Money whirling flow and Keynesian

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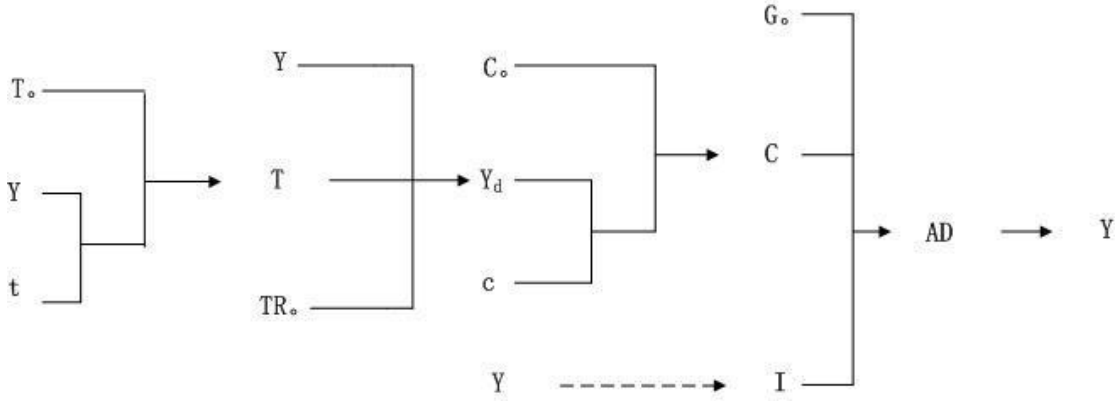
Introduction:

In this paper, I will make use of Keynesian theory to describe the money flow in the free market. I will then build a new model based on the Keynesian model and use this model to explain how stagnation occurs.

1. Traditional Keynesian theory framework

Traditional Keynesian theory can be described as follows in Figure 1:

Figure 1. Overview of traditional Keynesian theory[1]



Where C represents consumption, I is investment, G。is government purchases and Yd is disposable personal income.

C。is spontaneous consumption, c is the marginal propensity to consume, TR。is transfer payments, t is the tax rate, T。is the fixed tax while T is the tax.

Ad represents total consumption and Y is total national production. [1]

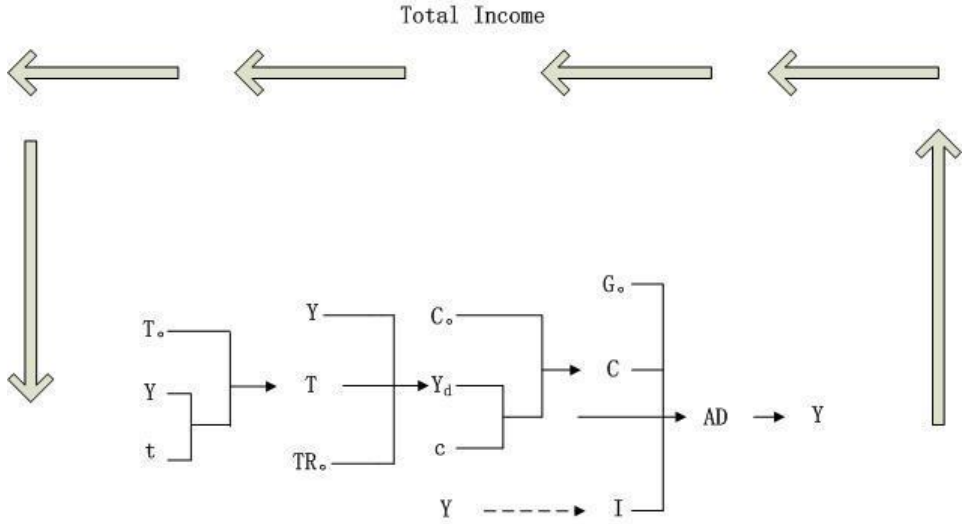
Here we ignore the international business just to make the whole process simpler, so there is no net exports.

2. Circulation inside Keynesian Theory Framework

From this picture, we can see that the total demand AD determines the total production Y, which leads to total income and therefore government purchases G。, consumption C and investment I. This then composes total demand AD through the mechanism, AD=G+C+I [1]. The money flows inside.

This is shown in Figure 2:

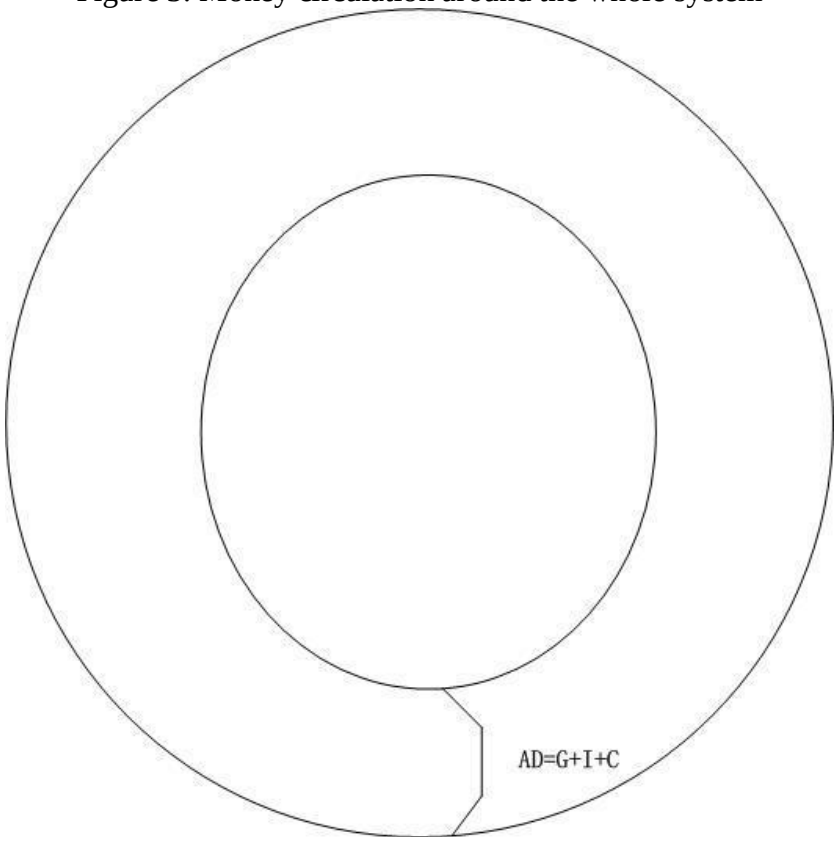
Figure 2. The circulation of money flow inside the Keynes Theory Framework



3. The components of the total demand

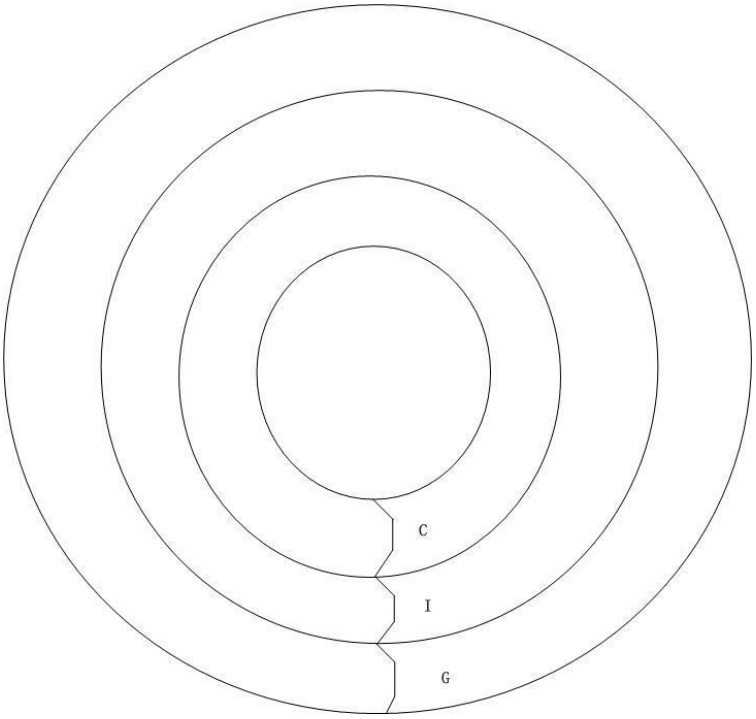
We can regard the whole system as a ring, with money flowing inside the ring.

Figure 3. Money circulation around the whole system



Considering the fact that Total Demand AD has three components (government purchases G。, consumption C and investment I) it can be represented as in Figure 4:

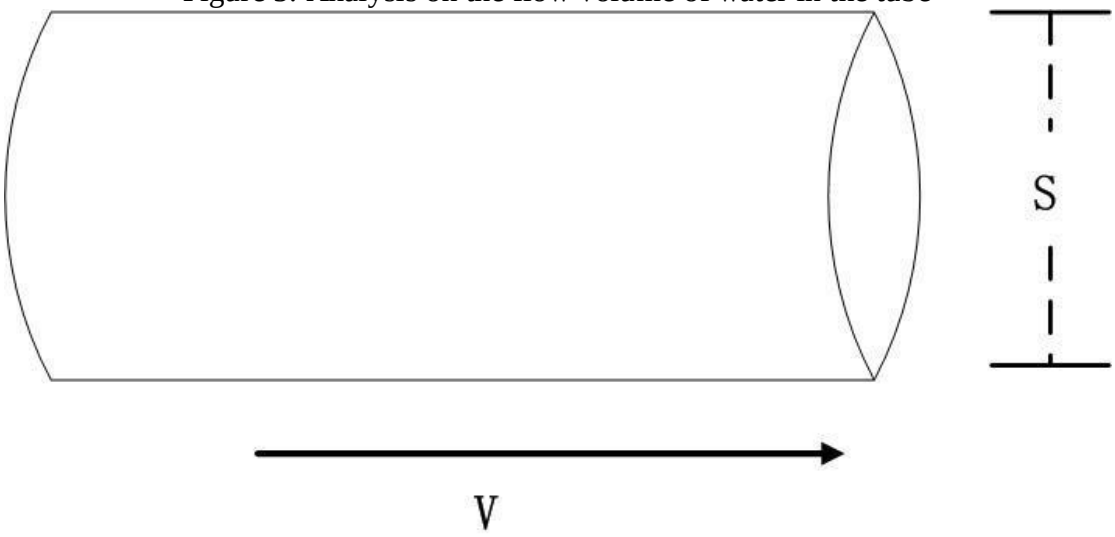
Figure 4. Three money flow circulations



4. Comparison between water tubes and money flow

The water tube appears as in Figure 5:

Figure 5. Analysis on the flow volume of water in the tube

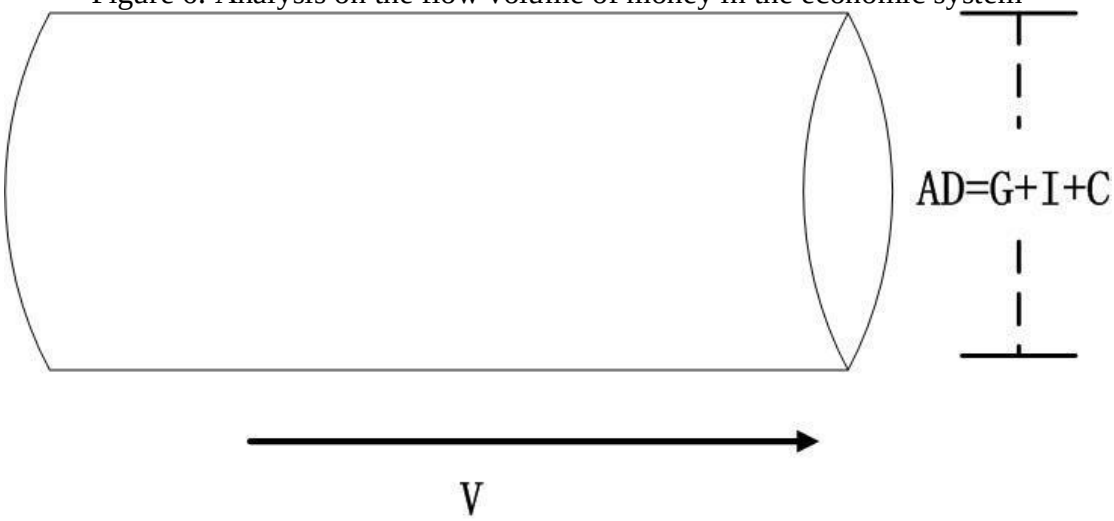


The total water flow volume is depended on two variables: one is the cross sectional area of the water flow S, another one is the water flow speed V.

Likewise, the total production is depended on two variables: one is the cross sectional area of the money flow in a unit of time, another one is the money flow speed V. Here we assume that AD is, in any unit of time, the total demand. G, I and C are the total

government purchases, consumption and investment in a unit of time.

Figure 6. Analysis on the flow volume of money in the economic system



In Keynesian theory, Keynes brought in the concept of multipliers to represent the speed of money flow[1]. Here I will use the money flow speed as a new variable. So we have that the real total production is the Y=AD*V=(G+I+C)*V.

Apparently if Y is large enough, there will be enough income to support more jobs, so there will be less unemployment. In Keynes theory, Keynes used Yf to represent the total production that can provide full employment. [1]

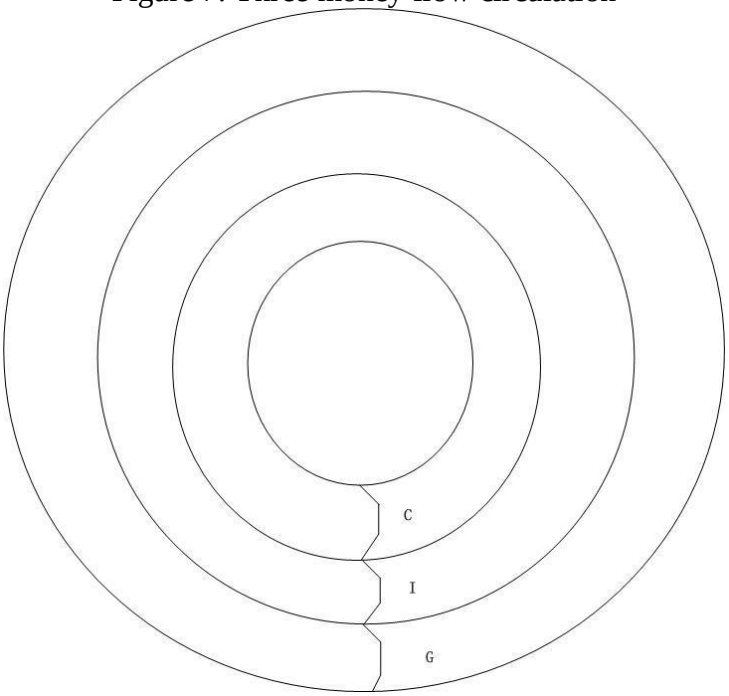
5. Analysis on why stagnation occurs

Economic crisis occurs in the situations where C is very small, so the total demand AD is not enough. By using Keynesian stimulus policy, the government try to increase the G and I, which enlarges AD (AD*V=(G+I+C)*V). The total demand will enlarge so Y will increase.

If there is slight inflation, peoples' consumption habits won't change: they will buy the same number of products in the market. So the total money flow volume (G+I+C=(price of total goods)*(number of total goods)) will enlarge because the increase in the price of goods, and the AD enlarging leads to the Y enlarging. This slight inflation provide a growth in the number of job positions.

If there is slight deflation, peoples' consumption habits won't change, they will buy the same number of products in the market. So the total money flow volume will be smaller (AD=(price of total goods)*(number of total goods), prices decrease, so AD decreases), meaning the AD is smaller and therefore the Y is smaller. This deflation leads to fewer job positions.

Figure 7. Three money flow circulation



But why does stagnation occur? Here we can see, the government tries to increase AD by increasing G and I by printing more money, by doing this, there will be serious inflation. It will inhibit people's consumption speed.

$Y=AD*V=G*V_g+I*V_i+C*V_c$, even G and I is enlarged, assume Vg and Vi stay the same, because of the inflation, the C and Vc are inhibited and decreased, if C and Vc decrease too much, the Y will be smaller compared to what it used to be, then there will be more unemployment. That is the reason why the stagnation and inflation happen at the same time.

Citation:
[1]. Intermediate Macroeconomics, Yan Zhang