

## **Part I**

### **GOALS**

Macroeconomic policy is used in attempting to attain certain goals. For example, a newly elected president will announce that it is his or her goal to reduce both unemployment, inflation and the government deficit. Less commonly the President will speak about improving the balance of payments, of increasing the rate of growth of the economy and improving the distribution of income.

The chapters in Part I of these notes discuss each of these goals. The chapters begin with a review of the successes and failures of past Presidents in meeting their goals. This is followed by a more precise definition of the goal. Frequently, a goal cannot be represented adequately by a single variable so it is necessary to discuss the structure of the goals. For example, while most people care only about the overall level of unemployment, some are concerned with the level of unemployment for certain groups such as teenagers, women, or minority groups. Following a discussion of the structure of the goal, the effects of changes in the goal on various groups in the society are elaborated. Finally, the preferred level of the goal is discussed.

The next chapter is on unemployment and the following five chapters are about inflation, the balance of payments, growth, income distribution and the government deficit.

## **2**

### **Unemployment**

The unemployment rate normally varies between three and ten percent though it has been greater than twenty per cent in times of serious depression. A six percent unemployment rate means that six out of every one hundred people who want to work cannot find jobs. Since there are roughly 100 million people in the work force in the United States, a six percent unemployment rate would mean that about 6 million people who want work cannot find it.

This chapter begins with a review of unemployment rates in the United States since the end of World War II. The review is organized by presidential terms in order to provide an indication of the political setting. After the historical review there is a section on the precise definition of the unemployment rate. Then the structure of unemployment is elucidated. As was discussed above this means an analysis of unemployment rates among various groups in the population, i.e. male and females, blacks and whites, teenagers and adults. It is shown that females, blacks, and teenagers suffer relatively higher rates of unemployment. The chapter closes with discussion of the effects of unemployment and the preferred level of unemployment.

### **Experience**

#### **Harry S. Truman (HST)**

As Figure 2.1 shows there was a period of low unemployment after the Second World War followed by high unemployment during a sharp recession in 1949. Then the Korean War began and unemployment reached a low of 3 percent.

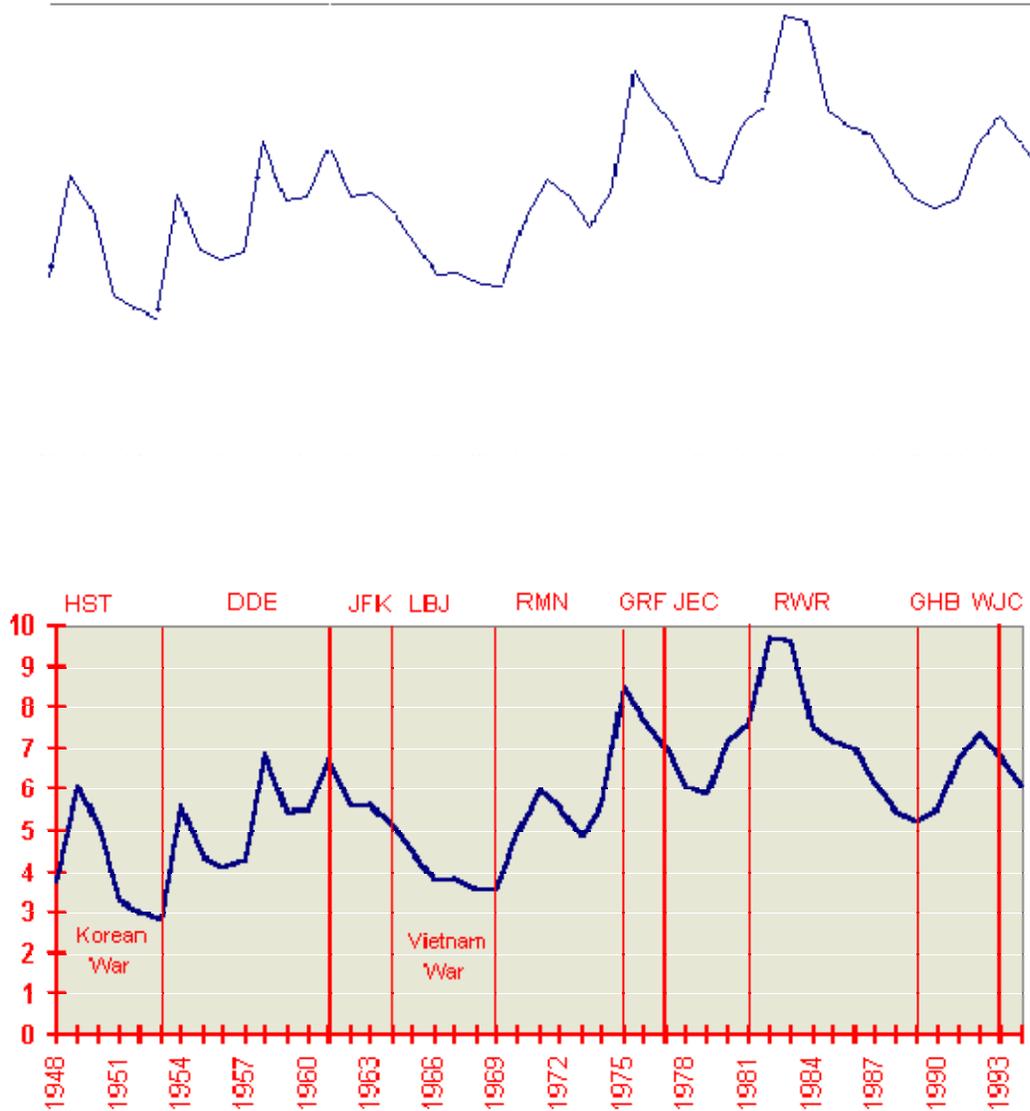


Fig. 2.1 Unemployment Rate - Percent

### Dwight David Eisenhower (DDE)

When Eisenhower entered office he quickly made peace and began to preach in favor of a balanced budget. The combination resulted in unemployment increasing to almost 6 percent. There were two other serious economic downturns during the Eisenhower era - in 1959 and in late 1960. In order to mitigate their effects the Eisenhower Administration did not call them recessions or depression, but rather 'rolling readjustments'.

### **John F. Kennedy (JFK)**

John Kennedy inherited the last of these rolling readjustments and indeed used it to gain a victory over Richard Nixon. Keynesian economics reached the peak of its success during the Kennedy Administration. The Council of Economic Advisors consisted of Walter Heller of The University of Minnesota, Gardner Ackley of The University of Michigan and James Tobin of Yale University. These three convinced the President to use a combination of expenditure increases and tax cuts which decreased unemployment from 7 to 5.5 percent.

### **Lyndon Baines Johnson (LBJ)**

It remained for Lyndon Johnson and the Vietnam War to complete Kennedy's unfinished work. By the time Johnson chose not to run for another term in 1968 unemployment had reached a low of about 3.5 percent.

### **Richard M. Nixon (RMN)**

When Richard Nixon assumed power unemployment was extremely low but inflation was high by the standards of the time (5 percent). So what did he do to stop the inflation? He followed the advice of many economists and cut the rate of growth of government spending in order to induce a recession and thereby reduce the rate of inflation. This worked. Inflation slowed but only at the terrible cost of soaring unemployment. Unemployment rose from 3.5 to 6.0 percent - throwing 2.5 million people out of work.

Then politics worked its wonders. Nixon faced Democratic majorities in both the House and the Senate and he worked hard in the mid-term Congressional elections to decrease the size of these majorities. However the state of the economy was so bad that he failed in this endeavor. Being quick to learn, he saw the handwriting on the wall for his own presidential re-election attempt in 1972 if he did not decrease the unemployment rate. So first he began to increase government spending and then he initiated wage and price controls in August of 1971. The combination was most successful. He won easily in 1972. However, trouble lay ahead. Not only was the possibility of his impeachment nearing but also OPEC actions were rapidly driving up the price of oil. Also, food prices were rising due to the wheat crop failure in the Soviet Union and the ensuing wheat deal with the United States. The Administration decided to fight the inflation by decreasing the rate of growth of government spending. American consumers responded to the higher gasoline prices by shunning Detroit and turning to smaller, more efficient foreign cars. The result was one of the sharpest recessions the U.S. economy has ever experienced. Unemployment rose from 5 percent in 1974 to 9 percent in 1975 - an increase of four million people on the jobless role.

### **Gerald R. Ford (GRF)**

Ford began his administration with an aborted attempt to fight inflation with his WIN campaign; however this was quickly turned into a battle against unemployment with rather good effect. Unemployment fell by almost one and a half percent in Ford's brief administration.

## **James Earl Carter (JEC)**

When Jimmy Carter entered the White House unemployment was about 8 percent and within two years he had driven it down to less than 6 percent. Then the Iranian crisis occurred, oil prices rose again, and the U.S. auto industry went into another slump. Carter became convinced that he had to fight inflation rather than unemployment if he was to be re-elected. Moreover, he could not repeat Richard Nixon's strategy of using wage and price controls to fight inflation because he did not have the Congressional authority to impose wage and price controls. So he began to slow down the rate of growth of government spending. This resulted in unemployment going back up to almost 8 percent and had little or no effect in slowing the inflation. This contributed sharply to Carter's defeat in November of 1980.

## **Ronald W. Reagan (RWR)**

President Reagan inherited a high unemployment rate from Jimmy Carter and planned to decrease it with increased economic activity in the private sector. However, he also wanted to decrease the rate of growth of government spending and the balance between these two actions resulted in increased unemployment in the first year or so of his first term. In part this resulted from the fact that the government spending decreases which he requested were put into effect rather quickly while the tax cuts were spread out over a three year period.

By the time of the mid-term elections of 1984 the build-up in defense expenditures and effects of the personal income tax had begun to show their effects. The unemployment rate was back down to the 7.5 percent level that Reagan had inherited from President Carter. Reagan's success in the 1984 elections in contrast with Carter's failure of in the 1980 elections is a good example of the so-called V- $[\lambda]$  or "Vee-Lambda" theory. The unemployment rate during Carter's presidency made a V, i.e. in the first two years of his presidency he worked hard to reduce the employment which was causing so much hardship. However, in 1979 the Iranian oil crisis occurred. This caused another rise in oil prices followed by a broad increase in prices. Carter turned to fight this inflation and let the unemployment rate rise. Thus the V - but not V for victory.

In contrast unemployment followed a lambda,  $[\lambda]$ , in Reagan's first term. There was an initial cut in the rate of growth of government expenditures which increased unemployment. However, the increase in defense expenditures took some time to take effect because appropriations had to be increased by Congress and new projects developed and funded. Also, the Congress did not give Reagan the immediate 25 percent cut in personal income taxes that he requested. Rather they strung it out over three years in installments of 5, 10, and 10 percent. The result of all this was that unemployment rose during Reagan's first year in office to almost ten percent, held steady for a year at about that level and then plunged to 7.5 percent before the 1984 elections - a beautiful  $[\lambda]$ . The American people responded by re-electing Reagan for another four year term.

In his second term Reagan succeeded in continuing to drive the unemployment rate down and to maintain his perfect lambda. By the end of Reagan second term he had driven the unemployment rate lower than it had been at any time since the Nixon administration. In fact, another nice

example of the V-[[Lambda]] theory is the lambda which Richard Nixon followed during his first term of office before he soundly beat George McGovern in the 1972 presidential election.

### **George Herbert Bush (GHB)**

President Bush got a good start with a five and a half percent unemployment rate which Ronald Reagan passed along to him. But could he keep it that low? No. A year and half into the Bush years one of the longest expansions every came to an end and the unemployment rate begin to rise toward seven percent. The rise in the unempolyment rate continued during the Bush years turning down only in final quarter. So while the chart shows that he ran a belated lambda, to the voters in November of 1992 his record look like a forward slash, i.e. "/". This was a major contributor to his defeat by Bill Clinton.

### **Bill Clinton (WJC)**

Clinton began his presidency at the top of George Bush's slash and was able to bring the unemployment rate down steadily. So far he has run a backward slash, i.e. a "\". However, he runs the risk that his backward slash will turn into a V in the last year of his four year term.

### **Definition**

The rate of unemployment is the percentage of people who want work (and who are therefore in the labor force) but who do not have it. It may be defined as mathematically as

$$U = (L - E) / L$$

where

U = unemployment rate

L = labor force

E = employment

Thus the unemployment rate is equal to the number of people unemployed (L - E) divided by the labor force, E. The labor force does not include those who do not want to work. Thus when there is a rise in the percentage who want to work there is a commensurate rise in the unemployment rate. A recent example of this is the increase in the number of women who have entered the labor force.

### **Alice's Problem**

In Lewis Carroll's *Alice in Wonderland* Alice is overheard to remark on one occasion that it is sometimes necessary to run fast in order to simply remain in the same place. Presidents of the United States must frequently feel like Alice as they try to increase employment as rapidly as the labor force grows in order to simply hold the unemployment rate where it is. Of course the

problem is exacerbated not only by population growth but also by a change in the age distribution which frequently finds more young people entering the labor force each year than old people retiring.

### **Labor Force Participation Rates**

The labor force participation rate of women (the percentage of women of working age who have jobs or who are seeking employment) has been rising (see Figure 2.2). The increase in women

[Click here for Picture](#)

Fig. 2.2 Labor Force Participation Rate

in the labor force has been partly offset by a decline in the labor force participation rate of males; however, the female rate has been rising more rapidly than the male rate has been falling.

### **The Structure of Unemployment**

It is not only the overall unemployment rate which is important but also the structure of unemployment. For example, unemployment rates are higher for females than for males, for blacks than for whites, and for teenagers than for adults. As Figure 2.3 shows, until recently the unemployment rate among males was usually about one or two percent lower than the unemployment rate

[Click here for Picture](#)

Figure 2.3 Unemployment Rate by Sex (percent)

for females. However, in recent years the rates have begun to converge and at time the male unemployment rate has even been higher than the female unemployment rate. At least in this dimension it would seem that inequality between the sexes is diminishing.

The unemployment rate for blacks is four to six percent higher than the rate for whites (Figure 2.4). The argument has been made that blacks are hurt more by recessions than are whites. To the casual eyes there seems to be some truth to this. Look at the differences at the peaks and troughs in Figure 2.4.

[Click here for Picture](#)

Figure 2.4 Unemployment Rate by Race (percent)

The unemployment rate for teenagers is ten to fifteen percent higher than for other workers (Figure 2.5).

[Click here for Picture](#)

Figure 2.5 Unemployment Rate by Age (percent)

## Effects

### The Preferred Level

Different people have different preferences about the unemployment rate. For example, if you are in the lower part of the income distribution and working in an industry that fluctuates substantially with the ups and downs in the economy you may have a strong preference for a low unemployment rate and not care too much about the inflation rate. If on the other hand, you are a retired person living on a fixed pension the unemployment rate would not matter much to you but you would want the rate of inflation to be very low.

## 3

## Inflation

### Experience

It is difficult for the present generation of students to think about an economy in which there is not some inflation. However, their grandparents and great-grandparents remember well a time when the inflation rate was negative - a time when prices fell - namely the Great Depression. So surely prices can fall. But can there be good times when prices are falling? It seems hard to believe now but there was a time for almost a hundred years in Europe in the 19th century when wages were roughly constant and prices fell as labor productivity increased. Of course it is difficult to imagine the repetition of that kind of era in today's world. There have also been times of very high inflation rates - even as high as several hundred percent. Examples are the hyperinflation in Germany between the First and Second World Wars and the inflation which plagued Chile in some recent years.

Figure 3.1 shows that there was a high rate of inflation during the Korean War and that the inflation rate gradually increased during

[Click here for Picture](#)

Fig. 3.1 Rate of Inflation

the Vietnam War. The two recent spikes of inflation in 1974 when OPEC sharply increased oil prices and 1980 during the Iranian Crisis were primarily due to increases in energy and food prices. Also, inflation fell sharply during the Reagan administration due to the high levels of unemployment and to the sharp decreases in the rate of price increases in fuel and food. It rose during the early years of the Bush administration but turned down again in the midst of the recession in 1991 and continue to fall during the first two years of the Clinton Administration.

## Definitions

rate of inflation = [Click here for Picture](#)

### **Structure of Price Changes**

Look at price changes in various sectors - inflation may not be general but rather concentrated in certain sectors such as food.

### **Types of Inflation**

Cost-push Labor cost rising faster than productivity

Demand-pull Higher Demand

Commodity Changes in relative prices. Supply-side shock.

Momentum Inertia, viz cost of living adjustments (COLAs)

Pure Monetary Inflation Too much money

### **Effects of Inflation**

and therefore on the growth of the economy

### **Preferred Level of Inflation**

Some people gain during times of inflation and others lose so the preferred level depends on the individual. The society as a whole prefers lower rates of inflation.

**4**

## **BALANCE OF PAYMENTS**

### **Experience**

### **Net Exports**

See Figures 4.1 thru 4.3.

[Click here for Picture](#)

Figure 4.1 Net Exports (billion 87 dollars)

Net exports are equal to exports minus imports so a decline in net exports may be caused either by declining exports or rising imports. For example during the Vietnam war years of the Johnson Administration U.S. income was rising rapidly and we imported more goods with the result that net exports fell. The same thing happened during the middle years of the Reagan administration.

This trend in the Reagan years was exacerbated by the fact that the U.S. dollar was revalued in the early Reagan years making it cheaper to buy imported goods such as Japanese cars. Note also that the downturns in the U.S. economy after the oil shocks of 1973 and 1979 resulted in less imports and therefore improvements in net exports. The same kind of thing happened during the Bush years when the economy turned down and imports fell to cause a rise in net exports. Also, in the later Reagan years the U.S. dollar was devalued and this made imported cars and other imported products more expensive.

[Click here for Picture](#)

Figure 4.2 Imports of Petroleum Products, millions of dollars

imports of oil = f (U.S. income, price of foreign oil)

Figure 4.2 is difficult to read because it is in value rather than in quantity terms. Thus a rise in imports such as that shown between 1973 and 1981 could be caused either by an increase in oil prices or by constant prices accompanied by an increase in the number of barrels of oil imported. This aside, however, most of the big movements in Fig. 4.2 in recent years were caused by price changes more than by quantity changes. For example the substantial oil price increase in 1973 is mirrored in the increased value of imports in that year. Also the large increase in oil prices in 1979 is clearly shown in the figure as is the decline in oil prices in the early years of the Reagan administration. However, it was also true that the high oil prices in the late 1970 resulted in increased oil production in the U.S. and therefore resulted in a decline in the number of barrels imported in the early 1980's. As oil prices fell and then stabilized in the 1980's U.S. production declined and the number of millions of barrels per day of imports increased again.

[Click here for Picture](#)

Figure 4.3 Imports of Automobiles and Parts (87 dollars, millions)

The most striking aspect of Fig. 4.3 is the sharp rise in imports of automobiles to the U.S. in the middle Reagan years. This was caused by a combination of rising income levels and by the revaluation of the dollar in the early years of the Reagan Administration.

imports of autos = f ( U.S. income, price of U.S. autos / price of foreign autos)

### **Exchange Rates**

See Figures 4.4 and 4.5.

[Click here for Picture](#)

Figure 4.4 U.S.- Japanese Exchange Rate (yen per dollar)

Income elasticity of demand

Higher for Japanese exports than for U.S. exports

Expanding markets, viz food has a low income elasticity of demand and autos have a high income elasticity of demand.

[Click here for Picture](#)

Figure 4.5 U.S.- German Exchange Rate (marks per dollar)

### **Definitions**

### **Net Exports**

Net Exports = Exports - Imports

### **Exchange Rate**

Foreign Exchange Calculations

Example of devaluation of the dollar relative to the yen

1978 - 280 yen / dollar 1989 - 150 yen / dollar 1994 - 100 yen / dollar

Consider a Japanese car that cost 2.0 million yen in 1977

(2.0 million yen) / (280 yen per dollar)

$$= 2,000,000 / 280 = (2 \times 10^6) / (.28 \times 10^3) = 7.143 \times 10^3$$

= 7,143 dollars

In 1989 the car would have cost

(2.0 million yen) / (150 yen per dollar)

$$= 2,000,000 / 150$$

= 13,333 dollars

In 1994 the car would have cost

(2.0 million yen) / (100 yen per dollar)

$$= 2,000,000 / 100$$

= 20,000 dollars

## **Effects**

International Trade

Exporters - devaluation

Importers - Revaluation

Labor Force

International Power

## **Preferred Level**

Traders

Want Stable Exchange Rates

Unions

They want low exchange rates in order to hold jobs here, but  
they also want high exchange rate when buying imported goods.

Exporters

Importers

**5**

## **Growth**

### **Experience**

See Figure 5.1.

[Click here for Picture](#)

Figure 5.1 Gross National Product Growth Rate (percent)

### **Definitions**

Valued added = sales - cost of material inputs

Current and constant dollar GNP

## **Effects**

## **Foreign Policy**

Military strength and dependence on imports

Income Distribution (in U.S. and among countries)

## **Resource Use**

## **Pollution**

## **Preferred Level**

Review arguments in "effects" above

## **6**

## **Income Distribution**

## **Experience**

## **Factor Shares**

See Figure 6.1.

## **Size Distribution**

Quintile Income  
Distribution  
from H. P. Mueller  
Rich Man Poor Man

|        |    |
|--------|----|
| lowest | 4  |
| second | 9  |
| middle | 14 |
| fourth | 21 |
| fifth  | 52 |

Cumulative for Gini

|        |    |
|--------|----|
| lowest | 4  |
| second | 13 |

|       |        |     |
|-------|--------|-----|
|       | middle | 27  |
|       | fourth | 48  |
| fifth |        | 100 |

[Click here for Picture](#)

[Click here for Picture](#)

## Definitions

## Factor Shares

Wages, profits, rents and interests

## Size Distribution

Quintiles

Lorenz Curve

The Gini ratio can be defined as

Gini ratio = (area A) / (area A + area B)

So a low Gini ratio means substantial equality. The U.S. ratio is .4 at present.

[Click here for Picture](#)

[Click here for Picture](#) Percentage of Total Income Received by the Top Quintile

## Structure

### Male - Female

In 1970 mean earnings for males was \$9,918 and for females it was \$5,675.

### Black - White

The median income in 1969 for workers with year-round full-time jobs (in thousands of dollars) was

1969 1987

Male Female Male Female

Hispanic 18 15

Black 5.9 4.1 19 16

White 9.0 5.2 27 17

1987 figures from Austin American Statesman 9/5/88

### **Effects**

Roughly speaking the income distribution becomes more equal in times of full employment and less equal in times of high unemployment.

### **Optimum**

### **Equal Opportunity**

### **Equal Income**

7

### **Government Budget Deficit**

### **Experience**

See Figure 7.1.

[Click here for Picture](#)

Figure 7.1 Federal Government Surplus or Deficit

[Click here for Picture](#)

Figure 7.2 Federal Gov't Surplus or Deficit as a Percent of GNP

### **Definitions**

### **Structure**

### **Effects**

### **Optimum**