II. The Keynesian School – Episode II

The Rise of the Government

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Principles of Macroeconomics
Semester 2/2019-2020
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Version: February 5, 2020

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Recap: The Keynesian Settings

The Keynesian settings

Again, this model deals with the short-run economic fluctuations. There were certain key assumptions made so far, with the main one being that *demand creates its own supply*, in contrary to classical theorists' Say's Law.

1. Firms can decide the level of employment – while **capital is "fixed"**;
   $\Rightarrow$ aggregate supply is the value of outputs produced by N persons
   $\Rightarrow$ aggregate demand is the demand caused by employing N persons.
2. Household does not need to spend it all – savings;
3. Exogenous and constant – price and rates of return;
4. "Unplanned" consumption are provided by the firms at a fixed price

Shocks and Crises: Keynesian Response

Did we forget to mention something?

Again – according to Keynes, demands create supply, which is determined by employment. According to Keynes, what is **unemployment**?

Voluntary unemployment	Involuntary unemployment
Frictional/Search	Classical/Real-wage Structural Cyclical/Deficient-demand

What is an economic downturn, according to Keynes?

Aggregate demand ($AE = C + I$) can be too low, leading to lower employment, leading to lower output. The economy cannot get to full employment. He offers two definition:

1. When there is no involuntary unemployment
   "the equality of the real wage to the marginal disutility of employment "
2. Where "a further increase in the value of the effective demand **will no longer be accompanied by** any increase in output."

The big question for Keynes was
– deep in the context of the Great Depression –
what can we do in the face of
involuntary unemployment and low output.

The Keynesian economic machine

Now according to Keynes (2016):

1. Economies often suffers from inadequate demand $\Rightarrow$ involuntary unemployment
2. Market forces are slow and painful – people die
3. Government can step in to increase demands $\Rightarrow$ reduce involuntary unemployment
4. Sometimes, increasing the money supply may not be enough to stimulate investment (I) – will cover later

Roles of the government

In dealing with economic fluctuations, the government can attempt to stabilised the economy through various means.

1. Fiscal policies: government's spending and taxes
2. Monetary policies: The Bank of Thailand's intervention through the money market (incl. exchange rates).

Fiscal policy: taxes and spending

We will all pay taxes, hopefully. Let's call all net taxes paid by households, T. The total income available for use after paying tax is called disposable income:

$$Y_d = Y - T$$

With the presence of taxes, the household consumption function becomes:

$$\begin{aligned} C &= C_0 + c(Y - T) \\ \Leftrightarrow C &= C_0 + cY_d \end{aligned}$$

Meanwhile, the parliament decides on how much to spend on the economy, based on their judgement to the questions should they/what on/how. We take government spending, G, as exogenous.

Fiscal policy: discretion is advised

We can think of government's fiscal policies in two terms:

1. Discretionary: when government deliberately changes G and T.
2. Non-discretionary: policies in place that produce impacts automatically. Also called automatic stabilisers

Can you think of one downside to discretionary fiscal policies?

Now, WHAT ARE DOSE????

1. Progressive taxation
2. Road construction
3. Subsidies to rice farmers
4. Unemployment compensation

Monetary policy

A lot to talk about, and we will cover this after the midterm!

- Highly linked to fiscal policy, yet so not (for good reasons).
- Where classical economists disagree with Keynesians.

Equilibrium with G, T, X and M

Now the aggregate expenditure (aggregate demand) becomes

$$AE \equiv C + I + G + (X - M)$$

Again, the equilibrium demands that the total output (Y) equals to the demand!

$$Y^* = C + I + G + (X - M)$$

Mathematically?

$$
\begin{aligned}
Y^* &= C + I + G + (X - M) \\
\Rightarrow Y^* &= C_0 + c(Y^* - T) + I + G + (X - M) \\
(1 - c)Y^* &= C_0 - cT + I + G + (X - M) \\
\therefore Y^* &= \frac{1}{1 - c}\Big(C_0 - cT + I + G + (X - M)\Big)
\end{aligned}
$$

Now what are the multipliers?

$$
\begin{aligned}
\frac{\partial Y}{\partial I} &= \\
\frac{\partial Y}{\partial G} &= \\
\frac{\partial Y}{\partial T} &=
\end{aligned}
$$

Drawing time! – a fuller Keynesian cross

Drawing time! – peaks, trough, and full employment

A model can always get more detailed

Investment can also depends on the level of (i) output; and (ii) interest rates. For instance, we can endogenise investment:

$$I = I_0 + I_1 Y - I_2 r$$

We can also endogenise exports and imports! For instant, exports can depend on how well other economies are doing in other parts of the world:

$$X = x_1 Y^{row}$$

where Y^{row} denotes the level of income in the rest of the world.

A fun (but perhaps useless) exercise: a budget balanced policy

Let's say the government taxes and spends in a way that $G = T$, and that $M = M_0 + mY_d$

$$\begin{aligned} Y^* &= C_0 + c(Y^* - T) + I + G + X - M_0 - m(Y^* - T) \\ \Leftrightarrow Y^* &= \frac{1}{1 - c + m}\Big(C_0 + (m - c)T + I + G + X - M_0\Big) \end{aligned}$$

We know that

$$\frac{\partial Y}{\partial G} = \frac{1}{1 - c + m} \tag{1}$$

$$\frac{\partial Y}{\partial T} = \frac{m - c}{1 - c + m} \tag{2}$$

Since G and T changes by the same amount, the multiplier is...

References

Keynes, J. (2016). *General theory of employment , interest and money*. Atlantic Publishers & Distributors (P) Limited. Retrieved from https://books.google.co.th/books?id=xpw-96rynOcC