

## **CHAPTER 2**

### **REVIEW OF LITERATURE**

Chapter two contains three sections. The first section presents the major trends in clothing and shoes consumption patterns, the economy, and demographics in the United States. The second section reviews previous studies related to clothing consumption, including both time-series and cross-sectional studies. Shoes are included in the clothing categories in the literature review of previous studies because there is little research on shoes consumption. The third section discusses neoclassical consumer demand theory because this research basically focuses on demand analysis.

#### **Trends in Clothing and Shoes Consumption, the Economy, and Demographics in the United States**

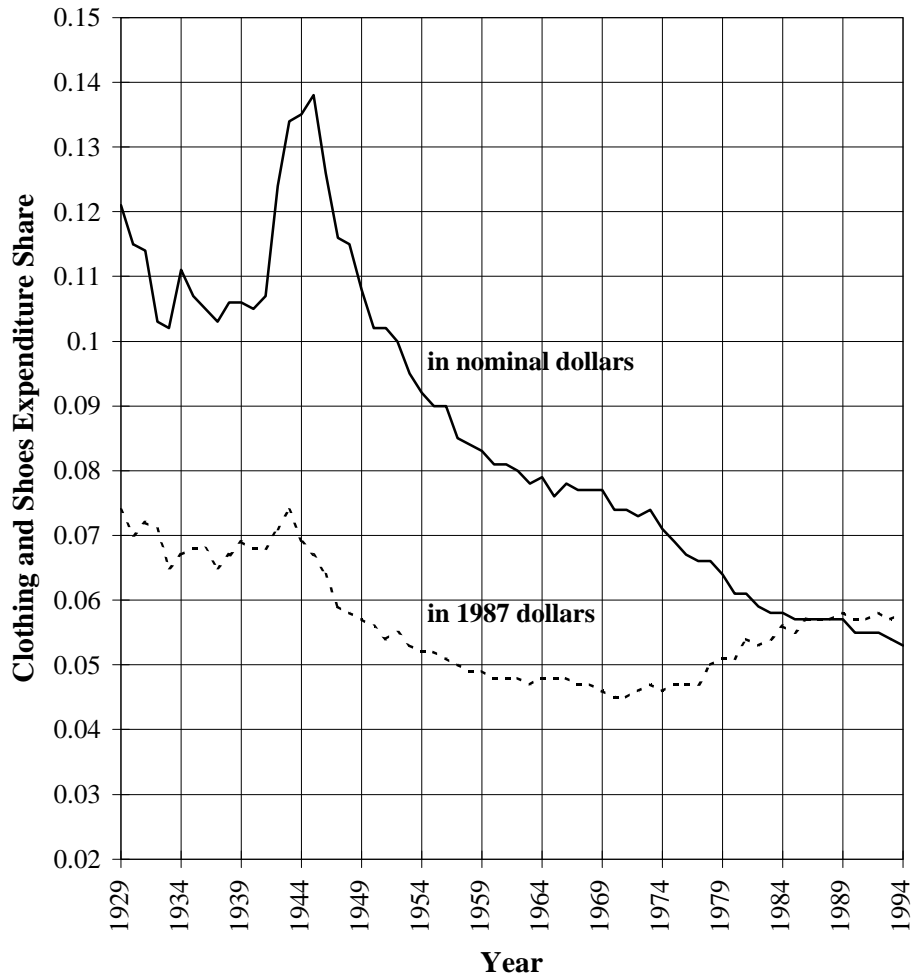
##### **Changes in Clothing and Shoes Consumption in the U.S.**

Based on The National Income and Product Accounts of the U.S. (NIPA), total personal consumption expenditures (PCX), in real terms, increased at an average annual rate of 2.99 % during the years 1930-1970 and at an average annual rate of 2.89 % during the years 1971-1994. Over 1971-1994, clothing and shoes expenditures (CSX), in real terms, rose faster than the PCX, but CSX rose slower than PCX during the years 1930-1970 (see Table 2.1). The CSX as a share of real total personal consumption expenditures decreased from 7.4 % in 1929 to 4.5 % in 1970, and later increased to reach 5.8 % in 1994 (see Figure 2.1). In nominal dollars, from 1929 to 1994, the expenditure share of clothing and shoes remarkably decreased from 12.1 % in 1929 to 5.3 % in 1994; the peak year was 1945, when the share reached 13.8 %. Comparing CSX with other major consumption expenditures as shares of PCX in nominal terms, the shares for CSX and food expenditure have drastically decreased, but the share of medical care expenditures has continuously increased (see Figure 2.2). Expenditure patterns for shoes and categories of clothing also have changed over time. Based on NIPA, the expenditure for women's and children's clothing and the expenditure for men's and boys' clothing, as

Table 2.1.  
Average Annual Rates of Change (%) in Consumption Expenditures, U.S. Selected Periods

Periods	<u>Clothing and Shoes Expenditures</u>		<u>Personal Consumption Expenditures</u>	
	Constant \$ (1987)	Nominal \$	Constant \$ (1987)	Nominal \$
1930-1970	1.79	4.48	2.99	5.57
1971-1994	4.06	7.10	2.89	8.57
1930-1994	2.63	5.45	2.96	6.68

Note. Annual change rates and average annual change rates were calculated by the author using the data in statistical tables (Tables 2.6, 2.7) in The National Income and Product Accounts of the U.S., 1929-1958, 1959-1988, 1985-1992, 1993-1994, U.S. Department of Commerce, Bureau of Economic Analysis, Washington, DC.



**Figure 2.1.** Clothing and shoes expenditures as a share of total personal consumption expenditures, 1929-1994. Clothing and shoes expenditure shares were calculated and plotted by the author using the data in statistical tables (Tables 2.6, 2.7) in The National Income and Product Accounts of the U.S., 1929-1958, 1959-1988, 1985-1992, 1993-1994, U.S. Department of Commerce, Bureau of Economic Analysis, Washington, DC. The shares in 1987 dollars differ from the nominal shares because the former, in each year, is the ratio of real clothing and shoes expenditures to real total consumption expenditures (price indexes of those two being different), whereas the latter, in each year, is the ratio of the respective nominal expenditures.

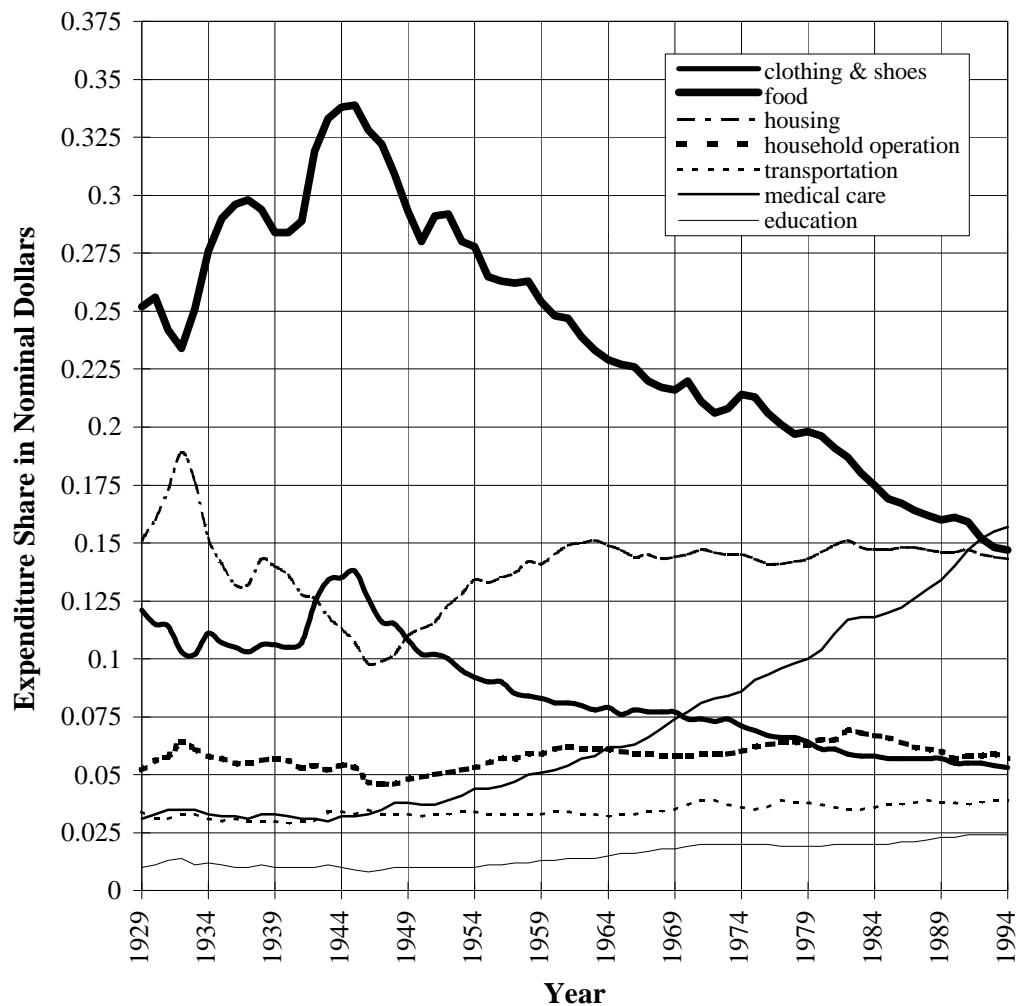


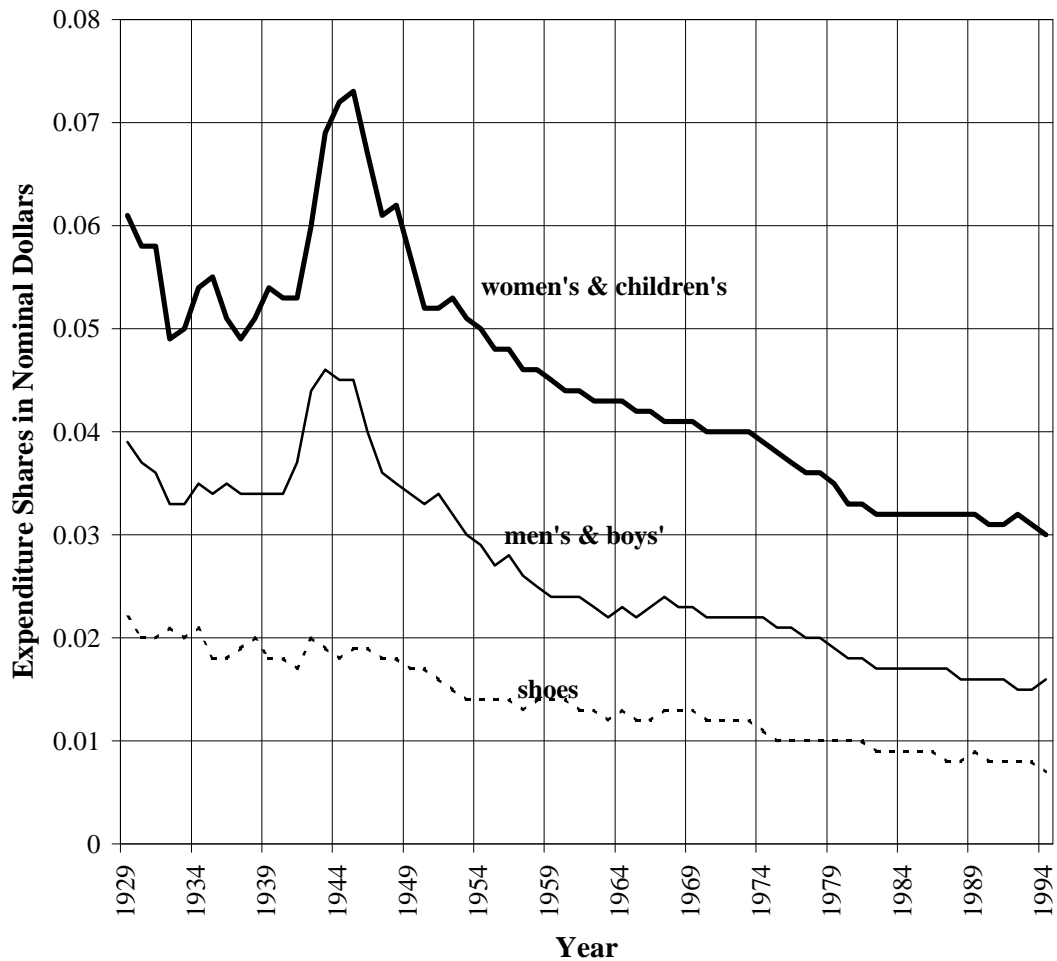
Figure 2.2. Major consumption expenditures as shares of total personal consumption expenditures, 1929-1994. The expenditure shares for the consumption categories were calculated and plotted by the author using the data in statistical tables (Tables 2.6, 2.7) in The National Income and Product Accounts of the U.S., 1929-1958, 1959-1988, 1985-1992, 1993-1994, U.S. Department of Commerce, Bureau of Economic Analysis, Washington, DC.

shares of personal consumption expenditures in nominal terms, have continually decreased since World War II. The share of shoes has also continually decreased since World War II. These trends are illustrated in Figure 2.3a. In real terms, the shares of women's and children's clothing and men's and boys' clothing in personal consumption expenditures continually decreased until the early 1970s, but have increased since the early 1970s (see Figure 2.3b). Consumer expenditures for women's and children's clothing dramatically increased after the early 1970s. The share of shoes in real personal consumption expenditures has decreased over the years 1929-1994 (see Figure 2.3b).

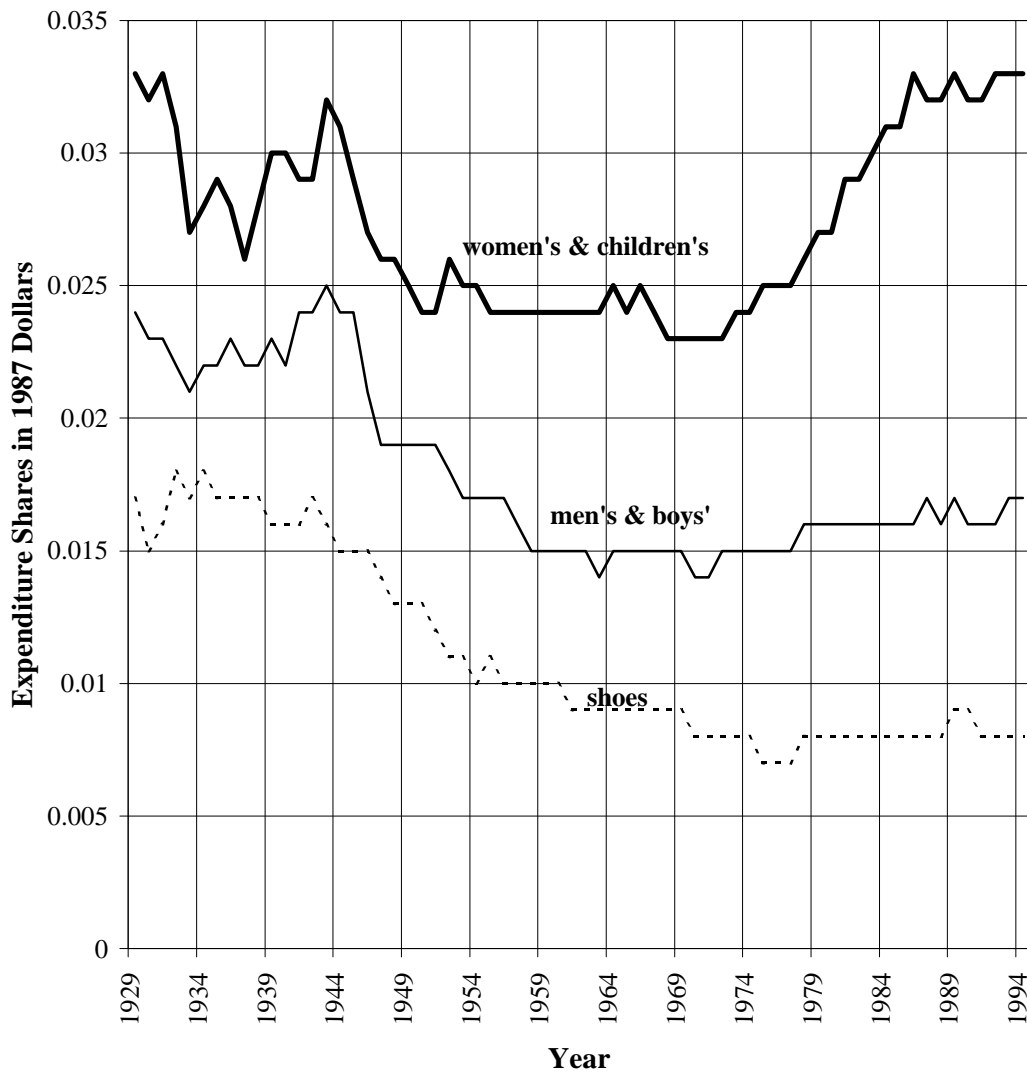
Table 2.2 shows price changes of consumption goods based on the price indexes for personal consumption expenditures by type of product in The National Income and Product Accounts. The price of clothing and shoes increased at an average rate of 1.7 % per year while the price of all items rose at a rate of 1.59 % per year from 1930 to 1970; however, from 1971 to 1994, the price of all goods and the price of all nondurable goods rose faster than the price of clothing and shoes. During that most recent period, the prices of women's and children's clothing, men's and boys' clothing, and shoes increased at average annual rates of 2.75, 3.05, and 2.98 % respectively. Since the early 1970s, the relative price of clothing categories and shoes has drastically decreased, as illustrated in Figure 2.4, which might have contributed to the downtrend of those items' nominal budget shares in the PCX. The decreased relative prices of clothing categories and shoes are thought to be partially due to the surge of clothing and shoes imports (Winakor, 1989).

#### **Clothing and Shoes Consumption and Government Regulations in the World War II Period**

During World War II, U.S. consumers spent a relatively high proportion of their consumption expenditures on clothing categories and shoes (see Figure 2.3a). On average, they spent 13.2 % of their PCX in nominal terms on clothing and shoes during the years 1942-1945 in comparison with the postwar periods in which they spent 7.6 % of their PCX on those items. Relative prices of clothing categories, in particular, were very high during the war period (see Figure 2.4), which might have contributed to high proportions of clothing categories in the PCX during World War II.



**Figure 2.3a.** Expenditure shares of clothing categories and shoes in total personal consumption expenditures, 1929-1994. Clothing categories and shoes expenditure shares were calculated and plotted by the author using the data in statistical tables (Tables 2.6, 2.7) in The National Income and Product Accounts of the U.S., 1929-1958, 1959-1988, 1985-1992, 1993-1994, U.S. Department of Commerce, Bureau of Economic Analysis, Washington, DC.



**Figure 2.3b.** Expenditure shares of clothing categories and shoes in total personal consumption expenditures in constant dollars, 1929-1994. Clothing categories and shoes expenditure shares were calculated and plotted by the author using the data in statistical tables (Tables 2.6, 2.7) in The National Income and Product Accounts of the U.S., 1929-1958, 1959-1988, 1985-1992, 1993-1994, U.S. Department of Commerce, Bureau of Economic Analysis, Washington, DC.

Table 2.2.

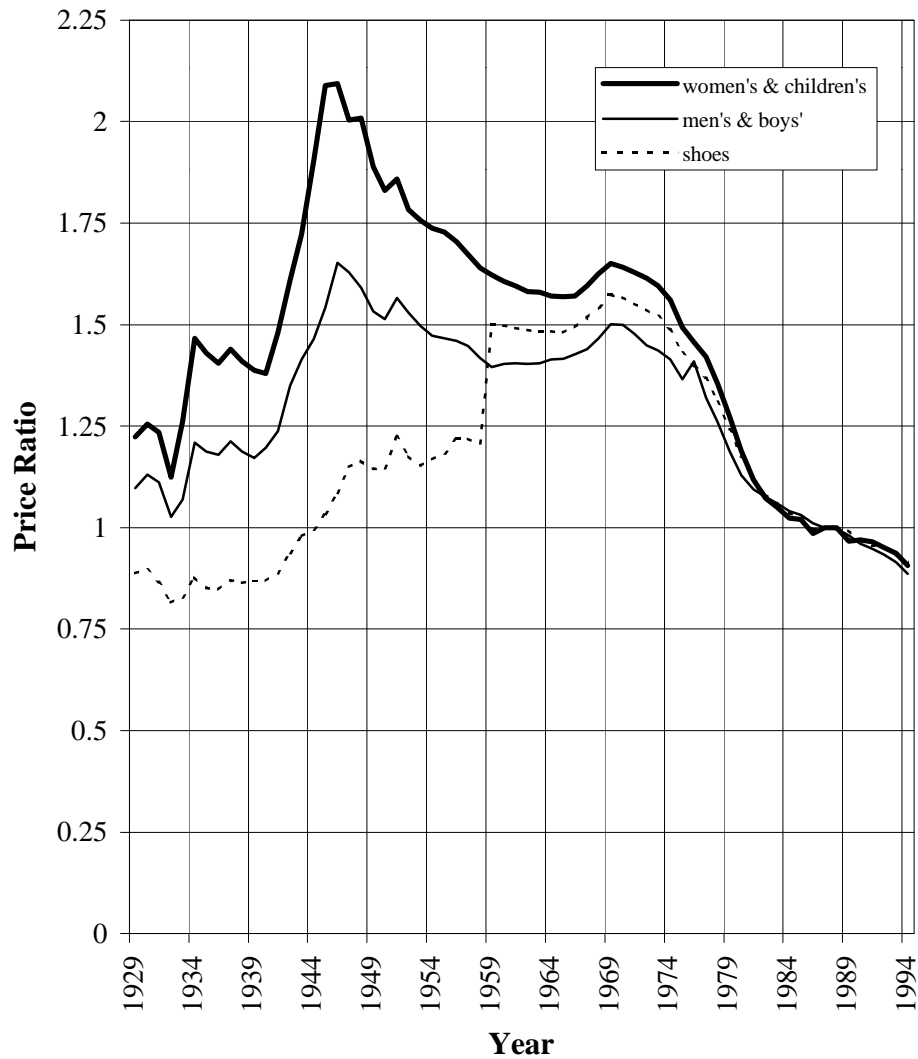
Average Annual Rates of Change (%) in Prices of Clothing and Shoes, U.S. Selected Periods

Periods	ALL	ND	CS	WC	MC	SH
1929-70	1.59	2.05	1.70	2.49	2.49	3.17
1971-94	5.33	4.98	2.92	2.75	3.05	2.98
1929-94	2.97	3.13	2.15	2.59	2.70	3.10

Note. ALL = all consumption goods, ND = nondurable goods, CS = clothing and shoes, WC = women's and children's clothing, MC = men's and boys' clothing, SH = shoes

Annual change rates and average annual change rates were calculated by the author using the data in a statistical table (Table 7.5) in The National Income and Product Accounts of the U.S., 1929-1958, 1959-1988, 1985-1992, 1993-1994, U.S. Department of Commerce, Bureau of Economic Analysis, Washington, DC.





**Figure 2.4.** Relative prices of clothing categories and shoes (1987=100), 1929-1994. Relative prices of clothing and shoes (clothing and shoes relative to prices for all items) were calculated and plotted by the author using the data in a statistical table (Table 7.5) in The National Income and Product Accounts of the U.S., 1929-1959, 1959-1988, 1985-1992, 1993-1994, U.S. Department of Commerce, Bureau of Economic Analysis, Washington, DC.

Shortages of raw materials for clothing and shoes caused the U.S. government to regulate consumption and production of clothing and shoes, by implementing restrictions on clothing production and price controls during World War II. Wool and cotton shortages were very serious during World War II. Less than half of U.S. cotton yarn and fabric was available for civilian use; the least available fiber for civilians was wool; 90% of U.S. rayon was permitted to be used for civilians (Raushenbush, 1942). Rubber and zippers were also in short supply (Murray, 1990). Polenberg (1972) illustrates the seriousness of rubber shortages:

As rubber supplies continued to dwindle, the President decided on a scrap drive as a last alternative to rationing. On June 12 he appealed to the people to turn in “old tires, old rubber raincoats, old garden hose, rubber shoes, bathing caps, gloves- whatever you have that is made of rubbers.” The petroleum industry managed the drive. Citizens deposited rubber at gasoline stations where it was picked up by tank wagons on their usual rounds. (p. 16)

The Office of Price Administration introduced ten major rationing programs including shoes rationing in 1942; thus, individuals had to obtain ration certificates by demonstrating need and families received coupons or stamps for redemption (Polenberg, 1972). Rationing was enforced until the end of World War II (Vatter, 1985).

During the wartime, clothing design aspects in clothing production were strictly regulated by the U.S. government: the total amount and type of fabric used in manufacturing apparel; measurements for size ranges of clothing categories; lengths of skirts and jackets; numbers of pockets; the addition of hoods, shawls or scarves; the width of pant legs; and styles of sleeves, belts and cuffs (American War Production Board, 1942). Work clothes suitable for farm work, for house work, and for laboratory work were designed and recommended by the Division of Clothing and Textiles of the U.S. Bureau of Home Economics (Raushenbush, 1942).

The U.S. government enforced price controls to protect the war economy. The Office of Price Administration (OPA) started to implement General Maximum Price Regulation (GMPR) in April of 1942; the prices of eight million products were set by the

GMPR (Harris, 1976). The price control had been generally successful in stabilizing prices until the elimination of it in early 1946 (Vatter, 1985). Under various techniques of price control programs, prices of clothing and shoes were controlled by the OPA (Harris, 1976): cost-plus ceilings (corsets and women's, girls', and children's outerwear); base-period regulations (men's work clothing and outer clothing, leather shoes, men's work shoes); dollar-and-cents ceilings (rubber footwear, rayon hosiery); and GMPR (everything else). The price control worked for standardized products like cigarettes or food products, but failed to control the price of products whose style, design or packaging changed. Clothing manufacturers often stopped producing inexpensive garments and concentrated on more expensive garments.

Despite various efforts to control the price of clothing and shoes, clothing and shoes were among the most difficult and least successful fields of price control during World War II (Harris, 1976). Clothing prices rose 17.6 % from 1942 to 1945 at the same time that consumer food prices increased only 12.4 %, while the price of all items increased just 10.3 % over the same period (Vatter, 1985). The excessive rise in both textile and apparel prices during the war period is attributed to the discontinuance by clothing manufacturers of many low-price lines (Vatter, 1985). Harris (1976) suggests that "when quality is not under control as well as price, a rise of price can be concealed by selling inferior quality at the same price" (p. 24). Much attention has been paid to the deterioration of quality and the evasion of price control through shifts to higher priced and more profitable lines during the 1944-1945 period (Harris, 1976).

### **The U.S. Economy in the Twentieth Century: Trends**

The general trend of the U.S. economy in the twentieth century has been toward prosperity. One measure of an economy's performance is the value of goods and services produced in the economy during a year; that is, its gross national product (GNP). Based on NIPA, the U.S. economy grew at an average rate of 3.1 % per year between 1929 and 1994. Figure 2.5, where U.S. GNP is plotted around its trend for every year since 1929, shows that the business cycles have not been very regular. The GNP was very low in the Great Depression, but rose considerably in World War II. The GNP actually increased

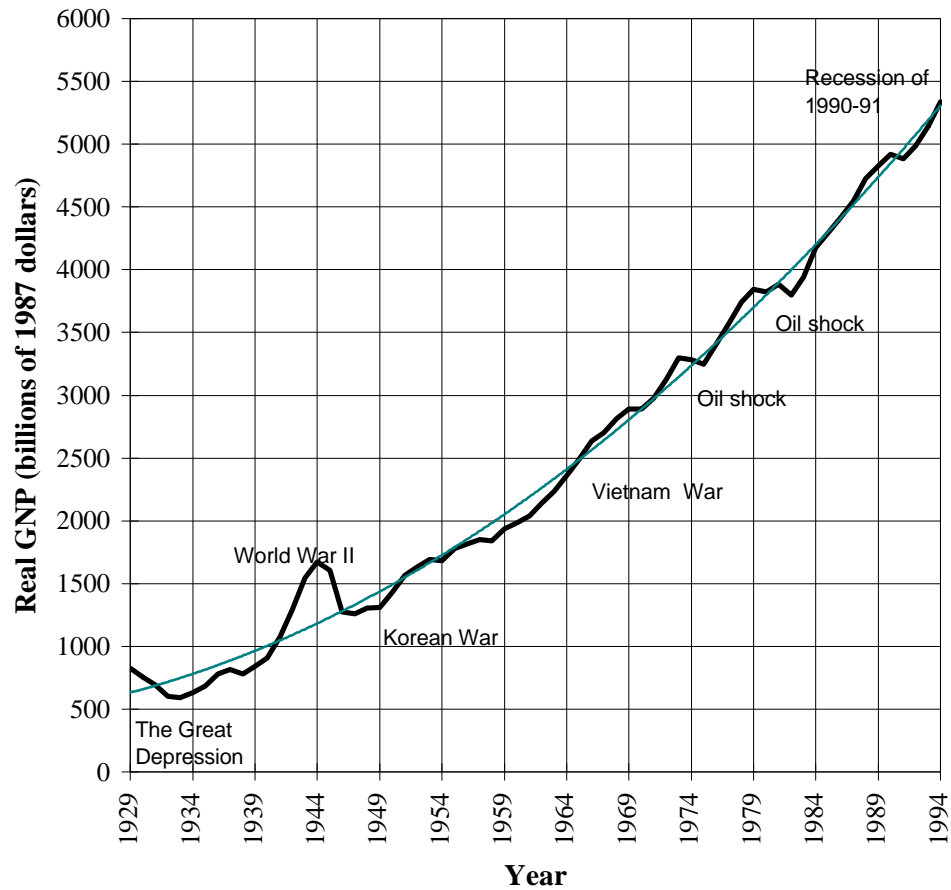


Figure 2.5. Real Gross National Product, 1929-1994. Trend of real GNP was plotted by the author using the data in a statistical table (Table 1.10) in *The National Income and Product Accounts of the U.S.*, 1929-1958, 1959-1988, 1985-1992, 1993-1994, U.S. Department of Commerce, Bureau of Economic Analysis, Washington, DC.

between 1933 and 1937, although it was still very low in 1937. The economy did not recover from the Great Depression until the start of World War II. The first oil shock in the mid-1970s and the second oil shock in the early 1980s also impacted the U.S. GNP.

The percentage change in the GNP deflator is an economy-wide price index that provides one measure of the overall inflation rate. Figure 2.6 shows the change in the GNP deflator between 1929 and 1994. The Great Depression was clearly a deflation period. The inflation of 1946, following World War II, was the highest of the period under examination. High inflation also occurred with the first and second oil shocks and corresponds to the recessionary periods in Figure 2.6. As measured by the GNP deflator, the average inflation rate per year was 2.6 % between 1929 and 1949 and 2.76 % between 1950 and 1970, and then doubled to 5.5 % between 1971 and 1994.

Unemployment generally rises during recessions and falls during expansions. This can be seen in Figure 2.7, which plots the civilian unemployment rate for the years since 1929. The average unemployment rate in the U.S. was 11.3 % over the years 1929-1949, followed by a drop to 4.6 % in the period 1950-1969 and then an increase to 6.7 % during the period 1970-1993. The low unemployment of the 1950s and 1960s is noteworthy because it was accompanied by comparatively low inflation. The Great Depression had a high unemployment rate and low wages and prices. During the first oil shock recession in 1974-1975, the unemployment rate reached 8.6 %, and in the second oil shock recession in 1980-1982, it reached 9.5 %. In 1993, unemployment in the U.S. stood at 6.8 %.

Figure 2.8 shows that PCX has increased over time, as has personal income, the amount received by individual persons in payment for the services of factors of production. Since the mid-1960s, nominal PCX has increased rapidly, reaching 4,628.4 billion dollars in 1994 which is 60 times more than in 1929. In real terms, PCX steadily increased since 1929, reaching 3,579.6 billion dollars in 1994. The increase in expenditures varied among the major categories shown in Figure 2.9. Expenditures for service goods have risen the most rapidly since the mid-1950s. Since the mid-1950s, nondurables have been the second largest expenditure category. Figure 2.10 depicts