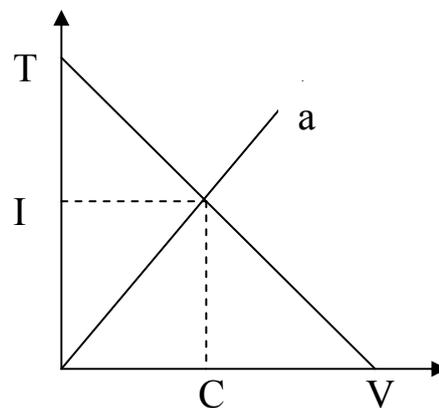


Aggregate Demand Analysis

I. Method of Macroeconomic Analysis of CPEs

The basic approach is the **distribution** approach, as illustrated by Fang et. al. This is different from the demand analysis of the market economy that we have studied so far.



T is public income whereas V is private income. I represents investment and C consumption. The basic idea is that public income (e.g. government revenue) is used largely for investment, while private income (in the form of wages and farmers' incomes) is spent mostly on consumption. The line "a" actually represents the preference of the CPE in allocating income between the government and the households, and therefore preference towards investment or consumption. (We can also have a different line "b" to represent the latter. But let us keep the model simple here.)

This approach is essential for CPEs because the government has overwhelming power in deciding distribution of income, and the various components demand are determined by such a distribution.

II. Consumption Demand

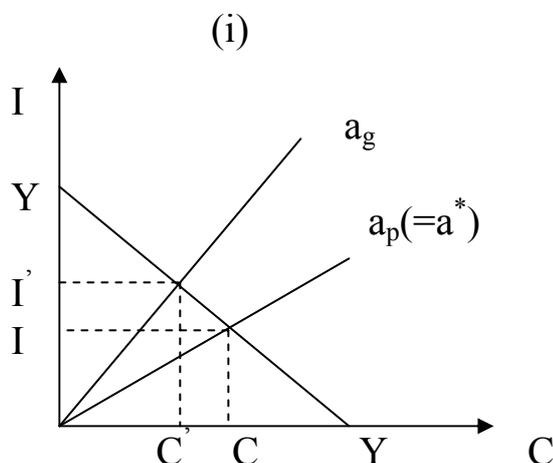
Please read Fang et. al.

The key point is so called "income illusion hypothesis", which leads to high consumption propensity. The gist of the hypothesis is that capital is publicly owned and no individuals have direct control over it. Hence it is easy for individuals to exaggerate the contribution of

his labour to output. Moreover, all his incomes are a result of his labour and have nothing to do with capital efficiency. All these factors create an "income illusion". Given that illusion, people would have a tendency to choose a higher ratio of consumption against investment, because investment is not seen to be making much of a contribution to value-added. Hence people would nurture a high propensity to consume (See Fang et. al, pp.119-128)

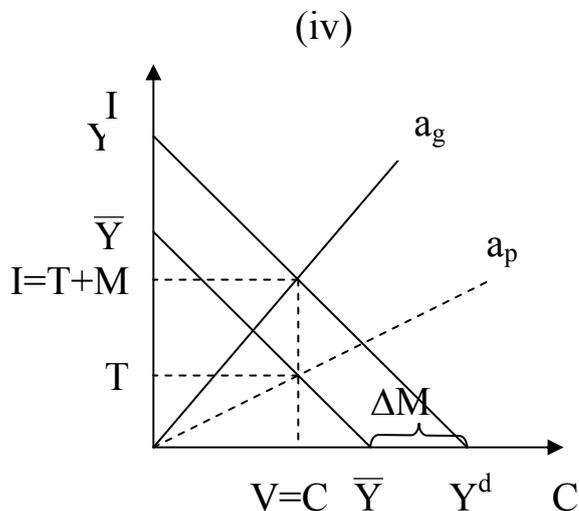
III. Investment Demand

1. Government's propensity towards high investment/accumulation (because of ideology, "taut planning", the Fel'dman model etc.)



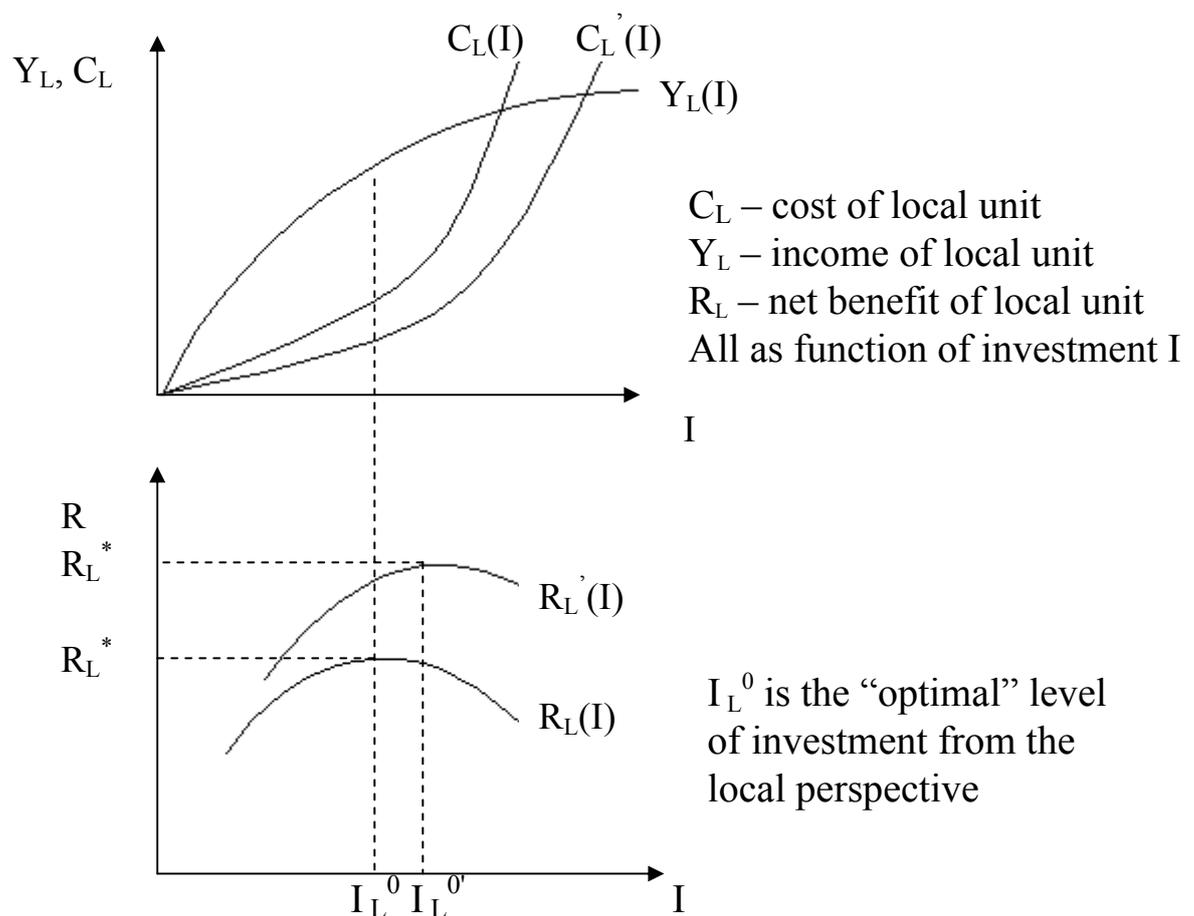
where a_g represents the government's preference for higher investment and a_p the public's preference for higher consumption.

A case with monetary accumulation:



Monetary expansion is the major method for various parties of vested interests to improve their welfare under the CPE!

2. Enterprise behaviour and investment expansion



[figure 7.1, Fang et al., p.203 (modified)]

The critical factor depends on $C_L(I)$. Due to the “soft budget constraint”, actual cost may “lower” to $C'_L(I)$ as, for example, the central government may automatically cover any loss incurred in an investment expansion programme.

This could lead to serious problems at the macroeconomic level as different local units/enterprises may then strive to achieve their maximum “net benefit” by competing to invest. (“兄弟競爭”)

3. Conclusion

Because of income illusion and investment competition, there is a strong tendency for $Y^d = C + I$ to increase. Monetary expansion is a key mechanism to accommodate such increases in aggregate demand.

Aggregate Supply Analysis

I. Preliminaries

1. Potential/Latent Supply (潛在供給) versus actual supply

Three factors determining the aggregate supply of an economy:

- (i) The amount of productive resources (labour, capital, and existing skill (現存技術)) and their growth,
- (ii) The utilization efficiency of these resources,
- (iii) The utilization rate of these resources. Ex post, this equals the ratio of actual aggregate supply over potential/latent aggregate supply.

2. Economic Efficiency

Three forms:

- (i) productive efficiency (生產效率): technical and behavioural
- (ii) allocative efficiency (配置效率): K/L, product mix etc.
- (iii) dynamic efficiency (動態效率): (intertemporal)

3. Productive and allocative efficiency

In summary form:

$$Y = \sigma HF (eN, zQ) \quad \text{----- (1)}$$

where Y: output, H: innovation (創新程度), σ : degree of actualization of innovation (創新資源的發揮程度), F: function, e: degree of labour effort (勞動者的努力程度), N: employment [L=eN], z: efficiency level of capital (資本的有效程度), Q: capital

stock.

So $K = zQ$

Eq. (1) is an expanded version of the normal production function
 $[Y = F(L, K)]$

4. How are e , z and σ determined in CPEs?

Both e (degree of labour effort) and z (efficiency level of capital) are affected by the problem of “X-efficiency” (X-效率) or X-inefficiency.

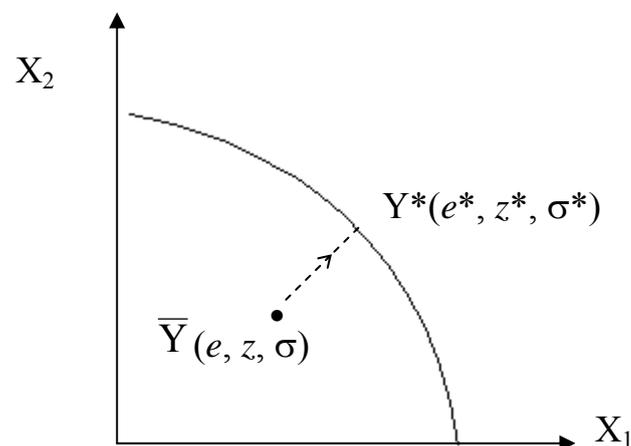
Negative factors affecting:

e – effort slackening (偷閒)

z – idleness (閒置)

By extension, σ can also be similarly treated.

We can denote their optimal value as e^* , z^* and σ^* , then the PPF (production possibility function) can be so graphed:



The actual output, \bar{Y} , will normally lie inside the PPF due to effort slackening on the part of the labourers, idleness in capital stock, and inefficient actualization of innovation etc.

II. Labour effort slackening

This is largely microeconomic in nature and not amenable to normal macroeconomic policies. Read chapter 12 of Fang et al. yourselves.

III. Capital Utilization

1. There is a tendency for enterprises in CPEs to “over-produce” (過度生產), and “over-stock” (超額儲備). We have already gone into some analyses in the first semester. Let us now briefly look at the model of Fang et al.

Assume that the planners set two targets for the enterprise:

$$R = \alpha Q + \beta \pi \quad \text{----- (1)}$$

where R is the reward for the enterprise, Q the output level, π profit and α and β are coefficients. The justifications for this “multi-target” planning have been covered in the first semester.

Since π is a function of Q , however, eq. (1) can be rewritten as an objective function of the enterprise

$$\begin{array}{l} \text{Max } R = \alpha Q + \beta \pi(Q) \quad \text{----- (2)} \\ Q \end{array}$$

First order condition is obviously

$$\alpha + \beta \frac{d\pi}{dQ} = \alpha + \beta \pi'(Q) = 0 \quad \text{----- (3)}$$

From (3), we immediately observe that since Q is set at a level where $\alpha + \beta \pi'(Q) = 0$, it necessarily exceeds the profit-maximizing level (of Q) where $\pi'(Q) = 0$.

Moreover, **the larger the value of the weight α is, the higher is then the possibility to overproduce.**

When “overproduction” becomes a prevailing tendency, the aggregate resource constraints will bite. This will generate a feedback on the enterprises, most of which will compete for “inputs”.

Hence the “reserve” ratio of the stock of capital and other durable resources will rise. The problem of “capital idleness” (資本滯存) will worsen.

* Given the reality of the CPEs, the stock idle in one enterprise will not be available to other enterprises because

- (i) there is no mechanism for “re-trading” (capital cannot be sold for π because it is “publicly owned”);
- (ii) it is very difficult for planners to detect “idleness” and effect on administrative transfer as enterprises will engage in strategic behaviour. Overall, z (the efficiency level of capital) will decline.