

Capitalist Cattle Farming in the Eastern Low Countries (c. 1470-1570)

Bridging the ‘Commercialisation’ and ‘Property Relations’

Approaches to Rural Economic Change

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This article documents and explains the rise of capitalist cattle farming in the sixteenth-century eastern Low Countries. The case of the two parishes of Zeddam and Netterden shows that by 1570, a small group of graziers, specialised in the fattening of Danish-bred oxen, had come to hold a prominent place in the local rural economy. In some localities, their pastures represented more than 40 per cent of the total value of taxed landholdings. When conceptualising capitalist farming based on its internal logic of accumulating capital through exchanging commodities, these graziers can be considered to be capitalist farmers. Because capitalist cattle farming in the eastern Low Countries emerged in a different context than the typical capitalist tenant farmer in the western areas of the Low Countries, the case offers a fresh perspective on the causal factors allowing a capitalist logic to take root in farming. The rise of the capitalist graziers in Zeddam and Netterden was the combined consequence of the expansion of long-distance trade networks, local geographical conditions, and local property relations. The studied case thus shows how the two currently dominant explanatory models focused on ‘commercialisation’ and ‘property relations’ can be integrated to explain the rise of capitalist farming.

Dit artikel onderzoekt de opkomst van grootschalige vetweiderij in het oosten van de zestiende-eeuwse Nederlanden. De casus van de twee parochies Zeddam en Netterden laat zien dat een kleine groep vetweiders zich omstreeks 1570 had gespecialiseerd in het vetmesten van Deense ossen en niet meer weg te denken was uit de lokale agrarische economie. Rondom sommige nederzettingen

vertegenwoordigden hun weilanden meer dan veertig procent van de totale belaste pachtwaarde. Door kapitalistische landbouw te definiëren als agrarische productie met als doel het accumuleren van kapitaal door het verhandelen van producten kan deze vetweiderij als een voorbeeld van agrarisch kapitalisme worden geclassificeerd. De huidige casus biedt een nieuw perspectief op de mogelijke verklaringen voor de opkomst van de kapitalistische landbouw omdat deze in de oostelijke Nederlanden in een andere context ontstond dan het klassieke agrarisch kapitalisme in de westelijke regio's van de Nederlanden. De kapitalistische vetweiderij in de parochies Zeddam en Netterden bestond bij gratie van drie factoren: de integratie van de regio in de internationale handel in slachtvee, de lokale geografische omstandigheden en lokale bezitsverhoudingen. Zodoende integreert dit artikel de twee op dit moment dominante verklaringsmodellen van kapitalistische landbouw gericht op de rol van langeafstandshandel enerzijds en van bezitsverhoudingen anderzijds.

Introduction

In 2010, Wim Blockmans and Bas van Bavel both published major monographs with a clear focus on the economic history of the Low Countries.¹ Though published simultaneously, Peter Hoppenbrouwers points out that 'they are miles apart when it comes to explaining long-term economic evolution.'² In fact, they correspond well to two of the main 'supermodels' of pre-modern economic development.³ Blockmans' work is largely in line with the 'commercialisation' model with origins in a tradition of Smithian economic thought: in this view, international trade and urban demand are the main drivers of development.⁴ Van Bavel, in contrast, focuses on the institutional organisation of factor markets and its social roots: he steers close to the 'property relations' model, which is indebted to Marxist approaches stressing the impact of class struggle over key economic resources such as land.⁵ Despite their differences, both narratives focus on the best studied, and arguably most dynamic, western parts of the Low Countries.⁶ This article

- 1 Wim Blockmans, *Metropolen aan de Noordzee. De geschiedenis van Nederland, 1100-1560* (Bert Bakker 2010); Bas van Bavel, *Manors and Markets: Economy and Society in the Low Countries, 500-1600* (Oxford University Press 2010). DOI: <https://doi.org/10.1093/acprof:oso/9780199278664.001.0001>.
- 2 Peter Hoppenbrouwers, 'Three Decades of Economic and Social History of the Medieval Low Countries: A Summary View', in: Remi van Schaik (ed.), *Economies, Public Finances, and the Impact of Institutional Changes in Interregional Perspective: The*

Low Countries and Neighbouring German Territories (14th-17th Centuries) (Brepols 2015) 20. DOI: <https://doi.org/10.1484/M.SEUH-EB.5.103703>.

- 3 John Hatcher and Mark Bailey, *Modelling the Middle Ages: The History and Theory of England's Economic Development* (Oxford University Press 2001). DOI: <https://doi.org/10.1093/acprof:oso/9780199244119.001.0001>.
- 4 Blockmans, *Metropolen*, 20-22, 540-587, 649-655.
- 5 Van Bavel, *Manors*, 4-6, 9-10, 387-406.
- 6 Hoppenbrouwers also pointed to the 'Flandrocentric approach' and 'Hollandocentric

turns to the east of the duchy of Guelders and shows that radical economic change did not bypass this region. In the eastern Low Countries, capitalist cattle farming emerged during the sixteenth century and the context in which it arose shows that long-distance trade, property relations, and local geographical conditions each played a crucial role.

The capitalist farming central to this article concerned the fattening of Danish-bred oxen. In his 1581 *Descrittione di tutti I Paesi Bassi*, the Florentine nobleman and long-time resident of Antwerp Lodovico Guicciardini noted how large numbers of cattle were driven from as far away as Denmark to the duchy of Guelders for fattening (Figure 1).⁷ The history of these trade networks is well documented.⁸ During the fifteenth century, urban centres exerted a strong demand for beef, which was initially satisfied through regional trade. From around 1470 onwards, the increasing demand in the Low Countries (especially Antwerp) and the Rhineland (especially Cologne) was met by importing animals bred in Denmark and northern Germany.⁹ Denmark specialised in breeding due to its suitable climate and because the relative ease of transporting live animals compensated for the kingdom's notoriously bad roads and distance from the European economic centre of gravity.¹⁰ During the studied period, Danish exports soared from an estimated 20,000 oxen per year between 1480 and 1500 to 45,000–50,000 between 1540 and 1580.¹¹ Most animals were driven overland to the Low Countries in spring. On the road, the young animals lost much of their weight, so, over summer, they were fattened on rich pastures along the transport routes before their eventual sale and consumption in autumn.¹² The long-distance trade thus created new opportunities for agricultural economies.

This article shows how the trade in oxen prompted the rise of capitalist cattle farming in two parishes in the eastern Low Countries known as Zeddam

bias' in respectively Blockmans' and Van Bavel's book: Hoppenbrouwers, 'Three Decades', 18.

7 Lodovico Guicciardini, *Descrittione di tutti I Paesi Bassi, altrimenti detti Germania inferiore* (Antwerp: Apresso Guglielmo Siluio, 1567) 155.

8 Heinz Wiese, 'Der Rinderhandel im nordwesteuropäischen Küstengebiet vom 15. Jahrhundert bis zum Beginn des 19. Jahrhunderts', in: Heinz Wiese and Johann Bölts (eds.), *Rinderhandel und Rinderhaltung im nordwesteuropäischen Küstengebiet vom 15. bis zum 19. Jahrhundert* (Gustav Fisher 1966) 1–129; Ian Blanchard, 'The Continental European Cattle Trades, 1400–1600', *The Economic History Review* 39:3 (1986) 427. DOI: <https://doi.org/10.1111/j.1468-0289.1986.tb00415.x>; Jeroen

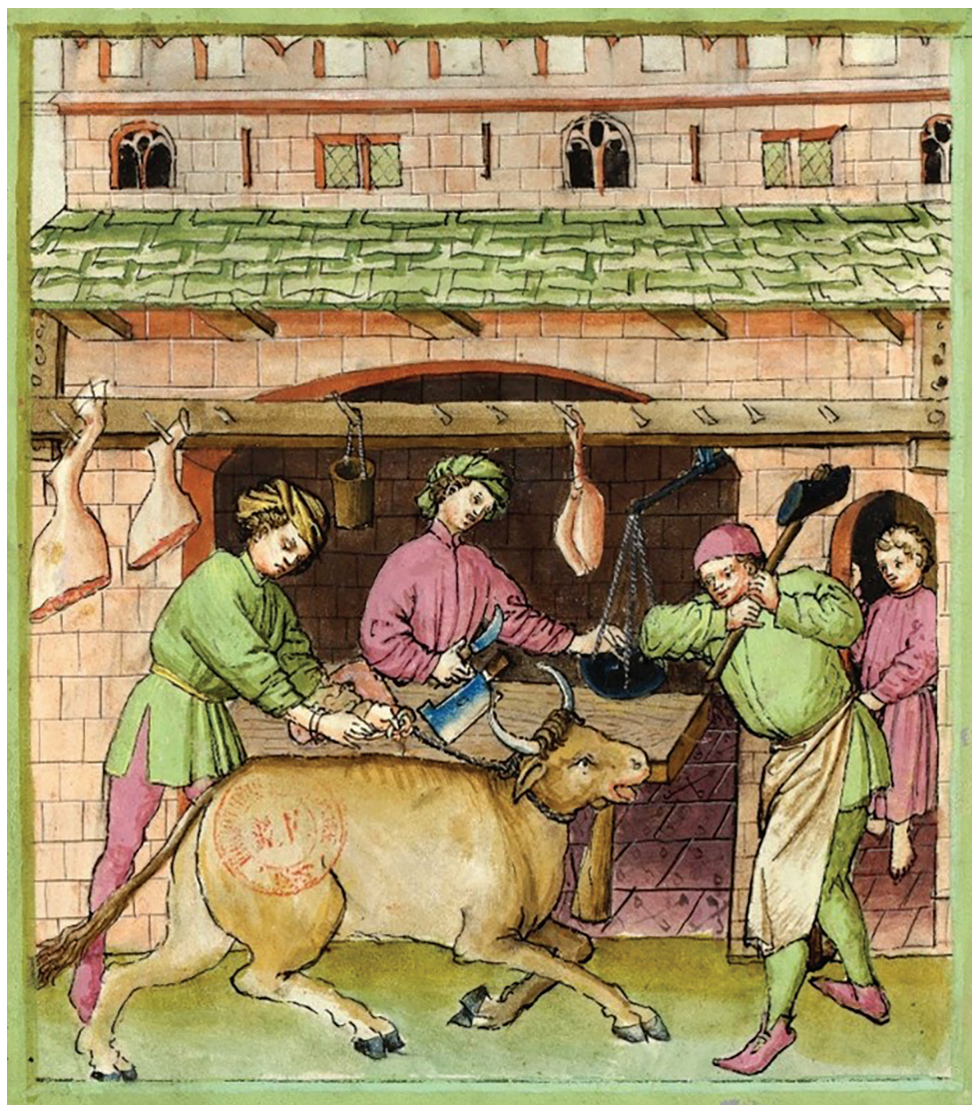
Benders, 'Over ossen en keurslagers. De stad-Groningse, Overijsselse en Gelderse veehandel tussen circa 1350 en 1550', in: F.J. Bakker, D.E.H. de Boer, Renée Nip, and Remi van Schaik (eds.), *Het Noorden in het midden. Opstellen over de geschiedenis van de Noord-Nederlandse gewesten in middeleeuwen en nieuwe tijd* (Koninklijke Van Gorcum 1998) 61–86; Wilhelmina Gijsbers, *Kapitale ossen. De internationale handel in slachtvee in Noordwest-Europa (1300–1750)* (Verloren 1999).

9 Blanchard, 'The Continental European Cattle Trades', 429–433; Gijsbers, *Kapitale ossen*, 15–17, 23–28.

10 Wiese, 'Der Rinderhandel', 4–5.

11 *Ibid.*, 78.

12 Gijsbers, *Kapitale ossen*, 23–28.



▲
Figure 1. The butchering of a young bovine in an urban environment as depicted in a fifteenth-century edition of the *Tacuinum sanitatis* by Ibn Butlân. Source: Bibliothèque nationale de France, Département des manuscrits, Latin 9333, f. 71v, <https://gallica.bnf.fr/ark:/12148/btv1b105072169/f156.item.zoom>.

and Netterden. The first section introduces a new theoretical perspective on agrarian capitalism by defining it as farming based on the capitalist logic of accumulating capital through the exchange of commodities. It also briefly discusses the current historiography on the rise of capitalist farming in the Low Countries. The second section draws on sixteenth-century fiscal sources to show that a small group of specialised graziers had come to hold an important position within the parishes' agricultural economies. The third section harks back to the definition of agrarian capitalism introduced in the first section and identifies the graziers as capitalist farmers. Finally, the fourth section explains the rise of capitalist cattle farming in the eastern Low Countries as the combined effect of long-distance trade networks, geographical conditions, and property relations.

Theoretical considerations and historiographical background

The current historiography on the rise of agrarian capitalism in the Low Countries is largely based on the work of Robert Brenner, whose articles kickstarted an influential debate in the 1970s. Brenner argued that the social property relations, resulting from a class struggle over land and the rural surplus, explained why agrarian capitalism took hold in England. In the wake of this debate, historians working on the Low Countries found evidence of shifts to large-scale and arguably capitalist farming in four regions: coastal Flanders, the Guelders river area, and coastal Frisia during the fifteenth and sixteenth centuries, as well as Holland from the late sixteenth century onwards.¹³ In his original article, Brenner defined capitalist agriculture as 'large-scale tenant farming on the basis of capital improvements and wage labour.'¹⁴ Though this definition is concise, Brenner also stressed other aspects including economic growth resulting from a shift in focus from land to labour productivity, and proletarianisation.¹⁵ Wage labour, economic growth, and proletarianisation are oft-cited elements of (agrarian) capitalism but are also hard to measure for pre-modern societies. The same holds for the dominance of market exchange, often stressed as a defining feature of capitalism.¹⁶ In the eastern Low Countries, Brenner's typical tenant farmers are not easily found

13 The best introduction to the regionally diverse patterns of development in the Low Countries is: Van Bavel, *Manors and Markets*. For an introduction to the Brenner debate, see: T.H. Aston and C.H.E. Philpin (eds.), *The Brenner Debate: Agrarian Class Structure and Economic Development in Pre-Industrial Europe* (Cambridge University Press 1985). DOI: <https://doi.org/10.1017/CBO9780511562358>.

14 Robert Brenner, 'Agrarian Class Structure and Economic Development in Pre-Industrial Europe', in: Aston and Philpin, *The Brenner Debate*, 10-63, 25. DOI: <https://doi.org/10.1017/CBO9780511562358.003>.

15 *Ibid.*, 48-50.

16 Maarten Prak and Jan Luiten van Zanden, *Pioneers of Capitalism: The Netherlands 1000-1800*

while the macro-societal effects of capitalism are hard to observe if capitalist production has not yet permeated society.

The present article departs from Karl Marx' idea of capitalism as a mode of production. Marx' main contribution is that he showed how society-wide effects followed from the way in which productive forces such as labour, tools, and raw materials were used in production. What distinguished capitalism was the producers' underlying aim of accumulating value through exchanging commodities expressed in the simple formula $M-C-M'$: A capitalist converts money (M) into commodities (C) that can be sold for more money (M'). Peasant family farmers, meanwhile, aimed to maintain their households based on the household's labour, either through subsistence farming or by selling crops such as flax to buy necessary foodstuffs ($C-M-C$).¹⁷ Crucially, neither the purchase of production factors (such as land and labour) nor a profit-motive set capitalists apart. There is nothing to suggest that peasants would not aim for the highest possible output relative to their inputs, and peasants were active on land, labour, and capital markets. The difference lies in their intentions. Peasants acquired land and hired labourers to adjust the size of their farms in line with their household's developmental cycle and to bridge temporary labour shortages (for instance during the harvest).¹⁸ What defined capitalist farmers was that they bought land and labour with the aim of selling the produced foodstuffs with a profit and to accumulate capital. Based on this underlying logic of capitalist production, capitalist farmers can be identified in the eastern Low Countries.

Wage labour, economic growth, proletarianisation and market exchange all logically follow from the capitalist's aim to accumulate value through the exchange of commodities (buying land and labour and selling foodstuffs). First, as Marx points out, wage labour was central to European capitalist farming.¹⁹ He assumes that value can only be added through

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- 17 Karl Marx, *Capital: A Critique of Political Economy*, transl. Samuel Moore and Edward Aveling (Charles H. Kerr & Company 1909) 163-173.
- 18 For land, see: Peter Hoppenbrouwers, *Een middeleeuwse samenleving. Het Land van Heusden (ca. 1360-ca. 1515)* (Landbouwhogeschool Wageningen/Afdeling agrarische geschiedenis 1992) 421-422, 432-435; for labour, see: Thijs Lambrecht, 'The Institution of Service in Rural Flanders in the Sixteenth Century: A Regional Perspective', in: Jane Whittle (ed.), *Servants in Rural Europe: 1400-1900* (Boydell

& Brewer 2017) 43; Jean Birrell, 'Peasant Farmers and their Farmworkers in Later Medieval England', in: Miriam Müller (ed.), *The Routledge Handbook of Medieval Rural Life* (Routledge 2021) 177-180. DOI: <https://www.doi.org/10.4324/9781003194866-15>; For capital see: Erik Thoen, *Landbouweconomie en bevolking in Vlaanderen gedurende de late Middeleeuwen en het begin van de moderne tijden. Testregio: De kasselrijen van Oudenaarde en Aalst (eind 13de – eerste helft 16e eeuw)* (Belgisch Centrum voor Landelijke Geschiedenis 1988) 862-866, 929-935.

- 19 Marx, *Capital*, 815.

the labour process, which is valid for pre-modern agriculture.²⁰ Hence, to accumulate through the exchange of commodities, labour needs to be bought as a commodity. Although slavery can be considered a way to buy labour as a commodity, in the Low Countries, wage labour was virtually the only possibility. As Marx shows, wage labour was suited for accumulation because wages tended to be lower than the value the labourer adds during their paid working hours.²¹ Secondly, the capitalist logic implies increasing labour productivity. To maximise the potential for accumulation, capitalists had to increase the price of their output relative to the price of their inputs, including labour. This could be achieved by artificially lowering wages or increasing output prices as well as by forcing labourers to work overtime. These strategies must have been rather unusual in the northern Low Countries, where the labour market generally knew few constraints.²² Here, capitalist farmers would have had to change their production strategies to increase output per labour unit. This strive for higher labour productivity, in turn, helped to increase society's output per capita.²³ Third, capitalist farming contributed to proletarianisation by drawing labour from the household economy to work for wages. This also worked the other way: the more farmland capitalist farmers accumulated, the less was left for their peasant neighbours. Finally, commodity and factor markets were central. Capitalists, after all, must purchase the means of production and labour, and sell the produced commodities. All aspects commonly associated with agrarian capitalism can thus be traced back to the simple definition of capitalist farming as production aimed at the accumulation of capital through the exchange of commodities.

Why would a capitalist rationale take hold in agriculture, a sector traditionally dominated by household farmers trying to maintain their families based on the family's own labour? For Brenner, social property relations are the main explanatory variable, which he defines as the relations among producers and exploiters 'that, taken together, make possible/specify the regular access of individuals and families to the means of production [...] and/or the social product per se.'²⁴ Capitalist farming is said to arise when

20 *Ibid.*, 221-234.

21 *Ibid.*, 586-594.

22 Van Bavel, *Manors*, 205-210; In coastal Flanders, during the seventeenth and eighteenth centuries labour laws did favour capitalist production and even enabled forms of forced labour: Thijs Lambrecht, 'Labour Legislation and Rural Servants in the Southern Low Countries, c. 1600-1800', in: Jane Whittle and Thijs Lambrecht (eds.), *Labour Laws in Preindustrial Europe: The Coercion*

and Regulation of Wage Labour, c.1350-1850 (Boydell & Brewer 2023) 144-163. DOI: <https://doi.org/10.2307/jj.9192211.13>.

23 Marx, *Capital*, 344-353.

24 Robert Brenner, 'Property and Progress: Where Adam Smith Went Wrong', in: Chris Wickham (ed.), *Marxist History-Writing for the Twenty-First Century* (Oxford University Press 2007) 58. DOI: <https://doi.org/10.5871/bacad/9780197264034.003.0004>.

farmers must buy their inputs (especially land) on the market. Only then will they be subject to competition and forced to maximise their profits in a capitalist way.²⁵ According to Brenner, social property relations governing the access to the means of production determined whether capitalist farming could take hold.

Brenner's line of reasoning looms large in the current historiography on the Low Countries, including the general overview provided by Van Bavel in his *Manors and Markets*. Wherever historians found evidence of large-scale commercial farming, (large) landed estates let out on commercial leases were predominant too.²⁶ This is especially clear in the case of coastal Flanders where drainage problems combined with reduced opportunities for proto-industrial activities and high levels of taxation brought about the large-scale dispossession of smallholders during the thirteenth and fourteenth centuries.²⁷ The resulting rise of absentee large landownership and the dominance of lease markets were accompanied by a parallel process of increasing farm size and higher wage-labour inputs.²⁸ A similar argument can be made for Holland, where large-scale farming only really took off from the late sixteenth century onwards, after urbanites started acquiring land on a massive scale and leaseholds became dominant.²⁹ In the Guelders river area, meanwhile, large landed estates had been common since the dissolution of the manorial system. Here, Van Bavel argues, the crucial link was the rise of short-term competitive lease markets. They gained ground from the thirteenth century onwards and became dominant by the end of the sixteenth century.

25 *Ibid.*, 60-61.

26 Tim Soens and Erik Thoen, 'The Origins of Leasehold in the Former County of Flanders', in: Bas van Bavel and Phillipp Schofield (eds.), *The Development of Leasehold in Northwestern Europe, c. 1200-1600* (Brepols 2008) 49. DOI: <https://doi.org/10.1484/M.CORN-EB.3.313>; Erik Thoen and Tim Soens, 'The Family or the Farm: A Sophie's Choice? The Late Medieval Crisis in Flanders', in: John Drendel (ed.), *Crisis in the Later Middle Ages* (Brepols 2015) 144. DOI: <https://doi.org/10.1484/M.TMC.5.103788>; idem, 'Rural Specialisation and Commercialisation in the Former County of Flanders in the Middle Ages and the Early Modern Period', in: Alain Dierkens, Nicolas Schroeder, and Alex Wilkin (eds.), *Penser la paysannerie médiévale, un défi impossible* (Éditions de la Sorbonne 2017) 138-139. DOI: <https://doi.org/10.4000/>

[books.psorbonne.27990](https://doi.org/10.4000/); 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-19th. Century)', in: Bas van Bavel and Peter Hoppenbrouwers (eds.), *Landholding and Land Transfer in the North Sea Area (Late Middle Ages-19th Century)* (Brepols 2004) 54-57. DOI: <https://doi.org/10.1484/M.CORN-EB.4.00138>; Bas van Bavel, 'Rural Development and Landownership in Holland, c. 1400-1650', in: Oscar Gelderblom (ed.), *The Political Economy of the Dutch Republic* (Ashgate 2009) 170-171; Van Bavel, *Manors*, 244-246.

27 Soens and Thoen, 'The Origins', 44.

28 Tim Soens, *De spade in de dijk? Waterbeheer en rurale samenleving in de Vlaamse kustvlakte (1280-1580)* (Academia Press 2009) 83-88.

29 Van Bavel, 'Rural Development'.

The resulting competition for leasehold land, in turn, coincided with the rise of capitalist tenant farming.³⁰ Agrarian capitalism in the Low Countries thus appears connected to social property relations that rendered producers dependent on the lease market for land.³¹

The perceived correlation between capitalist farming and property relations has pushed other possible explanatory variables to the background. Consequently, a remarkable rift occurred between the historiography on agrarian capitalism and studies on the agricultural history of the Low Countries in general. Whereas the former adopts an approach centred on property relations, the latter focuses, much in line with the work of Blockmans, on commercialisation and dynamics of supply and demand. Changes in cultivation practices are often seen as responses to demand stimulated by urbanisation and international trade, while shifts in farm size and labour organisation are often seen as a response to changes in factor and commodity prices.³²

Piet van Cruyningen, meanwhile, points out that the ‘Brennerian historians have [...] paid insufficient attention to natural factors such as soil and the availability or excess of water.’³³ Ironically, it was Brenner himself who did reserve a major role for ecological change in his account of agrarian capitalism in Holland but framed its effects fully within his social property relations perspective. Instead of the class struggle between lords and peasants, Brenner argued that the subsidence of the Holland peat soils rendered farmers dependent on the market for their inputs. Soil subsidence, which occurred through the oxidation of peat soils after their reclamation, aggravated drainage problems and prevented the cultivation of cereals which the farmers now had to procure at the market.³⁴ Based on the case of capitalist cattle farming in the eastern Low Countries, I aim to bridge the gap between the property relations and commercialisation approaches while including geographical conditions as a crucial third variable.

30 Van Bavel, *Manors*, 244–246.

31 In his earlier work on the Guelders river area, Van Bavel considered social property relations not necessarily as the prime mover leading to capitalist farming but as providing the opportunity for upscaling (see below).

32 Jan de Vries, *The Dutch Rural Economy in the Golden Age, 1500–1700* (Yale University Press 1974) 164–173; Jan Luiten van Zanden, *De economische ontwikkeling van de Nederlandse landbouw in de negentiende eeuw, 1800–1914* (Landbouwhogeschool Wageningen/Afdeling agrarische geschiedenis 1985) 316–317, 344–345; Jan

Bieleman, *Boeren in Nederland. Geschiedenis van de landbouw, 1500–2000* (Boom 2008) 45–50, 101–103; Blockmans, *Metropolen*, 540–587.

33 Piet van Cruyningen, *Farming the North Sea Coast, 900–2000: Managing Water, Reclaiming the Land* (Boydell & Brewer 2025) 14–15. DOI: <https://doi.org/10.1515/9781805435754>.

34 Robert Brenner, ‘The Low Countries in the Transition to Capitalism’, in: Peter Hoppenbrouwers and Jan Luiten van Zanden (eds.), *Peasants into Farmers? The Transformation of Rural Economy and Society in the Low Countries (Middle Ages – 19th Century) in Light of the Brenner*

Introducing the case: Graziers in Zeddham and Netterden

This article focuses on two parishes in the eastern Low Countries: Zeddham and Netterden. They were part of the territories of the lords of Bergh who, by the mid-fifteenth century, had carved out a large seigneurie (*heerlijkheid*) in the border region between the duchies of Guelders and Cleves. Even today, the area central to this study is part of the Dutch-German border region between the towns of Doetinchem in the Netherlands and Emmerich in Germany. The seigneurie of the lords of Bergh comprised multiple parishes and settlements, of which only some are studied in this article. To denote the areas that are included I use the term parish because they largely, though not entirely, overlap with the parishes of Zeddham and Netterden. Hence, the small hamlet of Wijnbergen and the agricultural land surrounding the small town of 's-Heerenberg are considered part of the parish of Zeddham even though they respectively fell under the parishes of Doetinchem and 's-Heerenberg.³⁵ Similarly, the parish of Netterden includes Borghees and Speelberg, even though they fell under a parish church in the city of Emmerich.³⁶ Finally, the settlements of Milt, Wieken, Wals, and Megchelen are not included because the sixteenth-century fiscal sources central to this article record them under the heading of the neighbouring parish of Genderingen.³⁷ Figure 2 maps the studied areas on a palaeogeographical map representing the situation around 1500.

The parishes consisted of multiple localities. Apart from several hamlets, the parish of Zeddham included the village of Zeddham itself and the relatively large settlement of Groot Azewijn. The parish of Netterden counted, apart from the village of that name, a number of hamlets.³⁸ The town of 's-Heerenberg and the family castle of the lords of Bergh, known as Huis Bergh, were located in between both parishes. Probably due to the presence of the town counting at least 153 hearths in the sixteenth century, the area was relatively densely populated compared to its surroundings with an estimate of more than 20 inhabitants per square kilometre around the year 1500.³⁹ Still, the town was not large enough to be considered an important urban centre.

In terms of geographical conditions, the parishes of Zeddham and Netterden consisted of two main landscapes. The western part of the parish

Debate (Brepols 2001) 310-311. DOI: <https://doi.org/10.1484/M.CORN-EB.3.293>.

35 Anthonie van Schilfgaarde, *Het archief van het Huis Bergh* (G.J. Thieme 1932) 101.

36 Van Schilfgaarde, *Het archief*, 100-101.

37 Erfgoedcentrum Achterhoek en Liemers (hereafter ECAL), 0214 Huis Bergh (hereafter HB) cat. nr. 1673, f. 29.

38 Van Schilfgaarde, *Het archief*, 100-102.

39 H. Ditt, 'Zur kulturgeografischen Struktur und Stellung des Westmünsterlandes im Mittelalter', in: Georg Droege (ed.), *Landschaft und Geschichte. Festschrift für Franz Petri* (Ludwig Röhrscheid 1970) 130-131; A.G. van Dalen, *Bergh. Heren, land en volk* (Thoben Offset 1979) 80.

of Zeddarn was dominated by a moraine with surrounding Pleistocene sandy areas. This high, dry, and sandy area, however, borders on a riverine landscape consisting of river clay terraces and river dunes. The parish of Netterden also consisted mostly of a riverine landscape, dominated by a large complex of sand dunes in its western parts around Borghees and Speelberg.⁴⁰ The contrast between sandy soils and river clay terraces will highlight the importance of soil structures as a factor in the rise of capitalist livestock farming.

Three different sources from the second half of the sixteenth century testify to the presence of large-scale pastoral farming in the parishes of Zeddarn and Netterden. The first source is a crude list of individuals charged for a livestock tax and shows how a few individuals owned surprisingly large herds of oxen. The second is a series of receipt registers of a property tax that makes clear that the large herds were mirrored by a concentration of pastures in the hands of a few leaseholders. Although some individuals could be identified in both sources, a series of court records of the local seigneurial court as the third source provides conclusive evidence that many of the large leaseholders used their pastures to graze their own stock. Overall, the three sources thus highlight a group of large-scale farmers who owned and grazed large numbers of oxen on their leasehold pastures.

The cattle tax register is hard to interpret but shows that large numbers of oxen owned by just a few individuals roamed the area. The source is quite rudimentary; no specific date is mentioned, the selection criteria for the taxed individuals are unclear and the exact number of taxed animals is not always evident. Yet it does pertain at least partially to the studied parishes judged by the names of mentioned pastures. Crucially, the list reveals two important aspects of the pastoral economy: large numbers of oxen roamed the area, and the animals often belonged to just a few individuals. First, the list includes about 2102 oxen, representing 84 per cent of all animals in the list.⁴¹ The oxen were owned by 62 individuals who, on average, owned 34 oxen per person. Furthermore, no less than 74 per cent of all recorded oxen were owned by 20 individuals owning more than 40 animals. The four largest herds, moreover, counted no less than 124, 132, 142, and 263 oxen. By the late sixteenth century, the grazing of oxen had become an increasingly important sector, and one dominated by individuals owning large numbers of animals.

40 Jakob Düffel, *Zur Geschichte der Stadt Emmerich* (Schleipen & Eichhorn 1955) 15, 60–61.

41 These numbers are calculated based on the individual records of animals usually listed per pasture. Only in the case of the large grazier known as Conrad vanden Vurden were these numbers lacking, so I used the total recorded in the list. In general, I refrained from using the

totals since they are often slightly different from my own calculations. Furthermore, when only a combination of oxen and other bovines are recorded, the animals are all counted as oxen. This only concerned 43 animals. Due to the source's crude nature, a different reading might lead to different results – but the dominant share of oxen is beyond doubt.

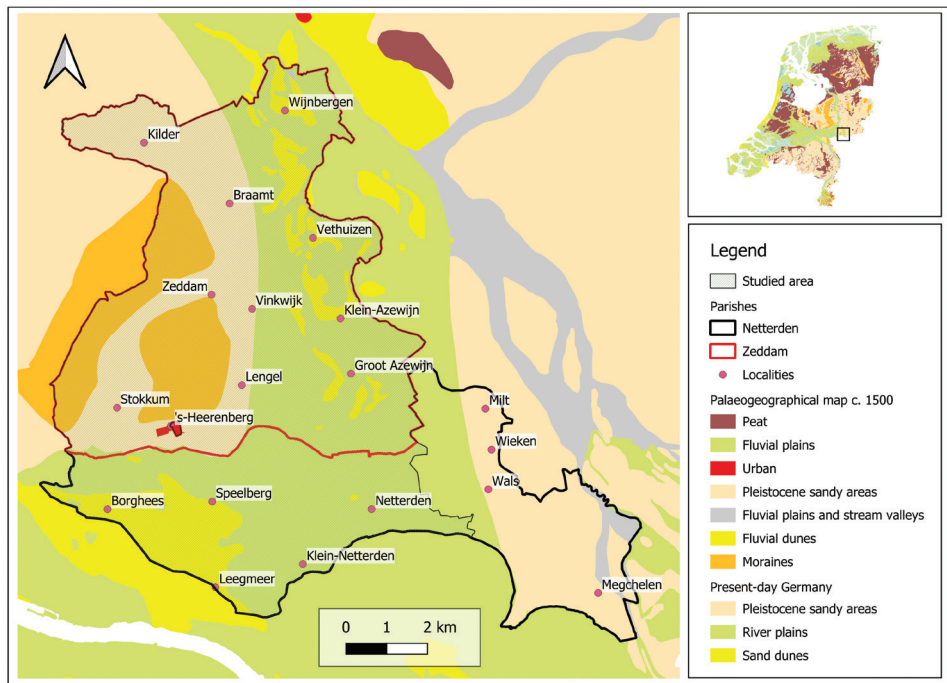


Figure 2. The parishes of Zeddum and Netterden against the backdrop of the palaeogeographical map representing the situation c. 1500. Sources: Rombert Stapel, 'Historical Atlas of the Low Countries (1350-1800)', <https://hdl.handle.net/10622/PGFYTM>, IISH Data Collection, V14 (2018); Rombert Stapel, 'Historical Atlas of the Low Countries: A GIS Dataset of Locality-Level Boundaries (1350-1800)', *Research Data Journal for the Humanities and Social Sciences*, 8:1 (2023) 1-33. DOI: <https://doi.org/10.1163/24523666-bja10033>; P. Vos, M. van der Meulen, H. Weerts, and J. Bazelmans, *Atlas of the Holocene Netherlands: Landscape and Habitation since the Last Ice Age*, Amsterdam (Amsterdam University Press 2020). The areas in present-day Germany are based on: Bodenkarte von Nordrhein-Westfalen 1:50000 (hereafter BK50) (https://www.gd.nrw.de/pr_kd_bodenkarte-50000.php#bk50), Geologischer Dienst NRW, last accessed 19 February 2026, used following "Data licence Germany – attribution – Version 2.0" (www.govdata.de/dl-de/by-2-0).

A comparison with other regions shows that the herds recorded in the cattle tax register were surprisingly large. In 1672, only 9% of the capitalist dairy farmers in Delfland (in Holland) owned more than 40 heads of cattle and no one more than 76.⁴² In general, herds of more than 30 animals were unseen or a clear exception in Western European regions as diverse as the Overijssel district of Zwollerkerspel, the Veluwe region, Holland, Frisia, Oldenburg, Ostfriesland, South Staffordshire, and the Lincolnshire marshes.⁴³ Before the onset of agrarian capitalism in early sixteenth-century Holland, herds were even smaller with on average 4 to 6 cows while the richest farmers possessed 10 to 12. In the Zeevang area to the north of Amsterdam, the average herd size even declined from 4 in 1506 to 2.8 in 1554.⁴⁴ With herds of more than 40 oxen, the individuals mentioned in the livestock tax list were on par with farms held in direct exploitation by religious institutions in coastal Flanders and the Guelders river area. During the sixteenth century two of these farms in coastal Flanders kept around 44 oxen per year, while the abbey of Mariënweerd in the Guelders river area kept about 50.⁴⁵ The four individuals in the cattle tax register with the largest herds could even compete with the seventeenth-century farms (*Vorwerke*) of the count of Oldenburg that kept, on average, 77 oxen and 96 cows with a maximum of 213 oxen and 196 cows.⁴⁶ It appears that a group of large-scale graziers had emerged in the parishes of Zeddum and Netterden.

The question arises whether the individuals paying the cattle tax can be considered farmers. It is, for instance, possible that they were merchants who paid local farmers to graze their cattle. The second source, a series of receipt registers of a property tax surveyed in 1570, however, shows that the graziers also controlled land as the crucial production factor. Although they are more systematic than the cattle tax register, the property tax registers still

42 Van Cruyningen, *Farming*, 175-176.

43 Jan Luiten van Zanden, 'De telling van de veestapel en de graanproductie in Zwollerkerspel in 1526. Een stukje in een legpuzzel', A.A.G. *Bijdragen* 28 (1986) 97-99; H.K. Roessingh, 'De veetelling van 1526 in het kwartier van Veluwe', A.A.G. *Bijdragen* 22 (1979) 13-19, 49-50; Bieleman, Boeren, 75, 77; J. Bölts, 'Die Rindviehhaltung im oldenburgisch-ostfriesischen Raum vom Ausgang des 16. Jahrhunderts bis zum Beginn des 19. Jahrhunderts', in: Wiese and Bölts (eds.), *Rinderhandel*, 217-219; Pauline Frost, 'Yeomen and Metalsmiths: Livestock in the Dual Economy in South Staffordshire 1560-1720', *Agricultural*

History Review 29:1 (1981) 34-36; Van Cruyningen, *Farming*, 128, 134.

44 Van Cruyningen, *Farming*, 120.

45 Tim Soens and Erik Thoen, 'Vegetarians or Carnivores: Standards of Living and Diet in Late Medieval Flanders', in: Simonetta Cavaciocchi (ed.), *Le interazioni fra economia e ambiente biologico nell'Europa preindustriale secc. XIII-XVIII* (Firenze University Press 2010) 495-527, 525; Bas van Bavel, *Transitie en continuïteit. De bezitsverhoudingen en de plattelandseconomie in het westelijke gedeelte van het Gelderse Rivierengebied, ca. 1300-ca.1570* (Verloren 1999) 600.

46 Calculated based on the data for four comital farms (*Vorwerke*) in: Bölts, 'Die Rindviehhaltung', 199.

require careful analysis as outlined in Appendix A. Nonetheless, the property tax registers provide a clear overview of the rental value of agricultural land in both parishes. The tax was levied on all properties (*erfgoederen*), including land. Leased properties were taxed based on their lease price while all properties that were used by their owners were taxed according to an estimate of their potential lease price.⁴⁷ The tax was levied on the property owners, but since most of the land was leased out, the receipt registers also typically record the leaseholders' names. Consequently, ten out of the twenty graziers charged for more than 40 oxen in the cattle tax list also appear in the property tax registers as leaseholders of pastures or lands that can be assumed to have been pastures.⁴⁸

Moreover, the sizes of the herds mentioned in the cattle tax list correspond well to the sizes of pastures held by the largest leaseholders recorded in the property tax registers. The surface area of plots are not generally recorded, but the tax register on Groot Azewijn states that two pastures, both worth six *daler*, could graze respectively two oxen and one ox and another bovine (*rund*).⁴⁹ Although the lease value of a pasture reflects the bargaining position of both parties, it also relates to the productive capacity of the land. Hence, the ratio of three *daler* per ox can be applied to all pastures to get a rough indication of the number of cattle they could sustain. The property tax registers for Zeddum and Netterden show there were at least fourteen leaseholders and owner-users with pastures that could graze between 40 and 280 oxen.⁵⁰ Both the overlap in names and the corresponding sizes of pastures recorded in the property tax registers and herds in the cattle tax registers suggests the presence of large-scale pastoral farmers who controlled both land and animals as production factors.

Court records of the seigneurial court with jurisdiction over the parishes of Zeddum and Netterden provide the final evidence as the third source. They cover the years 1574-1576 and include multiple cases of landlords confiscating the oxen of their lessees as collateral for outstanding lease payments. This clearly shows that the oxen were owned by the leaseholders. Among the affected lessees were graziers known from the fiscal sources such as Lodewijk and Johan Everwijn, Theunis de Haan, Henrich van

47 ECAL, HB, cat. nr. 1662, scan 12; all recorded lease values in the tax registers are converted into *daler*, the most often mentioned currency in the registers. The value of other currencies or prices expressed in kind were converted based on the exchange rates deduced from the recorded payments and applied taxation rate.

48 Their names are Conrad vanden Vurden, Gerrit Smit, Johan van Schrieck te Rees, Conrad inde Winkel, Gerrit Balman te Issem, Johan Bongart

ingen Engel, Lodewijk Everwijn, Bernt Debbinck, Nieuwenhuis te Rees, and Teunis de Haan.

49 ECAL, HB, cat. nr. 1666, f. 34.

50 Their names are Jan Bongert te Wesel, Conrad vanden Vurden, Gerrit Smit, Gerrit Everwijn, Peter Smit, Conrad inde Winkel, Jan van Schrieck te Rees, Henrick Klos, Arnt de Haan, Gerrit Balman te Issem, Johan Hueckenhorst, Lambert Holscher, Klooster Bethlehem, Frederik Tingbergen (see note 53).

de Hovelick, Johan van Schrieck, Conrad vanden Vurde, and Gerrit Everwijn.⁵¹ The possibility that some of the large leaseholders identified in the property tax registers were not actually farmers but sublet their pastures can be dismissed. It was common in the studied parishes for the leaseholders of pastures to graze their own oxen.

The property tax registers have the additional advantage of allowing for a quantitative estimate of the large-scale pastoralists' share in the total rural economy based on their share in the parishes' total taxed lease value. By using the threshold of 120 *daler* as representing pastures able to graze 40 oxen, a group of 14 graziers can be identified. This threshold remains arbitrary to a certain extent, but the discussion of herd sizes in other regions suggests that pastoral farmers with 40 head of cattle can no longer be considered typical farmers. In the parishes of Zeddam and Netterden, they held respectively 24 and 33 per cent of all leasehold value.⁵² As shown in Table 1, their prominence was even more pronounced on a local scale. The extreme case of Groot Azewijn, where graziers used 49 percent of all taxed land, was contrasted with localities where graziers were barely or not active at all. The local variability is a key point to which the final section of this article returns when discussing explanations for the rise to prominence of the graziers. Overall, large-scale pastoral farmers or graziers had come to hold a prominent place in the agricultural economies of Zeddam and Netterden around 1570.

The grazier as a capitalist

Large-scale graziers and farmers geared towards pastoral agriculture are often considered hallmarks of agrarian capitalism both in the Low Countries and England. In coastal Flanders as well as in the Guelders river area, the rise of agrarian capitalism was accompanied by a shift from arable to pastoral farming. The fattening of beef for urban markets gained prominence in both regions while horse breeding gained ground in the Guelders river area.⁵³ This section argues that the large-scale pastoral farmers in the parishes of Zeddam and Netterden also operated as capitalist farmers seeking to accumulate capital through the exchange of commodities.

So far, all evidence suggests that the graziers operated as capitalists. By leasing land, they in fact bought it as a commodity to be used in the

51 ECAL, 828 Rechterlijk Archief van het Landdrostambt Bergh 1488-1811, cat. nr. 87.

52 For the holdings of graziers see: ECAL, HB, cat. nr. 1663 fs. 6-8, 12-13, 40-41; cat. nr. 1664, f. 5; cat. nr. 1666 fs. 5, 26-27, 29-30, 32-35, 44, 48; cat. nr. 1671 fs. 9, 17, 19, 21-22, 24, 45, 51-52, 62.

53 Kristof Dombrecht, 'Plattelandsgemeenschappen, lokale elites en ongelijkheid in het Vlaamse kustgebied (14de-16de eeuw). Case-study: Dudzele Ambacht' (PhD thesis, Ghent University 2014) 98-101, 104-16; Soens and Thoen, 'Vegetarians', 524-525; Van Bavel, *Transitie*, 598-606.

Location	Total lease value in <i>daler</i>	Lease value held by graziers in <i>daler</i>	Estimated number of oxen grazed by graziers	% of total lease value held by graziers
Wijnbergen	798	53	18	7%
Braamt	386	-	-	-
Kilder	301	-	-	-
Zeddam	623	263	88	42%
Vinkwijk	198	-	-	-
Klein Azewijn	956	18	6	2%
Lengel	1337	309	103	23%
's-Heerenberg	324	-	-	-
Stokkum	518	-	-	-
Groot Azewijn	2622	1291	430	49%
Netterden	4787	1751	584	37%
Borghees	1179	137	46	12%
Speelberg	1562	262	87	17%
Sum	15590	4082	1362	26%

Table 1. Overview of the total lease value recorded for each locality in the tax registers, the total lease value held by large-scale pastoral farmers, and the percentage of the locality's total lease value held by the graziers.

Sources: ECAL, HB, cats. 1663, 1664, 1666, and 1671.

production process. The oxen also must have been bought as commodities since oxen are castrated adult male bovines and thus incapable of reproduction. The only way the graziers could obtain large herds of oxen was by buying them, relying on the trade network in Danish and north-German oxen that had been well-established by the mid-sixteenth century. One of the main trade routes in this network passed through the area of the parishes of Zeddam and Netterden.⁵⁴ A private account kept for the brothers Daam and Hector van den Bergh, both illegitimate sons of lord William II of Bergh, testifies to their involvement in both the oxen trade and fattening business. According to the account, they imported no less than 153 Danish oxen in 1535, sold 31 of them immediately after arrival, and 84 after they had been fattened.⁵⁵ Finally, the graziers certainly sold their oxen as commodities because it made no sense for a household to consume 40 oxen.

In the seventeenth and eighteenth centuries, households in Holland cities and Hamburg are reported to have bought between one half and three fat oxen per year. The meat was typically salted and consumed throughout the year.⁵⁶ The graziers also relied on long-distance trade routes for selling

54 Gijsbers, *Kapitale ossen*, 16-17.

55 One other animal had disappeared on the road, one died and nine oxen were sold as ill. What

happened to the remaining 27 oxen is not recorded. ECAL, HB, cat. nr. 1132 scans 15-22.

56 Gijsbers, *Kapitale ossen*, 26.

their fattened animals. One of the seigneurial accounts of the lords of Bergh covering the year 1551/1552 records how Johan van Schrieck, one of the lord's leaseholders, transported oxen to 's-Hertogenbosch – a crucial link in the oxen trade.⁵⁷ It is beyond doubt that the graziers bought and sold commodities, the main question is whether they did so to sustain their households or to accumulate capital.

The private account of the brothers Daam and Hector van den Bergh, combined with evidence on lease prices deduced from the lord's seigneurial accounts, suggests the fattening of oxen could work as a capitalist enterprise. On average, the brothers sold their meagre oxen for 6.6 guilders and the fat animals for 11.4 guilders. Through fattening, the stock's value thus increased with 73 per cent. This number corresponds closely to the average increase of 72 per cent in the prices of oxen fattened by the St. Elisabeth hospital in Antwerp between 1522 and 1545.⁵⁸ Expressed as a percentage of the sales price, the increase was 42 per cent, which corresponds to Heinz Wiese's findings for Denmark and Schleswig-Holstein (varying from 35 to 54 percent).⁵⁹ The nearest surviving seigneurial account (1528/1529), meanwhile, provides information on the costs for pastures. It bases the price of two large pastures on the number of oxen they could graze, using the ratio of 3.25 golden guilders per ox. If this ratio applied in 1535 too, the profit margin of a grazier having to lease all his pastures had been reduced to 1.55 golden guilders per ox. Although wages and other costs for oxen dying or falling ill are not included, the return on investment was about 16 per cent. This was considerable compared to average sixteenth-century interest rates of about six per cent as documented for Holland and Utrecht.⁶⁰ Around 1530, the fattening business could function well as a capitalist enterprise.

The definitive answer on whether the graziers operated as capitalist farmers hinges on the question whether they bought their labour inputs as commodities. This is unfortunately the domain for which no direct evidence

57 ECAL, HB, cat. nr. 2105, scan 57; The abbey of Mariënweerd in the Guelders river area also sold an important part of their fattened oxen on the 's-Hertogenbosch market: Van Bavel, *Transitie*, 601; Herman van der Wee and Erik Aerts, 'The Lier Livestock Market and the Livestock Trade in the Low Countries from the 14th to the 18th Century, in: Ekkehard Westermann (ed.), *Internationaler Ochsenhandel (1350-1750)* (Klett-Cotta 1979) 235-254, 244-245; Benders, 'Over ossen', 66-67; Gijsbers, *Kapitale ossen*, 16-17.

58 Etienne Scholliers, *De levensstandaard in de xve en xvie eeuw Antwerpen* (De Sikkel 1960) 37-38.

59 Wiese, 'Der Rinderhandel', 107-109. He compared the prices of meagre oxen and fat oxen sold in the consumption centres.

60 Jaco Zuijderduijn, *Medieval Capital Markets: Markets for Renten, State Formation and Private Investment in Holland (1300-1550)* (Brill 2009) 173-175, 242-247. DOI: <https://doi.org/10.1163/ej.9789004175655.i-320.2>; Jan Huiting, 'Domeinen in beweging. Samenleving, bezit en exploitatie in het West-Utrechtse landschap tot in de nieuwe tijd' (PhD thesis, University of Groningen 2020) 197-200. DOI: <https://doi.org/10.33612/diss.128405108>.

is available. If they predominantly relied on their household's labour and only hired labour to keep the household business afloat, they cannot be considered capitalists. Only to the extent that they accumulated capital by buying land (pastures), labour (hired staff) and raw materials (oxen) and by selling fattened oxen, did they follow a capitalist logic. By combining indirect evidence on the size of the graziers' holdings, estimated labour requirements, and the characteristics of the fattening business, it is made plausible that the graziers indeed followed a capitalist logic.

Although the property tax registers do not generally record the surface area of plots, the size of the graziers' holdings can be estimated. On a few occasions, the registers do record the surface area of pastures yielding an average of 2 *daler* per *morgen*.⁶¹ Assuming that the *morgen* was about the size of the common Rhineland *morgen* of 0.85 hectares, the size of landholdings of graziers leasing pastures worth more than 120 *daler* can be estimated as being larger than 50 hectares.⁶² This estimate is probably too high, since, as argued below, only the best pastures were reserved for the fattening of oxen. Therefore, average lease prices are not a reliable basis. The seigneurial account for 1528/1529 provides an alternative. It both mentions the surface of two large pastures and defines their lease prices based on the number of oxen they could graze. In these cases, the number of oxen per hectare can be estimated at respectively 1.4 and 1.7.⁶³ As a result, in the best case, a grazer with 40 oxen would have needed just 23.5 hectares: less than half the estimate based on the average lease price. This second estimate is also more in line with evidence from Flanders, where even more oxen could be grazed on one hectare. Around Furnes each *gemet* (about 0.45 ha) of good grassland could feed one ox (2.2 oxen per ha) while in the Scheldt polders each *bunder* (c. 1.3 ha) could fatten three oxen (2.3 oxen per ha).⁶⁴ The number of 1.7 oxen per hectare suggests the graziers in Zeddam and Netterden farmed holdings roughly measuring between 23 and 165 hectares.

Even on relatively large farms, pastoral farming did not require high labour inputs. Based on data collected by Arthur Young for the English Midlands around 1770, Robert Allen calculated the average labour requirements on

61 Two for Groot Azewijn, one for Klein Azewijn, one for Borghees, eleven for Speelberg and thirteen for Netterden: ECAL inv. no. 1663 f. 42; inv. no. 1666 fs. 21, 26, 43; inv. no. 1671 fs. 8, 10, 14-15, 17, 19, 32, 43, 46, 49, 57, 60a, 64-67.

62 It is also possible that it referred to the Guelders *morgen* common in the duchy of Guelders. Although the exact size of this *morgen* remains yet unclear, it probably measured about 0.86-0.87 hectares: Henk Roessingh, 'Gelderse landmaten

in de 17e en 18e eeuw. Een empirische benadering door H.K. Roessingh', *Bijdragen en mededelingen betreffende de Geschiedenis der Nederlanden* 83 (1969) 72-88.

63 ECAL, HB, cat. nr. 2094 f. 22v.

64 Paul Lindemans, *Geschiedenis van de Landbouw in België* (De Sikkel 1994) 433-434; Paul Vandewalle, *Oude maten, gewichten en muntstelsels in Vlaanderen, Brabant en Limburg* (Belgisch centrum voor landelijke geschiedenis 1984) 51-52.

pastoral farms. His data can be used to estimate the labour requirements on the farms of the graziers in the parishes of Zeddam and Netterden, although only the lowest possible estimates are appropriate. While the fattening of livestock was notoriously labour-extensive, pastoral farms as studied by Allen could also practice some labour-intensive arable cultivation. Furthermore, it remains unclear to what extent they practised dairying which also required more labour than fattening. Based on the lowest possible requirements given by Allen, pastoral farms of between 20 and 165 hectares would need between 0.45 and 3.7 men, and between 0.16 and 1.35 boys and women.⁶⁵ For Holland and inland Flanders, Van Bavel assumed households could provide 3.7 man-years.⁶⁶ Purely based on the size of their farms, the graziers operating in the parishes of Zeddam and Netterden could probably just have gotten by as family farmers.

It is the nature of the labour required in the fattening business that suggests all graziers used hired labour. Because the oxen did not need to be milked or stalled over winter, labour-intensive tasks such as milking or haymaking were not necessary. Most labour must have pertained to supervising the animals, driving them to and from their pastures and to maintaining the pastures' enclosures in the form of hedges, fences or ditches. As Allen points out, hiring wage-labour could increase labour productivity in such a context. For the easiest tasks such as herding, cheap labour could be substituted for the farmers' relatively expensive time. Difficult tasks such as making and repairing hedges, in contrast, could be done more efficiently by hired specialists.⁶⁷ In addition, as shown below, the rise of the fattening business went hand in hand with the formation of large pastures measuring between four and twelve hectares. This type of fields was perfectly suited to increase the labour productivity of hired workers in two ways. First, supervision costs were lower when animals were concentrated in fewer pastures. Secondly, larger pastures generally require shorter fences and ditches relative to the surface area they enclose, thus reducing the labour costs for hedging and digging. Moreover, Allen's data on labour requirements shows that for pastoral farms smaller than 40 hectares the demand for men, maids and boys was roughly equal, while male labour was relatively more important on larger farms.⁶⁸ The main tasks associated with

65 Robert Allen, *Enclosure and the Yeoman* (Oxford University Press 1992) 215. DOI: <https://doi.org/10.1093/acprof:oso/9780198282969.001.0001>.

66 I used Van Bavel's estimates for Holland and Flanders because he considers live-in servants part of the households even though they did provide hired labour. In Holland and Flanders, however, the number of servants was considerably lower: 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* 21:1 (2005) 56-61. DOI: <https://doi.org/10.1017/S0268416005005631>.

67 Robert Allen, 'The Growth of Labor Productivity in Early Modern English Agriculture', *Explorations in Economic History* 25:2 (1988) 135-139. DOI: [https://doi.org/10.1016/0014-4983\(88\)90013-7](https://doi.org/10.1016/0014-4983(88)90013-7).

68 Allen, *Enclosure*, 215.

Settlement	Cottager households with a potential labour surplus	Estimated surplus in man-years
Netterden	5	2,9
Speelberg	4	2,9
Groot Azewijn	6	2,2
Lengel	3	0,8
Wijnbergen	2	0,5
Zeddam	7	15,8
Total	27	25,1

Table 2. The potential labour surplus among cottager households in the settlements where graziers were active.

Sources: see table 1.

large-scale grazing thus align perfectly with capitalist farming but appear ill-suited to household farming.

A second kind of indirect evidence pertains to the graziers' social status. Eight out of the thirteen graziers identified in the 1570s tax registers could be identified. The largest grazier, Johan Bongert, is often referred to in the registers as the major of the city of Wesel, at about 46 kilometres south-east of 's-Heerenberg.⁶⁹ It is beyond doubt that he did not herd his cattle himself but solely acted as an investor. In a similar vein, Johan van Schrieck is mentioned to have lived in the city of Rees (22 kilometres from 's-Heerenberg), where members of his family served at least three times in the city government between 1557 and 1599.⁷⁰ Three others are recorded as living in the cities of Doetinchem, Emmerich, and Xanten, while a fourth grazier was said to live in the settlement of Issum (about 50 kilometres of 's-Heerenbergh).⁷¹ Finally, Gerrit Everwijn is known to have served as alderman of 's Heerenberg while the last grazier was the convent of Bethlehem close to Doetinchem.⁷² It is possible that the monastery grazed oxen for their own consumption but this is unlikely. The convent could graze almost 50 oxen in the studied area alone which comes close to the herds of abbeys in coastal Flanders and the Guelders river area that did fatten oxen for the market. One exception that proves the rule is Peter Smit. Apart from a leasehold farm of about 25 hectares, he leased pastures that could graze about 87 oxen.⁷³ Operating the leasehold farm alone must have already required hired labour

69 For Jan Bongert as mayor of Wesel, see: ECAL, HB, cat. nr. 1671 fs. 26-27.

70 Friedhelm Weinforth, 'Studien zu den politischen Führungsschichten in den klevischen Prinzipalstädten vom 14. bis 16. Jahrhundert' (PhD thesis, University of Cologne 1982) 132.

71 ECAL, HB, cat. nr. 1663, f. 40; cat. nr. 1666, fs. 5, 35; cat. nr. 1671, fs. 9, 26, 28, 38, 41, 51, 67; cat. nr. 1311, fs. 1r, 6v, 11r; Weinforth, *Studien*, 62-63.

72 ECAL, HB, cat. nr. 1663, fs. 8, 12, 40; ECAL, HB, cat. nr. 1666, fs. 26, 29, 33, 34, 35; ECAL, HB, cat. nr. 1671, f. 46; Van Dalen, *Bergh*, 159. For the convent of Bethlehem, see: ECAL, HB, cat. nr. 1673, f. 83; ECAL, HB, cat. nr. 1666, f. 5.

73 The size of the leasehold farm is estimated based on the average lease price of 2 *daler* per *morgen*.

input, so even for this local farmer the fattening business appears to have been a capitalist enterprise.⁷⁴ Overall, it is hard to imagine how the identified graziers managed their herds, if not by hiring labour as a commodity.

Analogies with scarce information from other areas where graziers were active suggest they used locals as semi-permanent supervisors. The large Scueringe farm in coastal Flanders, measuring about 200 hectares and held in direct exploitation by the Bruges St. John's hospital, increasingly relayed its focus to the fattening of oxen over the sixteenth century. Though the farm hired more day labourers instead of servants for their arable farming, they continued to rely on permanent servants to take care of their livestock.⁷⁵ An even better example was Matheus Groenewout who, in 1748, grazed 55 oxen and 25 cows in the Purmer area north of Amsterdam. He did not live in the area himself but his two servants and one maid did.⁷⁶ Although he does not present direct evidence, Spencer Dimmock also argues capitalist graziers in the parish of Lydd in Kent lived in the town while the marshes were mostly populated by their shepherds and keepers.⁷⁷ It is likely that the graziers operating in the parishes of Zeddum and Netterden also made use of the local cottagers' labour.

The property tax registers from the 1570s suggest potential labour reserves existed among the recorded leaseholders of farmsteads. Using the average lease price of 2 *daler* per *morgen* (of about 0.85 hectares), the size of holdings can be estimated. In addition, Van Bavel estimated for the western parts of the Guelders river area that farms of less than 4 hectares required 0.9 man-years per hectare and that households, as mentioned, typically counted 3.7 members able to conduct a man-year of labour.⁷⁸ Table 2 uses these estimates to assess the number of cottagers with a theoretical surplus of labour in settlements where the graziers were active. These numbers are clear minima because houses are typically not recorded in the tax registers. As a result, locals living on plots of land or gardens could not be recognised and included in the table. Most potential surplus could be found in the church village of Zeddum while the other settlements counted between 0.5 and 2.9 surplus man-years. This distribution aligns rather well with the requirements of the graziers who would have needed a few semi-permanent local labourers

74 1663 fol 41; 1671 fols 17, 45, 51-52, 62. For the labour requirements on leasehold farms see: Van Bavel, 'Rural Wage Labour', 47.

75 Lies Vervaet, 'Goederenbeheer in een veranderende samenleving: het Sint-Janshospitaal van Brugge, ca. 1275-ca. 1575' (PhD thesis, Ghent University 2015) 164-165.

76 Ad van der Woude, *Het Noorderkwartier. Een regionaal historisch onderzoek in de demografische en economische geschiedenis van westelijk Nederland van de late middeleeuwen tot het begin*

van de negentiende eeuw (HES Uitgevers 1983) 573.

77 Christopher Dyer, *An Age of Transition? Economy and Society in England in the Later Middle Ages* (Oxford University Press 2009) 231-232. DOI: <https://doi.org/10.1093/oso/9780198221661.001.0001>; Spencer Dimmock, *The Origin of Capitalism in England, 1400-1600* (Brill 2014) 338. DOI: <https://doi.org/10.1163/9789004271104>.

78 Van Bavel, 'Rural Wage Labour', 56-61.

for supervision and larger groups of temporary labourers for the upkeep of hedges and ditches, who could be sought from a little further (perhaps even from the town of 's-Heerenberg). Even though direct evidence of wage labour in the fattening sector is lacking, all available information and the nature of the fattening industry suggest the graziers operated as capitalist farmers.

Explaining the rise of the capitalist grazier

How to explain the rise of capitalist graziers in the parishes of Zeddam and Netterden? The timing of the graziers' emergence shows that their capitalist farming existed by virtue of the long-distance trade in Danish livestock. Danish exports really kicked off from about 1470 onwards with exports more than doubling after 1500 to between 45,000 and 50,000 oxen per year.⁷⁹ Meanwhile, large-scale pastoral farming does not appear to have been a profitable business in Zeddam and Netterden before the sixteenth century. Clearly upset by the economic headwinds of the time, the treasurer of the lord of Bergh noted in his 1472/1473 account that he failed to lease out a plot and had let two oxen and a bull graze the field 'so one would get something out of it.'⁸⁰ During these years, the fattening business was a last resort, not a growth sector. A list of confiscated livestock owned by citizens of Emmerich in 1447 also shows that large-scale pastoral farming lay in the future. The largest confiscated herd counted 28 animals followed by two herds of 10 oxen each.⁸¹ Oxen were already fattened before the sixteenth century, but only for regional (urban) markets.

In the first half of the sixteenth century, a clear process of upscaling occurred. The 1503/1504 seigneurial account records three relatively large composite pastures consisting of multiple individual plots. The first had been fenced off by Derick van Syck who combined plots he owned and leased into one large pasture measuring about 36 *malder gezaais*, or around 12 hectares. After he passed away, the seigneurial administration of the lords of Bergh decided to keep the pasture intact by buying, leasing, and exchanging plots.⁸² At the same time, the account mentions two other pastures that

79 Wiese, 'Der Rinderhandel', 78.

80 Original: 'datme[n] dair wat aff kregen'. ECAL, HB, cat. nr. 2036, f. 9v.

81 Andreas Dederich, *Annalen der Stadt Emmerich* (Emmerich: J.L. Romen, 1867) 331-332.

82 ECAL, HB, cat. nr. 2061, f. 25r; The *malder gezaais* is a complicated unit of measurement because it does not relate to the surface area of a plot but to the amount of seed that could be sown

in it. Moreover, it was still in the process of being standardised during the seventeenth and eighteenth centuries. Nonetheless, estate managers, fiscal officials, and land surveyors used equivalents of *malder gezaais* in units that were based on surface area. According to a small note in a collection of land surveys, a *malder gezaais* of clayey soils equalled 0.4 *morgen*: ECAL, HB, cat. nr. 2885, scan 7.

were most likely formed and fenced off on the initiative of the seigneurial administration. They measured about four and six hectares respectively.⁸³ The 1516/1517 seigneurial account mentions two other large pastures which must have been about the same size as Derick van Syck's pasture, as indicated by their lease prices.⁸⁴ The accumulation of holdings continued until 1552, when all three and multiple other pastures were leased by one leaseholder: Gerrit Smit. The lease price he paid for the combined pastures constituted about 23 per cent of what the treasurer recorded as his total revenues for the year 1552/1553.⁸⁵ The rise of large-scale capitalist farming thus only took off when the trade network in Danish oxen expanded, indicating that this type of capitalist farming depended on long-distance trade networks.

The fact that the graziers restricted their enterprise to the best pastures available shows that geographical conditions also played a major role. The 1832 cadastre (land survey) as digitised in the HisGis database provides a perfect illustration. Table 3 lists the weighted average yield per hectare for all pastures listed in the HisGIS database ordered per location and the percentage of the graziers' holdings as recorded under these localities in the property tax registers. The precise methodology is outlined in Appendix B. In general, the relatively high average yields per hectare and the high percentage of grazer-holdings corresponds very well; only the settlements of Klein Azewijn and Vethuizen stand out. A small note in a series of land surveys of some of the lord of Bergh's leaseholds dating from 1542 also shows that the best pastures were reserved for fattening oxen. For a leasehold farm in Borghees, the lease price for each *morgen* of pasture that could graze oxen was 12.5 per cent higher than the price for normal pastures.⁸⁶ Wiese explains why suitable soils were of such high importance. Only good quality soils, that provided enough grass to fatten the animals, allowed graziers to compete with fatteners located in the vicinity of consumption centres.⁸⁷ Hence, in early eighteenth-century tax registers on Oldenburg, the average value of oxen more than doubled between the least and most fertile areas.⁸⁸ Capitalist cattle rearing clearly depended on the availability of suitable soils.

The pastures used by the graziers in the parishes of Zeddum and Netterden corresponded closely to the ideal described by Konrad Heresbach in his *Rei Rusticae Libri Quatuor* (Four books on Husbandry). Heresbach owned an estate close to the river Rhine in the vicinity of the town of Wesel located about 35 kilometres from 's-Heerenberg.⁸⁹ Although he does not mention

83 ECAL, HB, cat. nr. 2061, f. 24v.

84 They were leased out for 67 and 47.5 guilders while Derick van Syck's pasture was leased out for 59.25 guilders: ECAL, HB, cat. nr. 2075, fs. 23v-24r.

85 ECAL, HB, cat. nr. 2106, fs. 23r, 28r.

86 ECAL, HB, cat. nr. 2885 scan 7.

87 Wiese, 'Der Rinderhandel', 14.

88 Bölts, 'Die Rindviehhaltung', 150-153.

89 Wilhelm Abel, 'Einleitung', in: Konrad Heresbach, *Vier Bücher über Landwirtschaft. Band I vom Landbau*. Wilhelm Abel (ed.) Helmut Dreitzel (trans.) (Verlag Anton Hain 1970) vi.

Location	Weighted average yield per hectare in <i>guilders</i> c. 1832	% of the graziers' holdings c. 1570
Wijnbergen	9.8	1%
Kilder	5.7	0%
Braamt	6.8	0%
Zeddam	13.3	6%
Stokkum	9.6	0%
Vinkwijk	7.5	0%
Vethuizen and Klein Azewijn	17.0	0%
Lengel	17.0	7%
Groot Azewijn	19.6	30%
Netterden	24.0	44%
Speelberg and Borghees	n/a	12%

Table 3. Table showing the weighted average yield per hectare of pastures in the various localities in the parishes of Zeddam and Netterden as recorded in the 1832 cadastre and the percentage of the graziers' holdings that were recorded under the names of the same localities in the 1570s tax registers.

Sources: KNAW Humanities Cluster, 'HISGIS Nederland', <https://www.hisgis.nl/>; See table 1.

the large-scale fattening of oxen, he must have been well aware of the local conditions. He argued that new pastures were best created on fertile, clay-rich soils that were dewy and even or gently inclined. Although good pastures required moisture, they also should not be too wet because the animals would otherwise trample the soil.⁹⁰ Figure 3 shows that the graziers were mostly active in areas that correspond closely to Heresbach's description. Most of the graziers' holdings were recorded under the headings of Groot Azewijn (32%) and Netterden (43%) that were both part of the lower-lying fluvial plains dominated by clay soils. Settlements such as Stokkum, Kilder, and Braamt, in contrast, were located on the edges of the moraines with unsuitable dry sandy soils and slopes too steep to retain sufficient water. Present-day height maps show that the height could differ from 20 to 13 metres above the Amsterdam Ordnance Datum (NAP).⁹¹ As Heresbach prescribed, the area between Groot Azewijn and Netterden was relatively flat at about 15 to 14 meters above NAP. Moreover, it was not the lowest part of the area but tended to fall towards the north. The area around Klein Azewijn and Vethuizen lay between 14 to 12 metres above NAP. Hence, the area of the grazer's preference was probably not too wet as it could be drained to the north. The locations where the graziers were active ticked all the boxes of Heresbach's ideal pastures.

Finally, property relations were also a crucial variable in this case, though not in the way envisioned by Brenner. As the property tax registers

90 Heresbach, *Vier Bücher*, 80b1, 79b.

91 Actueel Hoogtebestand Nederland, AHN-viewer, <https://viewer.ahn.nl>. Accessed 18 May 2025.

from the 1570s show, leaseholds dominated the agricultural economy in both parishes. Measured by lease value, 87 per cent of all taxed landholdings were held in lease, while 3 per cent was explicitly recorded to have been used by its owner, and the user of a final 9 per cent remains unclear. In the parish of Netterden, 84 per cent was leased, 2 used by their owners, and the users of 14 per cent remain unclear.⁹² Moreover, the formation of large fenced-off pastures during the first decades of the sixteenth century demonstrates that property rights were well defined so other villagers could claim no usage rights to the graziers' pastures. From a Brennerian perspective, most producers relied on the lease market for land as a crucial input. The capitalist cattle farmers, however, were only active in specific parts of the parishes, and only after their integration in the cattle trade networks. The rise of capitalist farming was not prompted by property relations.⁹³

A comparison with the situation in Holland shows that property relations including large landownership and lease markets were crucial because they allowed for the easy accumulation of land by users. By the sixteenth century, the fattening of oxen was an important business in the northern parts of Holland as well. In some villages around Medemblik and Oostwoud, it was considered the main source of the residents' livelihood.⁹⁴ Most farms in this area, however, were extremely small (0.5 to 4 hectares). Moreover, most farmers owned their land and, during periods of population growth, subdivided their family holdings which led to further fragmentation.⁹⁵ Only from the mid-sixteenth century onwards did capitalist farming gain ground. Crucially, this shift was preceded by attempts at clarifying lease rights and the increasing accumulation of land in the hands of urban landowners who leased it out on the market.⁹⁶ In the northern parts of Holland, commercialisation and soil conditions allowed for the fattening of oxen but small-scale peasant landownership hampered the easy accumulation of holdings and the rise of capitalist farming.

Interpreting the role of the property relations as providing opportunities for accumulation, rather than as the prime mover of

92 For the sources, see Table 1.

93 Elsewhere I elaborate on this point by comparing the settlements of Stokkum and Groot Azewijn, both located in the parish of Zeddam: Reinder Klinkhamer, 'Lordship, Land Markets and Rural Economic Development in the Eastern Low Countries c. 1460 to 1570', *Jahrbuch für Wirtschaftsgeschichte/Economic History Yearbook* 67:1 (2026) 241-273. DOI: <https://doi.org/10.1515/jbwg-2026-0008>.

94 Bieleman, *Boeren*, 85.

95 Bas van Bavel, 'Structures of Landownership, Mobility of Land, and Farm Sizes: Diverging Developments in the Northern Parts of the Low Countries, c. 1300-c. 1650', in: Peter Hoppenbrouwers and Bas van Bavel (eds.), *Landholding and Land Transfer in the North Sea Area (Late Middle Ages – 19th Century)* (Brepols 2004) 143-145. DOI: <https://doi.org/10.1484/M.CORN-EB.4.00142>.

96 Van Bavel, 'Rural Development', 177-185.

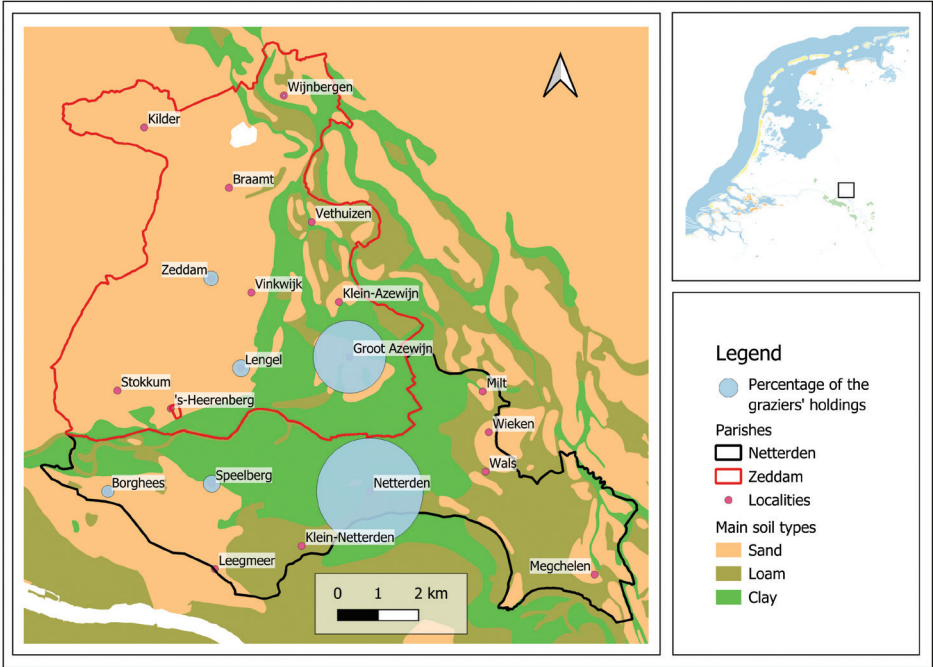


Figure 3. The share of the graziers' holdings in various settlements against the backdrop of a simplified present-day soil map. Sources: Stapel, 'Historical atlas'; BK50; see table 1.

capitalist development, allows for integrating the ‘property relations’ and ‘commercialisation’ models. Combining these approaches, in fact, corresponds rather well to the earlier work of Van Bavel on the Guelders river area. In these publications, he formulates the role of the lease market as allowing capitalist farmers to grasp the opportunity to accumulate land presented by a combination of high prices and low wages, as well as military turmoil that was detrimental for small producers lacking reserves.⁹⁷ Trade networks and geographical conditions, in turn, should be considered as crucial in providing profitable opportunities for capitalist farming.

The case of the parishes of Zeddam and Netterden shows how property rights, trade networks, and geographical conditions can be combined in one explanatory framework. That this frame can be applied to other regions, too is evident from the account by Gérard Sivéry on the rise of large-scale pastoral farming in the south-west of Hainaut after the Black Death. He points out that pastoral farming and upscaling occurred in this region thanks to the increased urban demand for meat from Flemish, Brabant, and even Holland cities, which rendered pastoral farming profitable. Sivéry, however, also stresses that this shift was only possible in areas with soil structures suitable for grassland. Finally, he includes property relations as well, arguing that small-scale producers lost out because communal grasslands were increasingly leased out to wealthy farmers.⁹⁸ In the end, the relatively peripheral parishes of Zeddam and Netterden, whose integration in long-distance trade was not self-evident, shows how property relations, geography, and trade were all crucial elements in the rise of capitalist farming.

Conclusion

In 2010, the two main explanatory models of the economic history of the Low Countries came into direct competition when Blockmans and Van Bavel simultaneously published major monographs on this topic. While Blockmans stressed the impact of commercialisation and long-distance trade, Van

97 Van Bavel, *Transitie*, 580–584, 662–663; idem, ‘Land, Lease and Agriculture: The Transition of the Rural Economy in the Dutch River Area from the Fourteenth to the Sixteenth Century’, *Past & Present* 172:1 (2001) 32–34, 42–43. DOI: <https://doi.org/10.1093/past/172.1.3>; idem, ‘Elements in the Transition of the Rural Economy: Factors Contributing to the Emergence of Large Farms in the Dutch River Area (15th–16th Centuries)’, in: Hoppenbrouwers and Luiten van Zanden (eds.), *Peasants into Farmers?* 190–192, 197–199. DOI:

<https://doi.org/10.1484/M.CORN-EB.3.289>; idem, ‘People and Land: Rural Population Developments and Property Structures in the Low Countries, c. 1300 – c. 1600’, *Continuity and Change* 17:1 (2002) 22–28. DOI: <https://doi.org/10.1017/S0268416002004046>; idem, ‘Structures’, 141.

98 Gérard Sivéry, ‘Les profits de l’éleveur et du cultivateur dans le Hainaut à la fin du Moyen Âge’, *Annales. Économies, Sociétés, Civilisations* 31:3 (1976) 609, 611–612. DOI: <https://doi.org/10.3406/ahe.1976.293740>.

Bavel focused on property relations as the main explanatory variable. Based on a case study of capitalist farming in the sixteenth-century eastern Low Countries, this article argues that both models are not mutually exclusive but complementary and that geographical conditions should be added as a crucial third variable.

The main benefit of the studied case is that it is not one of the areas commonly associated with the emergence of capitalist farming. However, by reducing the concept of capitalist production to its essentials – accumulation through the exchange of commodities – capitalist cattle farmers can be identified in the area during the sixteenth century. Because capitalist cattle farming in the eastern Low Countries arose in a different context than capitalist agriculture in the western regions, the present study provides a new perspective on the explanatory variables that have been addressed in the historiography so far. The emergence of capitalist graziers in the eastern Low Countries was the result of the region's integration in the long-distance trade in Danish oxen, of geographical conditions suitable for the fattening of large livestock, and of property relations that allowed for the easy accumulation of land. Not only was capitalist farming not unique to the western Low Countries, explaining its rise requires a model that integrates trade, geography, and property relations.

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