

An Industrializing Region? The West Riding of Yorkshire c. 1755 – 1871

*Part of an E.S.R.C. Funded Project:
Male Occupational Change and Economic Growth in
England 1750-1850.*

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Note: this is a preliminary report rather than a fully-fledged paper. Comments would be very welcome (to Leigh Shaw-Taylor: lmws2@cam.ac.uk) but please do not cite or reproduce this material without permission.

The report documents a preliminary attempt to reconstruct the evolution of the male occupational structure of the West Riding of Yorkshire from the mid-eighteenth century through to the late nineteenth century. At present we only have data on female employment from 1851 and this document is exclusively concerned with male employment. The findings presented here are provisional and the picture may well change as we collect further data.

The present account is based on data which provide snapshots of the male occupational structure of the West Riding for c.1755, c.1785, c.1817, c.1851 and c.1871. We are fortunate that approximately half of the West Riding's Anglican baptism registers systematically recorded the occupations of fathers for some period between 1740 and 1799. A search of all 300 odd West Riding registers has generated occupational snapshots for 71 parishes or chapelries centred on 1755 and 136 centred on 1785.¹ From 1813 it was a legal requirement to record fathers' occupations in Anglican baptism registers. So we have taken a further snapshot centred on 1817 for all of the 184 registering units for which we have eighteenth century data. We have used county-wide data from the published census for 1851 and 1871.

The first section of the report examines the place of the West Riding in the national economy in 1851. The second section looks at change over time in the Riding as a whole from 1755 to 1871. The third section examines the development of three cities over the period. In the concluding section the development of the West Riding is compared with the southern agricultural county of Hertfordshire.

The West Riding in a national context in 1851

Together Lancashire and the West Riding of Yorkshire contained the largest concentration of secondary sector employment in the country by the mid-nineteenth century. According to 1831 census they accounted for 55 % of national employment in 'manufacturing.' The map shown in figure one (reproduced at the end of the paper) is derived from the data on adult male employment published in the 1851 census. It shows, for each of the 576 English registration districts, whether the primary, secondary or tertiary sector was the largest employer of adult male labour. Registration districts where the primary sector was the largest employer are shown in green. The red districts are those where the secondary sector was the largest employer of adult male labour and the purple ones show those districts where the tertiary sector predominated. The black boundary lines are the 1851 registration counties. As is immediately evident Lancashire and the West Riding contained far and away the largest areas in which secondary employment predominated. However, in the eastern half of the West Riding and in the north west of the Riding the primary sector remained the largest employer. By the middle of the nineteenth century the West Riding had a higher proportion of its adult male workforce in secondary employment than any other English county.

Figure two (reproduced at the end of this document) shows the percentage of adult males in each registration district in secondary employment in 1851. The areas shown in red had between 70 and 80 per cent of adult males in secondary employment. Areas shown in pink had between 60 and 70 percent of adult males in secondary employment while orange indicates a figure between 50 and 60 per cent. Four areas

¹ Many West Riding parishes were very large and had a number of subsidiary chapelries in addition to the parish church. Many chapelries maintained their own baptism registers.

stand out as having very high levels of secondary employment south-West Lancashire, parts of the West Riding, the Birmingham area and large parts of London.

However, a conventional map like this does not show how important any given area was in national terms because it contains no information on population levels which varied dramatically around the country. Figure three shows the spatial concentration of adult male secondary employment in 1851. This map illustrates the importance of each area to national secondary sector male employment. There are ten different colours on the map. Each colour accounts for ten percent of England's secondary male employment. The key shows the number of registration districts with each colour. The six registration districts where secondary employment was most concentrated are shown in dark purple. Liverpool and Manchester in Lancashire, Bradford and Huddersfield in the West Riding, Birmingham and the St Pancras registration district in London accounted for ten per cent of all secondary employment. At the other end of the spectrum 226 light yellow registration units also accounted for 10 per cent of all secondary employment.

The central importance of Lancashire, the West Riding and London to secondary sector employment are now brought out even more strongly. But figure three also draws attention to the degree of spatial concentration within the West Riding. Secondary employment within the Riding was concentrated in the woollen and worsted district around Leeds, Bradford and Huddersfield with a secondary cluster further south formed by the metal working district around Sheffield. As is well known, during the course of the eighteenth century the West Riding came to completely dominate the production of wool textiles. In the process the wool textile industry came to be characterised by an extraordinary degree of spatial concentration.

Figure four shows the relative importance of national adult male employment in woollen textiles by registration district. As with figure three it illustrates the spatial concentration of the industry. All colours except black represent ten percent of national adult male employment by registration district. Bradford registration district on its own, shown in black, accounted for 20 per cent of English adult male employment in the woollen industry. The vast majority of England, shown in pale yellow, contributed only ten percent of adult male employment in the industry. Plotted in this way the old East Anglian industry fails to register at all.

Change over time: 1755-1871

I want now to consider changes in the adult male employment structures in the West Riding over the period 1755 to 1871. In what follows some violence has been done to administrative history by including the city of York in the West Riding.

Table one shows the crude breakdown between the primary, secondary and tertiary sectors over time. The last two columns, pertaining to 1851 and 1871 are simply derived from the published census data on males 20 and upwards. The earlier data are derived from the baptism registers of Anglican churches. There were about 300 chapelries and parishes in the West Riding in this period. We have abstracted data from the baptism registers of every West Riding parish and chapelry that recorded the fathers' occupations for 95% of more of legitimate baptisms for either one or two eight year periods between 1740 and 1799. Between 1740 and 1769 around 25% of parishes and chapelries in the West Riding met this criterion. The data from 21,000 baptisms have been abstracted for the period which centres on 1755 and the

breakdown is shown in column one. Data from 66,000 baptisms from the same set of parishes and chapelries from 1813-20 is shown in column 2.

Table 1. The Sectoral Composition of the Adult Male Workforce in the West Riding of Yorkshire c. 1755 -1871

Sector	c. 1755 71 <i>registering units</i> (1) %	c. 1817 71 <i>registering units</i> (2) %	c. 1785 136 <i>registering units</i> (3) %	c. 1817 136 <i>registering units</i> (4) %	c.1817 184 <i>registering units</i> (5) %	1851 <i>whole county</i> (6) %	1871 <i>whole county</i> (7) %
Primary	26.5	12.6	23.8	22.2	24.2	21.9	18.4
Secondary	66.9	79.6	68.2	68.2	66.4	63.4	61.4
Tertiary	6.5	7.8	8.0	9.5	9.4	14.7	20.2
	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	21,103	66,563	46,103	72,449	91,546	367,684	483,693

In the last quarter of the eighteenth century 136 parishes and chapelries, a little under half the West Riding total, recorded the occupations of 95 per cent or more of fathers of legitimate children for an eight year period. Data from 46,000 baptisms are shown in column three for a period which centres on 1785. The fourth column shows data from 72,000 baptisms for the corresponding parishes and chapelries from 1813-20. Finally column five amalgamates all the 1813-20 data we have collected to correspond to the 1755 and 1785 samples. This covers a total of 184 parishes and chapelries, something over half the West Riding total.

Tabulating the data in this form makes it clear that we have not yet collected sufficient parish register data! As a consequence we are currently only in a position to offer a rather tentative account of the evolution of the West Riding's male occupational structure. The problem can be seen in columns one and two. In this sample of parishes and chapelries the primary sector fell from 25 per cent of all adult male employment to 12 per cent between 1755 and 1785. From the remaining columns it is clear that the fall in the primary sector in this set of parishes and chapelries was not representative of the West Riding as a whole. In the larger samples for 1785 and 1817 shown in columns 3, 4 and 5 the primary sector accounted for between 21 and 23% of all adult males. A figure which accords closely with the known county total for 1851. It appears that our sample for 1740-1769 is simply not representative of the county as whole.

The data do not suggest a similar problem with the sample for 1770 to 1799 centred on 1785. Here the sample is made up of around 50 per cent of parishes and chapelries compared with 25 per cent for the earlier period. However there can be no certainty on the representativeness of the second sample at present.

The problem with the first of the eighteenth century samples arises precisely because of the degree of spatial concentration within the West Riding and because some parishes and chapelries were very large indeed. The inclusion or omission of a

handful of critical parishes or chapelries can distort the whole sample. The problem with our first sample is that it includes the massive metal working parishes of Sheffield but none of the massive parishes from the textile districts. Since Sheffield's population grew at twice the rate of the rest of the sample and the sample does not include any of the fast growing wool parishes the presence of Sheffield serves to distort the sample.

The problem can be seen more clearly when the data are examined in more detail. Table two shows the proportions of adult men recorded in some of the more detailed sub-sectors. Between 1785 and 1817 the iron and steel sector appears to grow rapidly whilst the agricultural sector appears to halve. But this is all driven by Sheffield's increasing share of the sample.

Table 2. Selected occupational groups of the adult male workforce in the West Riding of Yorkshire c. 1755 -1871

Sector	c. 1755	c. 1817	c. 1785	c. 1817	c.1817	1851	1871
	<i>71</i>	<i>71</i>	<i>136</i>	<i>136</i>	<i>184</i>		
	<i>registering</i>	<i>registering</i>	<i>registering</i>	<i>registering</i>	<i>registering</i>	<i>whole</i>	<i>whole</i>
	<i>units</i>	<i>units</i>	<i>units</i>	<i>units</i>	<i>units</i>	<i>county</i>	<i>county</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Agriculture	22.1	9.6	21.1	18.1	19.8	16.7	10.9
Mining	4.4	3.1	2.7	4.1	4.4	5.2	7.5
Iron and steel	16.2	25.8	13.9	14.3	12.0	6.7	9.4
Clothing & footwear	8.5	5.2	7.1	6.0	6.1	6.2	4.4
Engineering & machines	1.5	4.5	1.8	2.6	2.2	3.0	4.3
Building & construction	5.2	4.5	5.4	4.9	5.1	6.9	8.6
Textiles	20.8	20.2	23.3	23.0	24.1	26.7	18.1
Other Secondary	14.8	19.4	16.6	17.5	16.8	14.1	16.6
Transport	1.5	1.7	2.3	2.9	2.7	4.4	8.0
Food and Drink	1.2	0.6	1.2	1.1	1.1	1.2	1.3
Dealing and Retail	1.2	2.3	1.5	2.2	2.2	4.6	6.2
Professional	1.2	1.1	1.1	1.1	1.1	1.8	1.7
Clerical	0.2	0.6	0.7	0.6	0.6	0.5	0.7
Other Tertiary	1.2	1.5	1.3	1.6	1.7	2.1	2.2

The presence of the large worsted dominated parish of Bradford as well as Sheffield in the 1785 sample shown in column three ensures a more representative sample. The degree of occupational stability from 1785 to 1817 remains remarkable. Textiles stayed constant at 23% iron and steel stayed constant at 14% and agriculture declined very slightly from 21% to 18%. The growth in the tertiary sector after 1817 is dominated by a very rapid expansion of transport, dealing and retailing.

If we were to suppose, for the moment, that the 1785 and 1817 samples are indeed representative of the West Riding as a whole what would they tell us? Essentially they would suggest an astonishing stability in the male occupational structure of one of the most rapidly industrialising regions on England across the late eighteenth and early nineteenth centuries. Between 1785 and 1817 the size of the primary sector

remained at around 24% while the secondary sector remained at around 66 or 68% and the tertiary sector remained at around 8 or 9%. But from 1817 to 1871 the primary sector declined somewhat as did the secondary sector also declined though at a lower rate. But the tertiary sector doubled in size over this period. We have virtually completed the process of collecting occupational data for the period 1813-20 for all the West Riding parishes and chapelries for which we do not presently have data. A preliminary inspection of the data for 142 of the remaining 164 parishes and chapelries suggests that the 1785 data are in fact broadly representative of the county as a whole. We will soon be in a position to re-analyse the various data-sets.

The male occupational structures of three cities c. 1755-1851

In the meantime it is possible to test the tentative picture just sketched a little further by examining some individual settlements. The cities of York, Sheffield and Bradford have been selected for more detailed analysis. Table three sets out the sizes of the primary, secondary and tertiary sectors in the three cities.

Table 3. Male Occupational Structures of York, Sheffield and Bradford c. 1755 to 1851

York	c. 1755	c. 1785	c. 1817	c. 1851
	%	%	%	%
Primary	4.3	8.5	5.4	9.5
Secondary	60.2	59.3	63.6	55.2
Tertiary	35.3	32.2	30.9	35.3
Sum	100.0	100.0	100.0	100.0
N	1,090	3,309	5,207	9,524

Sheffield	c. 1755	c. 1785	c. 1817	c. 1851
	%	%	%	%
Primary	3.4	5.3	4.8	5.6
Secondary	93.3	90.2	87.7	79.2
Tertiary	3.4	4.5	7.4	15.1
Sum	100.0	100.0	100.0	100.0
N	4,549	9,131	15,135	36,390
Population Estimate	17,842	30,940	52,831	145,560

Bradford	c. 1755	c. 1785	c. 1817	c. 1851
	%	%	%	%
Primary		10.7	17.8	7.1
Secondary		83.2	75.6	77.2
Tertiary		6.3	6.1	15.7
Sum		100.0	100.0	100.0
N		3,375	8,786	27,032
Population Estimate		11,436	30,669	108,128

The three cities had highly distinct occupational structures from each other. Sheffield and Bradford both grew about ten fold over the period for which we have data. But none of them underwent a fundamental change in their occupational structures. Across the whole period about 60% of adult males in York worked in the secondary sector and around one-third in the tertiary sector. Bradford and Sheffield by contrast were manufacturing towns with small tertiary sectors. Over time both cities became somewhat less overwhelmingly dominated by manufacturing and experienced rapid tertiary growth from a low base.

Table four shows the secondary sector in a little more detail. In all three cities clothing and footwear and construction were substantial sectors a feature probably common to almost English towns in this period. Beyond that York had a diversified secondary sector with no notable specialism. Sheffield, unsurprisingly, was dominated by the iron and steel sector and Bradford by the production of Worsted cloth. Both industrial towns experienced some diversification of their secondary sectors as they expanded. All three cities had experienced a substantial growth in their construction sectors by the mid nineteenth century.

Table 4. The Secondary Sectors of York, Sheffield and Bradford c. 1755 to 1851

York	c. 1755	c. 1785	c. 1817	c. 1851
	%	%	%	%
Iron and Steel	1.2	1.4	1.7	2.3
Clothing and Footware	16.6	13.2	13.1	10.6
Engineering, machines, tools	0.0	0.9	0.9	1.7
Building and Construction	7.0	6.0	5.9	10.6
Textiles	5.6	3.3	3.2	1.8
Other Secondary	29.8	34.5	38.7	28.2

Sheffield	c. 1755	c. 1785	c. 1817	c. 1851
	%	%	%	%
Iron and Steel	56.7	52.9	50.9	33.5
Clothing and Footware	10.7	7.5	4.6	6.2
Engineering, machines, tools	5.9	7.3	8.7	10.4
Building and Construction	3.7	4.4	3.2	6.7
Textiles	1.1	1.3	0.4	0.2
Other Secondary	15.2	16.9	20.0	22.2

Bradford	c. 1755	c. 1785	c. 1817	c. 1851
	%	%	%	%
Iron and Steel		1.7	4.0	4.0
Clothing and Footware		6.0	5.5	6.0
Engineering, machines, tools		0.9	1.4	3.0
Building and Construction		5.8	5.0	8.4
Textiles		58.7	44.1	44.4
Other Secondary		10.1	15.6	11.4

Table five shows some of the more notable elements of the tertiary sector in the three cities. The differences between tertiary-rich York and the manufacturing cities were very stark in the eighteenth century. Seven percent of adult males worked in the transport sector in York in 1785 as against well under one percent in the industrial cities. While York experienced little basic change in its tertiary sector the tertiary sectors of Sheffield and Bradford experienced explosive growth driven primarily by the transport, retailing and wholesaling sectors.

Table 5. The Tertiary Sectors of York, Sheffield and Bradford c. 1755 to 1851

York	c. 1755	c. 1785	c. 1817	c. 1851
	%	%	%	%
Transport	13.3	7.1	7.5	8.9
Food and Drink	4.1	4.5	3.6	2.9
Dealing and Retailing	6.4	6.5	8.4	9.8
Professions	4.2	5.5	3.3	4.9
Clerical	0.3	0.2	0.9	0.9
Other Tertiary	7.1	8.4	7.2	8.0

Sheffield	c. 1755	c. 1785	c. 1817	c. 1851
	%	%	%	%
Transport	0.1	0.1	0.6	3.6
Food and Drink	0.4	0.7	0.2	5.0
Dealing and Retailing	0.9	0.8	3.0	1.7
Professions	0.4	0.5	1.0	1.2
Clerical	0.0	0.2	0.9	1.3
Other Tertiary	1.6	2.1	1.7	3.1

Bradford	c. 1755	c. 1785	c. 1817	c. 1851
	%	%	%	%
Transport		0.7	1.2	3.5
Food and Drink		1.9	1.5	0.8
Dealing and Retailing		0.9	1.6	6.1
Professions		0.3	0.3	1.5
Clerical		0.1	0.5	0.7
Other Tertiary		2.3	1.1	3.0

Conclusion

I want to return now to consider the bigger picture of occupational change in the West Riding as a whole. The evidence from Bradford, Sheffield and York broadly supports the view that the secondary sector formed a relatively stable share of male employment but that tertiary employment was growing rapidly, especially from the early nineteenth century. The secondary sector, which accounted for a little over 60% of male employment in 1851, may have formed a very similar proportion in 1750. If the picture presented here is correct what changed from the late eighteenth century was the decline of the agricultural sector and the rise of the tertiary sector. In this sense the very broad trends in the occupational structure of the West Riding are surprisingly similar to those taking place over the same period in the agricultural county of Hertfordshire. The comparison is graphed in figure five.

Both in the West Riding and in Hertfordshire there were only minor changes in the size of the secondary sector across the whole period from the 1750s to 1871. The secondary sector actually underwent some relative decline in the West Riding over the nineteenth century, which just when it began to pick up in Hertfordshire. In both counties the tertiary sectors grew rapidly from the late eighteenth century.

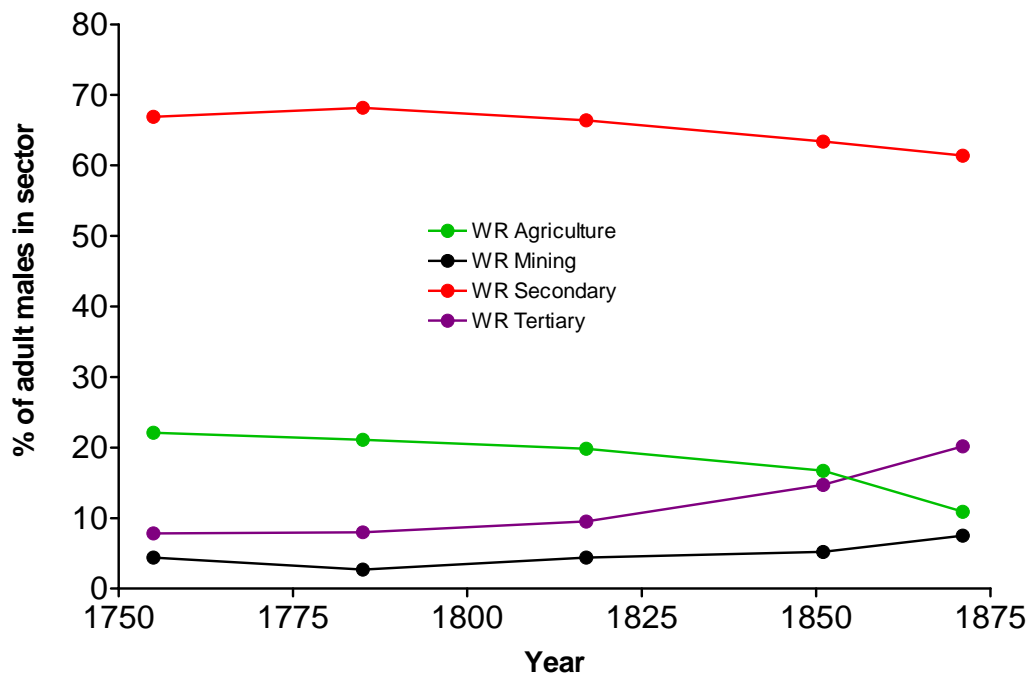
However, population growth in the two counties was very different. Whereas Hertfordshire grew only 20% from 1761 to 1801 on Wrigley's figure the West Riding grew 65%.² Over the following fifty years the figures were 131% and 70%. And we know from recent work by May Pickles that between 1650 and 1750 when England's population was essentially static the population of the West Riding grew by around 40% fuelled by in-migration to the industrial areas. In contrast it is likely that the population of Hertfordshire was either stagnant or fell somewhat between 1650 and 1750. Between 1650 and 1850 it is likely that the population of the population of Hertfordshire doubled whereas the population of the West Riding increased over fivefold.

When we have completed collection the 1813-20 data for the Riding and conducted further disaggregated analysis we will be able to present a much more certain picture. But on present evidence the West Riding was dominated by secondary employment by 1750 and possibly much earlier. Its contribution to the growth of the secondary sector at the national level between 1750 and 1870 was primarily driven not by changing local occupational structures but by differential patterns of migration. As we build up our county level case studies the picture that is emerging is that in some areas secondary sector employment grew rapidly in number (but not as a proportion of employment) through by differential migration but that the tertiary sector grew everywhere by a process of structural change. The only areas that underwent major structural change between 1750 and 1850 may turn out to be those which de-industrialised.

² Wrigley, 'County Populations'

Figure Five: The occupational structures of Hertfordshire and the West Riding of Yorkshire compared c. 1755-1871.

The West Riding of Yorkshire PST 1755-1871



Hertfordshire PST 1758-1871

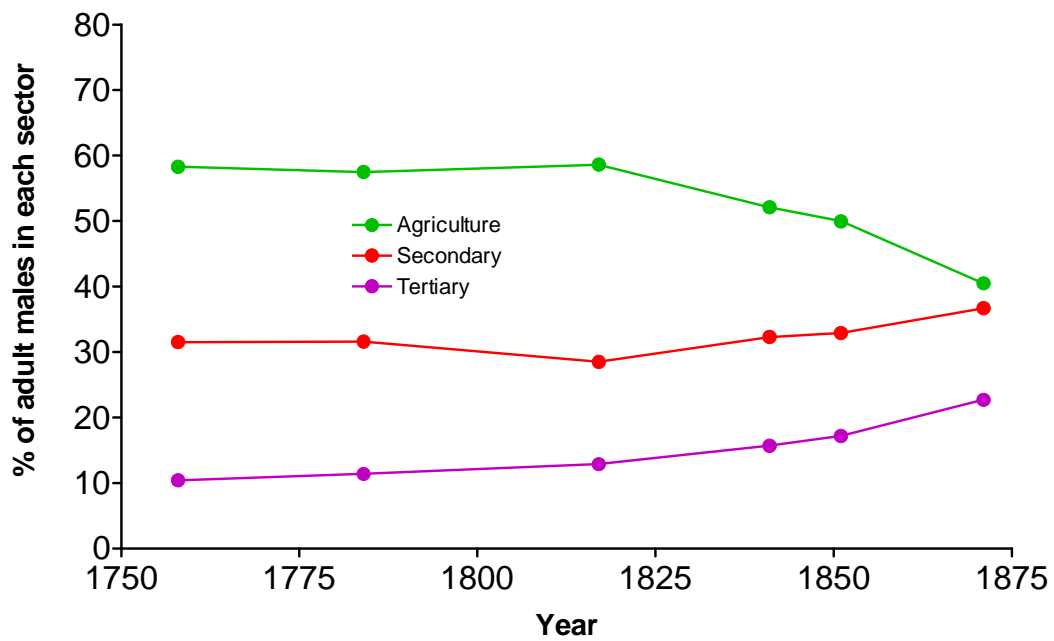


Figure 1. England: Adult male employment by leading sector

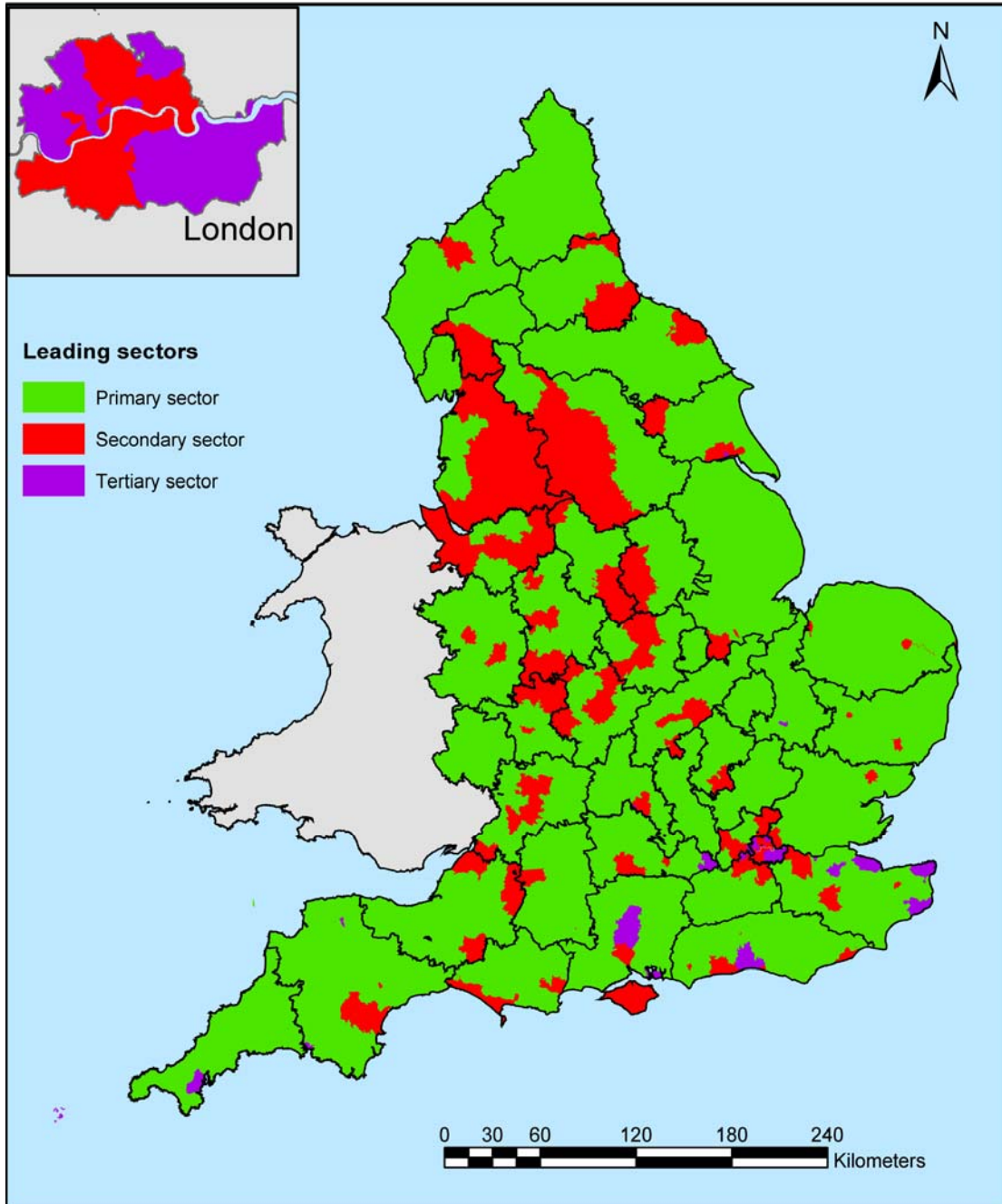


Figure 2. England: Percentage of adult males in secondary employment in 1851

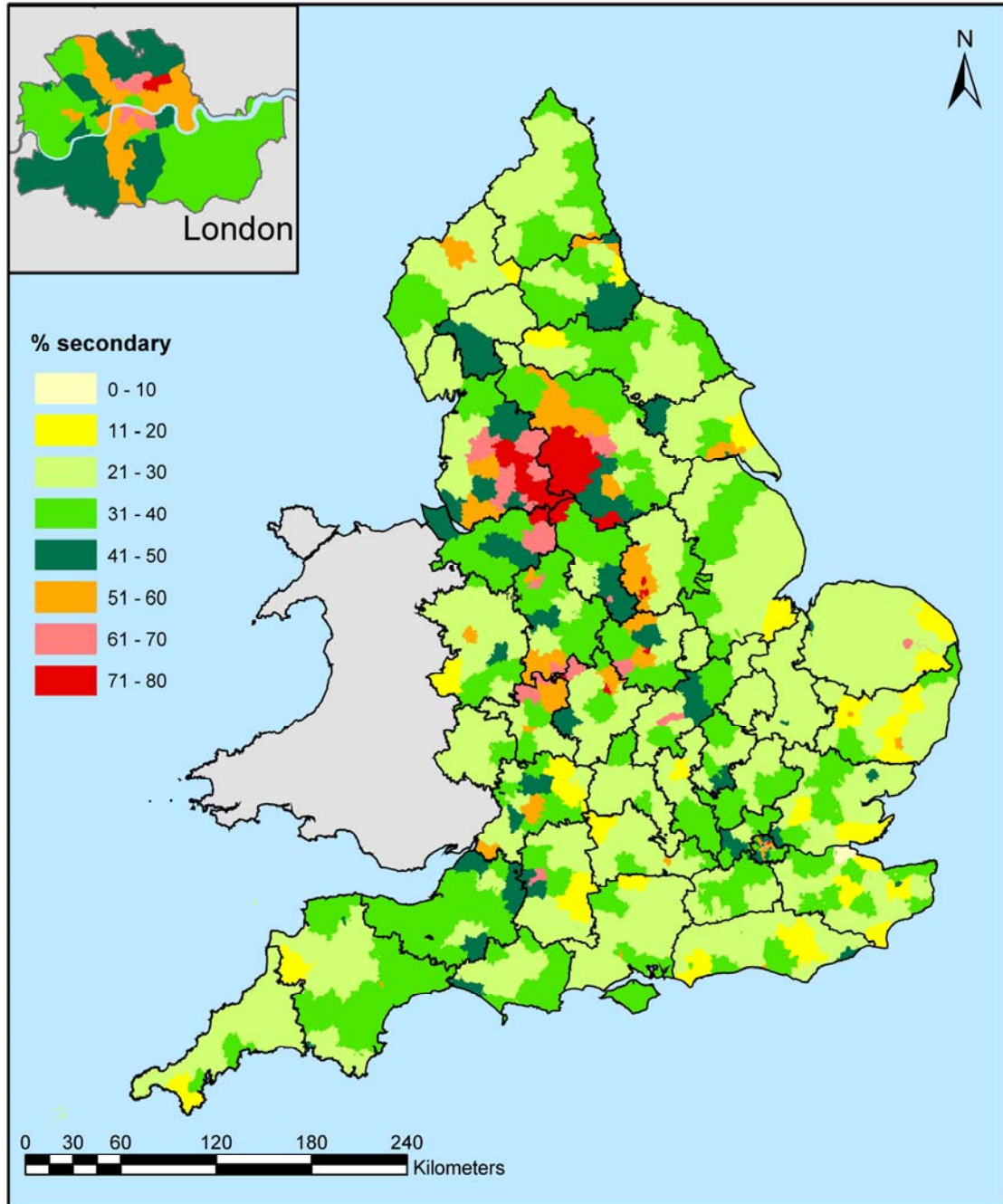


Figure 3. England 1851: Spatial concentration of adult male secondary employment

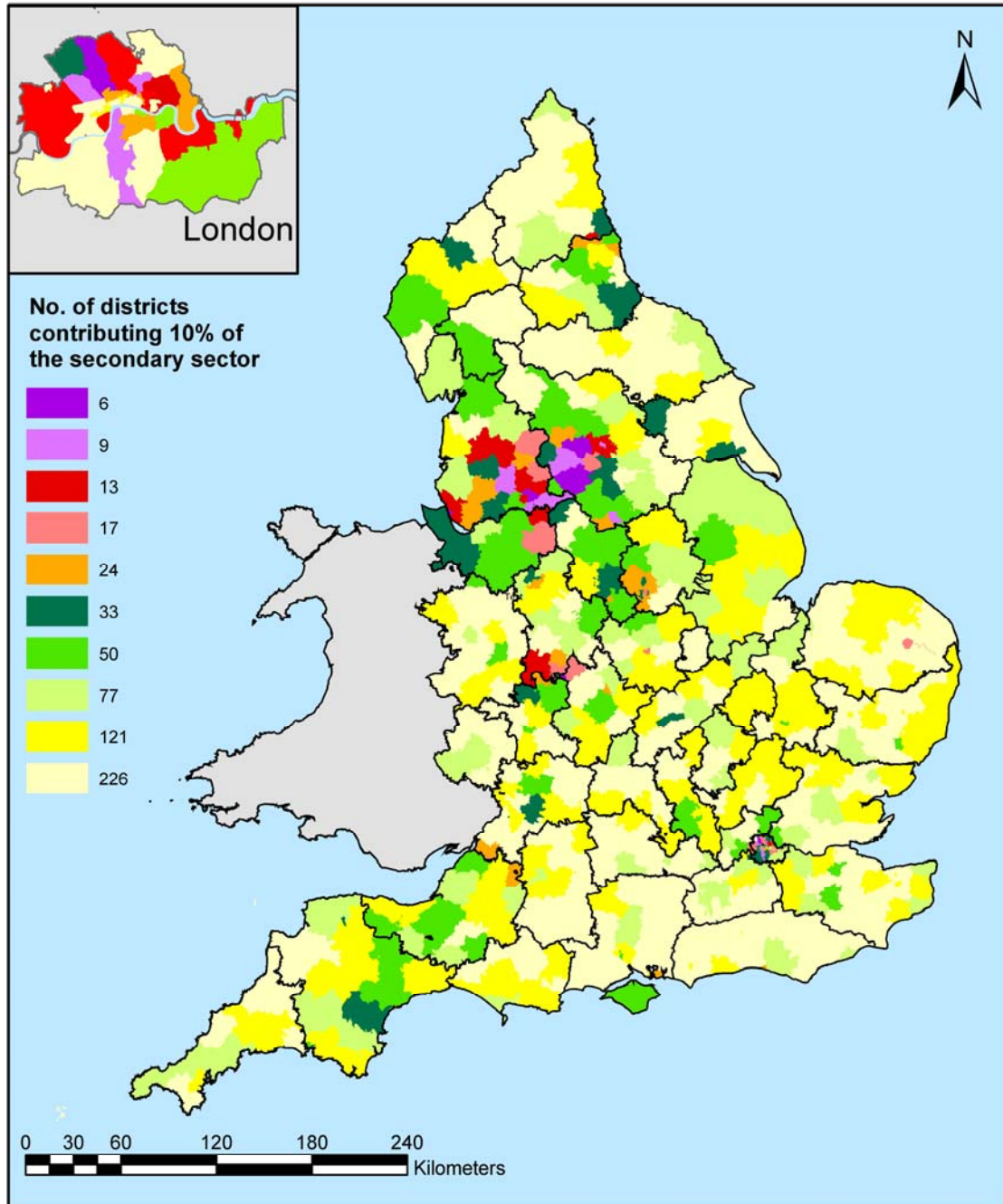
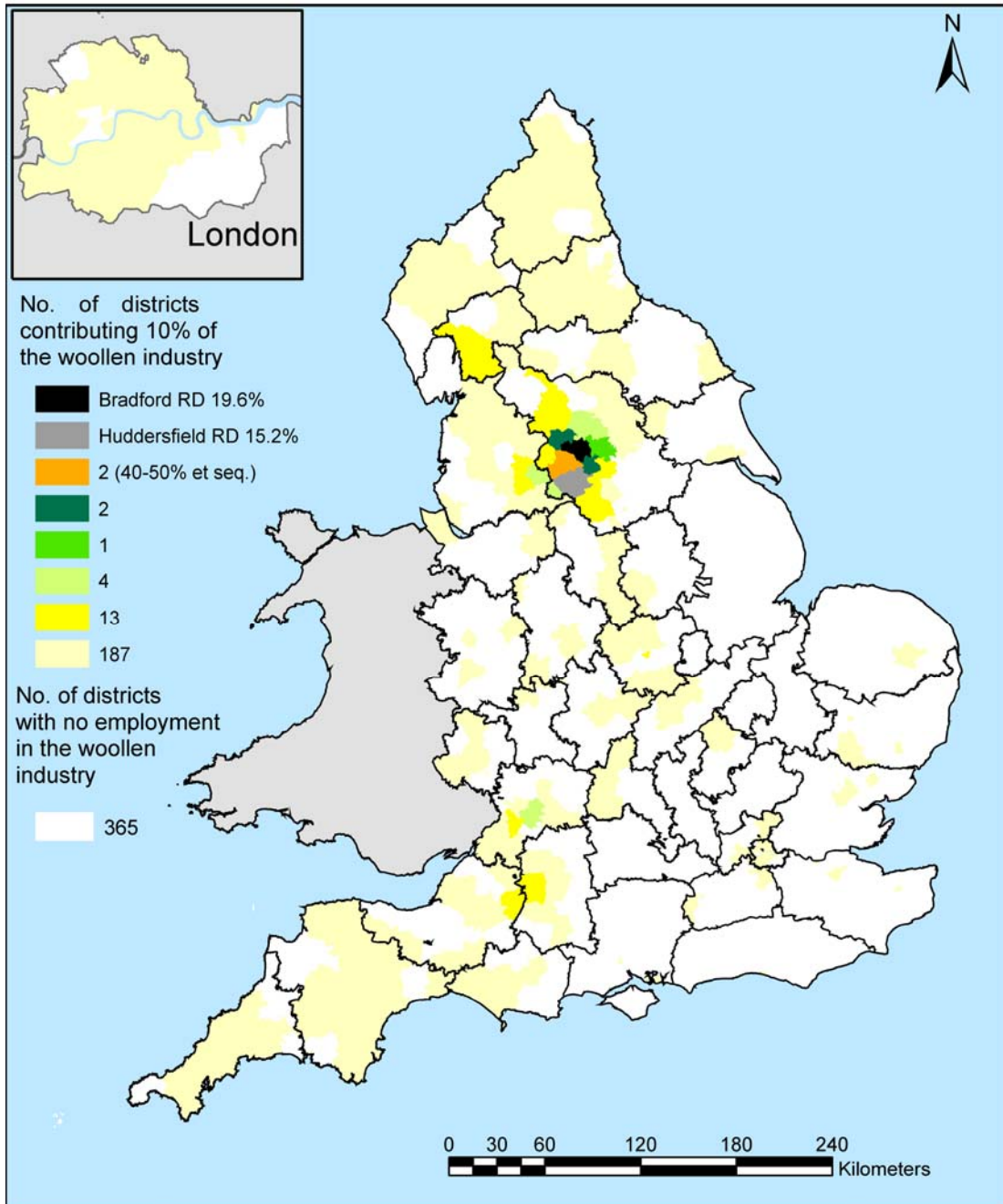


Figure 4. England 1851: Spatial concentration of male employment in the woollen and worsted industry



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