

# York County's Manufacturing Economy in 1810

by

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Although the York County economy was primarily agricultural 200 years ago, 1810 provides a convenient year to start the study of York's manufacturing economy. The 1810 federal census and the township tax returns contain a wealth of information on the structure and distribution of York County's manufacturing economy during the early stages of the county's industrial development. Over the course of the next half century, the county's manufacturing output would gradually outstrip its agricultural production. My purpose in this paper is to use the census and tax sources to describe York County's manufacturing economy in 1810, with the emphasis on the geographic distribution of manufacturing activity across the county. What were the major manufacturing industries 200 years ago in York County and where in the county were these industries concentrated?

A good starting point is the township population data in Table 1 from the 1810 census. York County had a population of 31,358 in 1810. York Borough and Manheim Township each had more than 2,000 residents. Rappaport and Sachs (2003, p. 8) argue that population density captures underlying variations in local productivity and quality of life. Consistent with the idea that people vote with their feet, the intuition is that "population density reveals individuals' preferences over local areas by aggregating the indirect contribution to utility via productivity-driven higher wages with the direct contribution to utility via high quality of life" (Rappaport and Sachs 2003, p. 9). The county's population density was just under 35 persons per square mile. The shaded jurisdictions in Figure 1 had population densities greater than the density for the county as a whole. These areas trace out a continuous line running from the northeast corner of the county to the southwest. The implication is that since much of the county's population was concentrated in these eight entities, which contained about 42 percent of the county's population and occupied just 27 percent of its land area, the standard of living was highest in these

Table 1. Township Populations and Population Density in 1810

	<u>Population</u>	<u>Population Density</u>
York Borough	2,847	547.5
Manheim	2,207	53.8
Codorus	1,975	29.6
Dover	1,882	32.0
Newberry	1,796	45.8
Shrewsbury	1,792	28.2
Windsor	1,739	32.6
Manchester	1,579	46.3
Hopewell	1,577	22.2
Paradise	1,548	35.7
Hellam	1,410	34.0
Fawn	1,402	24.1
Fairview	1,238	34.8
Warrington	1,105	31.1
Heidelberg	1,087	35.1
York	1,040	27.0
West Manchester	978	47.7
Chanceford	966	19.7
Washington	941	33.7
Lower Chanceford	818	19.7
Monoghan	725	30.9
Franklin	706	28.8
York County	31,358	34.7

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Source: 1810 Census population schedules for York County. Population density is persons per square mile.

townships. The four townships with the smallest population densities, Lower Chanceford, Chanceford, Hopewell, and Fawn, are located in the southeastern portion of the county.

Congress passed an amendment to the act providing for the taking of the 1810 census “making it the duty of the marshals, secretaries, and their assistants, to take also, under the directions and instructions of the Secretary of the Treasury, an account of the several manufacturing establishments and manufactures within their several districts, territories, and divisions . . .” (Bishop 1966, v. II, p. 159). However, neither Congress nor the Secretary of the

Table 2. York County's Leading Manufacturing Industries in 1810

	<u>Value of Output</u>
Distilleries	\$286,167
Wheat mills	279,600
Cloth	252,019
Flaxseed oil	210,030
Tanneries	79,802
Hats	68,407
Blacksmiths	66,130
Shoes, boots, slippers, trunks, and saddlery	45,558
Stockings	40,056
Forges	21,333

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Source: Coxe (1814, p. 44-75).

Treasury provided the U.S. Marshals conducting the census with specific instructions as to what information about manufacturing establishments to collect. As a result, the quality and quantity of the information collected varied greatly from numerator to numerator, and the data falls well short of a full accounting of the manufacturing economy of the country in 1810. Nevertheless, with that caveat in mind, the returns contain a vast amount of valuable information.

Just a few manufacturing schedules exist, appended to the population schedules. Most, including those for York County, have been lost. However, the data collected exists in summary form in Coxe's (1814) *A Statement of the Arts and Manufactures of the United States of America for the Year 1810*. He estimates that manufactures for the whole of the United States in 1810 were worth \$172,762,676, or approximately \$3 billion in 2010 dollars (Coxe 1814, p. li).

Manufacturing production in Pennsylvania was \$44,194,740; York County ranked eighth among Pennsylvania counties, behind Philadelphia, Lancaster, Berks, Chester, Montgomery,

Washington, and Northampton Counties with \$1,383,755 in manufactures (Coxe 1814, p. lxiii).

Table 2 lists York County's major manufacturing industries in 1810 based on the total value of output as recorded in the 1810 Census (Coxe 1814, p. 44-75). The significance of farming to the

county economy is evident in the fact that the county's leading manufacturing industries, distilleries and wheat mills, processed the output of its agricultural sector.

The 1810 Census counted 505 distilleries in York County producing 590,560 gallons of whiskey, making York the third largest whiskey producer in Pennsylvania. That is surely an underestimate as the township tax returns record a total of 599 distilleries across York County in 1810 (Luetscher 1911, p. 28). Whiskey production amounted to nearly 20 gallons per county resident. Most of this whiskey was taken by Conestoga wagon to Baltimore. The typical load consisted of four 150 gallon barrels (Luetscher 1911, p. 25). Farmers found that it was more profitable to turn corn and rye into liquor than to haul the grain to Baltimore. Prowell (1907, v. 1, p. 628) notes that whiskey production was one of the few ways that the owner of a small amount of capital could become a manufacturer. Gibson (1886, p. 351) reports that from 1810 to 1840 around one-fifth of York County farmers owned a still. Figure 2 plots the distribution of distilleries across the county. Whiskey production was concentrated in the central and southwestern areas of the county. According to the tax records, there were 108 distilleries in Manheim Township. Only Lower Chanceford had no distilleries listed in the tax records; even York Borough had three.

Although classified in the census with "articles of a doubtful nature or agricultural", wheat milling was undoubtedly manufacturing as it required a large outlay of capital. Figure 3 shows the distribution of the county's 108 grist mills. The shaded townships had 6 or more mills as tabulated by Luetscher (1911, p. 16). Wheat milling was concentrated in the southern half of the county, implying that the county's agricultural production was concentrated in that portion of the county. There were 12 mills in Manheim Township and 10 in York Township. Owners of grist mills were likely to have a distillery to manufacture their portion for grinding into whiskey. There is a strong correlation, 0.74, between the number of distilleries and the number of grist mills in a township.

York's third leading manufacturing industry was the production of cloth goods of all kinds, including cotton, flaxen, hempen, and woollen. With only two cotton manufacturing establishments and no hemp or wool cloth manufacturers, York County confirms Fletcher's (1950, p. 423) assertion that "(u)ntil about 1820 linens, woolens and other fabrics were manufactured not in factories but in homes, mainly farm homes." Flax and wool were the chief raw materials. The census reports that 36,234 yards of cotton goods, 216, 213 yards of flaxen cloth, 28,327 yards of mixed and hempen cloth, and 60,180 yards of woollen cloth were manufactured in families. That works out to over 10 yards of cloth produced per person. York County was among the leading cloth manufacturers in the state, ranking sixth among Pennsylvania counties in the total value of all kinds of cloth produced and third in cotton goods produced in families.

Flax was one of the most important commercial crops in 1810. Flax was grown on nearly every farm. The fiber was used to manufacture cloth. It is estimated that one acre of flax was needed to make summer clothes for a family of seven (Fletcher 1950, p. 160). Men prepared the flax for spinning through a series of operations including retting, breaking, swingling, scutching, and hackling. Men were also responsible for shearing the county's 32,442 sheep and washing the wool. Women were responsible for carding, spinning, and weaving. Census takers counted 7,595 hand cards in the county, the most in Pennsylvania, 10,488 spinning wheels, and 978 looms.

The flax seed was crushed in oil mills. York County was the leading producer of flaxseed oil in Pennsylvania. 23 mills produced 212,050 gallons. As depicted in Figure 4, these mills were concentrated in the central and southwestern areas of the county. Both Manheim and Shrewsbury Townships had four oil mills according to the 1810 tax returns (Luetscher 1911, p. 17).

The top tier of York's manufacturing industries processed the output of the county's prodigious agricultural sector. The second tier of manufacturers, smaller than the top tier by a

factor of three or more, consisted of a variety of industries. The census takers counted 41 tanneries in the county in 1810. The township tax records show that there were 10 tanneries in York Borough, six in Shrewsbury, and four in Manheim Township (Luetscher 1911, p. 16). With production valued at \$79,802, York County ranked second among all counties in Pennsylvania in tanning, trailing only Philadelphia.

York County ranked fourth statewide in the production of hats. 47 hatteries produced 29,150 wool and mixed cloth hats in 1810. The county hat industry was concentrated in York Borough. Peter Ahl owned a notable factory on East Market Street opposite the Court House, where he made silk, felt, and fur hats (Prowell, v. 1, p. 757). Several other significant hatteries were located nearby.

The most ubiquitous craftsman in 1810 was the blacksmith. The census reports that there were 159 blacksmith shops in York County. The blacksmith produced a great variety of small articles for the farm and the home.

“Almost everything made of iron was made by him. He made the plows . . . He ironed off the wagons and carts. He made scythes, reaping hooks, axes, knives in general, chisels, drawing knives, shears, sheep shears, garden hoes, grub hoes, spades, shovels of all kinds, hammers, rakes, harrows, pitch-forks, stable forks, andirons, flatirons, door handles, latches, hinges, locks, cowbells, shod horses and oxen, made the irons of hames and harness, steel for flint and steel, iron lamps for burning lard, nails of all kinds, griddles, tongs, pokers, sled-shoes, chimney cranes, pot-hooks, cranks for grindstones, spinning wheels, spindles, chains and thousands of other things” (Plumb quoted in Fletcher 1950, p. 455).

York County craftsmen produced 20,004 pairs of shoes, boots, and slippers and 5,211 saddles and bridles. The county was the second leading manufacturer of stockings in Pennsylvania, producing 34,965 pairs. Other notable small industries were saw mills, which cut nearly 900,000 feet of boards at around 100 mills spread out around the county, gun manufacturing, coopering, and cabinet making.

The 1810 Census records just one iron forge in York County producing 200 tons with a value of \$21,333. However, Gibson’s (1886) history of the county describes three forges that appear to have been in operation in 1810. The oldest was Codorus Forge, erected in 1765 and

located in Hellam Township. Gibson (1886, p. 486) recounts that Codorus Forge was purchased in 1810 by Henry Grubb for \$17,810. Spring Forge in Paradise Township, erected in 1770 and containing two forge fires and two hammers, was owned by David Eaton in 1810 (Gibson 1886, p. 484). Castle Fin Forge began operations in 1810 under the ownership of Joseph Webb (Gibson 1886, p. 486). Then called Palmyra Forge, it was located on Muddy Creek in Lower Chanceford Township.

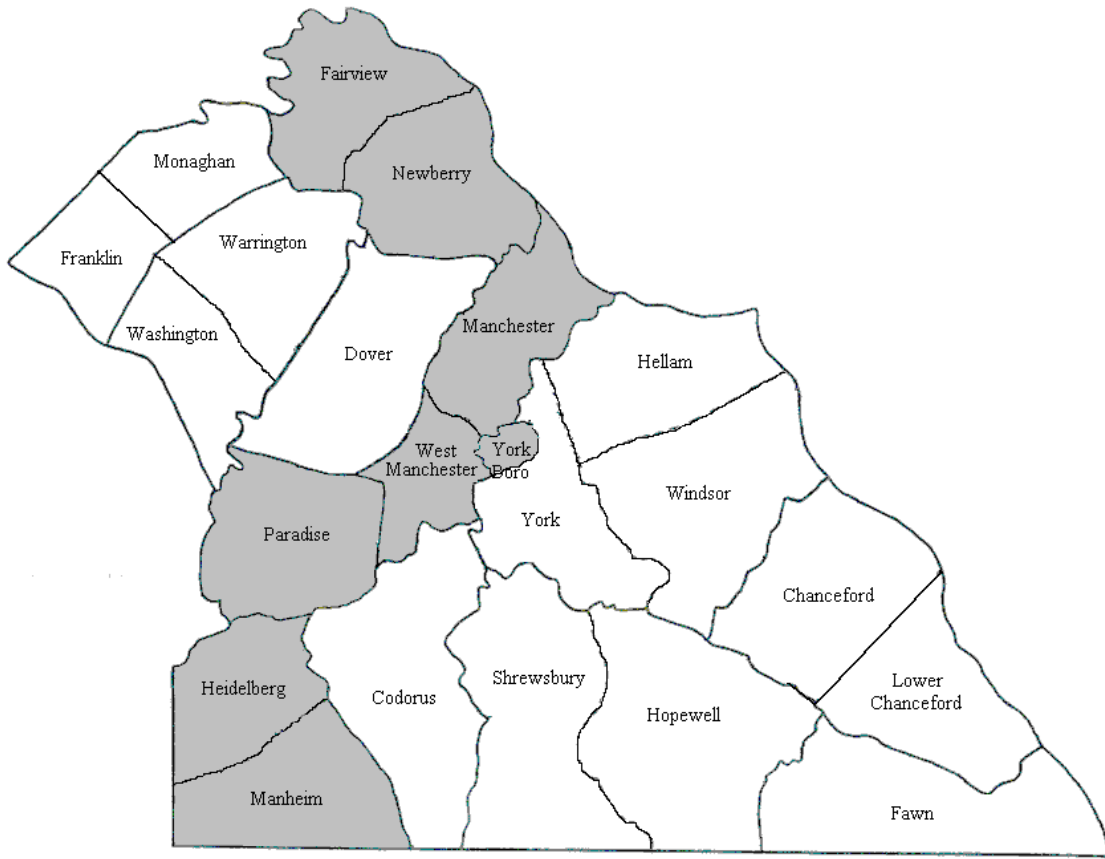
The 1810 Census and township tax records tell us that York County's major manufacturing industries 200 years ago were those that processed the output of the county's farmers. Plots of the locations of these manufacturing establishments in Figures 2 through 4 show that much of the county's manufacturing activity was concentrated in the central and southwestern portions of the county, especially York Borough and Manheim Township. If population density is taken as a proxy for income per capita and quality of life, then the weight of York County's economic activity in 1810 took place in those townships running across the county from southwest to northeast as depicted in Figure 1.

While York's manufacturing economy was still in its infancy in 1810, manufacturing gradually began to dominate the county economy over the course of the nineteenth century, particularly the area around York Borough, and would move away from simply processing agricultural output. In 1820, there were about 2 persons employed in agriculture for every person employed in manufacturing in York County; by 1840, the ratio had fallen to 1.65. Manufacturing had clearly eclipsed farming by 1870 when manufacturing production in York County was valued at \$7,028,934 while agricultural output was \$6,443,180.

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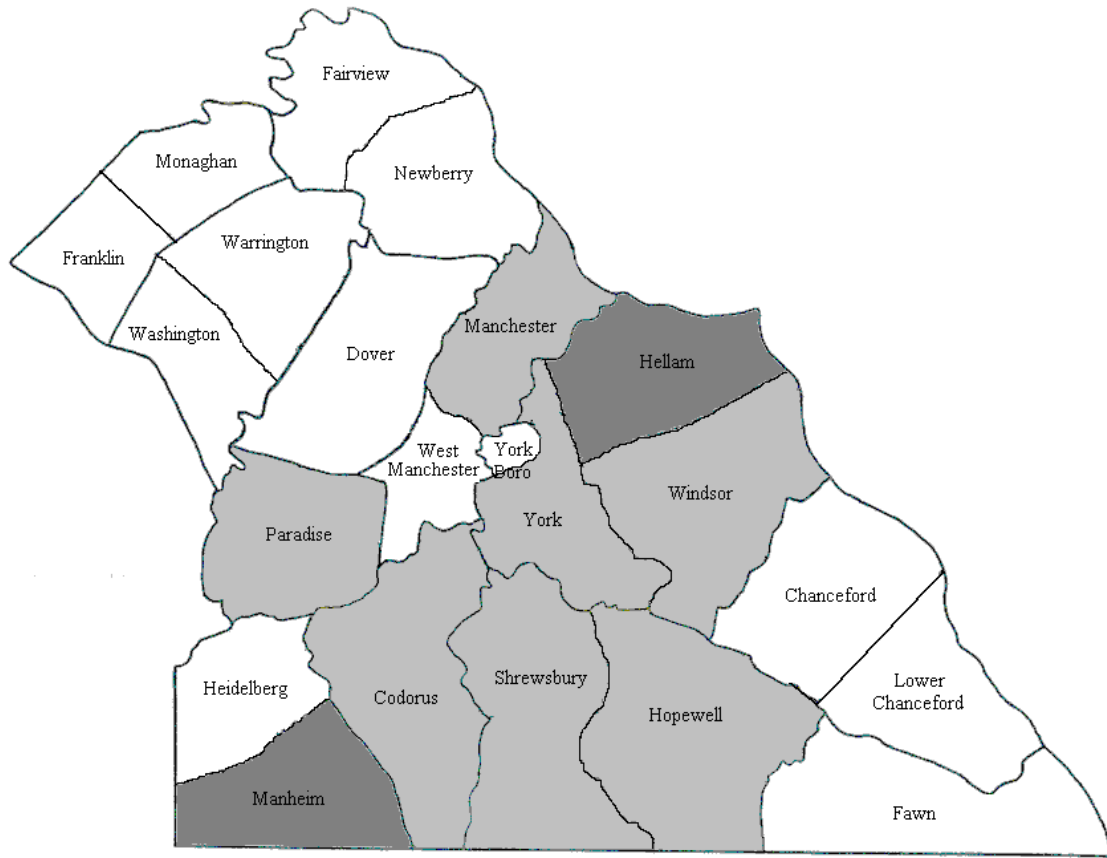
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**Figure 1.** Township Population Densities in 1810.



Notes: Shaded townships have a population density greater than the county population density. Township boundaries adopted from Jonathan R. Strayer's map of the genealogy of the townships of York County in Barnes (1996, p. 110).

**Figure 2.** Distribution of Distilleries Across York County



Notes: Townships shaded dark gray had 60 or more distilleries according to Luetscher's (1911, p. 28) tabulations from the 1810 tax records. Light gray shaded townships had at least 30 distilleries in 1810.

**Figure 3.** Distribution of Grist Mills Across York County



Notes: Shaded townships had 6 or more grist mills as tabulated by Luetscher (1911, p. 16)

**Figure 4.** Distribution of Flaxseed Oil Mills Across York County



Notes: Dark gray shaded counties had 3 or 4 mills listed in the 1810 tax records (Luetscher 1911, p. 17). Light gray shaded counties had 1 or 2 mills.