

## *Mid-XIX Century Military Spending Patterns*

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How and why industrialization occurs remains an unanswered question. Among conjectures forwarded are those of leading sectors or demand linkages which shift the structure of production, which encourage the development of new institutional forms suited to industrial rather than subsistence agricultural economies and which promote the development of new technologies. Railroads, canals and other developments, including among them war, have been advanced as causes for changes in demand capable of shifting output mixes in the requisite direction. Our concern is with the impact of war upon demand patterns.

Contemporary evidence bearing upon this question can be obtained from input-output tables. But such data would not deal with the impact of war during those years when today's industrialized economies were developing. Consequently, we must turn to the past. One war for which this claim has been made is the American Civil War. But research into demand patterns has been either solely on the intuitive level or has concerned itself with the products of a single industry.<sup>1</sup> We need knowledge of actual government expenditures.

Some records are available which do outline actual wartime purchases. The State of Massachusetts, for one, recorded war and peace time expenditures in great detail. The information is contained in the annual reports by the Auditor. This note deals with the data contained in these records. As we shall see, there was a dramatic shift in expenditure patterns following the outbreak of the war. The shift moved purchases from non-manufactured goods into expenditures predominantly for manufactured goods. Furthermore, this pattern of purchases was strikingly different from pre-war national patterns. Once again, the comparative concentration upon manufactured goods was remarkable.

Our factual base is the annual reports for the years 1860 and 1861. Unfor-

<sup>1</sup> See, for example, STANLEY L. ENGERMAN, "The Economic Impact of the Civil War," *Explorations in Entrepreneurial History*, SS, Vol. 3, No. 3, Spring, 1966, pp. 176-199, or RICHARD F. WACHT, "A Note on the Cochran Thesis and the Small Arms Industry in the Civil War," *Explorations in Entrepreneurial History*, SS, Vol. 4, No. 1, Fall, 1966, pp. 57-62.

tunately we are unable to utilize reports for later years. For while expenditures were identified both by dollar amount and type of goods purchased in both 1860 and 1861, the reporting methods change after that. All we do find in these later records are expenditures identified by type of good, but no dollar figures are given. This, probably, was related to the methods used by the Federal Government to repay states.

Do the Massachusetts data adequately reflect national patterns? Quite likely they do so. Firstly, as is well known, the federal government largely relied upon the states to raise, equip, train and field troops during the war's early years. The states were then reimbursed.<sup>2</sup> This reliance upon the states means we can utilize the Massachusetts records to examine wartime demand. Furthermore, the Massachusetts sample is quite large when compared with total wartime expenditures. Massachusetts' share of the North's total expenditures during 1861 was 8.5 percent.<sup>3</sup> Our sample, therefore, is large.

How were expenditures distributed? Reported expenditures are distributed by census category in Table 1 below.

Table 1<sup>4</sup>

## PERCENTAGE DISTRIBUTION OF MASSACHUSETTS STATE SPENDING

	1860	1861
<i>Total Spending</i>		
Non-Military		
Direct Wage Payments	30.1	32.8
Purchases of Final Goods and Services	69.9	67.2
Military		
Direct Wage Payments		15.8
Purchases of Final Goods and Services		84.2
<i>Spending for Final Goods and Services</i>		
Non-Military		
Census Category I (Manufactures)	22.3	33.5
Census Categories II - X	77.7	66.5
Military		
Census Category I (Manufactures)		82.5
Census Categories II - X		17.5

<sup>2</sup> FRED ALBERT SHANNON, *The Organization and Administration of the Union Army, 1861-1865*, (The Arthur H. Clarke Co., Cleveland, 1928). He covers these points in detail in his chapter one and two entitled "The States-Rights Principle Applied to the Army" and "Feeding and Clothing the Volunteers," pp. 15-106.

<sup>3</sup> Massachusetts spend \$2,989,000 during 1861 for military items. The figures were summed from separate items in the 1861 Report. Federal expenditures were \$35,402,000. The federal data come from Series 457 (total), 458 (Dept. of the Army) and 459 (Dept. of the Navy), of *The Historical Statistics of the United States, Colonial*

These data clearly reveal that although military materials were primitive by modern standards, they were unusually concentrated in manufactured items by comparison with nonmilitary state spending. Moreover, not only did the military funnel an extraordinary percentage of their expenditures on final goods and services into manufactured goods, they also devoted a distinctly small percentage to direct wage payments when compared with ordinary state spending. Shifts in state wartime spending patterns unquestionably occasioned a highly unusual shift in demand patterns. Demand was shifted dramatically away from *both* direct wage payments and purchases of non-manufactured items into manufacturing.

Moreover, this extraordinary division between manufactured and non-manufactured items was certainly different from the usual division of gross national product. In 1869 value added by manufacturing was 24 percent of GNP.<sup>5</sup> Not all Massachusetts dollars spent on manufactured goods were for

*Times to 1970*, (U.S. Department of Commerce, Washington, D.C., 1975), Part. II, p. 1114.

<sup>4</sup> *Report of the Auditor of Accounts of the Commonwealth of Massachusetts*. The report for the years ending December 31, 1860 and 1861 were used. Obviously the Auditor did not report all purchases segregated into the census categories we use today. Where entries would fall into two or more census categories, and we refer here to two digit categories, the entries were divided into category according to reported expenditures by other similar departments. For example, the state had a number of state hospitals, and we used entries from one to distribute purchases from another. Yet, such distribution was seldom necessary. Moreover, there were few if any entries which would have to be distributed between one digit census categories.

To obtain some idea of the detail in which the entries were recorded, consider the following selection. We use the Treasurer's Department, Details No. 83, Incidentals, (p. 109), for the year 1861.

Lith., Printing and Engraving	\$106.16
Blank Record and Check Books	129.00
Paper, Pens, Ink, &c.,	39.83
Printing Blanks and Circulars	110.77
Sundries	32.02
Postage	77.47
Boxes	6.48
Binding 2 vols. Documents	2.50
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	\$504.22

The Peace Commissioners reported expenditures on compensation for commissioners, for a messenger, car fare, hotel expenses, telegrams, stationery, postage, carriage hire, assessment for hall and so forth (p. 115). The Rainsford Hospital spent \$8.65 for 95 lbs. of cheese, \$29.17 for brooms and brushes, and \$88.16 for 268 gallons of molasses (p. 132), among other items.

<sup>5</sup> The GNP figures were taken from *Historical Statistics of the United States, Colonial Times to 1957*, (U.S. Department of Commerce, Washington, D.C., 1961), Series

valued added in manufacturing, of course. Some went for raw materials. Consequently, we cannot directly compare the breakdown of state spending with value added in manufacturing as a percentage of GNP. But if we assume that all dollars spent on all non-manufactured goods went directly into value added in that census category, and note that value-added in manufacturing was 58 percent of product value, we find an upper bound for all national expenditures for manufactured goods of 41 percent. This is far, far below the 82.5 percent spent in the Massachusetts military budget for manufactured goods. Unquestionably Civil War military spending in Massachusetts shifted spending toward manufacturing. And the magnitude of the shift was substantial.

We can not necessarily conclude from this that the Civil War promoted industrialization. There were, after all, numerous other connections between the war and subsequent economic growth. But this study reveals, for the first time, state spending patterns for both military and non-military goods. And this study of actual spending reveals extremely clearly a dramatic shift in spending patterns.