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Chapter 10

Leather Products

THE leather products group consists of industries which either process leather or use leather as the principal material in the fabrication of other products, such as shoes and gloves. Measured in terms of value added, the group was less than a fourth as important as textiles in 1929.

TRENDS IN THE PHYSICAL OUTPUT OF THE LEATHER PRODUCTS INDUSTRIES

Of the 11 leather products industries distinguished in the Census of Manufactures, quantity indexes are available for only four (Table 28 and Chart 12). Fortunately, two of these, leather and shoes, are the most important in the group.

Leather. The output of the primary leather industry, in which hides and skins are tanned, and the resulting leather is curried and finished, rose 61 percent between 1899 and 1937. In the last period, 1929–37, the leather industry achieved a net gain in output amounting to 12 percent. The peak in the series was reached in 1923. Declining exports accounted only in small degree for the retardation in the rate of growth in leather output: in 1899, 89 percent of the leather produced in this country went for domestic consumption, and in 1937 the percentage was 99. The output of leather was probably affected more by the decline in the manufacture of certain leather products and by the substitution for leather of such materials as cloth, rubber and artificial leather.

The leather industry is far from homogeneous. Indeed, it

TABLE 28

LEATHER PRODUCTS[a]

Physical Output: Indexes and Percentage Changes[b]

	Leather	Shoes, Leather	Gloves, Leather	Belting, Leather	Total Unadjusted	Total Adjusted
YEAR	INDEX OF PHYSICAL OUTPUT (1929:100)					
1899	70	60	85	..	64	64
1904	82	68	97	..	73	74
1909	89	78	98	..	82	83
1914	84	81	91	..	82	81
1919	104	89	105	..	94	90
1921	88	76	65	..	78	75
1923	120	93	..	..	99	95
1925	101	84	..	..	88	85
1927	106	96	91	80	98	97
1929	100	100	100	100	100	100
1931	81	84	74	46	82	80
1933	85	94	..	48	90	86
1935	104	103	102	76	103	100
1937	112	112	98	86	111	108
PERIOD	NET PERCENTAGE CHANGE IN PHYSICAL OUTPUT					
1899–1937	+61	+87	+16	..	+75	+69
1899–1909	+28	+31	+16	..	+29	+29
1909–1919	+17	+14	+7	..	+15	+9
1919–1929	−4	+12	−5	..	+6	+11
1929–1937	+12	+12	−2	−14	+11	+8

[a] Industries for which there are no adequate quantity data for any period listed above are: shoe cut stock, not elsewhere made; shoe findings, not elsewhere made; leather goods, not elsewhere classified; luggage; pocketbooks; saddlery and harness; and whips. These industries are covered by the adjusted total.

[b] The indexes have been constructed from basic data in the U.S. Census of Manufactures and other sources, by methods described briefly in Chapter 2 and in detail in Appendix A. Appendix B presents these data, together with the indexes derived from them. The indexes cited here for individual industries have been adjusted to take account of changes in the coverage of the respective samples, except when such adjustment was impossible.

The percentage changes are not always entirely consistent with the indexes given above because the changes were computed from the indexes in Appendix B, which are carried to one decimal place.

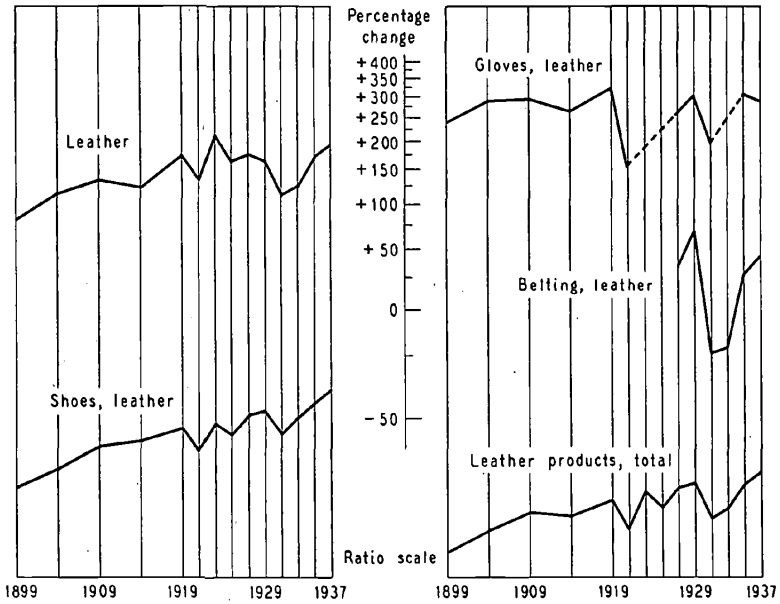
is really a group of about ten independent subindustries,[1] because the various types of leather are prepared by proc-

[1] J. R. Arnold, "Labor Productivity in the Leather Industry," *Monthly Labor Review* (July 1937), p. 68; Allen Rogers, "The Leather Industry," in *Representative Industries in the United States*, ed. by H. T. Warshow (Henry Holt, 1928), Chapter 12.

Chart 12

LEATHER PRODUCTS

Indexes of Physical Output



esses which differ markedly from one another. In Chapter 6 we noted shifts in the relative importance of the several species of animals slaughtered in meat-packing establishments. Such changes alone would have given rise to differences in the rates of growth in the output of the various branches of leather fabrication. In addition, there have been variations in the imports of hides and skins, and changes in the uses to which leather has been put. For example, there was a large demand for leather for automobile upholstery at one period, and a subsequent decline when the closed car superseded the open car and cloth materials came into use instead. Some of the changes in the composition of the industry's products are shown in the following figures, based on value of output:

Type of Leather	*Percentage Distribution of Total Value of Output* 1899	1909	1919	1929	1937
Sole	28.2	28.1	25.8	30.6	29.6
Belting	3.6	3.5	3.9		
Harness	8.7	8.0	2.8	1.3	1.1
Upholstery	3.1	4.5	3.8	3.3	1.9
Bag, case, and strap	56.4	55.9	1.4	1.5	1.3
Upper, other than patent			46.9	40.3	41.1
Glove and garment			15.4	5.0	6.2
Other				18.0	18.8
TOTAL	100.0	100.0	100.0	100.0	100.0

The most striking change occurred in the relative importance of harness leather, a product which dropped from 8.7 percent of the total output in 1899 to 1.1 percent in 1937. Upholstery leather rose in relative importance from 1899 to 1909, then declined to a low point in 1937. Glove, garment and miscellaneous leathers rose from 1919 to 1937, but upper leather, used for shoes, decreased.

The quality of leather was improved in the 38 years under discussion. One observer states that "in the side-leather branch . . . the expenditure of additional labor to turn out a more highly finished article has, since 1923, offset part of the gain in the efficiency of labor." [2] Moreover, the development of new tannages and treatments and the opening of new fields of use for leather have resulted in a far greater variety of leather products.[3] The increased variety represents, of course, a real improvement in the "quality" of leather in general.

Shoes made of leather rose at a somewhat more rapid rate than the output of leather alone. From 1899 to 1937 the net increase in the physical quantity of shoes produced was 87 percent, a rise slightly in excess of population growth during the period. In this industry, as in leather production, there was a gain of 12 percent from 1929 to 1937.

Among the types of shoes distinguished by the Census,

[2] J. R. Arnold, *op. cit.*, pp. 76–77.
[3] V. S. Clark, *op. cit.*, p. 228.

youths' and boys' and misses' and children's shoes changed but little in output between 1899 and 1937, whereas men's shoes rose 50 percent and women's shoes more than 130 percent. Since women's shoes are quite different from men's shoes in size, construction and design, the change in the composition of the industry's output reflects a considerable shift in manufacturing processes. The following tabulation classifies the number of shoes according to method of construction:

	Percentage Distribution			
Type of Shoe	1909	1919	1929	1937
Welted	32.3	38.0	33.5	32.7
Turned	16.4	18.6	15.1	6.4
McKay	41.5	36.3	34.2	20.0
Wood-and-metal-fastened	9.8	4.0	5.9	5.6
Stitchdown	..	3.2	10.6	13.2
Cemented	..	..	0.7	22.0
TOTAL	100.0	100.0	100.0	100.0

The welted shoe retained its place over the years 1909–37. Turned, McKay, and wood-and-metal-fastened shoes declined in relative importance. Stitchdown and cemented shoes, comparatively new in 1919, together accounted for 35 percent of the total output in 1937.

Though no exact figures can be given, there is some evidence that savings in materials caused the net output of the shoe industry to rise more rapidly than the gross output.[4]

Summary. The unadjusted index for the entire leather products group rose 75 percent between 1899 and 1937. Since the index is based on the output of the most important industries in the group, adjustment for industries omitted

[4] "Since 1923 specially designed mulling cabinets or rooms in which the upper leathers are hung before lasting have become increasingly general. The condition of the uppers can now be suitably and positively controlled to meet the requirements of different kinds of leather in different seasons—without excessive moisture in the work rooms and with benefit to the quality of the finished shoe. The result is economy in the amount of material used in each shoe and a saving in the number and cost of 'cripples' or spoiled shoes." Boris Stern, "Labor Productivity in the Boot and Shoe Industry," *Monthly Labor Review* (February 1939), p. 287.

affects it but slightly, reducing the gain between 1899 and 1937 to 69 percent. The growth during the 38 years was relatively slow but fairly continuous. There were increases in all four periods, ranging from 29 percent in the first to 8 percent in the last.

Two of the three leather industries for which we have data increased their output less rapidly than population grew between 1899 and 1937. The same trend may be observed in the adjusted total. All the leather products industries fell behind the 276 percent rise in total manufacturing for the entire 38 years. Only in 1929–37 did the output of the leather group grow more rapidly than the output of all manufacturing industries combined.

CHANGES IN THE INDUSTRIAL PATTERN OF LEATHER PRODUCTS MANUFACTURE

The data in Table 28 indicate that leather and leather glove production advanced less rapidly than the output of the group, and that shoe production went up more rapidly. The effects of these differing rates of growth on the composition of the group's output are shown in Table 29. In 1899 the primary leather branch contributed 23 percent of the group's output; by 1937 the relative contribution of the industry had fallen to 21 per cent. The leather gloves industry reduced its contribution from 3.9 to 2.6 percent. All other leather industries, excluding shoes, also decreased their contributions to the total. The shoe industry alone increased its relative contribution, from 52 to 57 percent.

Data on the relative contributions of individual industries to the value added by the leather group are presented in Table 30. These are not inconsistent with the trends indicated by the data on physical output: the trends in value added are somewhat steeper, but they move in the same di-

rection as the trends in physical output. The value data provide some additional information on "all other" leather industries. The most noteworthy changes occurred in the contributions of industries producing saddlery, harness and whips. These industries together contributed 8.2 percent of the value added in 1899 but only 0.9 percent in 1937. Pocketbooks, and the two shoe supply industries, shoe cut stock and

TABLE 29

LEATHER PRODUCTS

Relative Contributions of Component Industries to the Physical Output of the Entire Group[a]

Industry	*Percentage Distribution, Comparable Pairs of Years*									
	1899	1937	1899	1909	1909	1919	1919	1929	1929	1937
Leather	22.6	21.3	25.3	25.2	27.9	30.0	27.2	23.5	18.6	19.3
Shoes, leather	52.1	57.0	49.5	50.0	48.0	50.1	53.0	53.5	57.7	59.8
Gloves, leather	3.9	2.7	3.7	3.3	2.6	2.5	2.5	2.2	2.6	2.4
Belting, leather									2.2	1.8
All other products	21.4	19.0	21.4	21.5	21.5	17.3	17.3	20.8	18.8	16.8
TOTAL[b]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a] Derived from Table 28. For an explanation of the derivation of the measurements see Chapter 4, footnote 10.

[b] The columns do not add up to 100.0 in every instance because they contain rounded percentages.

shoe findings, improved their relative standing over the same period.

The fact that shoe production increased in relation to leather production may be explained by the decline in leather exports, the fall in harness and related leather products, the shift from retail to factory-made shoes, the growing use of rubber and cloth materials in shoe production, and the drift to half-shoes which require less leather per shoe. Indeed, in view of the presumptive importance of these trends, it is rather surprising that there is not a more pronounced

TABLE 30

LEATHER PRODUCTS

Relative Contributions of Component Industries to the Value Added by the Entire Group[a]

Industry	*Percentage Distribution*				
	1899	1909	1919	1929	1937
Leather	26.2	24.5	31.5	18.6	19.4
Shoes, leather	48.4	50.8	49.0	58.2	59.1
Shoe cut stock, n.e.m.	2.9	2.4	3.0	3.3	6.2
Shoe findings, n.e.m.	1.5	2.2	2.5	3.4	
Belting, leather	1.7	2.5	1.4	1.9	2.1
Gloves, leather	4.0	3.2	2.3	2.4	2.6
Leather goods, n.e.c.	3.0	2.6	2.5	2.3	6.7
Pocket books	0.6	0.5	0.8	4.3	
Luggage	3.5	4.1	3.4	4.2	3.0
Saddlery and harness	7.4	6.5	3.4	1.2	0.9
Whips	0.8	0.7	0.2	*	
TOTAL[b]	100.0	100.0	100.0	100.0	100.0

* Less than half of one percent.

[a] Basic data are given in Appendix C. N.e.m. denotes not elsewhere made; n.e.c. denotes not elsewhere classified.

[b] The columns do not add up to 100.0 in every instance because they contain rounded percentages.

difference between the rates of growth of leather output and of shoe production.[5]

[5] If the rise in shoe production is compared with the rise in leather output, the latter being measured by simple aggregation of the quantities of various leathers produced, as in the Day-Thomas index (Appendix D), the discrepancy is greater. Our index of shoe production increased by 72 percent from 1899 to 1935, while the Day-Thomas index of leather output rose by 12 percent.