

LECTURE 3 (Chapter 22)

UNEMPLOYMENT, INFLATION AND LONG-RUN GROWTH

Outline of today's lecture:

1. Long-Run Output and Productivity Growth
2. Recessions, Depressions, and Unemployment
3. Inflation

(1) LONG-RUN OUTPUT AND PRODUCTIVITY GROWTH

output growth The growth rate of the output of the entire economy.

per-capita output growth The growth rate of output per person in the economy.

productivity growth The growth rate of output per worker.

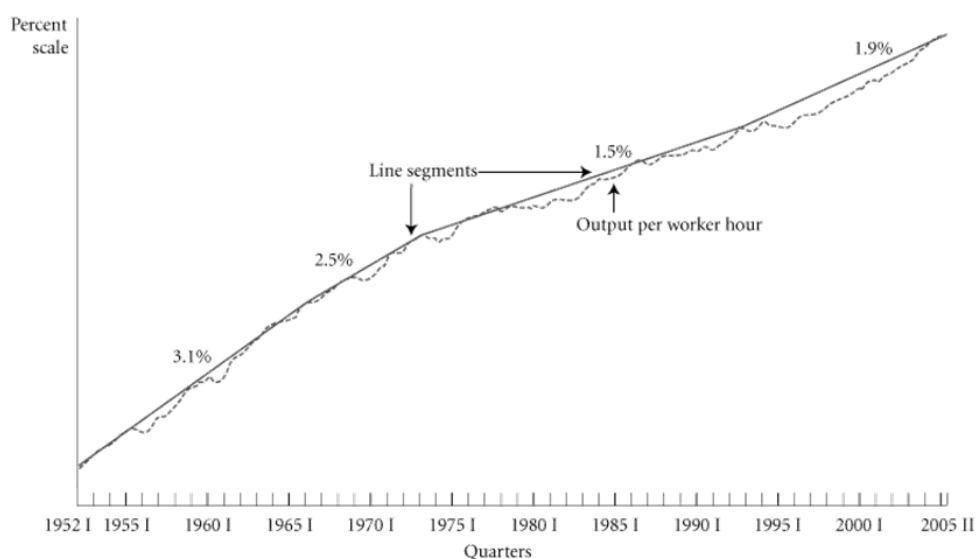


FIGURE 7.1 Output per Worker Hour (Productivity), 1952 I–2005 II

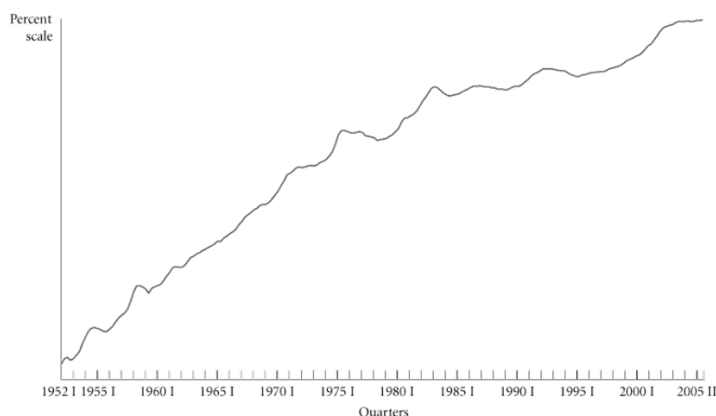


FIGURE 7.2 Capital per Worker, 1952 I–2005 II

(2) RECESSIONS, DEPRESSIONS, AND UNEMPLOYMENT

recession Roughly, a period in which real GDP declines for at least *two consecutive quarters*.

- Marked by falling output and rising unemployment.

depression A prolonged and deep recession.

- *The precise definitions of prolonged and deep are debatable.*

TABLE 7.1 Real GDP and Unemployment Rates, 1929–1933 and 1980–1982

THE EARLY PART OF THE GREAT DEPRESSION, 1929–1933

YEAR	PERCENTAGE CHANGE IN REAL GDP	UNEMPLOYMENT RATE	NUMBER OF UNEMPLOYED (MILLIONS)
1929		3.2	1.5
1930	–8.6	8.9	4.3
1931	–6.4	16.3	8.0
1932	–13.0	24.1	12.1
1933	–1.4	25.2	12.8

Note: Percentage fall in real GDP between 1929 and 1933 was 26.6 percent.

THE RECESSION OF 1980–1982

YEAR	PERCENTAGE CHANGE IN REAL GDP	UNEMPLOYMENT RATE	NUMBER OF UNEMPLOYED (MILLIONS)	CAPACITY UTILIZATION (PERCENTAGE)
1979		5.8	6.1	85.2
1980	–0.2	7.1	7.6	80.9
1981	2.5	7.6	8.3	79.9
1982	–1.9	9.7	10.7	72.1

Note: Percentage increase in real GDP between 1979 and 1982 was 0.1 percent.

Sources: *Historical Statistics of the United States* and U.S. Department of Commerce, Bureau of Economic Analysis.

employed Any person 16 years old or older

- (1) who works for pay, either for someone else or in his or her own business for *1 or more hours per week*;
- (2) who works without pay for *15 or more hours per week* in a family enterprise; or
- (3) who has a job but has been *temporarily absent*, with or without pay.

unemployed A person 16 years old or older who is not working, is available for work, and has made specific efforts to find work during the *previous 4 weeks*.

not in the labor force A person who is not looking for work, because he or she either does not want a job or has given up looking.

labor force The number of people employed plus the number of unemployed.

$$\text{labor force} = \text{employed} + \text{unemployed}$$

$$\text{population} = \text{labor force} + \text{not in labor force}$$

unemployment rate The ratio of the number of people unemployed to the total number of people in the labor force.

$$\text{unemployment rate} = \frac{\text{unemployed}}{\text{employed} + \text{unemployed}}$$

labor force participation rate The ratio of the labor force to the total population 16 years old or older.

$$\frac{\text{unemployed}}{\text{employed} + \text{unemployed}}$$

TABLE 7.2 Employed, Unemployed, and the Labor Force, 1953–2004

	(1)	(2)	(3)	(4)	(5)	(6)
	POPULATION 16 YEARS OLD OR OVER (MILLIONS)	LABOR FORCE (MILLIONS)	EMPLOYED (MILLIONS)	UNEMPLOYED (MILLIONS)	LABOR FORCE PARTICIPATION RATE	UNEMPLOYMENT RATE
1953	107.1	63.0	61.2	1.8	58.9	2.9
1960	117.2	69.6	65.8	3.9	59.4	5.5
1970	137.1	82.8	78.7	4.1	60.4	4.9
1980	167.7	106.9	99.3	7.6	63.8	7.1
1982	172.3	110.2	99.5	10.7	64.0	9.7
1990	189.2	125.8	118.8	7.0	66.5	5.6
2000	212.6	142.6	136.9	5.7	67.1	4.0
2004	223.4	147.4	139.3	8.1	66.0	5.5

Note: Figures are civilian only (military excluded).

Source: Economic Report of the President, 2005, Table B-35.

- There are large differences in unemployment rates across demographic groups.

TABLE 7.3 Unemployment Rates by Demographic Group, 1982 and 2005

	YEARS	NOVEMBER 1982	JULY 2005
Total		10.8	5.2
White		9.6	4.4
Men	20+	9.0	3.4
Women	20+	8.1	4.3
Both sexes	16–19	21.8	13.4
African-American		20.2	10.2
Men	20+	19.3	8.3
Women	20+	16.5	8.9
Both sexes	16–19	51.1	36.4

Source: U.S. Department of Labor, Bureau of Labor Statistics. Data are not seasonally adjusted.

- The national unemployment rate does not tell the whole story. A low national rate of unemployment does not mean that the entire nation is growing and producing at the same rate.

TABLE 7.4 Regional Differences in Unemployment, 1975, 1982, 1991, and 2003

	1975	1982	1991	2003
U.S. avg.	8.5	9.7	6.7	6.0
Cal.	9.9	9.9	7.5	6.7
Fla.	10.7	8.2	7.3	5.1
Ill.	7.1	11.3	7.1	6.7
Mass.	11.2	7.9	9.0	5.8
Mich.	12.5	15.5	9.2	7.3
N.J.	10.2	9.0	6.6	5.9
N.Y.	9.5	8.6	7.2	6.3
N.C.	8.6	9.0	5.8	6.5
Ohio	9.1	12.5	6.4	6.1
Tex.	5.6	6.9	6.6	6.8

Sources: Statistical Abstract of the United States, various editions.

discouraged-worker effect The decline in the measured unemployment rate that results when people who want to work but cannot find jobs grow discouraged and stop looking, thus dropping out of the ranks of the unemployed and the labor force.

- It can lower the unemployment rate.
 - Suppose there are 10 million unemployed out of a labor force of 100 million.
 - This means that the unemployment rate is 10% ($=10/100=0.1$ or 10 %).
 - If 1 million of these 10 million unemployed people stop looking for work and drop out the labor force, there would be 9 million unemployed out of a labor force of 99 million.
 - The unemployment rate would then drop to 9.1 % ($9/99=0.091$ or 9.1 %).

TABLE 7.5 Average Duration of Unemployment, 1979–2004

	WEEKS		WEEKS
1979	10.8	1992	17.7
1980	11.9	1993	18.0
1981	13.7	1994	18.8
1982	15.6	1995	16.6
1983	20.0	1996	16.7
1984	18.2	1997	15.8
1985	15.6	1998	14.5
1986	15.0	1999	13.4
1987	14.5	2000	12.6
1988	13.5	2001	13.1
1989	11.9	2002	16.6
1990	12.0	2003	19.2
1991	13.7	2004	19.6

Sources: U.S. Department of Labor, Bureau of Labor Statistics.

- When we consider the various costs of unemployment, it is useful to categorize unemployment into three types:
 - *Frictional unemployment*¹
 - *Structural unemployment*²
 - *Cyclical unemployment*³

frictional unemployment The portion of unemployment that is due to the normal working of the labor market; used to denote short-run job/skill matching problems.

structural unemployment The portion of unemployment that is due to changes in the structure of the economy that result in a significant loss of jobs in certain industries.

¹ Geçici işsizlik (in Turkish).

² Yapısal işsizlik (in Turkish).

³ Konjonktürel işsizlik (in Turkish).

natural rate of unemployment The unemployment that occurs as a normal part of the functioning of the economy.

- Sometimes taken as the sum of frictional unemployment and structural unemployment.

cyclical unemployment The increase in unemployment that occurs during recessions and depressions.

- In addition to economic hardship, prolonged unemployment may also bring with it social and personal ills: anxiety, depression, deterioration of physical and psychological health, drug abuse (including alcoholism), and suicide.
- Recessions may help to reduce inflation!

TABLE 7.6 Inflation Rates, 1974–1976 and 1980–1983

RECESSION BEGINS	INFLATION RATE
→ 1974	11.0
1975	9.1
1976	5.8
→ 1980	13.5
1981	10.3
1982	6.2
1983	3.2

Source: See Table 17.8.

TABLE 7.7 Inflation During Three Expansions

	INFLATION RATE
1972	3.2
1973	6.2
1974	11.0
1976	5.8
1977	6.5
1978	7.6
1979	11.3
1980	13.5
1984	4.3
1985	3.6
1986	1.9
1987	3.6
1988	4.1
1989	4.8

Source: See Table 7.8.

(3) INFLATION

inflation An increase in the overall price level.

deflation A decrease in the overall price level.

sustained inflation An increase in the overall price level that *continues over a significant period*.

consumer price index (CPI) A price index computed each month using a bundle that is meant to represent the “market basket” purchased monthly by the typical urban consumer.

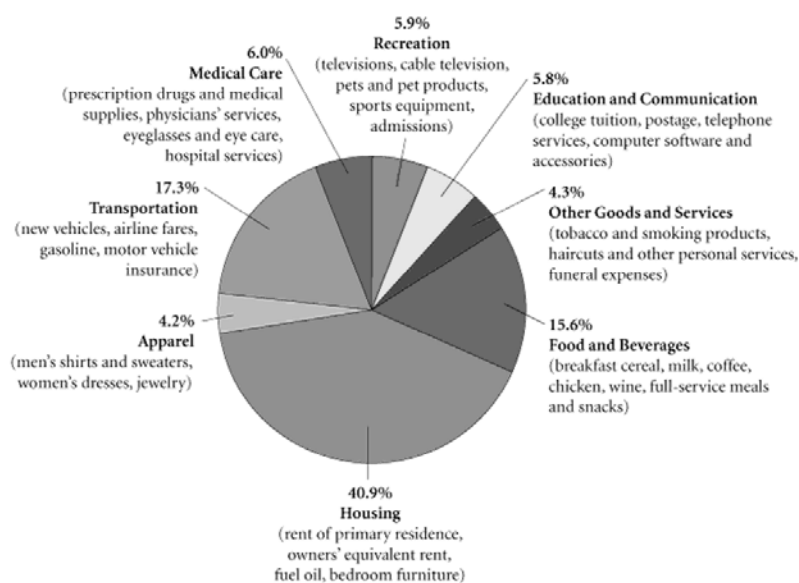


FIGURE 7.3 The CPI Market Basket

Expenditure Shares for TURKSTAT's CPI	2007
Food and Non-Alcoholic Beverages	28.5
Alcoholic Beverages and Tobacco	5.1
Clothing and Footwear	7.9
Housing, Water, Electricity, Gas and Other Fuels	16.6
Furnishings, Household Equipment and Routine Maintenance of the House	7.2
Health	2.7
Transport	11.6
Communication	4.4
Recreation and Culture	3.2
Education	2.2
Hotels, Cafes and Restaurants	6.4
Miscellaneous Goods and Services	4.4
Total	100.0

Source: TURKSTAT (2008)

- Changes in the CPI somewhat overstate changes in the cost of living.
 - CPI is a fixed-weight price index and therefore it does not account for consumers! Substitution away from high priced goods.

TABLE 7.8 The CPI, 1950–2004

	PERCENTAGE CHANGE IN CPI			PERCENTAGE CHANGE IN CPI			PERCENTAGE CHANGE IN CPI	
		CPI			CPI			CPI
1950	1.3	24.1	1968	4.2	34.8	1986	1.9	109.6
1951	7.9	26.0	1969	5.5	36.7	1987	3.6	113.6
1952	1.9	26.5	1970	5.7	38.8	1988	4.1	118.3
1953	0.8	26.7	1971	4.4	40.5	1989	4.8	124.0
1954	0.7	26.9	1972	3.2	41.8	1990	5.4	130.7
1955	-0.4	26.8	1973	6.2	44.4	1991	4.2	136.2
1956	1.5	27.2	1974	11.0	49.3	1992	3.0	140.3
1957	3.3	28.1	1975	9.1	53.8	1993	3.0	144.5
1958	2.8	28.9	1976	5.8	56.9	1994	2.6	148.2
1959	0.7	29.1	1977	6.5	60.6	1995	2.8	152.4
1960	1.7	29.6	1978	7.6	65.2	1996	3.0	156.9
1961	1.0	29.9	1979	11.3	72.6	1997	2.3	160.5
1962	1.0	30.2	1980	13.5	82.4	1998	1.6	163.0
1963	1.3	30.6	1981	10.3	90.9	1999	2.2	166.6
1964	1.3	31.0	1982	6.2	96.5	2000	3.4	172.2
1965	1.6	31.5	1983	3.2	99.6	2001	2.8	177.1
1966	2.9	32.4	1984	4.3	103.9	2002	1.6	179.9
1967	3.1	33.4	1985	3.6	107.6	2003	2.3	184.0
						2004	2.7	188.9

Sources: Bureau of Labor Statistics, U.S. Department of Labor.

producer price indexes (PPIs) Measures of prices that producers receive for products at all stages in the production process.

- The three main categories are *finished goods*, *intermediate materials*, and *crude materials*, although there are subcategories within each of these categories.
- If your income is fixed and prices rise, your ability to purchase goods and services falls proportionately.

real interest rate The difference between the interest rate on a loan and the inflation rate.

- Inflation that is higher than expected benefits debtors; inflation that is lower than expected benefits creditors.
- Inflation creates administrative costs and inefficiencies. Without inflation, time could be used more efficiently.
- The opportunity cost of holding cash is high during inflations. People therefore hold less cash and need to stop at the bank more often.
- People are not fully informed about price changes and may make mistakes that lead to a misallocation of resources.
- When unanticipated inflation occurs regularly, the degree of risk associated with investments in the economy increases.
- Some people consider inflation to be our public enemy number one. Elected leaders have vigorously pursued policies designed to stop inflation.
- The recessions of 1974 to 1975 and 1980 to 1982 were the price we had to pay to stop inflation. Stopping inflation is costly.

TABLE 7.6 Inflation Rates, 1974–1976 and 1980–1983

RECESSION BEGINS	INFLATION RATE
→ 1974	11.0
1975	9.1
1976	5.8
→ 1980	13.5
1981	10.3
1982	6.2
1983	3.2

Source: See Table 17.8.