

PROGRAMME FOR RESEARCH AND ACTIONS ON THE  
DEVELOPMENT OF THE LABOUR MARKET

# ANALYSIS OF THE DYNAMICS OF THE JOB CREATION PROCESS IN THE UNITED STATES AND AN EVALUATION OF MEDIUM AND LONG TERM PROSPECTS

VOLUME I: THE ROLE OF DEMOGRAPHIC FACTORS IN U S JOB  
CREATION — PERFORMANCE SINCE 1970



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LONG TERM PROSPECTS**

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Volume I: "The role of demographic factors in U.S. job creation-  
Performance since 1970"

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## CONTENTS

Page No.

<u>PART ONE</u>	<u>THE ISSUES</u>	
	1. Introduction	1
	2. The Framework of Analysis	2
<u>PART TWO</u>	<u>DEMOGRAPHIC, HOUSEHOLD AND LABOR MARKET PARTICIPATION TRENDS</u>	
	3. Changing Demographics	5
	4. Changes in the Size and Composition of Households and Families	7
	5. Changes in Labor Market Participation	12
<u>PART THREE</u>	<u>THE IMPACT ON SPENDING AND EMPLOYMENT</u>	
	6. Tracing Change at the Macro Level	14
	7. Tracing Change at the Micro Level	27
<u>PART FOUR</u>	<u>SOME PRELIMINARY CONCLUSIONS</u>	
	8. Conclusions	39





## TABLES

	Page No.
3.1 Economic Dependency Ratios for Selected Years	8
4.1 The Growth in the Number of Households, 1970-1980	8
4.2 Changes in the Numbers of Households and Families by Type and Number of Earners, 1970-1980.	9
4.3 Household, Family and 'Primary Individual' Incidence Rates, 1970-1980	11
4.4 Families Led by Women as a Percentage of All Families by Age of Household Head, 1950-1980.	11
4.5 Fertility Rates (Births per Woman), 1955-1995	11
6.1 Percentage Changes in Various Indices of Incomes and Prices, 1972/3-1980/1	15
6.2 Total Money Income of Households and Families: 1973-83 ( in 1983 dollars )	15
6.3 Average Income Gain of Males by Age Group and Period	17
6.4 Interview Survey Comparisons: 1972/3-1982/3	19
6.5 Diary Survey Comparisons: 1972/3-1982/3	19
6.6 The Changing Household Budget	20
6.7 The Household Food Budget	20
6.8 Changes in the Real Value of Aggregate Consumer Expenditures by Principal Categories over Selected Periods	22
6.9 The Changing Relative Importance of Different Household Types at Different Points in Time	23
6.10 Sectors with Positive Output and Employment Trends: 1969-1984	25
6.11 Negative Output and Employment Trends, 1979-84	26
6.12 Positive Output and Negative Employment Trends, 1969-84	26
6.13 Service Sector Sales 1977-82, Ranked by Rate of Growth	28

TABLES ( CONTD )

7.1	Major Areas of Service Sector Employment Growth 1973-84	29
7.2	Changes in Patterns of Family Food Expenditures 196/1-1980/1	34
7.3	Housing Starts and Mobile Home Shipments	36
7.4	The Components of Housing Growth 1970-80	38
7.5	Household Construction and Related Services 1973-84	38

FIGURES

2.1	How Demographic Changes Might Work Themselves Through to Change Employment	3
3.1	Live Births in the United States, 1909-80	6
3.2	Birth Rates (Two Measures) Selected Years, 1820-1980	6

PART ONE            THE ISSUES

1.    Introduction

One of the great unresolved questions about the U.S. economy concerns the factors driving its remarkable job creation performance since 1973. It was a performance made all the more impressive since it occurred during a period in which the rate of income and output growth was both erratic and below the trends of the previous two decades, and the number of new job seekers rose rapidly as the baby boom generation reached working age.

Analyses made of the performance of the goods-producing sectors of the economy which stress changes in the terms of trade for manufactured exports appear to explain - at least up to 1979 - the modest employment growth of that sector, but there is far less clarity let alone unanimity as to what has been powering the far larger, more diverse and more dynamic service sector.

Much is known about who took the jobs, in what states and in what sectors they occurred and what role small and large businesses had to play in the process. Far less is known as to the why of employment creation. All too often, reference is made to the parallel phenomenon of large numbers of new labor market entrants, both from the baby boom generation and women from the population cohorts that preceeded it, as if the sheer increased supply of labor was itself a sufficient explanation.

Among the explanations proffered, are changes in relative factor prices, the income elasticity of labor intensive services, changes in technology and consumer preferences, the redrawing of the boundaries between the goods producing and service sectors, and, last but not least, an amalgam of so called 'demographic factors.'

The aim of this paper is to examine what is known or can be deduced about the operation of such demographic factors. It begins by suggesting some of the possible ways that demographic change might effect job creation and by delineating which of these will be examined in this paper. It then goes on to briefly review the changes brought about in the age structure of the population and by the maturation into adulthood of the baby boom generation and describes some of the major changes that have been happening to the American household and family.

Armed with this background knowledge, the paper pursues two separate lines of enquiry,

- at the macro economic level it attempts to see if changes in demographic factors have influenced the **pattern of expenditure** in ways favoring job creation.
- at the micro level, it looks at what is known about the factors powering the growth of the largest job creating sectors and subsectors.

The paper ends by trying to draw some preliminary

conclusions about the scale and significance of the demographic factors examined.

## 2. The Framework of Analysis

One of the problems confronting any attempt to assess the role of demographic variables is that they are so embedded in the broader matrix of factors that it is difficult to see clearly where they begin and leave off and whether they are cause, effect or perhaps both. For example, it is part of the conventional wisdom that the maturation of the baby boom generation to working age had a significant depressive impact on average real income growth - whether this is a temporary permanent phenomenon is a matter of dispute. At the same time, stable or falling real income are alleged to have led to the postponement of marriage plans and child bearing - all of which may have changed the level of discretionary household income or the overall pattern of expenditures in way favorable to more labor intensive activities. Marriage and family postponement, for the earlier baby boomers at least, may also have been due to a 'marriage squeeze' stemming from a shortage of eligible older male partners. Then again, it may have more to do with changes in women's expectations and society's overall preferences.

Given these complexities, it seems sensible to base the analysis on some relationships that have long been part of economic theory. Four propositions making up a causal chain can be hypothesized,

- that a major and sustained increase in the birth rate will have a wave like effect on the size and age structure of the population and hence on the level of household formation
- that different phases of the family life cycle from formation to dispersion give rise to different levels and pattern of consumer spending
- that substantial changes in the mix of households will change the level and composition of consumer demand
- that changes in the level and composition of aggregate consumer demand will influence the level of economic activity and employment.

Each of these propositions is linked to the next by a series of variables which may or may not transmit the initial demographic impulse. (See Figure 2.1) For example, the combined effect of the differences in household expenditure patterns plus changes in the mix of households, may or may not have been sufficient to shift the aggregate consumption function very much. The resulting changes in the aggregate consumption function may have been in directions other than job creating (imports, capital intensive, goods) or have been counteracted by other factors such as productivity increases.

Figure 2.1 How Demographic Changes Might Work Themselves Through to Change Employment

Types of Economic Changes

Linkages between them will depend on, inter alia:

Changes in Households by

- number
- size
- type (by age, no. children, education, etc.)

The Extent of Differentials Between Household Types By

- total income
- discretionary income
- savings rates
- buying patterns

Changes in Level and Composition Consumer Demand

- level of savings
- level of consumption
- level of discretionary income
- composition of expenditure

The Extent of Leakages, e.g.

- to imports

and countervailing factors

Changes in the Levels and and Composition of Output

The Extent of changes in Labor productivity

Changes in Level and Composition of Employment

Turning to the literature on this topic for guidance reveals a rather schizophrenic picture. On the one hand, there is a very considerable body of marketing literature on the likely impact of the baby boom on different classes of expenditure and sectors. On the other, it is a field that has attracted little serious academic study except by those interested in the debate about the effects of demographics on income inequality.

The material that follows, therefore, starts with the official statistics, manipulates them, and then draws upon some of these more 'popular' works for data and insights.

PART TWOCHANGING DEMOGRAPHICS, HOUSEHOLD SIZE AND  
COMPOSITION AND LABOR MARKET PARTICIPATION3. Changing Demographics

During the period from 1970 to the early 1980's, three factors were working to change the age structure of the U.S. population; the maturation of the post-war baby boom generation, the inflow of migrants and increased life expectancy especially for older people. Of these, the first was by far and away the most significant.

Defined as the cohort born between 1946 and 1964, the baby boom generation has been described by Louise Russell as "a discontinuity in the age structure of the population, [one] unique in the history of the United States." (1)

As can be seen from Figures 3.1 and 3.2, the number of live births per year during most of this period exceeded 3 million and reached 4.3 million in the highest year 1957. From a low point just before WWII, the number of births per 1000 women of child bearing age increase by a factor of 50% until 1957 then fell back to its previous low point by the early 1970's. This spectacular rise in fertility was the product of the comparatively small female cohorts of the 1930's marrying earlier and in larger numbers, starting families earlier and in larger numbers and most importantly going on to have more children.

Between 1970 and 1980, the vast bulk of the baby boom generation came of age and began to make economic and family decisions. On its own the maturation of such a large number of people had the effect of significantly changing the balance between the population of working age and the dependent young such that in 1970, the ratio was more favorable than at any time since the early 1900's. This position was improved further by the child bearing behavior of the early baby boomers who substantially reversed the reproductive habits of their parents with the result that the number of live births continued to drop for most of the 1970's and was only reversed towards the end of the decade as a result of the sheer weight of numbers of women in the reproductive age band.

The very different reproductive behavior of the baby boomers was the product of four forces.

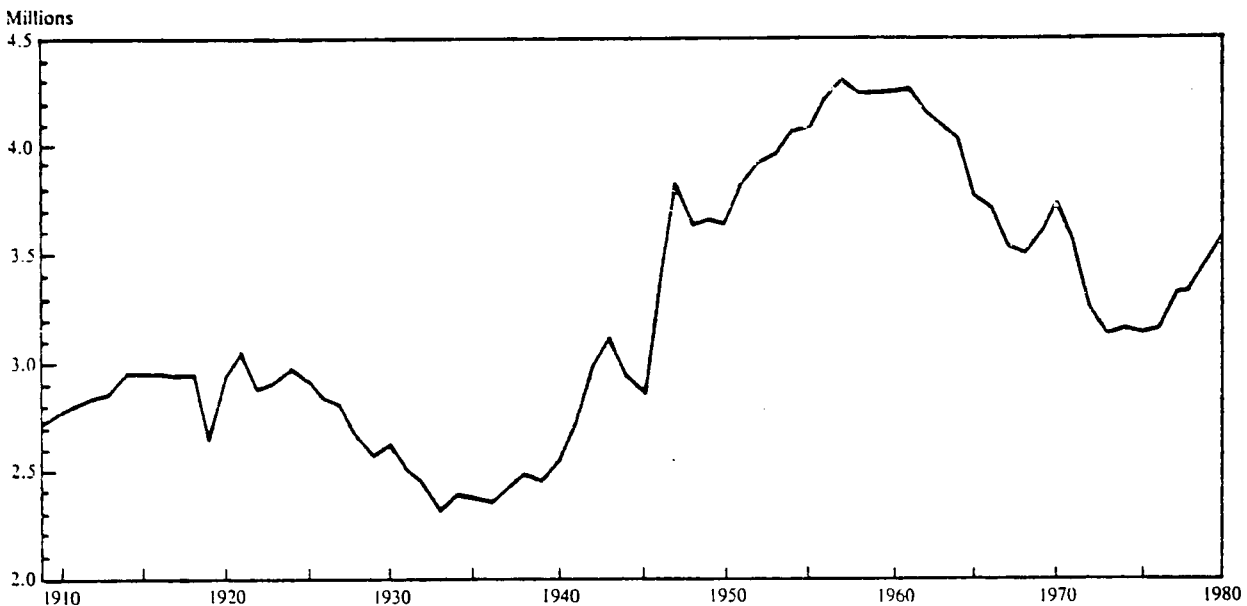
- a smaller percentage of the cohort getting married; seemingly, in the early 1970's, at least, as a result of a "marriage squeeze" caused by a shortage of more senior male partners. [58.5% of women aged 20-24 in 1985 had never married, compared to 44.3% in the same age band in 1970.]

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(1) Louise B Russell: The Baby Boom Generation and the Economy, Brookings Institution, Washington D.C. 1982

**Figure 3.1. Live Births in the United States, 1909-80**

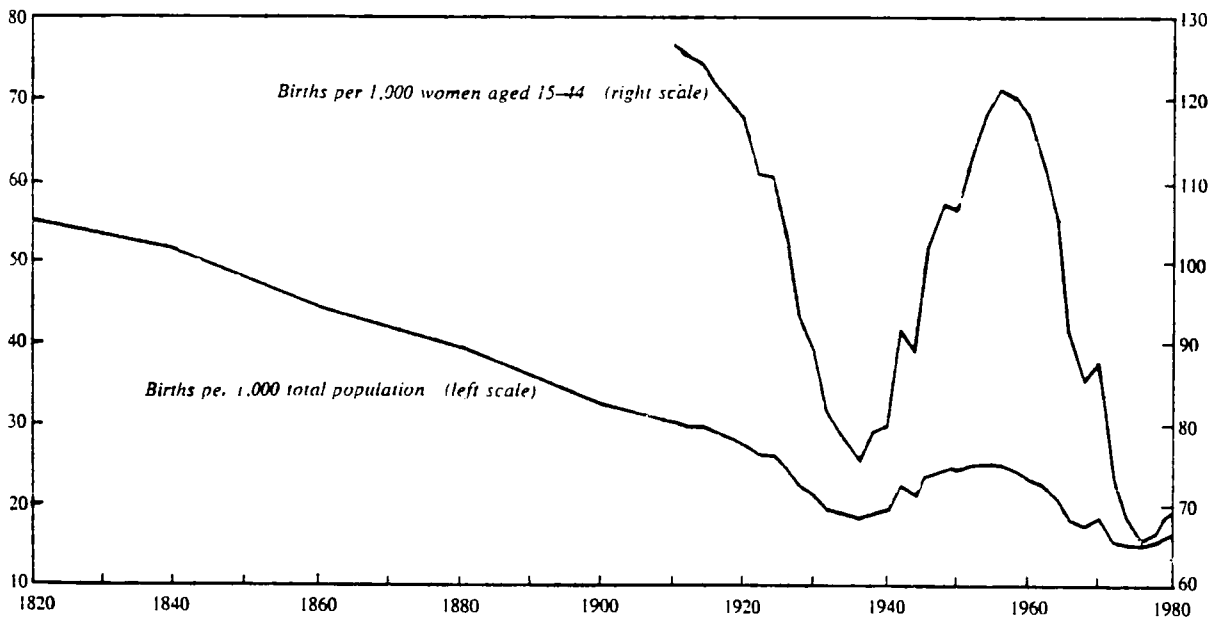
Figure Live Births in the United States, 1909-80\*



Sources: Data for 1909-76 are from Department of Health and Human Services, National Center for Health Statistics, *Vital Statistics of the United States, 1976*, vol. 1: *Nativity* (Government Printing Office, 1980), table 1-2; for 1977 and 1978, from "Final Natality Statistics, 1978," Advance Report, *Monthly Vital Statistics Report*, vol. 29 (April 28, 1980), p. 10; and for 1979 and 1980 (provisional numbers), from "Births, Marriages, Divorces, and Deaths for 1980," *Monthly Vital Statistics Report*, vol. 29 (March 18, 1981), p. 1  
 a. Registered births 1959-80. Numbers before 1959 are adjusted for underregistration.

**Figure 3.2. Births per 1,000 Total Population and per 1,000 Women Aged through 44, Selected Years, 1820-1980**

Figure Births per 1,000 Total Population and per 1,000 Women Aged 15 through 44, Selected Years, 1820-1980



Sources: Data to 1970 from Bureau of the Census, *Historical Statistics of the United States: Colonial Times to 1970*, pt. 1, ser. B5 and B8, p. 49; for 1972-79, from "Final Natality Statistics, 1979," Advance Report, *Monthly Vital Statistics Report*, vol. 30 (September 29, 1981), p. 10; and for 1980, provisional data from the National Center for Health Statistics.

Sources; Louise B Russell, *ibid*, p2 and p10.



- a marked tendency towards later marriages. [Whereas 54% of the 1935-39 cohort of women had married by the time they were 21, the corresponding percentage for those in the 1950-54 cohort was 45%]
- the delaying of childbearing once married. [The proportion of women having children in their first 3 years of marriage declined from 78% in the late 1950's to 58% in the early 1970's]
- far fewer children per couple with a fall from an average of 3.4 per couple to 2.1.

To summarize, whereas in 1960 of women ages 20-25, 72% were married and 55% were mothers, the corresponding figures for 1985 were 41% and 34%.

As a result of these trends, the dependency ratios, which were already more favorable in 1970 than at any time since the early 1900's, continued to improve throughout the Seventies for all groups except the elderly (see Table 3.1).

#### 4. Changes in the Size and Composition of Households and Families

In the decade 1970-1980, there was a rapid growth in the number of households. As can be seen from Table 4.1, an overall rate of growth of 25% led to the creation of over 15 million new households. The fastest rates of growth were at either end of the age pyramid and the largest absolute contribution was among the central baby boom cohort, the 25 to 34 year olds.

This phenomenon was the product of two somewhat separate forces.

- the very rapid expansion in the numbers of persons in the age band that typically begins to form households as the baby boomers moved through the age structure.
- an increase in household incidence rates (the propensity to form households) for most age groups but very particularly among both the younger and older cohorts. Over the period, incidence rates for the 25-34 age group moved up closer to those for the 35-64 year age group.

Besides the change in the number of households, there were four important changes in the composition of those households.

Firstly, within the vastly expanded total of households the importance of 'primary individuals' increased substantially. 'Primary individuals' are defined by the Census Bureau as households where the household head lives alone or with a non-relative.

As can be seen from Table 4.2, due to its very rapid rate of growth, this category accounted for just under 7m of the 15.6m increase in the number of households.

Table 3.1      Economic Dependency Ratios\* for Selected Years

Age Band	1955	1965	1975	1984	1995(est)
Under 16 years	74.9	81.3	61.1	47.9	46.1
16-64	51.4	50.6	43.4	34.9	28.2
65+	16.4	19.9	20.5	21.7	24.0
Overall	142.8	151.8	125.0	104.5	98.4

\* Defined as the number of persons in the relevant age band not in the labor force as a percentage of all those who are.

Source: Based on CPS data.

Table 4.1    The Growth in the Number of Households 1970-1980  
by Age of Household Head (000's)

Age Band	Absolute Increase 1970-80	% Increase 1970-80	% Share of Increase
18-24	1801	40	11.6
25-34	6223	53	39.9
35-44	2076	18	13.3
45-64	1579	7	10.1
65-74	2157	28	13.8
75+	1750	39	11.2
0			
All	15587	25%	99.9%

Source: Based on CPS data.

Table 4.2: Changes in the Numbers of Households and Families by Type and Numbers of Earners 1970-1980

Category	1970	1980	Absolute Increase 1970-1980	% Increase 1970-1980
<u>Married Couple Families</u>	44,832	49,316	4,484	10%
No Earners	3,252	5,903	2,651	80.9
One Earner	16,117	13,900	-2,217	
Two Earners	18,592	22,446	3,854	20.7
Three or more	6,872	7,067	195	
<u>Women-led Families</u>	5,968	9,416	3,448	57.8%
No Earners	1,326	2,216	890	67.1
One Earner	2,648	4,612	1,964	74.0
Two or more	1,993	2,589	596	29.9
<u>Men-led Families</u>	1,261	1,969	708	56.1%
No Earners	132	244	112	84.8
One Earner	530	891	361	60.2
Two or more	600	835	235	39.2
<b>TOTAL FAMILIES</b>	<b>52,061</b>	<b>60,701</b>	<b>8,640</b>	<b>16.6%</b>
<u>Primary Individuals</u>	11,416	18,363	6,947	60.8
<b>TOTAL HOUSEHOLDS</b>	<b>63,477</b>	<b>79,064</b>	<b>15,587</b>	<b>25%</b>

Source: Assembled from CPS data.

As can be seen from Table 4.3, between 1970 and 1980, the incidence rate for household formation by families\* hardly rose, and indeed dropped for the large 25-34 year old cohort, while the corresponding rates for primary individuals took off. As a result by 1980 more than 20% of all households headed by people aged 25-34 were primary individuals. Among these, the vast majority were living on their own. For the younger age groups this tendency appears to have been due to a postponement of marriages while for older groups it is linked to the rising divorce rate.

Secondly, within the total of families, there was a marked upward trend in the number and percentage of families headed by women. (See Table 4.4.)

Thirdly, the percentage of families without children has risen.

Lastly, as a result of a variety of factors, there has been a decline in average family size. Whereas married women aged 18-24 and 25-29 planned to have on average 3.1 and 3.4 children respectively in 1960, by the mid-seventies, the aspirations of their equivalents had dropped to only slightly more than two on average.

Table 4.5 below shows how these expectations actually turned out and are projected to continue.

Since 1980, these trends have continued albeit at a slightly less dramatic pace,

- the rate of growth of households has dropped back from 2.5% p.a. to 1.5% p.a.
- non-family households are still growing in numbers more rapidly than family households, but the differential in rates of growth has narrowed from 5 to 1 to 2.5 to 1.
- the fastest growing household category is now those headed by a male or female single parent.
- the numbers of married couples with children are falling rapidly due to a combination of continued divorce rates and 'nest clearing' among older families.
- the continued rise of the independent elderly living apart from their children. [66% of all post 65 year old households in 1985.]

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\* Families are defined by the Census Bureau as two or more persons who live together and are related by blood, marriage or adoption. It recognizes 3 general types; husband wife families, others headed by men and those headed by women.

Table 4.3: Changes in Household, Family and 'Primary Individual' Incidence Rates (Households per 1000 Persons in Age Group) by Age of Household Head: 1970-80

<u>Age Band</u>	<u>% Change 1970-1980</u>		
	<u>All Households</u>	<u>Families</u>	<u>Primary Individuals</u>
18-24	+14.8%	-12.6	+20.2
25-34	+ 7.2	-8.0	+140.8
35-44	+ 6.6	+1.3	+68.3
45-64	+ 1.8	-0.6	+13.5
65-74	+ 3.0	+1.0	+6.6
75+	+11.6	+0.3	+23.2

Source: Calculated from Russell, ibid. Table 5-2, p94.

Table 4.4: Families Headed by Women as a Percentage of all Families by Age of Household Head: 1950-1980

<u>Age of Household Head</u>	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1980</u>
15-25	4.4			19
25-34	4			16
35-44	7			16

Source: Based on Census data.

Table 4.5: Fertility Rates (Births per Woman) By Year and Race

<u>Group</u>	<u>1955</u>	<u>1965</u>	<u>1975</u>	<u>1982</u>	<u>1995</u> (projected)
White	3.4	2.8	1.7	1.8	1.9
Black	4.1	3.6	2.2	2.3	2.0

Source: Based on Census data.

## 5. Changes in Labor Market Participation

The 1970's were characterized by two main trends, the rapid rise in women's participation in the labor force and the gradual withdrawal of the older age groups especially males over 55.

As far as women's participation is concerned, two trends were apparent.

- each successive cohort of women reaching maturity exhibited a higher level of labor force participation rate than the one that preceded them (i.e. the whole labor curve moved up).
- the age profile of female participation didn't just move up, but also changed its shape as the valley caused by the lower rates for women aged 30-39 gradually disappeared (i.e the shape of the curve changed).

During the early 1970's, the rate of change in these trends was very rapid, but by the late 70's it had slowed down considerably. In part, the rising participation rates were a function of the growing percentage of unmarried women -- who traditionally have higher participation rates. However, increasingly, married women and women with children (and even with children under 1 year of age) began to participate.

Between 1970 and 1985, the number of married women working doubled. By March 1985, 49.4% of married women (and 48% of all mothers) with children less than a year old worked outside the home. This was an increase of 10 percentage points in 5 years and a doubling since 1970.

This performance was unique among OECD countries, not in the rate of growth of female labour market participation - the Netherlands and Italy grew faster - but in the fact that it occurred from an already high base level. Countries such as the U.K., France and Germany which also started the period with high levels of participation registered low or stagnant growth rates.

Among the principal factors cited as lying behind this development are the decline in fertility allowed by the spread of simple low cost birth control technology, higher levels of educational attainment and consequent aspirations among women and the economic pressures on the family produced by stagnant or falling real wages.

Data on the labor market participation of older workers indicate that the rates for workers over 65 have been dropping continuously since the turn of the century but that the fall in the rate for post 55 year olds has been a post WWII phenomenon associated in part with the spread in the coverage of pension plans and other forms of support for retirement. Since the late Seventies, this voluntary retirement has been augmented by a large degree of involuntary labor market withdrawal caused by the shakeout of older blue collar workers from the U.S.'s traditional manufacturing sectors.

Between 1975 and 1984, participation rates for white and black males over 55 fell by 15.1 and 19.9% respectively, while those for the comparable groups of women fell by 4% and 3.1 respectively.





PART THREE      THE IMPACT ON SPENDING AND EMPLOYMENT

6. Tracing Change at the Macro Level

6.1 Typically, changes in the pattern of consumer expenditure are seen to depend on prices and incomes in the shorter term and changes in products, consumer preferences and demographic factors over the longer term. Given the difficulty of handling changes in products and preferences in any systematic way, emphasis tends to focus on incomes, prices and demographic effects. The following sections review what light the various official statistics can throw on these issues.

6.2 Changing Money Incomes, Prices and Real Incomes

Information on income levels is available from a variety of statistical series each having a different coverage and hence utility. The three most commonly used are,

- figures from the Census Bureau's Current Population Survey which are based on regular field surveys and give good detail by a variety of household characteristics, but only cover cash incomes.
- figures from the Commerce Department's Bureau of Economic Analysis (BEA) which are generated as a part of the national income accounting process and therefore cover non cash as well as cash income but are weak on key detail.
- figures from the annual Consumer Expenditure Survey (interview and diary elements) which link income and expenditure to a range of household types but which only cover urban areas and an estimated 85% of the expenditures.

Typically, the BEA figures give the highest figures with the CPS and CES data being some 15% less on average.

Transforming these series into real terms leads to the second issue to be resolved, namely, what price deflator to use. Again three are available.

- the traditional Consumer Price Index (CPI-U).
- a modified CPI designed to put shelter costs on a rental equivalency basis of measurement instead of the CPI-U's asset purchase approach.
- the implicit GDP deflator from the national accounts system.

Table 6.1 illustrates how the figures vary between these different sources, between different degrees of coverage and most critically according to the price index employed. Between them, they give a range of answers from a 20% drop in real income per consumer unit over the period to a very small gain, with a best

Table 6.1: Percentage Change in Various Indices of Incomes and Prices, 1972/3-1980/1

1972/3 - 1980/1					
	Consumer Expenditure Survey		CPS	CPU	
	Diary Survey	Interview Survey		CPI-U	CPI-UXI
Avg. Ann. Pre-Tax Income per Consumer Unit	56%	61%			
" " (full reporters only)	72%		78%	94%	81%
(Excluding students & non-reporters)	88%	63%			
Avg. Ann. Pre-Tax Income Per Person	92%				

Source: Consumer Expenditure Survey 1980-81. Diary Survey p.5

Table 6.2: Total Money Income of Households and Families: 1973-83. (in 1983 dollars)

ALL RACES	1973	1975	1977	1979	1981	1983
No. Households	69,859	72,867	76,030	80,776	83,527	85,407
Median Income	23,567	21,843	22,313	22,595	20,895	20,885
Mean Income	27,255	25,507	26,430	26,840	24,962	25,401
No. Families	55,053	56,245	57,215	59,550	61,019	61,997
Median Income	27,017	25,395	26,320	26,885	24,525	24,580

Source: Based on CPS data.

estimate being that at the average level real incomes per household stagnated or fell slightly. However, when changes in the incidence of taxation are also taken into account, the likelihood is that the final post tax household income loss was even worse.

Table 6.2 shows how real household and family income changed over the period 1973 to 1983 as deflated by the traditional consumer price index. Average household incomes were depressed for a variety of reasons; within the total workforce younger workers just starting out made up a bigger share, the adult/youth wage differential widened appreciably and unemployment rates moved up substantially over the period.

While average post tax income levels per household unit fell overall during the period, the impacts at the family and the per capita level were substantially different.

- at the family level (i.e., leaving aside the non-family households), the decline in real incomes appears to have been slightly less than the fall in household incomes (9% as compared to 11.4%) over the period. This was probably due to the differences in the average numbers of earners in families as compared to non-traditional households and the higher average age of family heads tending to give them higher average wages.
- at the per capita level, incomes did better; rising in real terms by 2.8 % (CPS) or 11.4% (BEA) between 1973 and 1983 due to the 14% fall in the average size of consumer units.

Within these overall aggregates, different sub groups had significantly different experiences.

- all families with children suffered a decline in their median real income (down 8.3% between 1973 and 1984).
- the post 65 age group did best, especially between 1979 and 1984, when their incomes rose 13% in real terms. As a result, a far lower percentage were in poverty at the end of the period and the incidence of poverty had fallen to below the overall national average (12.4% compared to 14.4%).
- the under 25's did worse with a fall in their real incomes of 18% between 1979 and 1984.

In short, the increase in aggregate purchasing power between 1973 and 1984 arose from the rapid increase in the numbers of household units and wage earners without a corresponding rise in the number of dependent persons. In addition transfer payments made a bigger contribution than hithertoo. This contrasts sharply with the 1950's and 60's when increased purchasing power stemmed from steady increases in real wages.

For most families, therefore, maintaining real family income depended crucially on women working. By the end of the period women workers were contributing on average 25% of family income.

Without their contribution most families would have seen their incomes fall and in many cases, fall below the poverty level.

The improvement in the relative position of older people appears to have derived from their access to retirement incomes from both public and private transfers, and the cushion afforded by owning their own homes during a period of rapidly rising housing costs.

The principal victims of the period were the younger half of the baby boom generation, especially males, who experienced a major reduction in their income earning prospects relative to what their fathers had experienced on getting started in the labor market.

Table 6.3 illustrates this by looking at the real income gain that different age bands of male wage earners received over the 10 years prior to 1973 and that after it.

Table 6.3: Average Income Gain of Males by Age Group and Period

<u>Age Group</u>	<u>1963-1973</u>	<u>1973-1983</u>
% Income Gain Males Passing from age 25 to 35	110%	16%
% Income Gain Males Passing from age 40 to 50 in period	25%	-14%

Source: The Economic Future of the Baby Boom: Frank S. Levy & Richard Michel, prepared for Joint Economic Committee of U.S. Congress, December, 1985.

### 6.3 Changes in Consumption Levels and Patterns

Despite the less propitious overall economic environment of much of the post 1973 period and the poor performance of real wages and average family incomes, consumption per capita rose more rapidly than during the expansionary 50's.

Two other factors, apart from rising per capita incomes, seem to have contributed to higher consumer expenditures; a reduction in savings rates and an increase in consumer and family debt burdens.

- in 1981, young families saved less than 1% of their after tax income, compared to 4% for a similar group in 1973.
- the percentage of young families holding liquid assets fell from 93% in 1979 to 87% in 1983.

Commission of the European Communities

Programme for Research and Actions on the development  
of the Labour Market

**ANALYSIS OF THE DYNAMICS OF THE JOB CREATION PROCESS  
IN THE UNITED STATES AND AN EVALUATION OF MEDIUM AND  
LONG TERM PROSPECTS**

Volume I: "The role of demographic factors in U.S. job creation -  
Performance since 1970"

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- in 1983, 77% of families in the 25-34 age bracket had incurred some form of installment debt compared to 67% in 1970.
- in 1980, nearly one third of first time home buyers got financial assistance from their relatives (1978, 10%).

Changes in the composition of consumer expenditures within this expanding total are revealed by a comparison between the Consumer Expenditure Surveys of 1972/3 and those of 1982/3. Tables 6.4 and 6.5 compare - for the Interview Survey and the Diary Survey respectively - the absolute changes between the two years, the percentage change for each class of expenditure and how it compared to the relevant part of the Consumer Price Index. Several points stand out,

- several areas of major expenditure increases (fuels utilities and public services, gasoline, owned dwellings) have been due to corresponding price increases.
- expenditure on alcoholic beverages appears to have increased far faster than inflation, but part of this is attributed to previous under-reporting problems.
- average food expenditures failed to keep up with inflation, but within the total, food away from home expenditures outpaced price rises.

Another way of looking at these changes is to see how the percentage distribution of the total household budget has shifted. Tables 6.6 and 6.7 show the figures from the Interview and Diary Surveys. They indicate that between 1972/3 and 1982/3 (the latest date for which there are figures).

- the share of the total budget taken by food has increased slightly (1% point), but that this has been in the form of eating out, not food at home.
- the rise in total housing related costs would have been far higher were it not for a reduction in the share of house furnishing expenditures.
- transportation took a larger bite of the household budget in 1982/3 than 1972/3 mainly through the increased running costs element.
- recreation and alcoholic beverages registered small gains in their shares while health slipped back.
- the major losers were apparel and other goods and services.

While changes in average household expenditure levels for particular goods or services or changes in their budget shares are interesting, they only indirectly throw light on how consumer expenditure was changing at the margin and whether the balance of additional expenditure over the period would have been markedly different without the noted demographic changes.

**Table 6.4:**  
**Interview Survey Comparisons**  
**1972/3-1982/3**

Item	1972-73	1982-83	Percent change	
			Consumer expenditures	CPI-U
Number of consumer units (in thousands)	58,948	70,329	19	—
<b>Consumer unit characteristics:</b>				
Income before taxes <sup>2</sup>	\$12,388	\$23,027	86	—
Size of consumer unit	2.8	2.6	—	—
Age of reference person	47.1	46.6	—	—
<b>Number in consumer unit:</b>				
Earners	1.3	1.4	—	—
Vehicles	1.8	1.8	—	—
Children under 18	1.0	.7	—	—
Persons 65 and over	.3	.3	—	—
<b>Total expenditures</b>				
Food	\$9,421	\$19,128	103	—
Food at home	1,675	3,175	90	118
Food away from home	1,313	2,238	70	113
Alcoholic beverages	362	937	159	130
Housing	89	286	221	76
Shelter	2,638	5,669	122	—
Owned dwellings	1,507	3,309	120	—
Rented dwellings	746	1,947	161	—
Other lodging	644	1,065	65	389
Fuels, utilities, and public services	117	296	153	3164
Household operations	581	1,512	160	3192
Household furnishings and equipment	138	275	99	127
Apparel and services	411	773	88	71
Transportation	732	1,039	42	56
Vehicles	1,762	3,766	114	142
Gasoline and motor oil	709	1,425	101	3130
Other vehicle expenses	404	1,076	166	232
Public transportation	540	1,034	91	3102
Health care	110	231	110	146
Entertainment	432	834	93	154
Personal care services	389	879	126	88
Reading	106	178	68	103
Education	50	128	156	3119
Tobacco	126	257	104	3126
Miscellaneous	131	208	59	98
Cash contributions	102	274	169	—
Personal insurance and pensions	372	586	58	—
Life and other personal insurance	818	1,651	104	—
Retirement, pensions, Social Security	367	262	-29	—
	451	1,388	208	—

<sup>1</sup> Expenditure categories for 1972-73 were adjusted to correspond with 1982-83 definitions; estimates for 1982-83 exclude students.  
<sup>2</sup> Income before taxes is calculated using complete income reporters.  
<sup>3</sup> Estimated.

**Table 6.5:**  
**Diary Survey Comparisons**  
**1972/3-82/3**

Item	July 1972-June 1974	1982-83 <sup>1</sup>	Percent change	
			Consumer expenditures	CPI
Number of consumer units (in thousands)	59,159	71,356	—	—
<b>Consumer unit characteristics:</b>				
Income before taxes <sup>2</sup>	\$187.46	\$427.21	128	—
Size of consumer unit	2.8	2.6	—	—
Age of reference person	47.1	46.4	—	—
<b>Number in consumer unit:</b>				
Earners	1.3	1.3	—	—
Children under 18	.9	.7	—	—
Persons 65 and over	.3	.3	—	—
<b>Average weekly expenditures:</b>				
Food, total	\$33.11	\$56.16	70	104
Food at home, total	23.79	36.32	53	99
Cereals and bakery products	2.79	4.82	73	118
Meats, poultry, fish, and eggs	9.35	11.55	24	70
Dairy products	3.23	4.90	52	89
Fruits and vegetables	3.48	5.99	72	102
Other food at home	4.93	9.06	84	160
Food away from home	9.32	19.83	113	120
Alcoholic beverages	2.32	5.51	138	72
Tobacco products and smoking supplies	2.19	3.30	51	95
Personal care products and services	2.92	4.53	55	102
Nonprescription drugs and supplies	1.19	1.89	59	103
Housekeeping supplies	2.99	5.55	86	144

<sup>1</sup> Excludes students.  
<sup>2</sup> Income before taxes is calculated using complete income reporters.

**Source:** Consumer Expenditures: Results from the Diary and Interview Surveys, Raymond Gieseeman and John Rogers, Monthly Labor Review, June 1986, p. 17 and 18.



**Table 6.6:**  
**Interview Survey Data**

The Changing Household Budget		
Total Expenditures = 100%		
	Early 1970's	Early 1980's
<b>TOTAL EXPENDITURES</b>	100.0%	100.0%
<b>Food</b>	17.8	18.3
Food at Home	13.9	14.1
Food Away from Home	3.8	4.7
<b>Alcoholic Beverages &amp; Tobacco</b>	2.3	2.5
<b>Housing</b>	28.0	29.5
Shelter	16.0	16.5
Fuels, Utilities, Public Services	6.2	7.4
Household Operations	1.5	1.5
Housefurnishings & Equipment	4.4	4.1
<b>Apparel and Services</b>	7.8	5.5
<b>Transportation</b>	18.7	20.1
Vehicles	7.5	6.8
Other, Incl. Vehicle Expenses	11.2	13.3
<b>Health and Personal Care</b>	5.7	5.3
<b>Recreation</b>	4.1	4.4
<b>Other Goods and Services</b>	15.6	13.8

**Table 6.7**  
**Diary Survey Data**

The Household Food Budget		
Total Food at Home = 100%		
(Annual Expenditures)		
	Early 1970s	Early 1980s
<b>FOOD AT HOME—TOTAL</b>	\$1,231.45	\$1,775.75
<b>PERCENT DISTRIBUTION</b>	100.0%	100.0%
<b>Cereal and bakery products</b>	11.9	12.6
Cereal and cereal products	3.1	4.0
Bread	3.5	3.2
Other bakery products	5.3	5.4
<b>Meat</b>	28.9	24.5
Beef	15.4	13.1
Pork	8.8	6.8
Other meats	4.7	4.6
<b>Poultry</b>	4.6	4.4
<b>Fish and seafood</b>	2.8	3.1
<b>Dairy products</b>	13.8	13.4
Fresh milk and cream	6.8	7.0
Cheese	2.8	3.7
Other	4.2	2.7
<b>Fruits and vegetables</b>	14.4	15.6
Fruits	6.7	8.2
Vegetables	7.7	7.4
<b>Other foods</b>	16.3	17.5
Fats and oils	2.8	2.8
Sugar and other sweets	3.0	3.6
All other	10.5	11.1
<b>Nonalcoholic beverages</b>	7.3	8.9

**Source:** How Consumers Spend Their Money: Conference Board  
Consumer Research Center, 1984, p. 9 and 10.

Table 6.8 contains some crude data on the categories of expenditure that experienced the largest absolute increases over the period 1972/3 to 1982/3. Column one gives estimates for total consumer expenditure on the particular item, column two gives actual figures for urban consumers covered by the interview survey element of the Consumer Expenditure Surveys for each year. Several interesting points can be noted,

- on the basis of the expenditure patterns of urban consumers the expenditures on house ownership appear to make up the largest single component of the increase in aggregate real consumer expenditures over the period.
- expenditures on entertainment suprisingly provided the second largest increase in aggregate expenditure.
- food away from home experienced a major increase in expenditure but the increase in overall food expenditure was brought down by the fall in expenditure on food for consumption at home.
- expenditure on alcohol was also a major common item as was home furnishing and equipment and transport.

Even allowing for a degree of under-recording of alcohol and away from home food expenditures in 1972/3, the size of the expenditure increases in both categories (128.6% and 35.1% respectively) clearly goes some way to explain the major expansion that occurred in eating and drinking establishments during the period. Taking together the expenditure increases on entertainment and reading and also allowing for the fact that a part of the increase in household furnishing and equipment would consist of entertainment equipment (TV's, VCR's) it would appear that the entertainment industry has also been a very dynamic sector.

Several expenditure categories are not covered in the table; cash contributions, personal insurance and pension and miscellaneous, of which the last was both the largest and has experienced the biggest increase in nominal terms. Unfortunately price indices are not available for these categories so it is not possible to calculate what has happened in real terms.

One way of attempting to find out to what extent this pattern of increases in aggregate expenditure was the product of changing demographics is to look at how the proportions of different household groups changed over the period since these provide the weights that go to determine the overall picture.

Table 6.9 shows the changes over a variety of time periods as they affected three different categories of households; by type, by size and by age of household head. While some of the trends appear constant throughout the whole period, others seem to be in the process of reversing themselves,

- by number of earners, the trend has been steadily in favor of 'single earners' of single households. For 'no earners' the proportion first fell then rose whereas for two and three earners it shows the opposite trend.

**Table 6.8: Changes in the Real Value of Aggregate Consumer Expenditures by Principal Categories over Selected Periods (\$bn 1982/3 prices)**

	<u>1972/3-1982/3 (2)</u>	<u>1972/3-1982/3 (1)</u>
Home Ownership	n/a	21.3
Entertainment	24.1	18.7
Home Furnishings & Equip.	13.6	12.9
Food		
- Away from home	19.5	16.8
- At home	-7.1	-7.5
Alcohol	13.2	11.1
Transport	10.3	13.5
Fuels & Utilities	7.2	6.3
Apparel & Service	7.6	5.7
Reading	4.4	2.5
Education	n/a	1.3
Tobacco	-0.1	-0.7
Household Operations	-1.4	0.9
Health	n/a	-6.0

(1) Based on average annual expenditures of urban consumers by expenditure class deflated by the corresponding consumer price indices and multiplied by universe of consumer units.

(2) Based on aggregate expenditure figures grossed up (to include rural as well as urban consumers) for purposes of comparison with Personal Consumption Expenditures in the National Accounts.

Sources:

Column 1. Giesman & Rogers, Monthly Labor Review, June '86, p. 17.

Column 2. Consumer Expenditure Survey, Interview Survey, 1980/1, p.8.

Table 6.9: The Changing Relative Importance of Different Household Types at Different Points in Time

	1972/3	1980/1	1982/3	1985(E)
<b>A. <u>Type of Household</u></b>				
Single Household				
- No earner	10.1	9.8	9.9	
- One earner	12.6	16.9	18.8	
Consumer Units of Two or More				
- No earner	11.0	9.1	10.1	
- One earner	27.6	20.6	21.0	
- Two earners	28.2	31.8	30.0	
- Three or more	<u>10.5</u>	<u>11.8</u>	10.1	
	100.0	100.0	100.0	100.0
<b>B. <u>Size of Household</u></b>				
- One Person	25.1	26.7	28.7	23.7
- Two	26.6	29.3	29.3	31.6
- Three	16.1	16.9	15.8	17.6
- Four	14.8	14.7	15.0	15.7
- Five	8.7	7.1	6.7	11.2
- Six	<u>8.7</u>	<u>5.3</u>	4.5	
	100.0	100.0	100.0	100.0
<b>C. <u>Age of Household Head</u></b>				
- Less than 25	9.5	10.9	9.8	6.3
- 25-34	20.5	23.6	24.0	23.1
- 35-44	16.9	16.7	18.2	20.0
- 45-54	18.3	14.2	14.0	14.6
- 55-64	15.8	15.2	14.6	15.1
- 65+	<u>19.0</u>	<u>19.4</u>	<u>19.4</u>	<u>20.9</u>
	100.0	100.0	100.0	100.0

Source: Consumer Expenditure Surveys 1972/3, 1980/1, 1982/3 and Conference Board estimates for 1985.

- among different sizes of household the proportion of one person households has continued to rise while that for those with five plus has continually fallen. The middle categories have experienced a variety of trends.
- among different age groups the 25-35 age band initially rose and is now falling again, the 35-45 band has seen its percentage rise throughout as has the post 65 group. Those between 45 and 65 first rose in percentage terms and now seem to be slipping back.

Using the proportions of different household groups in 1972/3 as weights it is possible to calculate what aggregate expenditure would have been on each expenditure category in 1982/3 had household composition stayed the same as in 1972/3. For most of the major expenditure categories there would have been little change. Expenditures on food for home consumption would have been 6.8% higher and those for transport, utilities and entertainment would have been 3.5%, 4.0% and 3.9% higher respectively. Overall therefore it would not appear that changes in the mix of household types has had a major impact on aggregate spending.

#### 6.4 Changes in Output and Employment

As with income statistics, there is more than one series that can be used to review output trends. The two principal sources are,

- the figures on Gross Duplicated Output (sector sales, deflated by the price index for the industry mix of goods and services produced) that the Bureau of Labor Statistics, Economic and Employment Projections System, generates for all 150 sectors of the economy.
- the figures on Gross Product Originating (Net output or Value added) that are produced by the Bureau of Economic Analysis as part of the National Income Accounts.

While the Gross Product Originating figures are more commonly used as a measure of output, they are not available for detailed industries. Also, sales levels, rather than net output are likely to better reflect the demand for labor.

Tables 6.10, 6.11, and 6.12 compare the annual average trend rates of growth of output and employment for the 150 principal U.S. sectors from 1969 to 1984. Table 6.10 identifies those where both trends are positive. Table 6.11 groups those with a positive output trend, but no employment growth, while Table 6.12 has those with negative trends on both measures.

What is clear from Table 6.10 is that most service industries fell in this category and with few exceptions, had rates of growth of output in excess of both the economy overall and the non-service sectors. Also notable is the very wide range

Table 6.10: Sectors with Positive Output and Employment Trends, 1969-84

Industry	Output	Employment	Industry	Output	Employment
<b>Agriculture:</b>			<b>Durable goods manufacturing—Continued</b>		
Food and feed grains .....	2.4	0.6	Aircraft .....	1.3	0.3
Agricultural products, n.e.c. ....	1.7	1.4	Ship and boat building and repair .....	3.1	1.0
Forestry and fishery products .....	0.3	3.0	Motorcycles, bicycles, and parts .....	2.0	0.1
Agricultural, forestry, and fishery services .....	1.7	3.8	Scientific and controlling instruments .....	4.3	1.9
<b>Mining:</b>			Medical and dental instruments and supplies .....	5.5	5.7
Coal mining .....	2.8	3.3	Optical and ophthalmic equipment .....	8.6	1.5
Chemical and fertilizer mineral mining .....	1.6	2.5	Photographic equipment and supplies .....	6.0	1.2
<b>Construction:</b>			<b>Transportation and utilities:</b>		
Maintenance and repair construction .....	2.2	3.3	Trucking and warehousing .....	2.5	1.7
<b>Nondurable goods manufacturing:</b>			Air transportation .....	2.8	2.4
Meat products .....	2.1	0.3	Pipelines, except natural gas .....	2.0	1.4
Canned and frozen foods .....	2.4	0.1	Transportation services .....	4.0	6.1
Soft drinks and flavorings .....	2.7	0.5	Radio and television broadcasting .....	2.6	4.1
Food products, n.e.c. ....	2.1	0.4	Communication, except radio and television .....	7.5	1.3
Fabricated textile products, n.e.c. ....	1.3	0.5	Electric utilities, public and private .....	4.3	2.9
Paper products .....	2.5	0.1	Water and sanitary services .....	4.3	1.8
Periodical and book printing, publishing .....	3.3	2.0	<b>Trade:</b>		
Printing and publishing, n.e.c. ....	3.2	2.0	Wholesale trade .....	2.9	2.5
Industrial inorganic and organic chemicals .....	1.4	0.9	Eating and drinking places .....	2.5	5.0
Agricultural chemicals .....	2.2	0.5	Retail trade, except eating and drinking .....	2.5	1.7
Drugs .....	5.0	2.4	<b>Finance, insurance, and real estate:</b>		
Cleaning and toilet preparations .....	2.7	1.4	Banking .....	5.0	3.8
Petroleum refining and related products .....	1.6	0.4	Credit agencies and financial brokers .....	5.7	4.5
Plastics products, n.e.c. ....	4.9	3.7	Insurance .....	3.3	2.4
<b>Durable goods manufacturing:</b>			Real estate .....	4.5	3.6
Logging .....	4.5	0.3	<b>Services:</b>		
Millwork, plywood, and wood products, n.e.c. ....	3.1	0.8	Hotels and lodging places .....	2.8	3.9
Furniture and fixtures, except household .....	3.5	2.1	Personal and repair services .....	2.0	1.0
Primary aluminum and aluminum products .....	1.5	0.2	Business services .....	6.8	7.0
Fabricated structural metal products .....	0.2	0.5	Advertising .....	3.6	3.0
Fabricated metal products, n.e.c. ....	2.0	0.9	Professional services, n.e.c. ....	5.7	5.6
Construction, mining, and oilfield machinery .....	1.5	0.7	Automobile repair and services .....	2.1	4.2
Metalworking machinery .....	0.8	0.4	Motion pictures .....	5.6	2.2
<b>General industrial machinery:</b>			Amusements and recreation services .....	6.1	4.2
Nonelectrical machinery, n.e.c. ....	3.0	2.4	Doctors' and dentists' services .....	4.3	5.0
Computers and peripheral equipment .....	16.3	5.8	Hospitals .....	5.3	3.9
Typewriters and office equipment .....	5.6	0.2	Medical services, n.e.c. ....	5.4	6.8
Service industry machines .....	2.1	0.8	Educational services .....	3.2	3.5
Electric transmission equipment .....	2.1	1.0	Noncommercial and membership organizations .....	4.0	1.7
Radio and communication equipment .....	8.4	1.9	<b>Government:</b>		
Electronic components and accessories .....	11.3	4.2	Local government passenger transit .....	4.5	5.4
Electrical machinery and supplies, n.e.c. ....	3.6	1.9	State and local enterprises, n.e.c. ....	1.8	2.3
			General government .....	1.2	2.0

<sup>1</sup> Based on least squares trend line.  
n.e.c. = Not elsewhere classified.

Source: Deindustrialization and the Shift to Services: Ronald Kutscher and Valerie Personick, Monthly Labor Review, June 1986, p.9.

**Table 6.11:**  
**Negative Output and**  
**Employment Trends, 1969-84**

Industry	Output	Employment
<b>Mining:</b>		
Iron and ferroalloy ores mining .....	-3.9	-3.1
Copper ore mining .....	-1.7	-4.1
Stone and clay mining and quarrying .....	-0.8	-0.7
<b>Non-durable goods manufacturing:</b>		
Sugar .....	-0.2	-2.3
Tobacco manufacturing .....	-0.2	-1.4
Tires and inner tubes .....	-1.3	-1.5
Rubber products except tires and tubes .....	-3.3	-0.9
Leather tanning and finishing .....	-2.7	-2.9
Leather products including footwear .....	-1.8	-3.1
<b>Durable goods manufacturing:</b>		
Wooden containers .....	-4.1	-5.9
Structural clay products .....	-1.2	-3.8
Pottery and related products .....	-0.4	-0.1
Steel furnaces and basic steel products .....	-2.9	-3.5
Iron and steel foundries and forgings .....	-1.3	-2.3
Primary nonferrous metals and products, n.e.c. ....	-1.7	-0.2
Metal cans and containers .....	-0.8	-2.6
Heating equipment and plumbing fixtures .....	-1.8	-0.9
Metal stampings .....	-0.2	-1.3
Materials handling equipment .....	-0.8	-0.5
Special industry machinery .....	-2.0	-0.6
Railroad equipment .....	-5.1	-1.6
Transportation equipment, n.e.c. ....	-0.8	-2.5
Watches, clocks, and clock-operated devices .....	-1.7	-4.8
<b>Households:</b>		
Household industry .....	-3.2	-2.7

<sup>1</sup>Based on least squares trend line.  
n.e.c. = Not elsewhere classified.

**Table 6.12:**  
**Positive Output and Negative**  
**Employment Trends, 1969-84**

Industry	Output	Employment
<b>Agriculture:</b>		
Dairy and poultry products .....	1.0	-4.9
Meat animals and livestock .....	0.0	-2.9
Cotton .....	1.9	-8.9
<b>Non-durable goods manufacturing:</b>		
Dairy products .....	1.8	-2.9
Grain mill products .....	2.8	-0.1
Bakery products .....	0.0	-1.8
Confectionery products .....	3.3	-0.8
Alcoholic beverages .....	3.1	-1.4
Fabric, yarn, and thread mills .....	0.6	-2.2
Floor covering mills .....	3.1	-1.1
Textile mill products, n.e.c. ....	2.0	-1.8
Hosiery and knit goods .....	1.1	-1.7
Apparel .....	1.1	-1.4
Paperboard containers and boxes .....	1.3	-1.1
Chemical products, n.e.c. ....	2.2	-0.8
Plastic materials and synthetic rubber .....	2.3	-1.4
Synthetic fibers .....	4.0	-2.5
Paints and allied products .....	1.2	-0.9
<b>Durable goods manufacturing:</b>		
Sawmills and planing mills .....	0.8	-0.9
Household furniture .....	1.9	-0.8
Glass .....	0.6	-0.5
Stone and other mineral products, n.e.c. ....	1.8	-0.3
Primary copper and copper products .....	0.1	-1.2
Screw machine products .....	0.9	-0.6
Cutlery, handtools, and general hardware .....	0.4	-0.5
Farm and garden machinery .....	1.0	-0.8
Household appliances .....	1.5	-1.8
Electric lighting and wiring equipment .....	0.7	-0.1
Radio and television receiving equipment .....	5.6	-3.2
Telephone and telegraph apparatus .....	5.3	-0.5
Motor vehicles .....	0.9	-0.7
Musical instruments, toys, and sporting goods .....	3.0	-0.6
Manufactured products, n.e.c. ....	0.2	-0.5
<b>Transportation and utilities:</b>		
Railroad transportation .....	0.7	-3.0
Water transportation .....	2.9	-0.2
<b>Government:</b>		
U.S. Postal Service .....	2.4	-0.8
Federal enterprises, n.e.c. ....	3.3	-1.4

<sup>1</sup>Based on least squares trend line.  
n.e.c. = Not elsewhere classified.

Source: Kutcher & Personick, Ibid., p.10.

of values within the service sector group. Lastly, the various service sub-sectors exhibit a wide diversity in their incremental employment to output relationships. At one extreme, communications (except TV and radio), with a 7.4% p.a. compound rate of output growth only gave a 1.3% p.a. growth of employment, while at the other, eating and drinking establishments had a 2 for 1 relationship between rates of employment growth and output growth.

Tables 6.11 and 6.12 have between them only three service sub-sectors of which only one - domestic help - is numerically significant.

The divergencies of sales trends within a particular broad expenditure class is brought out by Table 6.13. This takes 50 service activities and looks at their sales performance relative to inflation over the period 1977-1982. It shows that within an 'industry', such as entertainment, trends varied as between on the one hand drive-ins and billiard establishments with negative growth and on the other recreation clubs which doubled their sales in 5 years. Similarly in the health field, medical labs and nursing facilities did well but receipts for dentists and optometrists were relatively stable. The table also suggests that it has been the business services that have had the rapid rates of growth. Indeed, only 2 of the 18 service sectors categorized as stable or declining in terms of real expenditure levels (auto rental and photo finishing) had a business content. All the rest were consumer services.

## 7. Tracing Changes at the Micro Level

### 7.1 An Overview of Employment Growth

Table 7.1, which is based on population census and establishment data, shows which activities within the service sector have played the biggest role in the growth in employment.

Of those that have been growing above the national average (23.4%), have contributed more than 0.25 M jobs over the period and are not exclusively serving business needs but also the ultimate consumer, four seem worth looking at in slightly more detail; health care, eating and drinking establishments, social services, and auto repair services. These are briefly examined in the next section before looking at whether the rapid increase in the number of households has had any marked effect on output and employment on industries such as construction and household fixtures and fittings.

### 7.2 Specific Service Sub-Sectors

#### **Health Care**

The health care industry in all its aspects is now judged to be the largest single contributor to GDP (at about 10.4%) and as Table 7.1 indicates, contributed nearly 2.5 M new jobs over the period 1973-84.



Table 6.13: Service Sector Sales 1977-82 Ranked by Rate of Growth

RECEIPT GROWTH IN SELECTED SERVICE INDUSTRIES: 1977-1982		
Labels in millions	total receipts 1982	percent change 1977-82
<b>STRONG GROWTH INDUSTRIES</b>		
Computer and data processing services	\$27.7	204%
Management consulting & public relations	18.0	170
Chiropractors	7.7	167
Engineering services	26.1	152
Equipment rental & leasing	10.9	138
Blueprinting & photocopying	0.9	127
Personal supply services	10.2	121
Membership sports & recreation clubs	2.5	119
Detective agencies & protective services	5.5	110
Testing laboratories & facilities	1.4	108
Theatrical producers	1.9	104
Architectural services	6.0	103
Legal services	34.3	100
Accounting, auditing & bookkeeping	14.6	100
Vocational & correspondence schools	1.6	94
Medical laboratories	2.9	94
<b>MODERATE GROWTH INDUSTRIES</b>		
Motion picture production & distribution	\$10.0	98%
Hotels, motor hotels & motels	32.5	96
Advertising	6.4	86
Osteopathic physicians	1.4	86
Physicians	50.0	85
Child day care services	1.4	85
Nursing & personal care facilities	13.2	84
Commercial photo, art & graphics	3.2	83
Research & development laboratories	3.7	83
Building cleaning & maintenance	7.4	75
Credit repairing, collection agencies	2.1	71
Dentists	16.1	69
Photographic studios	1.4	64
Bands, orchestral, entertainment groups	1.4	62
Automobile parking	1.6	61
Automotive repair shops	18.1	61
<b>INDUSTRIES KEEPING PACE WITH INFLATION</b>		
Amusement parks	\$1.6	57%
Photocopying laboratories	2.9	57
Auto rental & leasing	9.6	55
Motion picture theaters, excluding drive-in	3.2	51
Optometrists	2.1	51
Laundry, cleaning & garment services	9.4	49
Dental laboratories	1.3	45
Funeral services and crematories	3.7	41
<b>INDUSTRIES FAILING TO KEEP PACE WITH INFLATION</b>		
Beauty and barber shops	5.2	37%
Commercial sports	3.3	34
Bowling alleys	2.1	32
Electrical & electronic repair shops	4.1	32
Car washes	0.9	30
Watch, clock & jewelry repair	0.2	29
Shoe repair, shoe shine & hat cleaning	0.2	26
Reupholstery & furniture repair	0.6	24
Billiard & pool establishments	0.1	-1
Drive-in motion picture theaters	0.3	-21

Source: 1982 Economic Census, U.S. Bureau of the Census

Source: The (Business) Service Sector, Courtney Slater, American Demographics, May 1985, p.4

Table 7.1: Major Areas of Service Sector Employment Growth:  
1973-84 In Absolute and Percentage Terms (000s)

Professional Services	3633 (68.9)	Health	2448 (67.3)	Physicians & Dentists	638 (90.6)		
				Nursing Facilities	501 (76.0)		
				Hospitals	942 (45.9)		
				Medical Labs			
				Outpatient Care	367 (161.2)		
		Education	140 (14.3)				
		Legal Services	306 (122.9)				
		Social Services	739 (134. )				
Distribution	5290 (31.8)	Wholesale	1260 (29.5)	Durables	825 (33.6)	Machinery	482 (52.3)
				Non-Durables	434 (23.6)	Equipment	
						Paper &	59 (52.1)
						Paper Products	
						Groceries	160 (28.6)
						Misc.Non Durable	105 (34.1)
		Retail	4030 (32.7)	Food Stores	790 (42.6)		
				Building			
				Materials &	139 (26.1)		
				Garden Sup.			
				Eating &	2327 (76.2)		
				Drinking			
				Misc. Retail	478 (30.8)		
				Apparel &	354 (57.3)		
				Accessories			

Business & Repair Services 2452 (95.6)	Business Services 2092 (108)	Misc. Business Svcs. 779 (85.9)
		Personnel 578 (126.2)
		Supply Agencies
		Computer Data Processing 351 (193.9)
		Services to Buildings 252 (69.2)
	Repair Services 360 (57.4)	Auto Repair Services & Garages 261 (61.8)
		Misc. Repairs 99 (48.2)
Finance, Insurance and Real Estate 1674	Finance 999	Banking 516 (43.8)
		Credit Agencies 267 (64.0)
		Security, Commodity Brokers 151 (78.3)
	Insurance 374	Insurance Carriers 180 (16.8)
		Agents, Brokers Services 195 (62.5)
	Real Estate Combined 301 (37.7)	Real Estate 318 (41.4)
Transportation & Public Utilities 556 (11.9)	Transportation 171 (6.2)	
	Communications 217 (18.4)	
	Electric, Gas, Etc. 167 (22.9)	

Source: Based on Establishment data.

Substantial as these increases were there are two reasons to believe that even they somewhat understate the growth of medical related demand in the economy. First, the figures for physicians do not include the self-employed who make up some 25% of the total of doctors and specialists. Second, the figures only reflect medical personnel working in medical establishments; they don't include the various nurses, social workers, etc. employed in institutions such as schools and prisons.

For the period up to the early 1980's it was U.S. health policy to encourage the expansion of the system of provision and to widen access to it. The primary cause of the system's rapid expansion was therefore its increased affordability due a combination of broadened private insurance coverage and the extension of various public programs. Given that providers were re-imbursed on a cost of service basis, neither consumers nor providers needed to worry overly about the cost of the system.

A secondary cause of the expansion of the medical sector was the development and deployment of new technology. Whereas during the 1950's and 1960's increases in hospital 'bed capacity' were the driving force behind the expansion in output and employment, during the 1970's and 80's the focus switched to 'service intensity'. By this is meant an increase in the quality and quantity of services provided per hospital admission. Hence while on the one hand changes in technology, preferences and after 1983 financing arrangements tended to favor outpatient care and restrictions on hospital admissions, on the other, greater service intensity meant that both those that were admitted and those that weren't required the services of a larger number of professionals and para-professionals, especially in the diagnostic, laboratory and surgical areas. As a result, over the period 1972-84 employment in hospitals added 40% of all the new health sector jobs.

Besides increasing the intensity of medical services the new technology also facilitated the decentralization of their delivery. Employment growth outside the hospital sector was even faster than within it as Table 7.2 shows. Jobs in physicians offices increased twice as fast as those in hospitals due to a number of factors. Besides the previously mentioned factors of widening insurance cover and the intensification of services there was a substantial increase in the supply of practitioners and a tendency for increasing numbers of doctors to eschew self-employment in favor of corporate status thereby becoming employees and entering into the health care statistics.

The even more rapid rise in employment in nursing and personal care homes appear to have been a function of three forces. First, there was a major expansion of private and non-profit nursing home capacity during the early 1970's. Second, the resulting overcapacity and the deteriorating standards led many states to institute closer supervision of the sector and to encourage improvements in quality. These led to the provision of more intensive services and a rise in the staff/patient ratios. Finally over the period there was a progressive shift of mental patients out of the hospital system and into nursing homes.

**7.2 Wage and Salary Employment in the Health Services Industry; 1972-84**  
(Employment in thousands)

Year	Total, all health industries	Offices of physicians	Offices of dentists	Offices of osteopaths <sup>2</sup>	Offices of other practitioners <sup>2</sup>	Nursing and personal care facilities	Hospitals <sup>1</sup>	Medical and dental laboratories	Outpatient care facilities	Health and allied services, not elsewhere classified <sup>2</sup>
1972	4,338.1	48.1	188.3	13.4	44.6	591.2	2,906.4	69.6	48.8	27.8
1973	4,590.3	497.5	205.3	14.9	50.5	659.0	3,000.8	75.4	54.6	31.4
1974	4,853.0	543.3	227.4	15.9	56.0	708.1	3,126.4	79.5	61.0	35.4
1975	5,125.5	580.5	247.4	16.7	60.2	759.3	3,265.4	84.2	70.4	41.3
1976	5,360.5	613.7	266.2	18.1	64.6	809.1	3,373.3	89.9	78.9	45.7
1977	5,615.7	645.9	286.6	19.8	70.9	860.0	3,497.0	93.5	88.9	53.2
1978	5,867.1	680.6	302.3	21.2	78.5	910.6	3,613.7	99.1	100.4	60.8
1979	6,101.1	716.8	322.0	22.6	88.0	950.8	3,716.7	102.2	113.0	69.0
1980	6,411.5	750.0	341.3	24.1	96.4	996.6	3,883.7	104.7	132.7	81.8
1981	6,699.2	786.8	359.9	25.1	108.9	1,023.9	4,041.2	107.5	149.2	91.7
1982	6,941.1	825.0	383.9	26.7	121.0	1,067.1	4,143.8	109.5	160.4	103.7
1983	7,103.0	867.2	406.7	28.0	134.6	1,106.6	4,151.5	111.6	171.9	125.1
1984	7,188.7	907.5	425.7	29.8	148.1	1,144.6	4,078.1	113.2	190.7	151.0
Average annual rate of change (in percent)										
1972-77	6.7	7.6	8.8	3.1	9.7	7.8	3.8	6.1	12.7	13.9
1977-82	4.3	5.0	8.2	6.2	11.3	4.4	3.5	3.2	12.5	14.3
1982-84	1.8	4.9	5.3	5.6	10.6	3.6	-0.1	1.7	9.0	20.7
1972-84	4.3	6.1	7.0	6.9	10.5	5.7	2.9	4.1	12.0	15.1

<sup>1</sup> sic 806 plus State and local government hospitals. Data exclude Federal Government hospitals.

<sup>2</sup> Unpublished BLS data.

NOTE: "Unpublished data" do not meet publication standards for accuracy and reliability and therefore are not official BLS estimates.

Source: Employment in Health Services: Long-term Trends and Projections, Anne Kahl and Donald E. Clark, **Monthly Labor Review** August 1986, U.S. Department of Labor, Bureau of Labor Statistics.

The three categories that experienced the fastest rates of growth all reflect a broadening in the variety of outpatient and domiciliary care and their increasing acceptance by both consumers and health care financiers alike. A good example of this is the formation of health maintenance organizations (HMO's). Fastest growing of all (15% p.a) was the expansion of employment in home health agencies.

Lastly, it is worth noting that the aging of the population and in particular the rapid growth of those over 85 years of age - who require the most labor-intensive support services - appears not to have played a major role in driving the sector's growth. This however is beginning to change and Bureau of Labor Statistics projections of future employment trends accord this factor an increasingly important place.

Data on consumer expenditure on health derived from family budget sources seems to accord with the health care statistics which show that at the end of the period consumers were paying directly a smaller proportion of the costs of providing an increasingly more sophisticated and diverse health care system. Over the period, average family health expenditure fell slightly in real terms, became a smaller part of the household budget and even fell at the aggregate level.

Since the number of households increased substantially over the period, the growth in health expenditures must have come from other than the personal sector. To the extent that this greater institutionalization of health care costs is reflected in the family budget expenditure, it may perhaps be seen in the previously noted rapid increase in spending on non-life insurance and social security payments.

### **Eating and Drinking Away From Home**

Within the retail sector, it was this category that had both the fastest rate of growth and made the biggest absolute contribution to the numbers of new jobs with over 2.3 M between 1973 and 1984. Unlike some of the other retail sectors - automobile dealers, service stations and furniture and home furnishing stores - eating and drinking establishments away from home not only expanded during the upswings but also continued to expand during the recessions and to do so at a sufficient rate to offset the job declines in other part of the retail sector.

Behind this performance lies, firstly, the shift from food consumption at home to food away from home and, secondly, the big increase in expenditures on alcoholic beverages (see Table 6.8).

While increased alcohol consumption may reflect to some extent a change in the accuracy of reporting between 1972/3 and 1980/1, this is not a complete explanation nor is it the case for food expenditures which have been following a long term trend in favor of away from home consumption. ( see table 7.3 ).

Looking at the output figures for the sector, it is interesting to note that while its rate of growth was respectable (2.5% p.a.) it was only just above that of the economy as a

Table 7.3: Changes in Pattern of Family Food Expenditures, 1960/1-80/1

	<u>% Distribution of Total Family Food Budget</u>		
	1960/1	1972/3	1980/1
Food at Home	83.0	71.9	67.6
Food Away from Home	<u>17.0</u>	<u>28.1</u>	<u>32.4</u>
	100.0	100.0	100.0

Source: Consumer Expenditure Survey, Diary Survey, 1980-81, p.2.

whole. What made the difference was the very positive relationship between output growth and jobs. As Table 6.10 shows, over the period 1969 to 1984, the rate of growth of employment was twice that of output.

One reason why this might have occurred is alluded to in a recent discussion of the causes of the expansion of the retail sector overall. Discussing the effects of various 'demographic and socio-economic developments' - such as the increased incidence of working women and numbers of people living alone - the author concludes that,

"one end product of these changes is the gradual emergence of a more affluent society, in which time has become a scarcer resource. This, in turn, has led to increased customer demand for convenience. Consumers have less time for shopping, and they want to be able to shop whenever time becomes available. As a result, many retail stores have not only increased in size and number, **but have expanded their hours of operation as well.** Both factors have resulted in the addition of more workers in retail trade, **particularly part-timers.** Probably the greatest impact of these developments has been in the eating and drinking and food store establishments."

If this is the case, and it seems plausible, then the rise in the labor-intensity of retail output is both a real and a statistical phenomenon. Lengthened opening hours means that output (sales) may not increase in the same proportion as the added labor required to service those sales, while a greater percentage of the added labor consists of part-timers who appear in the statistics as if they were full-timers. (40% of retail employment growth has been in part-timers compared to a 1973 baseline figure of 32%).

It is interesting to note in this context that while labor productivity in the retail trade overall registered a 1% per annum increase in average output per hour over the period this was not the case for eating and drinking establishments and food stores. Of the sub-sectors for which such data exist these were the only two that registered declines.

That a greater propensity to eat out has not adversely affected the sales of the food stores is attributed to the fact that as they have seen their food sales decline many large retailers have diversified into other areas in order to provide a form of 'one stop shopping'. Activities such as delis and salad bars, cheque cashing and film processing are now handled increasingly in the retail sector possibly at the expense of their provision elsewhere.

### **Auto Repair Services**

Expenditures on auto repair and services exhibit some seemingly contradictory tendencies. On the one hand, expenditures don't seem to have kept up with inflation (Table 6.4), while on the other, it now account for a slightly greater percentage of family budgets than previously (Table 6.6). Similarly at the aggregate level expenditures on auto repairs together with that on vehicles has been one of the larger contributors to the increase in aggregate demand over the period.(Table 6.8).

How changes in levels of expenditure have effected output and employment in auto repair is indicated in Table 6.10, from which it appears that although positive the rate of growth of output has not been particularly high compared to other service sectors. However, it is clear that auto repair services have a very favorable ratio of employment to output. In common with eating and drinking establishments, a 1% increase in output gives a 2% increase in employment levels.

### **Social Services**

In term of both its rate of growth and its absolute contribution, social service employment had few equals (739,000 jobs, a 134% increase).

However, it is difficult to see where it fits exactly into the family budget picture. While certain elements such as child care and personal care have experienced moderate real output growth, the corresponding employment to output relationships do not appear strong. These factors suggest that while part of the growth in the sector's jobs came from private consumption - possibly stemming from the child care demands produced by greater female participation rates - much came from the public sector whether at Federal or State level.

### **7.3 The Role of Housing and Housing Related Expenditures**

As the magnitude of the baby boom became clear, leading experts in the 1960's hypothesized that there would be a boom in the housing and construction industry. The 1968 Economic Report to the President predicted that 20m extra housing units would be needed during the 1970's to cope with the additional demand.

In fact, the boom that took place was larger than had been anticipated. As can be seen from Table 7.4, in 6 of the 10 years between 1970-1980, total housing starts and mobile home shipments exceeded 2 million units (nearly reaching 3m in one year),



Table 7.4: Housing Starts and Mobile Home Shipments: 1947-80

Table Housing Starts and Mobile Home Shipments, 1947-80  
Thousands

Year	Housing starts			Mobile home shipments	Housing starts plus mobile home shipments
	Total <sup>a</sup>	Single unit <sup>b</sup>	Multi-unit		
1947	1,292	n.a.	n.a.	60	1,352
1948	1,385	n.a.	n.a.	86	1,471
1949	1,489	n.a.	n.a.	46	1,535
1950	1,973	n.a.	n.a.	63	2,036
1951	1,514	n.a.	n.a.	67	1,581
1952	1,527	n.a.	n.a.	83	1,610
1953	1,461	n.a.	n.a.	77	1,538
1954	1,574	n.a.	n.a.	76	1,650
1955	1,668	n.a.	n.a.	112	1,780
1956	1,372	n.a.	n.a.	124	1,496
1957	1,248	n.a.	n.a.	119	1,367
1958	1,405	n.a.	n.a.	102	1,507
1959	1,554	1,251	303	121	1,675
1960	1,296	1,009	287	104	1,400
1961	1,365	989	376	90	1,455
1962	1,492	996	496	118	1,610
1963	1,635	1,013	622	151	1,786
1964	1,561	972	589	191	1,752
1965	1,510	965	545	216	1,726
1966	1,196	780	416	217	1,413
1967	1,322	845	477	240	1,562
1968	1,545	900	645	318	1,863
1969	1,500	811	689	413	1,913
1970	1,469	815	654	401	1,870
1971	2,085	1,153	932	497	2,582
1972	2,379	1,311	1,068	576	2,955
1973	2,057	1,133	924	567	2,624
1974	1,352	889	463	329	1,681
1975	1,171	896	275	213	1,384
1976	1,548	1,166	382	246	1,794
1977	2,002	1,451	536	277	2,267
1978	2,036	1,433	587	276	2,299
1979	1,760	1,194	551	277	2,026
1980	1,313	852	440	229	1,542

Sources: Bureau of the Census, *Historical Statistics of the United States: Colonial Times to 1970* (GPO, 1975), pt. 2, ser. N 156-70, pp. 639-40; Bureau of the Census, *Construction Reports*, series C20, no. 82-1 (GPO, 1982), tables 1, 6; and author's estimates. Figures are rounded.

n.a. Not available.

a. Farm plus nonfarm. Housing starts for 1947-58 are author's estimates based on a regression of total on nonfarm starts for 1959-69. Nonfarm starts for 1947-58 were adjusted upward by means of the regression.

b. Private starts only.

Source: Louise B Russell, *ibid*, p104.

something only achieved once in the preceding 23 years. This performance can be disaggregated into 3 components.

- Required additions calculated on the basis of household incidence rates at the beginning of any 5 year period.
- Actual additions being the increased number of households over the 5 year period resulting from the changes in age structures plus changes in household incidence rates over the period from that age cohort.
- Housing starts being the actual numbers of new units constructed.

As can be seen from Table 7.5, actual additions substantially exceeded required additions because of the rise in the number of 'primary individual' households. Housing starts have exceeded actual additions to the number of households because of the need to replace other housing, the effect of inter-regional migrations, the growth of second homes and speculative building.

Given the existence of such a boom, it might be expected that employment would have risen substantially in a number of subsectors. In particular:

- in residential construction workers
- in the wholesale and retail sectors supplying construction materials
- in employment in supporting utility infrastructures
- in extra real estate and building management services.

As Table 7.6 shows, the employment trends in these sectors are quite diverse with respect to both their rate of growth and the scale of their job creation efforts. While most have experienced above average rates of growth, the construction industry itself has been far from dynamic.

Table 7.5: The Components of Housing Growth 1970-80

	Basic Needs of Age Cohort (Required Additions)	Additions Due to Changed Incidence Rates	Actual Additional Households	Additions for Replacement Migrants Speculation	Total Starts
1970-75	5187	+2529	7716	+3996	11712
1975-80	6008	+1952	7960	+1810	9770
Total	11195	+4481 =	15676	+5806 =	21482

Source: Adapted from data in Louise B Russell, *ibid.*

Table 7.6: Household Construction and Related Services: Absolute and Percentage Increase in Employment 1973-84 (000's)

	<u>Absolute</u> %
<u>Construction</u>	
Residential Building Construction	-14
Electric, Gas and Sanitary Services	167 (22.9)
<u>Fitting Out</u>	
Lumber & Construction Material Suppliers (Wholesale)	55 (37.2)
Building Materials (Retail)	139 (26.1)
Hardware, Plumbing & Heating (Wholesale)	38 ( )
<u>Furniture &amp; Fittings</u>	
Wholesale	32 (37.3)
Retail	119 (22.3)
Electrical Appliances	125 (36.4)
<u>Financial Services</u>	
Savings and Loan Associations	177 (128.9)
Real Estate Offices	318 (41.4)
<u>Services</u>	
Services to Buildings	252 (69.2)

Source: Based on Establishment data.



PART FOUR            CONCLUSIONS8.    Conclusions

The data and analysis presented in the previous sections point towards a number of general conclusions concerning the role of demographic factors in U.S. job creation. These can be summarized as follows:

- (a) Large scale net job creation and the coming of age of the baby boom generation were contemporaneous phenomena. The accompanying growth path of the economy during the period was one characterized by,
- stagnant labor productivity
  - low earnings growth especially for males
  - a redistribution of life chances away from the younger age household groups toward middle and late age household groupings.

While exogenous factors, such as the two oil price shocks, clearly played a major part in disrupting historical growth trends, there is a considerable body of opinion that holds that the rapid improvement of the labor supply position caused by the baby boom coming of age acted to discourage labor-saving investment and to dampen wage increases. According to this interpretation, demographics would seem, therefore, to have played a substantial role in establishing the basis of the subsequent economic dynamic.

- (b) In the absence of some compensating factors, stagnant or declining real earnings would on their own have led to reduced household and per capita incomes and, other things being equal, lower levels of consumer expenditure. Instead consumer expenditure at the per capita level was maintained. As we have noted, other things did not remain equal as various forms of adjustment occurred.
- increased female labor market participation
  - the postponement of marriage and of child bearing
  - the curtailment of family size
  - a fall in the savings ratio
  - increased recourse to credit

In addition, the rise in the extent of self-employment and in business formation rates may have been yet one more of these adjustments (in particular the high and rising trend in business formation rates among women). While some of these factors fall within the broad area of demographic change, it is a moot point what their relationship was to the problem of earnings and income levels.

At one extreme, there are commentators such as Levy and Michel who argue that the adjustments were all endogenously determined.

"The decade of the 1970's was thus the inverse of the 1950's. In the 1950's, wages were rising smartly but per capita income grew slowly because families were feeling sufficiently prosperous and optimistic to buy the most important consumption good of all - children - and in large quantities. In the 1970's, wage stagnation left individuals with two choices: decrease consumption or increase income through 'quality of life' demographic accommodations. They chose the latter." \*

Other commentators differ and point to the fact that rising female participation rates began in the 50's and 60's and that the 1970's were nothing more than the continuation of a historic trend, possibly accentuated by a gradual shift in female role perceptions.

Under this interpretation, rather than women being driven into the labor market by economic necessity, they opted for it as a conscious preference. Clearly, both necessity and choice were at work with the balance between them depending on income level, education, etc. However, their joint effect was to further increase labor supply with an additional dampening impact on earnings and incomes.

- (c) As a result of the various forms of adjustment, real incomes and spending per capita were able to rise. What changed from previous periods was that the distribution of that spending was somewhat different,
- it was based on a rapid increase in the number of households rather than greater incomes per household.
  - it increasingly required more than one wage earner to achieve it.
  - it was skewed more to those older age group with an established place in the jobs and housing markets than to labor force entrants
- (d) That the increase in aggregate demand principally derived from the existence of more households, especially of the non-traditional variety, doesn't seem to have had a profound effect on overall expenditure patterns. More significant in terms of expenditure pattern changes appears to have been the rapid rise in real energy costs and the greatly inflated cost of housing. In many ways, household expenditures have been obliged to 'stick to basics'; food, shelter and transportation. The exceptions to this seem to have been expenditures in the entertainment areas and the growing tendency towards vacationing by older workers and retirees.
- (e) The fact that increasingly two incomes were needed to make ends meet meant that either wage earners had to accept less leisure - in order to fit in both domestic chores and the

job - or they would need to buy in the particular service they no longer had time to carry out themselves. Both responses seemed to have occurred with the result that expenditure on food and drink away from home, child care, cleaning services have all grown.

- (f) What appears to have been more important than any acceleration in the rate of growth in certain categories of expenditure has been the fact that employment areas such as eating and drinking places and auto repair and service possessed very high incremental labor intensities. These in turn appear to be a product of the drive to provide 'convenience' to a consuming public for whom discretionary time - i.e time other than that require for work or household maintenance functions - was becoming an increasingly scarce commodity.
- (g) An examination of the largest contributors to net job growth further suggests that factors other than demographics appear to have been paramount. In particular in the massive health sector it appears to have been a product of unrestrained technological change, at least for the earlier part of the period and by no concern over the immediate consumer's capacity to pay for the service courtesy of some very liberal financing arrangements.
- (h) Overall, therefore, it would seem that demographic factors were contextually important as one of the principal economic challenges of the period and also played a role in the response to it. However, there is no strong evidence that demographically induced changes in the level or distribution of consumer expenditure had marked direct effects on employment growth except in a few small sub-sectors such as legal and social services and apparel and accesories. There is somewhat more evidence that, to the extent that increased woman's laborforce participation was a response to stagnant earnings caused by demographic factors, then the employment created by the commercialization of previously subsistence or household production in the interest of 'convenience' could be attributed to demographic change.





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