

Notes for 129 Markets and the organization of manufacturing

Outsourcing is the present like the past

What are the trade-offs between producing at two locations?

What makes the present similar to the past, what makes it different

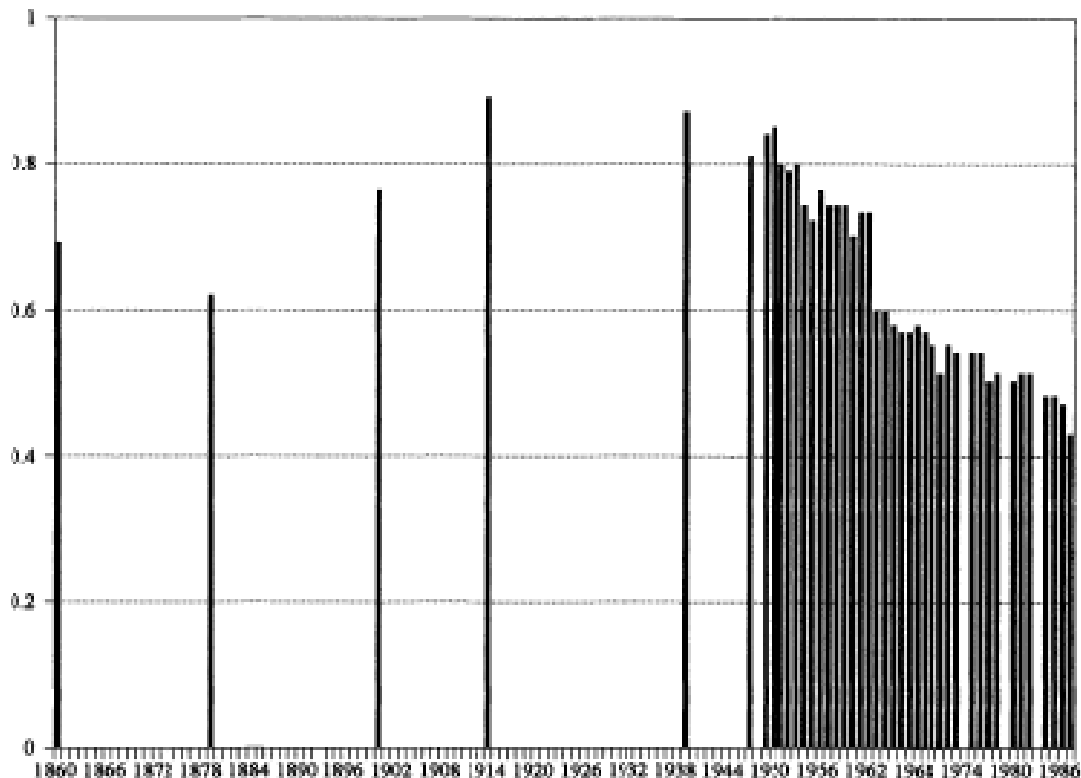


FIGURE I

Index of Regional Specialization: Manufacturing, 1860-1987

The specialization index is calculated using employment data from the U. S. *Census of Manufactures*. See Appendix 3 for sources.

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Krugman's index of regional specialization is defined as

$$SI_{jk} = \sum_{i=1}^n \left| \frac{E_{ij}}{E_j} - \frac{E_{ik}}{E_k} \right|,$$

where E_{ij} is the level of employment in industry $i = 1, \dots, n$ for region j and E_j is the total industrial employment for region j and similarly for region k . If the index is equal to zero, then the two regions, j and k , are completely despecialized. If the index is equal to two, then the regions are completely specialized.² Hoover's

3) Sokoloff

The question

The approach

Start with firm level data

Compute TFP (so net out differences in inputs by industry)

Then see what is associated with the residual.

How to interpret the regressions

- How are factories making gains before the 1840s according to Sokoloff? Are there still processes of growth that look like this today, or have we become a machine based economy. (does growth always require capital deepening?)
- How might economies be arranged to take advantage of markets. Is agriculture a problem in this respect.

Number of Employees per Northeastern Manufacturing Firm: 1820 and 1850

	1820	1850	Ratio of firm size in 1850 to that in 1820
Boots/shoes ^a	19.1 (N = 15)	33.6 (N = 72)	1.76
Cotton textiles	34.6 (92)	97.5 (856)	2.82
Flour and grist milling	2.4 (90)	1.8 (5128)	0.75
Glass	56.9 (8)	64.6 (76)	1.14
Hats and caps	8.4 (32)	17.0 (812)	2.02
Iron and iron products	19.5 (73)	24.2 (1562)	1.24
Liquors	2.7 (165)	5.0 (633)	1.85
Paper ^a	14.3 (33)	22.4 (12)	1.57
Tanning	3.8 (126)	4.2 (3233)	1.11
Wool and mixed textiles	10.6 (107)	24.5 (1284)	2.31

TABLE 6
Regression with Index of Total Factor Productivity as Dependent Variable: 1820

	$R^2 = 0.141$ Coefficient	$N = 534$ t -Statistic
Intercept	44.398	6.27
Dummy for factory size (>5 employees)	9.284	2.77
Log (% of labor force employed in agriculture)	-7.128	-4.89
Dummy for New England	-2.319	-0.74
Industry dummies:		
Liquors	1.967	0.27
Metal products	3.095	0.36
Milling	2.280	0.28
Tanning	-9.646	-1.30
Miscellaneous	5.158	0.75

TABLE 9
Regression with Index of Total Factor Productivity as Dependent Variable: 1850

	$R^2 = 0.092$ Coefficient	$N = 782$ t -Statistic
Intercept	104.769	20.77
Dummy for factory size (>5 employees)	22.150	6.74
Log(% of county population in urban area)	4.076	3.72
Dummy for New England	5.391	1.89
Industry dummies		
Coaches/harnesses	-3.630	-0.57
Clothes	-11.095	-1.51
Mills	-6.563	-0.99
Tanning	-7.904	-1.18
Miscellaneous	-3.060	-0.62