quarter of the sixteenth century and the documents thus provide standardized information for this period. Between 1349 and 1541, nine hearth counts have been preserved. Only six of them have been conserved in their entirety –meaning with the recording of hearths for individual localities– those from 1400, 1424, 1440, 1458, 1531 and 1541. For the counts of 1479 and 1501, only the total number of hearths per administrative district are available.<sup>94</sup> For the initial taxation of 1365, the smaller districts of Enghien and Flobecq-Lessines were not yet taxed and no hearth counts were conducted there. To account for their absence, these two districts have been excluded from the analysis of the overall population trends in Hainaut.<sup>95</sup> The year 1541 was selected as end date because it was the first count in which the population for the entire County of Hainaut rose significantly above its 1365 level.

<sup>90</sup> Maurice, Arnould, *Les dénombrements de foyers dans le comté de Hainaut XIVe–XVIe siècle* (Brussels, 1956).

<sup>91</sup> *Ibid.* 135.

<sup>92</sup> The so-called *bonnes villes*: Mons, Maubeuge, Le Quesnoy, Condé, Hal, Braine-le-Comte, Ath, Bouchain, Bavai, Saint-Ghislain, Avesnes, Chimay, Beaumont, Landrecies, Le Roelx and Leuze. Furthermore, Binche, Lessines and Enghien were also not included in the count. Arnould, *Les dénombrements de foyers*, 68.

<sup>93</sup> For an overview of these calculations see appendix of: Roosen, “Severity and Selectivity”.

<sup>94</sup> Arnould, *Les dénombrements de foyers*, 128-129.

<sup>95</sup> This exclusion does not affect the overall picture dramatically as the districts of Enghien and Flobecq-Lessines only made up 6.3 per cent and 2.8 per cent respectively in 1541. Arnould, *Les dénombrements de foyers*, 296.

Table 1. Population trends in the County of Hainaut

County of Hainaut								
Hearth count	1365	1400	1424	1440	1458	1479	1501	1541
Population	136,015	99,975	88,850	121,420	129,225	92,950	103,175	155,725
Index 1365 = 100	100	73.5	65.3	89.3	95	68.3	75.9	114.5

Calculated from Arnould, *dénombrements*.

According to the literature, the County of Hainaut as a whole experienced population developments similar to those in other parts of the Low Countries and northern France. Following a demographic boom at the end of the high Middle Ages, a population peak was reached in the final stages of the thirteenth century. The overall population density in Hainaut during this time has been estimated at around 112 persons per square km.<sup>96</sup> The beginning of the fourteenth century ushered in a period of intense mortality crises. First at the hand of the Great Famine (1315-17) and subsequently by the Black Death and recurring echo-epidemics. Only a few select Hainaut villages provide pre-Black Death figures for hearths that allow us to estimate the mortality rates in this period. The villages of Pont-sur-Sambre, Forest-en-Cambrésis and Louvignies-Quesnoy –all situated on the south of Hainaut– respectively lost 27 per cent, 60 per cent and 58 per cent of their hearths between the dates of 1286 and 1365.<sup>97</sup> These population losses provide some insight into the combined mortality effects of the Great Famine, The Black Death and *pestis Secunda*. Following the late medieval crisis the County of Hainaut, along with most of northern France, hit a population nadir in the first half of the fifteenth century (see table 1).<sup>98</sup> Afterwards, population numbers started to recover until another stage of population decline set in during the final quarter of the fifteenth century.<sup>99</sup> Falling population numbers during this period were not only the result of plague outbreaks but also warfare. Especially the Burgundian wars (1474-1477) seem to have affected Hainaut severely.<sup>100</sup> This was only a temporary setback, however, and during the first half of the sixteenth century a new phase of population growth had commenced. By the mid-sixteenth century, Hainaut as a whole had surpassed its 1365 population level. At a disaggregated level, however, there were sharp regional divergences in population trends within the County of Hainaut. In what follows, I will analyse the relative importance of endogenous and exogenous factors in defining these demographic divergences.

### 5.1. Northwest Hainaut

Compared to the overall development, the northwest of Hainaut recovered relatively quickly from the late medieval crisis. Yet the initial stage of population decline between the mid-fourteenth– and the early fifteenth century was more pronounced in this region. It is entirely possible that this was the result of the 1380-1382 plague outbreak which was more severe in the northwest than in the other regions of Hainaut. However, from the first quarter of the fifteenth century onwards there are clear signs of population recovery. Even the plague outbreak of 1438-1439 did not curtail growing population numbers in the long-term. Several smaller plague mortality peaks, such as the one in 1482-1484, combined with warfare in the final quarter of the fifteenth century did cause demographic decline, but this too was short-lived (table 2). By the mid-sixteenth century, population levels were almost a quarter higher than they had been in the second half of the fourteenth century, indicating moderate to strong population growth during the intermittent period. This recovery is also mirrored in the rising population density in the district of Ath which grew from ca. 45 to ca. 55 persons per square km.<sup>101</sup>

As explained above, long-run mortality trends in the northwest did not differ significantly from those in the northeast and southeast. It can therefore be assumed that the relatively swift population recovery by 1541 was primarily the result of the endogenous factors. It would seem that smallholders in this region were able to benefit from their strong grip on the land, the partible inheritance pattern and the combination of agriculture and proto-industry to achieve demographic recovery. After the mortality crises of the fourteenth– and early fifteenth centuries, the initial stages of demographic recovery were likely stimulated by the ease with which existing holdings could be subdivided by smallholders among their offspring. This meant newly established households acquired sufficient land to ensure their livelihood at a relatively early stage which lowered average marital age and stimulated births. As demographic growth continued during the first three quarters of the fifteenth

<sup>96</sup> Ole Jørgen Benedictow, *The Black Death, 1346-1353: the complete history* (Boydell & Brewer, 2004), 113.

<sup>97</sup> Gérard Sivéry, “La Hainaut et la Peste Noire”, *Mémoires et Publications de la Société des Sciences, des Arts et des Lettres du Hainaut*, no. 79 (1965): 432-433.

<sup>98</sup> Robert Fossier, “Peuplement de la France du Nord entre le X<sup>e</sup> et le XVI<sup>e</sup> siècles”, *Annales de démographie historique*, (1979): 59-99. For Hainaut: Sivéry, *Structures agraires*, 610-611.

<sup>99</sup> Arnould, *Les dénombrements de foyers*, 188.

<sup>100</sup> *Ibid.* 169-170.

<sup>101</sup> Calculated from: Arnould, *Les dénombrements de foyers*, 298.

century, quickly surpassing the 1365 population level, holdings were increasingly fragmented up to the point where they were too small to be self-sufficient. This did not slow down population growth, however, as both (seasonal) wage labour and proto-industry offered additional means of income. Warfare and plague mortality disrupted demographic recovery in the last quarter of the fifteenth century, but only in the short-term. The further rise of proto-industrial activities in the northwest of Hainaut likely stimulated a self-sustained growth process that resulted in a strong phase of population recovery in the beginning of the sixteenth century. The relatively

high population density in the northwest at this time, is a further indication that proto-industrial activities, in combination with small-scale agriculture played an important role.<sup>102</sup> There are some qualitative indications that proto-industry also influenced migration patterns in the northwest. In 1561, local tax collectors communicated to the administration of the Count that the population in the villages of Buissenal and Frasnés-lez-Buissenal (situated some 11km northwest of Ath) had declined noticeably due to out-migration triggered by the decline of proto-industrial activities.<sup>103</sup> Prior to this period, proto-industry likely acted as a migratory pull-factor.

Table 2. Population trends in the northwest of Hainaut

District of Ath								
Hearth count	1365	1400	1424	1440	1458	1479	1501	1541
Population	35,685	24,385	25,905	37,695	40,070	31,865	30,885	43,640
Index 1365 = 100	100	68.3	72.6	105.6	112.3	89.3	86.5	122.3

Calculated from Arnould, *dénombrements*.

## 5.2. Northeast Hainaut

The northeast of Hainaut witnessed population developments that were much more favourable than in the rest of the County. Instead of experiencing a net decline, this region saw its population rise noticeably between 1365 and 1400. Yet, apart from the 1380-1382 plague outbreak, there are no indications that the northeast suffered a milder plague regime than the other two regions. If anything, it seems plague mortality was actually higher in this region during the second half of the fourteenth century, especially the 1367-1369 plague seems to have struck the northeast comparatively hard. Despite some population decline in the first quarter of the fifteenth century, demographic recovery is clearly visible by 1440 (table 3). Despite its severity, the 1438-

1439 plague outbreak therefore does not seem to have influenced population trends in the northeast in the long-term. More noticeable is the effect of the 1468-1469 plague and the Burgundian wars, as population numbers declined noticeably in the final quarter of the fifteenth century. Regardless of these mortality crises, overall population numbers in the northeast never sank below their 1365 level. The first half of the sixteenth century heralded in a period of strong population growth and by 1541 the population more than doubled its 1365 level. The evolution of the population density in the district of Braine-le-Comte clearly indicates this remarkable demographic trajectory, between the mid-fourteenth and mid-sixteenth century the population density increased from ca. 12 to ca. 51 persons per square km.<sup>105</sup>

Table 3. Population trends in the northeast of Hainaut

District of Braine-le-Comte								
Hearth count	1365	1400	1424	1440	1458	1479	1501	1541
Population	1,175	2,865	3,045	3,705	3,990	3,290	2,585	4,910
Index 1365 = 100	100	243.8	259.1	315.3	339.6	280	220	417.9
District of Binche								
Hearth count	1365	1400	1424	1440	1458	1479	1501	1541
Population	6,825	8,275	6,305	7,765	7,585	7,680	6,125	10,285
Index 1365 = 100	100	121,2	92,4	113,8	111,1	112,5	89,7	150,7

<sup>102</sup> Calculated from: Arnould, *Les dénombrements de foyers*, 298.

<sup>103</sup> Norman Pounds and Charles Roome, "Population density in fifteenth century France and the low countries", *Annals of the Association of American Geographers* 61, no. 1 (1971): 127.

<sup>104</sup> Arnould, *Les dénombrements de foyers*, 285-286.

<sup>105</sup> Calculated from: Arnould, *Les dénombrements de foyers*, 298.

District of Roeux <sup>106</sup>								
Hearth count	1365	1400	1424	1440	1458	1479	1501	1541
Population	/	2,310	2,100	2,880	2,820	/	/	3,300
Index 1365 = 100	/	/	/	/	/	/	/	/
Total northeast (excluding district of Roeux)								
Hearth count	1365	1400	1424	1440	1458	1479	1501	1541
Population	8,000	11,140	9,350	11,470	11,575	10,970	8,710	15,195
Index 1365 = 100	100	139.3	116.9	143.4	144.7	137.1	108.9	189.9

Calculated from Arnould, *dénombrements*.

The late medieval plague regime in the northeast was not significantly less severe than in the other regions of Hainaut. It is therefore reasonable to assume that endogenous factors acted as the prime mover in the favourable population trends in this part of Hainaut. The initial stages of demographic growth between 1365 and 1400 were likely due to an influx of migrant labourers who took on either permanent or seasonal employment on the large grain producing holdings that dominated the region. As proto-industry rose to prominence in the northeast during the late medieval period, this too acted as an important migratory pull-factor.<sup>107</sup> Once these migrant labourers started to settled down, proto-industry most likely also promoted an internal growth process which helped sustain demographic growth.<sup>108</sup> Unlike in the northwest, however, significant population growth during the fifteenth– and sixteenth centuries did not result in an ongoing fragmentation of holdings as inheritance patterns favoured monogeniture in the northeast. Moreover, since in-migration most likely account for a significant portion of the demographic upswing, the possibility to inherit land from parents simply did not exist. Instead, the masses of nearly landless labourers caused an increase in both the number and size of rural hamlets.<sup>109</sup> The combination of ample employment opportunities on large holdings and the rise of proto-

industry acted both as a pull-factor for in-migration and also ensured the livelihood of households on small plots of land.

### 5.3. Southeast Hainaut

The southeast shows by far the least favourable population developments in terms of population recovery. Yet the initial stage of demographic decline between 1365 and 1400 was remarkably similar to that in the northwest and only slightly more severe than in Hainaut as a whole.<sup>110</sup> During the fifteenth century, however, the southeast would experience sharply declining population numbers at various stages. The effect of the 1400-1402 plague outbreak is very noticeable, the 1424 hearth count shows a population level almost 60 per cent lower than in 1365 (table 4). Although the mortality regime in the fifteenth century was very similar to that in the northwest and northeast, we see an absolute population nadir in the final quarter of this century. By the mid-sixteenth century, the population level is still lower than its 1365-level, indicating long-term stagnation. This stagnation is also reflected in the population density which remained at around 21 persons per km<sup>2</sup> between 1365 and 1541 in the district of Avesnes, the most populated area of this region.

Table 4. Population trends in the southeast of Hainaut

District of Avesnes								
Hearth count	1365	1400	1424	1440	1458	1479	1501	1541
Population	7,455	5,120	3,135	4,745	6,450	1,545	3,925	7,310
Index 1365 = 100	100	68.7	42.1	63.6	86.5	20.7	52.6	98
District of Beaumont								
Hearth count	1365	1400	1424	1440	1458	1479	1501	1541
Population	548	410	272	355	379	309	282	564
Index 1365 = 100	100	74.8	49.6	64.8	69.2	56.4	51.5	102.9

<sup>106</sup> The district of Roeux was counted alongside that of Mons in a number of hearth counts. It has therefore been excluded from the total for the northeast. Arnould, *Les dénembrements de foyers*, 296.

<sup>107</sup> van Bavel, “Early proto-industrialization”; van Zanden, “Third road to capitalism?” , 98.

<sup>108</sup> Pounds and Roome, “Population density”, 127.

<sup>109</sup> Sivéry, *Structures agraires*, 153.

<sup>110</sup> Limited data indicates the district of Avesnes was well populated before 1365, the population density in Pont-sur-Sambre in 1286 was 78.5 inhabitants per square km, by 1365 it had dropped to 57.5 inhabitants. Sivéry, *Structures agraires*, 256.

District of Chimay								
<b>Hearth count</b>	<b>1365</b>	<b>1400</b>	<b>1424</b>	<b>1440</b>	<b>1458</b>	<b>1479</b>	<b>1501</b>	<b>1541</b>
Population	348	282	134	194	238	303	749	354
Index 1365 = 100	100	81	38.5	55.7	68.4	87.1	215.2	101.7
Total southeast								
<b>Hearth count</b>	<b>1365</b>	<b>1400</b>	<b>1424</b>	<b>1440</b>	<b>1458</b>	<b>1479</b>	<b>1501</b>	<b>1541</b>
Population	8351	5812	3514	5294	7067	2187	4956	8228
Index 1365 = 100	100	69.6	42.4	63.4	84.6	25.8	59.3	98.5

Calculated from Arnould, denombrements.

To explain the long-term demographic trajectory of the southeast, endogenous factors once again seem to have played a pivotal role. After the initial impact of the Black Death, both the rural economy and the property structures went through a phase of significant change in the southeast. The region transitioned from being dominated by peasant smallholders engaged in mixed farming to one dominated by medium-sized holdings engaged in animal husbandry. The cumulative effect of these changes had a dramatic effect on population developments. The changes in the rural economy set into motion an enclosure movement that caused small scale peasants to lose access to communal grazing grounds. At the same time the labour extensive pastoral economy offered few employment opportunities through which these peasants could earn an additional income. Eventually, small scale peasants could no longer compete with their more successful neighbours and with little to no additional income, they lost their holdings and were forced to out-migrate.<sup>111</sup> It is entirely possible that the northeast of Hainaut saw an influx of these migrants during various stages of the fifteenth– and sixteenth centuries. Those who remained in the southeast were at trouble to establish new households, because farmers chose not to subdivide their holdings as smallholders did in the northwest. At the same time, it is also likely that women found relatively more employment opportunities in the labour extensive pastoral economy compared to arable agriculture which further increased the average marital age and negatively affected fertility.<sup>112</sup> In short, there were both strong incentives for out-migration and a lack of internal demographic growth processes present in the southeast that caused intense demographic decline and subsequent long-term stagnation.

## 6. Conclusion

This article has demonstrated that even adjacent regions within the County of Hainaut, which experienced similar mortality trends throughout the late medieval period, could experience very different demographic trajectories. The Black Death and subsequent plague outbreaks

could either prove to be a demographic disasters or create a window of opportunity for demographic growth. For the southeast of Hainaut, the shock of the Black Death and recurring plague was clearly a disaster as this region witnessed both substantial societal change in property structures and the type of rural economy as well as long-term demographic decline and subsequent stagnation. Although in an economic sense those tenant farmers who were able to accumulate and consolidate large pastoral holdings, benefitted from the demographic downturn. The demographic trajectories in the north of Hainaut fared substantially better by comparison. While the northwest saw moderate levels of demographic recovery between the mid-fourteenth– and mid-sixteenth century, recovery in the northeast of Hainaut was nothing short of expeditious. For this region, the Black Death and recurring plague actually seem to have functioned as a window of opportunity with regard to population developments. In fact, when analysing the available hearth counts for this region in isolation, any historian would be inclined to assume that the northeast did not suffer any noticeable mortality crisis in the second half of the fourteenth century. The major contribution of this article, then, is the fact that it has introduced data from a single (nearly) continuous source of mortmain accounts to gain insight in the long-term mortality trends for different regions of Hainaut. As such, it has endeavored to analyze the effect of endogenous factors in defining diverging post-plague population trends, in isolation from exogenous factors (plague mortality). Reconstructions of long-term deaths indicate that the northwest, northeast and southeast of Hainaut all witnessed similar mortality regimes during the fourteenth– and fifteenth centuries. It would therefore seem that the regional differences in demographic recovery rates in the County of Hainaut were not driven by regional variations in long-term mortality trends. Instead what mattered for demographic recovery after the Black Death were endogenous societal factors, or more broadly the socio-institutional framework that was already in place before the mid-fourteenth century and which consisted of institutions that were not geared specifically to preventing or mitigating the severe population shock.<sup>113</sup> For a population shock as unprecedented

<sup>111</sup> Sivéry, *Structures agraires*, 133, 117-119 & 504.

<sup>112</sup> Voigtländer and Voth, “How the West”, 2227-2229.

<sup>113</sup> Bas van Bavel and Daniel Curtis, “Better understanding disasters by better using history”, *International Journal of Mass Emergencies and Disasters* 34, no. 1 (2016): 143-169.

as the Black Death, it were these endogenous societal factors that defined the diverging demographic trajectories for adjacent regions in Hainaut.

## 7. References

### 7.1. Primary sources

Hainaut mortmain records: Archives Départementales du Nord, Lille (hereafter ADN), Lille B, 12122-12273; Algemeen Rijksarchief Brussel (hereafter ARB), I, 004, 17867-73.

### 7.2. Bibliography

- Allen, Robert. "The great divergence in European wages and prices from the Middle Ages to the First World War". *Explorations in economic history* 38, no. 4 (2001): 411-447. <https://doi.org/10.1006/exeh.2001.0775>
- Arnould, Maurice. *Les dénombrements de foyers dans le comté de Hainaut XIV<sup>e</sup>-XVI<sup>e</sup> siècle*, Brussels, 1956.
- Bailey, Mark. "Introduction: England in the age of the Black Death". In *Town and Countryside in the Age of the Black Death: essays in honour of John Hatcher*, edited by Mark Bailey and Stephen Rigby, xix-xxxvii. Brepols Publishers, 2011.
- Benedictow, Ole Jørgen. *The Black Death, 1346-1353: the complete history*, Boydell & Brewer, 2004.
- Blockmans, Wim. "The social and economic effects of plague in the Low Countries: 1349-1500". *Revue belge de philologie et d'histoire* 58, no. 4 (1980): 833-863.
- Bocquet, André. *Recherches sur la population rurale de l'Artois et du Boulonnais pendant la période bourguignonne, 1384-1477*, Arras, 1969.
- Campbell, Bruce. "Population Pressure, Inheritance, and the Land Market in a Fourteenth-Century Peasant Community". In *Land, kinship and life-cycle*, edited by Richard Smith, 87-134. Cambridge University Press, 1984.
- Cauchies, Jean-Marie. "Servitudes et temps de guerre (1480): Notre-Dame de Pamele (Maagdendale) et ses fermes d'Ellezelles et de Flobecq". *Revue du Nord* 356-357, no. 3 (2004): 785-794. <https://doi.org/10.3917/rdn.356.0785>
- Craeybeckx, Jan. "De agrarische depressie van het einde der XIX<sup>e</sup> eeuw en de politieke strijd om de boeren I". *Belgisch tijdschrift voor nieuwste geschiedenis* 4 (1973): 190-230.
- Curtis, Daniel. "The impact of land accumulation and consolidation on population trends in the pre-industrial period: two contrasting cases in the Low Countries". *Historical Research* 87, no. 236 (2014): 194-228. <https://doi.org/10.1111/1468-2281.12050>
- Delleaux, Fulgence. "Diffusion et application des méthodes culturelles flamandes dans les anciens Pays-Bas méridionaux au xviii<sup>e</sup> siècle". *Revue historique* 1 (2010): 27-58
- Delleaux, Fulgence. *Les censiers et les mutations des campagnes du Hainaut français: la formation originale d'une structure socio-économique (fin XVII<sup>e</sup>-début XIX<sup>e</sup> siècle)*, Presses universitaires de Namur, 2012.
- De Pleijt, Alexandra, and Jan Luiten Van Zanden. "Accounting for the "Little Divergence": What drove economic growth in pre-industrial Europe, 1300-1800?". *European Review of Economic History* 20, no. 4 (2016): 387-409. <https://doi.org/10.1093/ereh/hew013>
- De Rammelaere, C. "Bijdrage tot de Landbouwgeschiedenis in Zuid-Oostvlaanderen (1570-1790)". *Handelingen der Maatschappij voor Geschiedenis en Oudheidkunde te Gent* 16, no. 1 (1962).
- Epstein, Stephan. "Cities, regions and the late medieval crisis: Sicily and Tuscany compared". *Past & Present* 130 (1991): 3-50.
- Epstein, Stephan. *Freedom and growth: the rise of states and markets in Europe, 1300-1750*, Routledge, 2000.
- Epstein, Stephan. "The late medieval crisis as an "integration crisis"". In *Early Modern Capitalism*, edited by Maarten Prak, 25-50. Routledge, London, 2000.
- Fossier, Robert. "Peuplement de la France du Nord entre le X<sup>e</sup> et le XVI<sup>e</sup> siècles". *Annales de démographie historique*, (1979): 59-99.
- Fourquin, Guy. *Les campagnes de la région parisienne à la fin du Moyen Âge: du milieu du XIII<sup>e</sup> siècle au début du XVI<sup>e</sup> siècle*, Paris, 1964.
- Gamblin, André. "Le contact Cambrésis-Thiérache". *Revue du Nord* 41, no. 163 (1959): 33-47.
- Gilissen, John. "Le privilège de masculinité dans le droit coutumier de la Belgique et du Nord de la France". *Revue du Nord* 43, no. 170 (1961): 201-216.
- Goldberg, Peter Jeremy Piers. *Women, work, and life cycle in a Medieval economy: Women in York and Yorkshire c. 1300-1520*, Oxford University Press, 1992.
- Hatcher, John. *Plague, population and the English economy 1348-1530*, Macmillan International Higher Education, 1977.
- Harvey, Barbara. *Living and Dying in England 1100-1540: The Monastic Experience*, Clarendon Press, 1993.
- Herlihy, David. *Medieval and Renaissance Pistoia: the social history of an Italian town, 1200-1430*, Newhaven-yale, 1967.
- Herlihy, David, and Samuel H. Cohn. *The Black Death and the transformation of the West*, Harvard: Harvard University Press, 1997.
- Hoppenbrouwers, Peter. "Doorgifte van erfgoed op het laat-middeleeuwse platteland". *Madoc. Tijdschrift over de Middeleeuwen* 8 (1994): 88-98.
- Jessenne, Jean-Pierre. "Agrosystems and rural change in Northern France, c. 1750-c. 1850". In *Land Productivity and Agrosystems in the North Sea Area (Middle Ages-20th Century). Elements for Comparison*, edited by Bas van Bavel and Erik Thoen, 251-269. Brepols Publishers, 1999.
- Jessenne, Jean-Pierre, and Dominique Rosselle. "L'histoire rurale de la France du Nord de la fin du Moyen Âge au xxe siècle". *Revue du Nord* 2 (2008): 303-333. <https://doi.org/10.3917/rdn.375.0303>

- Ladurie, Emmanuel Le Roy. "L'histoire immobile". *Annales. Histoire, Sciences Sociales* 29, no. 3 (1974): 673-692.
- Ladurie, Emmanuel Le Roy. *The French Peasantry, 1450-1660*, University of California Press, 1987.
- Lambrecht, Thijs. "Reciprocal exchange, credit and cash: agricultural labour markets and local economies in the southern Low Countries during the eighteenth century". *Continuity and Change* 18, no. 2 (2003): 237-261. <https://doi.org/10.1017/S0268416003004624>
- Klapisch-Zuber, Christiane. "Plague and family life". In *The new Cambridge medieval history: c. 1300-c. 1415*, edited by Michael Jones, 124-154. Cambridge University Press, 2008.
- Knotter, Ad. "Problems of the family economy: peasant economy, domestic production, and labour markets in pre-industrial Europe". In *Early modern capitalism: economic and social change in Europe, 1400-1800*, edited by Maarten Prak, 135-160. Routledge, 2000.
- Malanima, Paulo. "The economic consequences of the Black Death". In *L'impatto della 'peste antonina'*, edited by Elio Lo Cascio, 311-328. Bari, 2012.
- Medick, Hans. "The proto-industrial family economy: The structural function of household and family during the transition from peasant society to industrial capitalism". *Social history* 1, no. 3 (1976): 291-315.
- Mendels, Franklin F. "Proto-industrialization: the first phase of the industrialization process". *The journal of economic history* 32, no. 1 (1972): 241-261.
- Montanari, Massimo. *La faim et l'abondance: histoire de l'alimentation en Europe*, Seuil, 1995.
- Pamuk, Şevket. "The Black Death and the origins of the 'Great Divergence' across Europe, 1300-1600". *European Review of Economic History* 11, no. 3 (2007): 289-317. <https://doi.org/10.1017/S1361491607002031>
- Poos, Lawrence Raymond. *A rural society after the Black Death: Essex 1350-1525*, Cambridge University Press, 2004.
- Postan, Michael. *The medieval economy and society: an economic history of Britain, 1100-1500*, California: University of California Press, 1973.
- Pounds, Norman, and Charles Roome. "Population density in fifteenth century France and the low countries". *Annals of the Association of American Geographers* 61, no. 1 (1971): 116-130.
- Roosen, Joris. "Severity and selectivity of the black Death and recurring plague in the southern Netherlands (1349-1450)". *TSEG-The Low Countries Journal of Social and Economic History* 14, no. 4 (2017): 25-55. <https://doi.org/10.18352/tseg.986>
- Roosen, Joris, and Daniel Curtis. "The 'light touch' of the Black Death in the Southern Netherlands: an urban trick?". *The Economic History Review* 72, no. 1 (2019): 32-56. <https://doi.org/10.1111/ehr.12667>
- Sivéry, Gérard. "La Hainaut et la Peste Noire". *Mémoires et Publications de la Société des Sciences, des Arts et des Lettres du Hainaut*, no. 79 (1965): 431-437.
- Sivéry, Gérard. "Herchies, un village du Hainaut (1267-1314)". *Revue du Nord* 52, no. 206 (1970): 309-330.
- Sivéry, Gérard. "Les profits de l'éleveur et du cultivateur dans le Hainaut à la fin du Moyen Age". *Annales. Histoire, Sciences Sociales* 31, no. 3 (1976): 604-630.
- Sivéry, Gérard. *Structures agraires et vie rurale dans le Hainaut à la fin du Moyen-Age*, Presses Université Septentrion, 1977.
- Soens, Tim, and Erik Thoen. "Vegetarians or carnivores? Standards of living and diet in late medieval Flanders". In *Le interazioni fra economia e ambiente biologico nell'Europa preindustriale: secc. XIII-XVIII-economic and biological interactions in the pre-industrial Europe from the 13th to the 18th centuries*, 495-527. Firenze; Firenze university Press, 2010.
- Soens, Tim, Peter Stabel, and Tineke Van de Walle. "An Urbanised Countryside? A Regional Perspective on Rural Textile Production in the Flemish West-Quarter (1400-1600)". In *Economies, Public Finances, and the Impact of Institutional Changes in Interregional Perspective: The Low Countries and Neighbouring German Territories (14th-17th Centuries)*, edited by Marc Boone and Anne Laure van Bruaene, 35-59. Brepols Publishers, 2015.
- Thirsk, Joan. *Alternative agriculture: a history: from the Black Death to the present day*, Oxford: Oxford University Press, 1997.
- Thoen, Erik. "Social agrosystems as an economic concept to explain regional differences. An essay taking the former County of Flanders as an example (Middle ages-19th century)". In *Landholding and Land Transfer in the North Sea Area (Late Middle Ages - 19th Century)*, edited by Peter Hoppenbrouwers and Bas Van Bavel, 47-66. Brepols Publishers, 2004.
- Thoen, Erik, and Tim Soens. "The family or the farm: a Sophie's choice? The late medieval crisis in the former County of Flanders". In *Crisis in the later middle ages: beyond the Postan-Duby paradigm*, edited by John Drendel, 195-224. Brepols Publishers, 2015.
- Thoen, Erik and Tim Soens. "The Low Countries, 1000-1750". In *Struggling with the environment: land use and productivity*, edited by Erik Thoen and Tim Soens, 221-258. Brepols Publishers, 2015.
- Van Bavel, Bas. "People and land: rural population developments and property structures in the Low Countries, c. 1300-c. 1600". *Continuity and Change* 17, no. 1 (2002): 9-37. <https://doi.org/10.1017/S0268416002004046>
- Van Bavel, Bas. "Early proto-industrialization in the Low Countries? The importance and nature of market-oriented non-agricultural activities on the countryside in Flanders and Holland". *Revue belge de philologie et d'histoire* 81, no. 4 (2003): 1109-1165. DOI:10.3406/rbph.2003.4777
- Van Bavel, Bas, and Jan Luiten Van Zanden. "The jump-start of the Holland economy during the late-medieval crisis, c. 1350-c. 1500". *The Economic History Review* 57, no. 3 (2004): 503-532. <https://doi.org/10.1111/j.1468-0289.2004.00286.x>
- Van Bavel, Bas. "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". *Continuity and change* 21, no. 1 (2005): 37-72. <https://doi.org/10.1017/S0268416005005631>
- Van Bavel, Bas. "The transition in the Low Countries: wage labour as an indicator of the rise of capitalism in the countryside, 1300-1700". *Past and Present* 195, no. 2 (2007): 286-303. <https://doi.org/10.1093/pastj/gtm036>
- Van Bavel, Bas. *Manors and markets: Economy and society in the Low Countries 500-1600*, Oxford: Oxford University Press, 2010.
- Van Bavel, Bas, and Daniel Curtis. "Better understanding disasters by better using history". *International Journal of Mass Emergencies and Disasters* 34, no. 1 (2016): 143-169.
- Vandenbroeke, Christian. *Agriculture et alimentation*, Centre belge d'histoire rurale, 1975.



- Van Gelder, Hans, *Nederlandse dorpen in de 16e eeuw*, Amsterdam, 1953.
- Van Zanden, Jan Luiten. "A third road to capitalism? Proto-industrialization and the moderate nature of the late medieval crisis in Flanders and Holland, 1350–1550". In *Peasants into Farmers? The Transformation of Rural Economy and Society in the Low Countries (Middle Ages-19th Century) in Light of the Brenner Debate*, edited by P. Hoppenbrouwers and Jan Luiten Van Zanden, 85-101. Brepols Publishers, 2001.
- Van Zanden, Jan Luiten. "The skill premium and the 'Great Divergence'". *European Review of Economic History* 13, no. 1 (2009): 121-153. <https://doi.org/10.1017/S1361491609002408>
- Voigtländer, Nico, and Hans-Joachim Voth. "How the West 'Invented' fertility restriction". *American Economic Review* 103, no. 6 (2013): 2227-2264. DOI:10.1257/aer.103.6.2227
- Wrigley, Edward Anthony, and Roger Schofield. *The population history of England 1541-1871*, Cambridge University Press, 1989.
- Yver, Jean. "Les deux groupes de Coutumes du Nord (Première partie)". *Revue du Nord* 35, no. 140 (1953): 197-220.