Chapter 9: Business Cycles

Chapters 3 to 8 are categorized as 'long-run economic performance' (part II). Starting from a production technology (3.1):

$$Y = AF(K, N),$$

along with producer and consumers' optimization behavior, in Chapter 3 we derived *full employment level* $\bar{N}$ and *full employment output* $\bar{Y} = AF(K, \bar{N})$.[1]. In Chapters 4 and 5 we consider the determination of K (or I as an *increment* of capital). Growth accounting (Section 6.1) is useful to measure the long-run performance of the economy. In chapter 7 we dealt with money market equilibrium.

In Chapters 4 to 7, we often assume that the output level Y is given. Say, in money market, we discussed that $M/P = L(Y, r + \pi^e)$ (7.9) determines P *given* $Y = \bar{Y}$, ...[2] However, we observe that the value of Y, as well as other variables, is subject to *short-run fluctuations*. A repeated sequence of temporary expansion - contraction is called *business cycle*. In this and the following chapters, we discuss (1) what causes business cycle and (2) how policy makers should respond.

9.1: What is a business cycle?

According to Burns and Mitchell in NBER,

1. fluctuation of aggregate economic activity
2. expansions and contractions (Figure 9.1)
3. comovement: predictable, leading or coincident.
4. recurrent but not periodic
5. persistence

9.2: History

Table 9.1.

- pre-WWI: rapid economic growth but also long and reccurent contractions
- great depression: 1930's (see p.294 for astonishing figures)

[1] Here, K is given. In the class I denoted $\bar{K}$. The implicit assumption is capital stock does not vary much in the short run: see p.70 and your past note.

[2] Remember or not, I made the same notice at Chapter 4.

- post-WWII: (1) long expansion period with a few short contractions until 1970's (2) oil shocks at 1970's and 1981-1982 recession.
- becoming less severe? decreasing time and degree of business downturns after WWII. (1) adoption of Keynesian stabilization policies (2) dubious data quality in the past
- made in Canada or influenced by the world (US?) (1) coincident but not exact co-movement in Canada-US business cycles (2) Figure 9.2: Head *et.al* examined the correlation between world and the country business cycles.

9.3: Business cycle facts

Summary: p.299 and figures.

Direction: procyclycal, countercyclical, acyclycal. In the table, only unemployment is countercyclical, and real wage and real interest rates are acyclycal.

Timing: leading, lagging, coincident.

As shown in graphs and the table. The reason why real wage is acyclical is written in p.307 (changing labor force composition).