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Volume Title: Factors Influencing Consumption: An Experimental Analysis of Shoe Buying

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Volume Publisher: NBER

Volume ISBN: 0-87014-416-2

Volume URL: <http://www.nber.org/books/mack54-1>

Publication Date: 1954

Chapter Title: Long-Term Trends

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Chapter URL: <http://www.nber.org/chapters/c9379>

Chapter pages in book: (p. 39 - 44)

LONG-TERM TRENDS

Several times in the course of these pages we have encountered factors that tend, on the whole, to shift in a persistent direction over the years, and thus impart a trend pattern to shoe buying, other things the same. For one thing, the close association of shoe buying and income means that an upward trend in income would imply an upward trend in the buying of shoes, and virtually any other commodity. We noted, too, that shoes, unlike many commodities, are one for which spending is larger, other things (including income) the same, when there are more people to be shod; and population has increased in the United States — an increase which, for the period covered by our time series, can be reasonably well represented by a straight-line trend. On the other hand, the continued urbanization of the country has meant that a larger proportion of total income is spent according to urban as contrasted with farm families' spending patterns, and this would tend to decrease the average proportion of income spent on shoes (though the marginal as opposed to the average propensity might increase). Greater equality of income distribution would have just the opposite effect and, as we noted earlier, for the period covered by the monthly data before World War II a straight-line upward trend of shoe buying probably reflected the largest part of the shift in income distribution that took place.

But other factors, too, were at work. For one thing, demand for shoes associated with wear and tear has doubtless decreased as improved techniques in tanning and perhaps in shoe manufacturing have lengthened the life of comparable shoes; better repair service has done likewise. Increased use of autos and buses has substituted wear on tires for wear on shoes. Counteracting the downward trend due to the lessening demand for shoes as physical protection is an upward one due to an increasing demand as a decoration. It is doubtless associated with analogous trends in other clothing. In part, too, it may reflect a rising level of living. In part, as both cause and effect, it is associated with the more frivolous, attractive shoes that the industry has offered at a price that permits several shoes to fit into a place in the budget formerly preempted by one or two pairs. These changes in the industry's offerings were due to several developments. For one thing, new mechanical and managerial techniques have made it possible and profitable for some firms to cater to the new directions in consumer demand. Improved methods of tanning produced cattle-hide leathers that were light and soft enough to use where formerly the more expensive calf- or kidskins would have been required, thus making it possible to supply light shoes at the price of clumsy ones. Leather substitutes have served the same function.

The advent of the large chain distributor and his associated manufacturers,

TABLE 5
EVIDENCE ON TRENDS IN DOLLAR SHOE SALES, 1909-1949

RETAIL SHOE SALES IN CURRENT PRICES, NBER	(1)	SHOE OUTPUT ^a IN CURRENT PRICES (millions of dollars)	(2)	RETAIL SHOE SALES ^b IN 1935-1939		SHOE OUTPUT ^c IN 1935-1939 WHOLESALE SHOE PRICES	(4)	CIVILIAN POPULATION 2 YEARS OLD AND OVER ^d (millions)	(5)	RETAIL SHOE SALES PER CAPITA IN 1935-1939		(6)	SHOE OUTPUT PER CAPITA IN 1935-1939		(7)
				RETAIL SHOE PRICES	SHOE PRICES					WHOLESALE SHOE PRICES	WHOLESALE SHOE PRICES				
1909			\$ 442.6			\$ 914.5		87.9			\$10.4				
1914			501.8			904.1		95.1			9.5				
1919			1,155.0			870.4		102.3			8.5				
1921			867.5			790.1		105.3			7.5				
1923			1,000.1			1,024.7		108.4			9.5				
1925			925.4			934.7		112.0			8.3				
1926		\$1,512.7		\$1,252.2				113.7			\$11.0				
1927		1,492.8		1,274.8		921.4		115.0			11.1			8.0	
1928		1,556.4		1,331.4		915.7		116.1			11.5			7.8	
1929		1,609.8		1,397.4				117.4			11.9				
1930		1,437.8		1,304.7		704.9		118.7			11.0				
1931		1,222.4		1,223.6				119.7			10.2			5.9	
1932		947.1		1,082.4		619.9		120.7			9.0				
1933		908.9		1,049.5				121.4			8.6			5.1	
1934		1,034.8		1,072.3		664.2		122.1			8.8				
1935		1,088.5		1,141.0				122.9			9.3			5.4	
1936		1,224.1		1,267.2		740.2		123.8			10.2				
1937		1,318.2		1,282.3				124.5			10.3			5.9	
1938		1,215.6		1,177.9		723.8		125.3			9.4				
1939		1,264.4		1,239.6				126.3			9.8			5.7	
1940		1,330.8		1,288.3				127.0			10.1				
1941		1,543.1		1,440.8				126.7			11.4				
1947		3,155.0		1,651.0		1,029.6		136.1			12.1			7.6	
1948		3,147.0		1,497.9				138.0			10.9				
1949		3,103.7		1,460.1				140.7			10.4				

operating in the broad and deep field of relatively low-priced shoes, might even have introduced differential change in the value per dollar purchased in a high-priced and low-priced shoe. The chronic overcapacity in the industry and the large number of small firms furthered a situation in which competition could run very readily into attempts to align on a "hot" design, which, catching the consumers' style-wise eye, would for a season or so cause a sparsely used plant to buzz.

The net effect of these several long-term influences has been a downward trend in the dollars spent on shoes. The presence of this trend can be seen in the figures collected in Table 5. Here we extend the picture backward by using production data in order to give it a firm anchorage. Though shoe sales in 1941 (col. 1) are as large as in 1929, and when adjusted for price change (col. 3) exceed 1929, we know that a good bit of the rise is due to the high national income of a defense economy. With income held constant, the trend, as we shall see presently, would have been downward. Even so, per capita shoe sales in constant prices were lower in 1941 than in 1929 (col. 6) and, judging from the production data, quite a bit lower than before World War I or the early twenties (col. 7).

But just as this downward trend was due to many sorts of factors, it had a variety of manifestations. We have noted that buying shifts along a quantity-price dimension during business cycles. It seems to have done likewise during the long passage of years, for there has been a clear shift in the weight of buying toward the lower price lines. This is evident in Table 6, column 1, where it is shown that the number of actual pairs of shoes that were bought has risen, not declined as did the money spent (either metered in current dollars or after adjustment for change in the price of uniform sorts of shoes). Even per capita sales in actual pairs (cols. 3 and 4) have held their own. In part, the maintained pair sales, in spite of falling dollar sales, have resulted from the increased importance of women's shoe buying, in which trading down was far more marked than for men's shoes.

NOTES TO TABLE 5

^a Based on data from *Census of Manufactures, footwear (except rubber) industry*. Prior to 1927 the figures apply to value of products for the industry; from 1927 through 1939 the value of shoe output in the industry was reported separately but, since it represented about 99 per cent of the industry's products in 1927, the data may be regarded as continuous. In 1947 information was presumably collected for manufacturers' sales of footwear rather than for output.

^b Column 1 divided by National Industrial Conference Board index for retail prices of staple shoes. Bureau of Labor Statistics index used beginning in 1940.

^c Column 2 divided by BLS index for wholesale price of boots and shoes. For 1909 the index was extended backward by the wholesale price of vici kid shoes. Note that, since wholesale prices are about 40 per cent lower than retail prices, these data are much lower than those in col. 3.

^d Total civilian population (*Statistical Abstract of the United States, 1948*, pp. 9 and 66) corrected for infants under two by subtracting births during the current and preceding year. Estimates for 1909 and 1914 were obtained by straight-line interpolation of census reports for 1900, 1910, and 1920 of male and female population two years of age and over. Whether or not children between the ages of one and two ought to be excluded is debatable.

TABLE 6
EVIDENCE ON TRENDS IN PAIR SHOE SALES, 1909-1947

	CONSUMER TAKINGS OF SHOES ^d						
	RETAIL SHOE SALES, PAIRS, NUMBER (millions) (1)	SHOE OUTPUT, PAIRS ^a (millions) (2)	RETAIL SHOE SALES, PAIRS PER CAPITA ^b (3)	SHOE OUTPUT, PAIRS PER CAPITA ^c (4)	Men's Work and Dress Shoes per Capita (5)	Women's Shoes per Capita ^e (6)	Ratio of Men's to Women's Shoes ^f (7)
1909		285.0		3.24			
1914		292.7		3.08			
1919		331.2		3.24			
1921		305.1		2.90	1.71	3.02	.594
1922					2.10	2.97	.738
1923		373.5		3.45	2.48	3.04	.848
1924					2.36	2.99	.823
1925		344.2		3.07	2.15	2.86	.777
1926	341.5		3.00		2.13	2.88	.767
1927	347.2	367.1	3.02	3.19	2.16	2.91	.766
1928	358.6		3.09		2.16	3.03	.733
1929	372.6	376.6	3.17	3.21	2.12	3.21	.680
1930	360.4		3.04		1.95	3.02	.660
1931	354.3	319.6	2.96	2.67	1.75	2.80	.638
1932	333.5		2.76		1.71	2.80	.623
1933	344.3	355.2	2.84	2.93	1.87	2.91	.651
1934	359.3		2.94		1.98	3.13	.637
1935	388.8	388.5	3.16	3.16	2.07	3.27	.637
1936	429.5		3.47		2.17	3.52	.620
1937	433.6	425.0	3.48	3.41	2.17	3.72	.586
1938	409.3		3.27		2.07	3.64	.572
1939	442.1	435.3	3.50	3.45	2.03	3.58	.570
1940	457.3		3.60		2.01	3.61	.559
1941	512.7		4.05		2.21	3.71	.599
1947	504.8	484.1	3.71	3.56			.586

* All years except 1921, 1923, and 1925 from *Census of Manufactures*. For 1927, 1935, 1937, and 1939, the figure is the one reported as output of the footwear other than rubber industry. For 1929, 1931, and 1933, the reported figure was raised to include other footwear, the quantity of which was not stated. The adjustment was made by dividing the value reported for other footwear by an average price based on the relationship between average price of all shoes and of other footwear for the census years 1927, 1937, and 1939. Data for 1921, 1923, and 1925 are annual totals of monthly census statistics of the shoe industry as reported by J. G. Schnitzer, *Boot and Shoe Industry, Statistics*, Department of Commerce Industrial Series No. 10 (1944), p. 25. These figures were adjusted by us for estimated undercoverage based on comparisons in 1927 (divided by 94 per cent).

^b Retail shoe sales, pairs (col. 1), divided by population two years of age and over (Table 5, col. 5).

^c Shoe output, pairs (col. 2), divided by population two years of age and over (Table 5, col. 5).

^d Schnitzer, *loc. cit.* These figures are presumably based on monthly census data adjusted for exports and imports and changes in commercial inventories of finished shoes. Direct estimates of sales may have been used for the later years.

^e Per capita means per man or per woman respectively.

^f Ratios based on aggregative rather than per capita statistics; Schnitzer, *loc. cit.*

Inspection of columns 5 and 6 for the peak years 1923, 1929, 1937, and 1940 indicates that men's shoes have lost ground and women's have gained it. The absolute level of purchases is not correct, since the figures do not include many shoes worn by men and women called "athletic," "misses," and also included in the "other footwear" category; these unavoidable omissions probably cause the table to understate especially the upward trend in women's shoes. Of course, the average price paid for shoes by women declined considerably more than that paid by men, so that men's dollar expenditure for footwear, though it doubtless lost ground in the family budget, lost far less than the pair figures suggest.¹

This differential history for women's and men's shoes in which the element of style played so substantial a part has broader implications, for certainly other consumer goods have experienced similar trends toward emphasis of the fashion component of demand. I have already mentioned several of the factors that were woven into the fabric of cause and effect. The movement is interesting partly because "high style" products seem to have characteristic requirements in production that create certain problems both for their manufacturers and the economy at large. The figures also suggest that without the successful appeal of style and the ability to manufacture an attractive lower priced shoe which stimulated shoe buying by women, aggregate shoe sales might well have declined more than they did. The strengthened appeal offered by shoe manufacturers in the form of style was a defense, whether intended or not, against the compounding magnetism of new types of goods. Without such defense the buying of any commodity — even when its basic utility retained its place unchallenged by direct substitutes as in the case of shoes — would, I suspect, start to weaken its grip on the consumer dollar.

The complicated causes and manifestations of long-term changes in shoe buying pose a problem when quantitative measurement is essayed. We shall, I conclude, have to use a trend factor in a multiple regression that aims to "explain" shoe buying, and this is not simply a statistician's device for giving a name to error or to gaps in knowledge. We know that these long-term changes occurred and that they affected shoe buying. On the other hand, the notion of equal annual increments implicit in a straight-line trend is a poor representation of the impact of any or all of them; it would be preferable to use data that reproduced more faithfully the time pattern of each influence. We cannot do this for several reasons: we do not in many cases have such data; and if we did, they

¹ The category "men's shoes" (including work and dress shoes) probably represents most of the shoes worn by men. The value of these shoes as given in the *Census of Manufactures* constituted 37.2 of the value of total footwear in 1919. The next figure that is provided applies to 1927, by which time it has dropped to 32.1. With some ups and downs it drops to about 31.5 in the last decade. The category "women's shoes" rose from 38.7 per cent in 1919 to 42.3 in 1927 and then rose only one or two percentage points thereafter. But in later years the number of "misses" shoes and "other" shoes worn by women have increased, and output of these classes of shoes has increased considerably. It seems safe to conclude, therefore, that the dollar value of women's shoe buying has increased relative to that of men; as to its status relative to children's footwear we cannot say.

would almost certainly look too much like one another for the influence of each to be reliably identified, even were it possible to assign the scarce parameters with such profligacy. Our trend variable, then, is a portmanteau factor showing the net impact of several components among which a stable relationship does not exist. The best that we can say for such a device is that it is preferable to the alternative of omitting most of these factors and permitting them to be picked up in a haphazard fashion by variables that parallel them for a while. If we keep in mind each of the several forces comprehended in the trend, they can be watched individually for significant shifts in behavior. During a time of abrupt change such as World War II, for example, the continuity of most of the factors would be interrupted — consider, for example, the spurt in population and in the equality of income size distribution.