

# TRACING REGIONAL AND LOCAL CHANGES IN POPULATION AND WEALTH DURING THE LATER MIDDLE AGES USING TAXATION RECORDS: CAMBRIDGESHIRE, 1334-1563

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## Introduction

Recent historical studies are increasingly highlighting the varying regional and local pace of economic development in the fourteenth, fifteenth, and sixteenth centuries.<sup>1</sup> Even before the devastation of the Black Death of 1348-1349, which may have halved the English population, there is evidence of arable land falling out of cultivation in various parts of the country.<sup>2</sup> Most regions experienced a substantial decline in population and land under cultivation during the late fourteenth and fifteenth centuries, in the wake of the Black Death and subsequent epidemics. The local impact of these general trends varied considerably, though, as some areas prospered with new trading and industrial opportunities. Cornwall and east Devon, for example, benefited from the expansion of tin mining, cloth making, livestock farming, maritime trade, and coastal fishing in this period.<sup>3</sup> Rural cloth-making developed in a number of areas, including southern Suffolk, western Wiltshire, the Kennet Valley of Berkshire, and the West Riding of Yorkshire. Similarly, in the sixteenth century, while national trends show that the population was beginning to grow again and land values rise, the rate of growth varied across the country.<sup>4</sup> This study examines the pattern of local and regional development in Cambridgeshire between the fourteenth and sixteenth centuries, using taxation records to explore relative changes in population and wealth within the county.

In the absence of widespread statistics relating to births, deaths, or incomes, historians rely heavily on taxation records to examine changes in population and wealth between the mid-fourteenth and mid-sixteenth centuries. Although taxation assessments will never record the total population or possessions of a community, as some categories of people and wealth will always evade the charge or be excluded from assessment, they provide a useful indicator of trends. Three major taxation assessments, which cover most of England, span this period: the lay subsidy of 1334, the poll taxes of 1377-1381, and the lay subsidies of 1524-1525.<sup>5</sup> With recent publications, the

numbers of taxpayers and amounts of taxable wealth raised from towns and villages assessed in these taxes have now been printed.<sup>6</sup> Several studies have used these records to chart the distribution of population and wealth in different areas at a particular date: in Cambridgeshire, for example, studies based on hundreds, parishes, and three-kilometre squares have mapped the spread of wealth and taxpayers in 1334, 1377, and 1524-1525.<sup>7</sup> To show change over time of course, it is necessary to compare totals for the same areas from different taxes. However, each of these taxes used a different basis of assessment, so direct comparisons from different taxes cannot be made. In this article, the published totals of taxpayers and taxable wealth have been used together with the original records of the 1524 lay subsidy to trace *relative* changes in population and wealth in Cambridgeshire.

### **Taxation records**

The lay subsidy of 1334 introduced tax quotas for each town and village. These payments represented a fifteenth or a tenth of the total value of the moveable goods of individuals – royal demesnes and some boroughs paying the higher rate of one tenth. The lump-sum payments were levied on each community, which assumed responsibility for assessing and collecting the quota from its residents. The 1334 subsidy therefore reveals the relative wealth of different communities, but not of individuals. These quotas remained in place, with certain reductions, which will be examined below, throughout the fifteenth century.<sup>8</sup>

The poll taxes of 1377-1381 assessed individuals rather than communities: the tax of 1377 levied at the rate of 4d on every lay person over 14 years of age, while the taxes granted in 1379 and 1380 were assessed partly on a graduated basis according to status. By 1381, there was intense opposition to these taxes, culminating in the Peasants' Revolt, and they were abandoned.<sup>9</sup> Where they survive, the returns of individual taxpayers can provide valuable evidence of employment and household structure.<sup>10</sup> In other counties, such as Cambridgeshire, where the nominative returns have been lost, surviving receipts, recording the total number of persons taxed in each place, still provide an indicator of population distribution.

The Tudor lay subsidies were calculated on a different basis to previous taxes. Unlike the lay subsidy of 1334, there were no fixed quotas for each settlement, and all individuals who fell within the thresholds of the tax were liable to assessment. Two subsidies granted in 1523 and collected in 1524 and 1525 were particularly comprehensive, assessing all those with more than £1 in lands, £2 in goods, or £1 in wages. Taxpayers were charged on the value of their lands, goods, or wages, depending on which would produce the greatest tax revenue, although this was complicated by differing rates of tax for each category.<sup>11</sup> For some regions, but sadly not Cambridgeshire, military surveys made in 1522 also survive, providing more extensive assessments.<sup>12</sup>

The different bases on which the taxes were levied present difficulties when making comparisons. The fifteenth of 1334 was based on assessments of

moveable goods alone, and the poll tax of 1377 made a flat charge per person, irrespective of wealth, whereas the sixteenth century lay subsidies assessed goods, incomes and wages. Over time, the accuracy of the assessments may have varied, the definition of the moveable goods to be assessed could have differed, and prices fluctuated. Absolute changes in population and wealth between the subsidies cannot, therefore, be measured accurately, and direct comparisons will not be made between the different records.

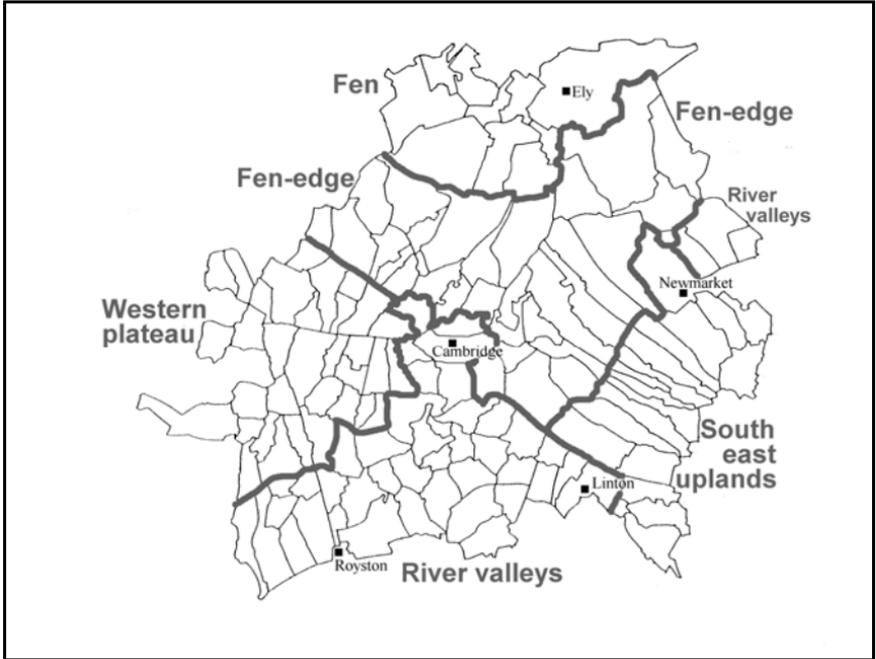
However, relative rates of change within the county can be identified. If each locality is ranked, using the number of taxpayers or amount of taxable wealth, from highest to lowest at two different dates, the change in rank order for each locality between the two dates provides a measure of relative change. This technique, which has been used to compare variations in the distribution of population and wealth between different counties, towns, and sub-regions, between the fourteenth and sixteenth centuries, is the principle behind the comparisons made here.<sup>13</sup> This overcomes the problems of using taxes that assess different types of wealth or categories of people. While levels of accuracy and evasion may have varied considerably between taxes levied at different dates, it can be assumed that levels of accuracy and evasion did not generally vary dramatically within the same assessment.

Other evidence can supplement trends revealed in the taxation records of 1334, 1377 and 1524. The bishops' census of 1563, recording the total number of families in each parish, provides another source for population estimates. However, an investigation of the returns from this 'census' has indicated large differences in accuracy between dioceses, and raises the possibility of totals being rounded, suggesting that it needs to be used with particular caution.<sup>14</sup> In this study its use has been confined to a comparison of population totals between sub-regions, rather than individual parishes. Additional taxation records provide further evidence of the extent of economic contraction: the *Nonarum Inquisitiones* – a tax of one ninth on specific tithes in 1341; and reductions from the tax quotas of 1334 made in 1433 and 1446. Finally, the distribution of different groups of taxpayers in the various sub-regions of the county will be examined using the original returns from the 1524 lay subsidy.

### **Cambridgeshire sub-regions**

Comparing taxation records on a county basis, Cambridgeshire declined in terms of its relative wealth and population between the fourteenth and sixteenth centuries. Cambridgeshire fell from being ranked the eleventh wealthiest county (measured by taxable wealth per acre) in the lay subsidy of 1334, to twenty-first in rank in the taxation assessment of 1514-1515. Cambridgeshire was among those English counties experiencing a decline in their taxpaying populations between the 1377 poll tax and the 1524-1525 subsidies, calculated on the basis of taxpayers per square mile. Neighbouring counties of Essex, Hertfordshire, Huntingdonshire and Suffolk all showed more rapid rates of increase in both taxpayers and taxable wealth than Cambridgeshire.<sup>15</sup> In comparison to England as a whole, therefore, or in comparison with most of its neighbouring counties, Cambridgeshire's rates of

Figure 1 Cambridgeshire sub-regions



increase were low. A more detailed comparison of taxable wealth, however, dividing most of England into 610 areas of measurement, has shown that the pace of growth between 1334 and 1524 varied significantly in different parts of Cambridgeshire.<sup>16</sup> Furthermore, the Cambridgeshire fenland, a large area of sparse settlement, tended to deflate the county's wealth and population when measured by area, in comparison with smaller counties of denser settlement. Only analysis on a more detailed level can show the significant variations in population and wealth that occurred within the county.

Cambridgeshire was predominantly an agricultural county, but comprised important sub-regional contrasts in types of landscape, settlement, and farming patterns. Five sub-regions are defined in Figure 1. The allocation of parishes to sub-regions has had to be somewhat arbitrary, as in practice many parishes straddle more than one type of land. The area examined is the whole county of Cambridgeshire, together with the southern part of the Isle of Ely, extending as far north as the parishes of Sutton, Mepal, Witcham and Wentworth. The urban parishes in Cambridge, Ely, Newmarket and Royston are excluded.

The Cambridgeshire sub-regions were characterised by particular landscapes and geology, settlement patterns, and agricultural practices. The fen sub-region comprised the peat fen; the more fertile silt fen lay further to the north-

**Table 1 Taxable wealth per acre, by sub-region**

Sub-region	Tax (£)	Acreage	Pence per acre	Rank
1334				
Fen-edge	242.25	108,025	0.54	3
Fen	30.38	28,869	0.25	5
South-east uplands	70.58	42,932	0.39	4
River valleys	274.99	88,220	0.75	1
Western plateau	184.78	60,703	0.73	2
Total	802.97	328,749	0.59	
1524				
Fen-edge	166.50	86,181	0.46	4
Fen	66.71	31,540	0.51	2
South-east uplands	57.49	37,581	0.37	5
River valleys	201.03	78,079	0.62	1
Western plateau	98.96	48,566	0.49	3
Total	590.70	281,947	0.50	

**Notes:** Acreage from the total of parishes with surviving returns. The column headed 'Pence per acre' has been calculated as  $((\text{Tax in } \pounds) \times 240) / \text{Acreage}$ .

**Sources:** 1334: *The lay subsidy of 1334*, ed. R.E. Glasscock, British Academy Records of Social and Economic History, new series, II (London, 1975), 23–8; 1524: J. Sheail, *The regional distribution of wealth in England as indicated in the 1524/5 lay subsidy returns*, ed. R.W. Hoyle, List and Index Society, special series, XXVIII, 2 vols (Kew, 1998), ii, 28–35; acreage: *Victoria County History, Cambridgeshire*, ii, 136–40.

east, beyond the present area of study. Settlement in the peat fen was scattered, and the parishes large, although local, administration was concentrated under the single figure of the bishop of Ely. Pastoral farming predominated, while other resources, such as fish, fowl, reeds, sedge, turves and rushes, were exploited.<sup>17</sup> The fen-edge sub-region shared areas of fen and clay in the north-west, and fen and chalk in the north-east. Open fields occupied a smaller proportion of land and parishes tended to be larger than in the valley areas, reflecting the large amounts of meadow and pasture and the difficulties in finding firm sites for building. Numerous smallholders supported themselves from the resources of the fen, and dairy cattle were prominent by the sixteenth century.<sup>18</sup> The fen-edge area stretched south-east beyond Cambridge until this area was drained in the nineteenth century.<sup>19</sup> The river valleys sub-region formed the central southern part of the county, around the four tributaries of the River Cam. Most parishes were carefully divided to provide a share of river frontage, alluvium, terrace, and upland slope. Chalk soils stretch from Guilden Morden in the west to Chippenham in the east. This was the 'sheep-corn' region, where barley was a major crop,

large flocks of sheep kept, and a three-course field rotation generally practised. Water meadows along the river were also used for dairy cattle. The river provided water-power for grinding corn and, in a few villages, for fulling cloth.<sup>20</sup> The western plateau sub-region of boulder clay, originally woodland, was an area of later settlement than the river valleys. Despite the problems of drainage on the clay soils, agriculture predominated and barley was the main crop. The south-east uplands sub-region contained parishes that formed thin rectangles sharing the boulder clay and chalk heath, with villages lying along the 300ft contour. Settlement was much slower here than on the western plateau (a considerable amount of woodland remained at the time of Domesday Book) and continued until well into the medieval period. South-east Cambridgeshire contained the East Anglian pattern of field systems, with a large number of open fields, whereas the Midland pattern of two or three main fields was found in western and central Cambridgeshire.<sup>21</sup> Several villages in the south-east uplands supplied Cambridge colleges with firewood and charcoal during the later Middle Ages.<sup>22</sup>

Table 1 shows the changing taxable wealth per acre of the Cambridgeshire sub-regions between 1334 and 1524. The tax assessment for each vill in the sub-region has been added together, and the total divided by the total acreage of the sub-region to give a figure of pence per acre. The sub-regions have then been ranked from 1 (the sub-region with the highest pence per acre) to 5 (the lowest), using a technique based on that used by Yates.<sup>23</sup> While the amount of wealth in each sub-region cannot be related directly between one subsidy and another, because different taxes assessed wealth in different ways, the relative position of the sub-regions in order of wealth at each date can be compared.

While the river valleys sub-region retained its primacy as the wealthiest area in terms of pence per acre throughout the period, there were significant changes. The western plateau and south-east uplands, areas of heavier clay soils, both slipped in rank by 1524. The increase in wealth in the fenland might suggest that alternative sources of income, such as pastoral farming, fowling and fishing, generated better returns during the later Middle Ages than areas where arable farming was more dominant.

Table 2 shows the distribution of population in the sub-regions, calculated by dividing the total number of taxpayers in each sub-region by the total acreage. The relative ranking of the regions displays similar trends to the distribution of wealth. The river valleys sub-region remained the most densely populated over the period. The relative size of the populations of the western plateau and south-east uplands declined after 1377. While the fen and fen-edge do not show entirely consistent trends, these sub-regions generally increased in relative wealth at the expense of the areas of the heavier soils, but did not challenge the primacy of the river valleys.

Table 3 presents the 1524 data in terms of wealth per capita, calculated by dividing the total amount of tax assessed in each sub-region by the number of taxpayers. This presents a somewhat different picture to measures of wealth by area, which tend to inflate areas of dense settlement and deflate areas of

**Table 2 Taxpayers per acre, by sub-region**

Sub-region	Taxpayers	Acreage	Taxpayers per 100 acres	Rank
1377				
Fen-edge	6,031	95,877	6.3	3
Fen	1,389	31,540	4.4	5
South-east uplands	2,173	48,003	4.5	4
River valleys	5,116	64,295	8.0	1
Western plateau	3,915	60,703	6.5	2
Total	18,624	300,418	6.2	
1524				
Fen-edge	1,213	86,181	1.4	4
Fen	662	31,540	2.1	2
South-east uplands	468	37,581	1.3	5
River valleys	1,660	74,066	2.2	1
Western plateau	767	50,309	1.5	3
Total	4,770	279,677	1.7	
1563				
Fen-edge	1,410	81,500	1.7	2
Fen	525	31,540	1.6	3
South-east uplands	504	35,022	1.4	4
River valleys	1,611	79,457	2.0	1
Western plateau	810	60,703	1.3	5
Total	4,860	288,222	1.7	

**Notes:** Acreage from the total of parishes with surviving returns.

**Sources:** 1377: *The poll taxes of 1377, 1379 and 1381*, Parts i-ii, ed. C.C. Fenwick, British Academy Records of Social and Economic History, new series, XXVII, XXIX (Oxford, 1998—in progress), i, 68–74; 1524: J. Sheail, *The regional distribution of wealth in England as indicated in the 1524/5 lay subsidy returns*, ed. R.W. Hoyle, List and Index Society, special series, XXVIII, 2 vols (Kew, 1998), ii, 28–35; 1563: British Library, London, Harleian MS 594, fols. 198–200v; acreage: *Victoria County History, Cambridgeshire*, ii, 136–40.

sparse settlement. The fen-edge emerges as the most prosperous in per capita terms, reflecting the abundance of resources available and the relative sparsity of settlement. The fen-edge of the Breckland was also the most prosperous

**Table 3** Wealth per capita in 1524, by sub-region

Sub-region	Pence per taxpayer
Fen-edge	32.9
Fen	24.2
South-east uplands	29.5
River valleys	28.6
Western plateau	32.1
Total	29.7

**Notes:** Only parishes with totals of both taxpayers and wealth in 1524 are included.

**Source:** J. Sheail, *The regional distribution of wealth in England as indicated in the 1524/5 lay subsidy returns*, ed. R.W. Hoyle, List and Index Society, special series, XXVIII, 2 vols (Kew, 1998), ii, 28–35.

part of that particular region in the early fourteenth century.<sup>24</sup> The river valleys area does not emerge as a prosperous sub-region by this measure, despite being the wealthiest and most populated in per acre terms. This was because, as will be shown subsequently, the sub-region contained the largest proportion of the poorest taxpayers in the county, which reduced the average wealth per head.

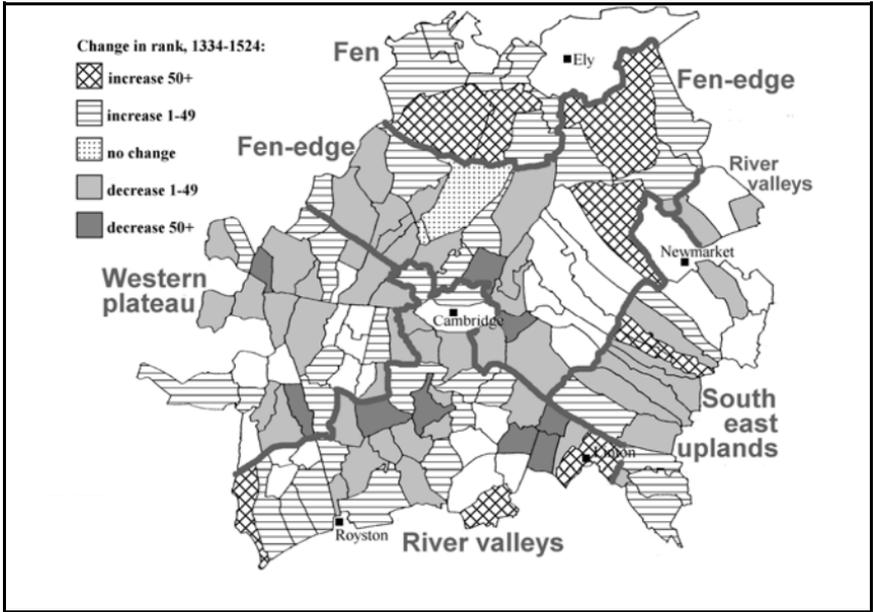
Important sub-regional variations in growth occurred in Cambridgeshire during the later Middle Ages. With falling demand for arable produce for much of this period, the heavier soils of the western plateau and south-east uplands experienced a contraction in settlement, and these areas experienced the greatest relative falls in population and wealth and the largest reductions in taxation within the county. In contrast, the greater opportunities for pastoral farming and other activities allowed the fen and fen-edge sub-regions to maintain, and in some places to increase, their relative shares of wealth and population over the period. The river valleys sub-region remained the wealthiest in per acre (although not in per capita) terms, and the most densely populated area of the county in 1524 as it had been in 1334.

### Analysis by parish

Comparison of taxation returns on a parish basis reveals that growth and decline was not as uniform as the sub-regional trends might suggest. Figure 2 shows the changes in the ranking of parishes by wealth between 1334 and 1524. All settlements were ranked in order of wealth per acre in 1334 and 1524, and the difference in rank order between the two dates was mapped.

The greatest increases in relative wealth, where vills increased 50 or more places in rank order between the two dates, occurred at Haddenham and

**Figure 2** Changes in the ranking of parishes by wealth, 1334-1524

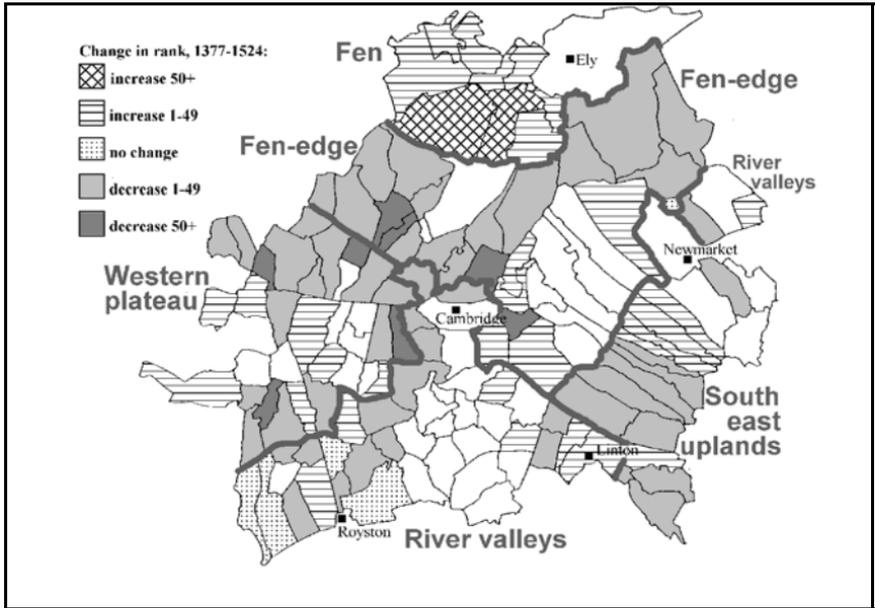


**Sources:** See Table 1.

Wilburton on the fen, Soham and Burwell on the fen-edge, Guilden Morden, Ickleton and Linton in the river valleys, and Burrough Green with Westley Waterless on the south-east uplands. Significantly, there were no places on the western plateau with such a great increase in relative wealth. Other areas with smaller increases were scattered, including all the fen parishes surveyed, together with groups of parishes north of Cambridge, in the south-west near Royston, and in the south-east around Linton. A cluster of villages with growing relative wealth around towns might suggest an urban stimulus, but some areas of the greatest decrease, where parishes fell 50 or more places in rank order between 1334 and 1524, were also found near towns (for example Teversham and Milton adjoining Cambridge, and Great and Little Abington and Pampisford near Linton). The proximity of even an expanding town did not guarantee prosperity for the surrounding villages in the later Middle Ages.<sup>25</sup>

Figure 3 illustrates the changes in the ranking of parishes by the number of taxpayers between 1377 and 1524. The pattern is similar, but not identical, to the changes in relative wealth. The greatest increases occurred in the fenland vills of Wilburton and Haddenham, with smaller pockets of growth taking place in all the sub-regions. The largest decreases were again at Milton and Teversham, at Papworth Everard, and also at Barton, Clopton and Lolworth on the western plateau.

**Figure 3** Changes in the ranking of parishes by number of taxpayers, 1377-1524



**Sources:** See Table 2.

Attempting to explain what caused some parishes to show large relative increases in population and wealth between the fourteenth and sixteenth centuries is far from easy. Some landlords offered greater opportunities for tenants to profit from their leases than others. At Wilburton for example, under the absentee bishop of Ely, tenants benefited from fixed rents: in 1609, the rents of assize and demesne land were at almost the same level as in 1507, while the farm of the manor remained at the same sum as that received around 1426.<sup>26</sup> Some settlements sited on major roads expanded during the later Middle Ages.<sup>27</sup> Haddenham commanded the principal entrance by land to the Isle of Ely, via the causeway that crossed the Ouse at Aldreth. Ickleton lay where the southern branch of the Icknield Way crossed the Cam, and Linton was sited on the main road from Cambridge to Haverhill. Some of the growing settlements supported markets, fairs, and non-agricultural trades, like Linton, Ickleton, and Gamlingay.<sup>28</sup> There was no single pattern of development, but a variety of local experiences from which some trends can be identified.

### **Additional evidence of areas of contracting population and wealth**

The analysis of taxpayers and taxable wealth by sub-region identified the western plateau and south-east uplands as experiencing the greatest relative decline in the later Middle Ages, but the comparison of individual parishes

**Table 4** **Uncultivated land in the *Nonarum Inquisitiones*, 1341**

Sub-region	Number of villis with uncultivated land	% of villis in sub-region with uncultivated land
Fen-edge	4	13.8
Fen	0	0.0
South-east plands	8	50.0
River valleys	13	32.5
Western plateau	11	34.4
Total	36	29.0

**Source:** *Nonarum inquisitiones in curia scaccarii temp. regis Edwardi III* (Record Commission, London, 1807), 203–15.

has shown that decline was not restricted to these regions. Additional evidence can help to highlight areas where the contraction of population and wealth was most acute.

The *Nonarum Inquisitiones* of 1341 was a tax of one ninth levied on the value of corn, wool and lambs within each parish. Assessments were compared with a valuation of clerical incomes in 1291, and jurors were required to explain discrepancies between the old and new values. In some cases, the jurors accounted for these differences by describing a contraction in the acreage of arable land between 1291 and 1341. Table 4 shows the number of villis in each Cambridgeshire sub-region where arable land had diminished. At least 5,730 acres were recorded as lying uncultivated in the county and the southern part of the isle, plus other land which was not specifically measured.<sup>29</sup> The regions of heavier soils and later settlement, the south-east uplands and the western plateau, bore the brunt of this contraction.

In many Cambridgeshire villis, the jurors attributed this reduction in the amount of land under cultivation to the poverty of the tenants. The king's frequent taxes and tallages had impoverished the tenants of Longstow, Kingston and Swaffham Prior, and resulted in the loss of 1,200 sheep which used to be folded at Gamlingay. The sterility of the land was blamed for the decline at Orwell, Weston Colville and Balsham. Flooding had damaged land at Impington and at Newton, where the loss was also attributed to the digging of turf and making of sewers. In ten villis, crops of Lent corn and peas had perished, while at Balsham, it was reported that corn and other goods fetched lower prices than they used to do.<sup>30</sup> The *Nonarum Inquisitiones* reveal that, even before the Black Death, the agricultural expansion that had characterised much of the twelfth and thirteenth centuries was coming to an end and the amount of land under cultivation was beginning to contract. As the Cambridgeshire returns show, the repeated burden of heavy taxes, the exhaustion of soil fertility, harvest failures, flooding, and price deflation, all took their toll on the agrarian economy of the early fourteenth century.<sup>31</sup>

**Table 5 1433 reductions from 1334 tax totals, by sub-region**

Sub-region	1334 total in £	1433 reduction in £	1433 reduction in percentage terms
Fen-edge	247.35	22.70	9.2
Fen	34.08	1.67	4.9
South-east uplands	70.58	8.33	11.8
River valleys	278.49	30.14	10.8
Western plateau	184.78	28.35	15.3
Cambridge	46.61	2.00	4.3
County total	894.98	95.66	10.7

**Notes:** Assessments at one-tenth are included as one-tenth. The 'county total' also includes Ely, Newmarket, and Royston (which have all been excluded from the sub-regions).

**Source:** 1334: *The lay subsidy of 1334*, ed. R.E. Glasscock, British Academy Records of Social and Economic History, new series, II (London, 1975), 23–8; 1433: Public Record Office, Kew, (hereafter PRO) E 179/81/80.

In 1433 the total national yield in taxation from the fifteenth and tenth, fixed since 1334, was cut by £4,000. Every county was granted a remission of 10.4 per cent of its quota, to be distributed among 'poor vills, cities and boroughs, desolate, wasted, destroyed, or very impoverished, or otherwise too heavily burdened with tax'. In 1446 the total sum remitted was increased to £6,000. These reductions remain mostly unpublished, and further research is needed to show how the reductions were implemented in different counties.<sup>32</sup> Bridbury argued that the remissions were rarely granted to those areas in greatest need, and saw the reductions as a measure of control by the parliament over the Exchequer. Certainly the reductions should be viewed with the context of the political weakness of Henry VI's government, which made such concessions easier to obtain.<sup>33</sup> Local commissioners apportioned the reductions within each county in differing ways: in Essex, every village received the same proportional reduction; in other counties, the proportions varied widely between different settlements. While personal interests and local pressures may have influenced the decisions of commissioners, it appears that reductions were apportioned on the basis of need in some areas, including Suffolk and Cambridgeshire. In at least some counties therefore, the figures provide an indicator of the extent of the relative decline of wealth and population since 1334.<sup>34</sup>

Tables 5 and 6 compare the tax totals of 1334 with the reductions allowed in 1433 and 1490-1491 (the later containing the additional reduction made in 1446).<sup>35</sup> The total tax assessment in 1334 has been divided by the total tax reductions for each sub-region. In both 1433 and 1490-1491, the western plateau and south-east uplands gained the largest percentage reductions. The fen and fen-edge received the smallest proportions of relief from taxation. This

**Table 6 1490-1491 reductions from 1334 tax totals, by sub-region**

Sub-region	1334 total in £	1490-1491 reduction in £	1490-1491 reduction in percentage terms
Fen-edge	247.35	38.66	15.6
Fen	34.08	6.30	18.5
South-east uplands	70.58	13.57	19.2
River valleys	278.49	45.75	16.4
Western plateau	184.78	40.05	21.7
Cambridge	46.61	26.61	57.1
County total	894.98	174.17	19.5

**Notes:** See Table 5.

**Sources:** 1334: *The lay subsidy of 1334*, ed. R.E. Glasscock, British Academy Records of Social and Economic History, new series, II (London, 1975), 23–8; 1490–1: PRO, E 179/81/120.

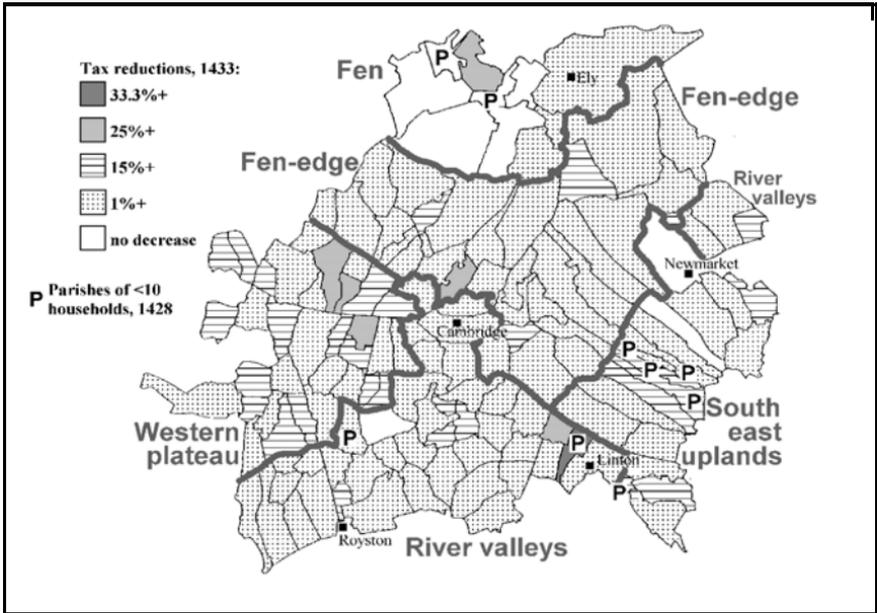
reinforces the evidence from the lay subsidies of the relative contraction in wealth and population. Table 6 reveals the substantial reduction in taxation received by Cambridge, awarded to the borough in 1446 and confirmed in 1465. Other towns made similar pleas for reductions of tax or dues during the fifteenth century; historians have debated whether such pleas represent a genuine contraction in urban economies or merely the strength of civic lobbying.<sup>36</sup>

Figures 4 and 5 show the reductions from the 1334 tax totals made in 1433 and 1490-1491 on a parish basis. The parishes with largest reductions were scattered across much of the county, although a few concentrations stand out. There were a number of villages on the boulder clay plateau to the west, and in the south-east uplands. There is some correlation between those parishes with the largest reductions in 1433 and 1490-1491, and the parishes with the largest falls in rank by number of taxpayers and taxable wealth, though not in every case.

Figure 4 also shows the Cambridgeshire parishes recorded as possessing fewer than ten households in 1428, which were exempted from a subsidy in that year. The subsidy of 1428 differed from the regular lay subsidies, as it was a tax on ecclesiastical parishes and knights' fees.<sup>37</sup> In Suffolk, the parishes that gained exemptions tended to have small acreages and to be located on heavy soils, and there was a similar correlation in Cambridgeshire, particularly on the south-east uplands.<sup>38</sup> Eight of the ten small parishes in 1428 received substantial subsidy reductions of 25 per cent or more in 1490-1491.

In parishes where populations had fallen substantially, ambitious landholders could consolidate and enclose their holdings with little opposition. Although a

Figure 4 1433 reductions from 1334 tax totals, and small parishes, 1428

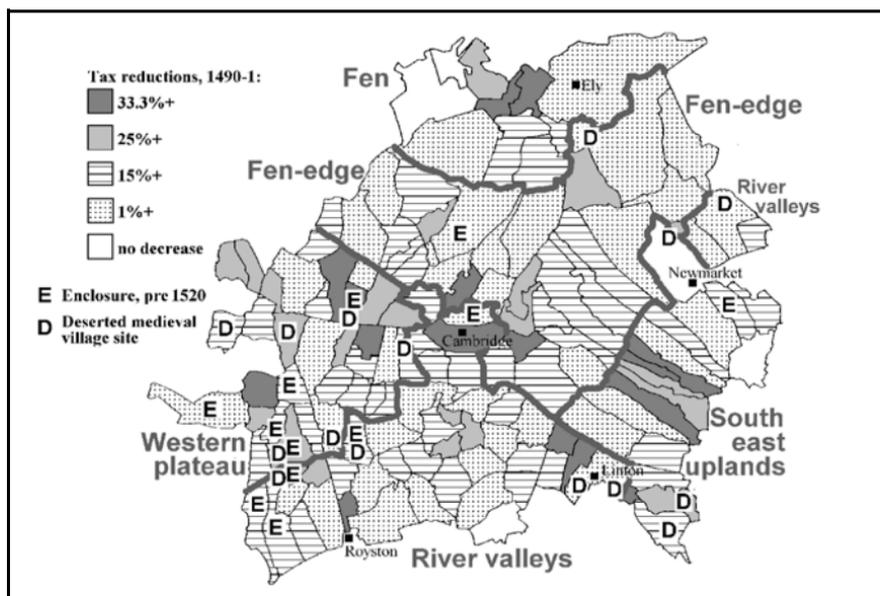


**Note:** 1433 reductions as percentages of 1334 assessment.

**Source:** 1334: *The lay subsidy of 1334*, ed. R.E. Glasscock, British Academy Records of Social and Economic History, new series, II (London, 1975), 23-8; 1433: PRO, E 179/81/80; 1428: *Inquisitiones and assessments relating to feudal aids...1284-1431*, Her Majesty's Stationery Office, 6 vols, (London, 1899-1920), I, 192-3.

marked change in land use from arable to pasture began in the mid-fourteenth century, most evidence for enclosures dates from a new public concern under the Tudors.<sup>39</sup> Returns of the inquisition into enclosures of 1517 survive for only 5 out of 17 hundreds in Cambridgeshire. As Figure 5 shows, several of the villages in which enclosure took place had received large taxation reductions and experienced a considerable relative decline in population and wealth, including Childerley, Clopton, East Hatley, and Shingay. Fifteenth-century enclosures have also been correlated with areas of declining population and depressed economic conditions in Devon.<sup>40</sup> These enclosures should be distinguished from the enclosure of common pastures in densely populated areas of the county in the mid-sixteenth century, such as at Cambridge, Landbeach, Ely, Downham, and Littleport, where there was intense pressure on grazing land.<sup>41</sup> Enclosures generally, however, were limited in Cambridgeshire, possibly because, as Cunningham claimed, the market for foodstuffs provided by the Cambridge colleges gave landowners less incentive to convert from arable to pasture.<sup>42</sup>

**Figure 5** 1490–1491 reductions from 1334 tax totals, and sites of enclosure and deserted medieval villages



**Note:** 1490-1491 reductions as percentages of 1334 assessment.

**Source:** 1334: *The lay subsidy of 1334*, ed. R.E. Glasscock, British Academy Records of Social and Economic History, new series, II (London, 1975), 23-8; 1490-1: PRO, E 179/81/120; *Victoria County History, Cambridgeshire*, ii, 72-3; M. Beresford and J.G. Hurst eds, *Deserted medieval villages* (London, 1971), 184.

The most extreme manifestation of the contraction of population and land under cultivation was the desertion of village sites. These can be identified from national gazetteers of depopulated village sites compiled by Beresford and Hurst. As Figure 5 shows, deserted medieval villages tended to be found on the western plateau and river valleys in Cambridgeshire; very little enclosure or desertion of villages occurred in the fen or fen-edge regions. The date of abandonment of villages is not always clear, but most seem to have been deserted during the population decline of the late fourteenth and fifteenth centuries.<sup>43</sup> Shrunken villages also tend to be found in the west and south-east of the county, although abandoned house sites also occur in some larger villages in the river valleys and fen.<sup>44</sup>

### Distributions of taxable wealth

The surviving Cambridgeshire returns from the 1524 lay subsidy have been used to produce Table 7, showing the distribution of taxpayers by wealth. Categories of wealth follow those used by Spufford, Wrightson and Levine. Taxpayers assessed at under £2 were generally labourers and servants. Those

**Table 7** Distribution of all taxpayers by wealth in Cambridgeshire sub-regions, 1524

Sub-region	Percentage of taxpayers assessed, by value of assessment			
	<£2	£2-4	£5-10	>£10
Fen-edge	35.4	39.9	16.5	8.3
Fen	48.3	34.4	11.3	6.0
South-east uplands	50.5	31.6	13.5	4.5
River valleys	59.4	22.1	10.9	7.6
Western plateau	48.6	29.7	14.3	7.4
Total	49.0	30.7	13.2	7.1

**Notes:** All assessments, whether based on lands, goods or wages, are used.

**Source:** 1524 lay subsidy returns: PRO, E 179/81/126, E 179/81/129-130, E 179/81/132, E 179/81/134 E 179/81/136-7, E 179/81/161, E 179/82/220 part 2, E 179/82/224 part 2.

assessed at £2-4 were perhaps holding tenements of up to a yardland (30-40 acres) and could be described as husbandmen or craftsmen; those assessed at £5-10 were substantial husbandmen, craftsmen and yeomen, farming perhaps 50-60 acres, and often the most prosperous men in their village. Large farmers and the gentry had assessments of over £10.<sup>45</sup>

There were significant sub-regional variations in the distribution of different levels of wealth. The fen and fen-edge were characterised by the smallest numbers of wage-earners and the largest numbers of smallholders, with between £2 and £4 in wealth. Similar trends have been found in other regions where pastoral farming predominated.<sup>46</sup> Assessments of less than £2 were most commonly found in the river valleys: nearly 10 per cent more taxpayers were charged at this rate in this sub-region than in the county as a whole. The river valleys region of Cambridgeshire displayed a similar inequality in wealth to parts of Norfolk and Berkshire. These were all major corn-producing regions, supplying London with grain, and contained large numbers of poor labourers and wealthy yeomen.<sup>47</sup> A large number of poorer inhabitants, gaining income from wages rather than land, suggests a considerable demand for buying and selling foodstuffs and goods. In the Cambridgeshire river valleys, this was reflected in a concentration of markets and fairs and the development of trade in malt barley and saffron in this sub-region in the later Middle Ages.<sup>48</sup>

## Conclusion

The river valleys retained its lead amongst the Cambridgeshire sub-regions in terms of both taxpayers and taxable wealth per acre between 1334 and 1524. This area had been the most densely populated part of the county at the time

of Domesday Book, and had grown considerably during the twelfth and thirteenth centuries. The rivers provided easy access and high-quality arable and meadow land. This sub-region contained the greatest proportion of wage-earners, and this resulted in the development of a number of markets and trading opportunities. Nonetheless, this was a region based largely on corn-growing, and so it experienced some contraction of land under cultivation and desertion of villages as demand for grain fell from the fourteenth century onwards.

The fen and fen-edge experienced some relative increases in taxpayers and taxable wealth between the fourteenth and sixteenth centuries. These regions received the lowest relative reductions in their taxation quotas, and contained few examples of declining arable land, enclosure and deserted settlement. The inhabitants of these areas benefited from the more diverse economic opportunities provided by the resources of the fen. The fen and fen-edge areas grew most rapidly at times of population expansion, most notably in the twelfth and thirteenth centuries, and again between the late-sixteenth and mid-seventeenth centuries, when these parishes became some of the most thickly settled parts of the county.<sup>49</sup>

The south-east uplands and western plateau, areas of later settlement, were less accessible and more difficult to cultivate. In the thirteenth century, at a time of growing population and low labour costs, these areas could be profitably cultivated. By the fifteenth century, however, the general contraction of population reduced the demand for cereals and increased the cost of labour; agricultural investment in these areas could no longer be justified. At times of agricultural depression, such as the later Middle Ages, and again in the late-nineteenth and early-twentieth centuries, the heavy land of the western clay plateau in particular became uneconomical to cultivate, and farming in the sub-region became depressed.<sup>50</sup> These two sub-regions experienced the greatest relative decline in taxpayers and taxable wealth, and contained the largest number of vills with declining arable land in cultivation, the greatest reductions to tax quotas, while a number of enclosures and deserted villages were to be found on the western plateau.

While the taxation records of the fourteenth and sixteenth centuries present many difficulties of interpretation, they offer the opportunity to compare relative changes in taxpayers and taxable wealth at a regional and local level. In Cambridgeshire, these changes were closely linked to the relative advantages of the different sub-regional economies, as they adapted to the changing economic circumstances of the later Middle Ages.

## NOTES

1. This article arises from my doctoral thesis, 'Cambridge and its economic region, 1450–1560', (unpublished Ph.D thesis, University of Cambridge, 2001), funded by the Economic and Social Research Council. I am most grateful to Professor J. Hatcher, my supervisor, and Professor N. Goose for reading earlier drafts of this work.
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