Innovative Approaches in Social, Human

and

Administrative Sciences

Editors:

H. Hale Künüçen

Xatire Quliyeva

Yılmaz Seçgin

ekin

Konu: Kitap Bölümü Yazarlığı

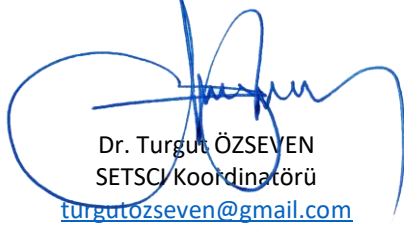23 Haziran 2019

Sayın **Özlen Hiç,**

31 Temmuz 2019 tarihinde Ekin Yayınevi ve SETSCI işbirliği ile yayınlanacak olan "**Innovative Approaches in Social, Human and Administrative Sciences**" başlıklı kitap için göndermiş olduğunuz "**An Efficiency Analysis of Keynesian Monetary and Fiscal Policies: Choosing the Right Policy**" başlıklı kitap bölümünüz editörlerimiz ve danışma kurulumuz tarafından değerlendirilmiş ve yayınlanmaya kabul edilmiştir.

Çalışmanızın "Innovative Approaches in Social, Human and Administrative Sciences" başlıklı kitapta kitap bölümü olarak yayınlanacağını bildiririz.

Saygılarımla,

Kitap İsmi : Innovative Approaches in Social, Human and Administrative Sciences

Editörler : Prof. Dr. H. Hale Künüçen
Prof. Dr. Xatire Quliyeva
Dr. Öğretim Üyesi Yılmaz Seçgin

Dr. Turgut ÖZSEVEN
SETSCI Koordinatörü
turgutozseven@gmail.com
+905332245325

EKİN 🌀
Basım Yayın Dağıtım

İLGİLİ MAKAMA;

Ekin Yayınevi 1988 yılından beri ulusal ve uluslararası düzeyde düzenli olarak faaliyet göstermektedir. Yayınladığımız kitaplar ulusal ve uluslararası yüksek öğretim kurumu ve kütüphane kataloglarında yer almaktadır.

Bilgilerinize arz ederim.

EKİN BASIM YAYIN DAĞITIM
Mehmet OYMAK
Şehreküstü Mah. Cumhuriyet Cad.
Durak Sk. No:2 Osmangazi-BURSA
Tel:0.224 220 16 72 - 223 04 37
Osmangazi V.D. T.C. 302 8625 2480

Innovative Approaches in Social, Human and Administrative Sciences

Editors:

H. Hale Künüçen, Baskent University, Turkey

Xatire Quliyeva, Azerbaijan Academy of Sciences, Azerbaijan

Yılmaz Seçgin, Tokat Gaziosmanpasa University, Turkey

EKİN

Publishing House

2019

www.set-science.com

CONTENT

An Efficiency Analysis of Keynesian Monetary and Fiscal Policies: Choosing the Right Policy

Özlen Hiç[1]

1. INTRODUCTION

Following the Great Depression in 1929-1934, John Maynard Keynes came up with a new macroeconomic system with his work "The General Theory of Employment, Interest and Money (1936)". Keynes claimed that his system represents the developed economies and reflects realities more accurately.

Keynesian policy recommendations in accordance with the Keynesian macroeconomic analysis were successfully implemented after the 1929 Great Depression and World War II, and consequently, business cycles, depressions and inflations were, to a great extent, eliminated. Moreover, through these policies, a noteworthy growth within a relative price stability was ensured. However, contrary to the Keynesian policy recommendations, many opposite tendencies started to be discussed in the academic as well as in the political circles. In 60's and 70's, during the Vietnam War, the United States, as opposed to the Keynesian economics advisors, had not increased the taxes to cover the increasing government expenditures because of the war. This lead both to budget deficits and balance of payments problems hence inflationary tendencies gained a continuous path. Again, as a result of wrong implementations of the Keynesian policies, public expenditures increased continuously in both the United States and European countries. This, eventually, gave rise to high inflation and unemployment rates due to this increase in the government expenditures and labor costs. Governments, on the other hand, rather than using the Keynesian fiscal policies for the fine-tuning of the economy, have kept raising the taxes continuously. Hence, contrary to Keynesian policy recommendations, the de facto implementation of tax policy was not successful. This is usually the case, because once the taxes are lowered, to raise it later seems impossible due to political and social reasons.

[1] İstanbul University/Economics Faculty, İstanbul, Turkey.
e.mail:ozlen.h.birol@gmail.com

In this case, especially in the United States, many anti-Keynes views have emerged, and these movements gained power from 70's on. These new liberals recommended a small and balanced budget. Milton Friedman and New Classical economists working with rational expectations are among these groups. Moreover, Milton Friedman had recommended giving up on the fiscal policies and instead raising the money supply at a constant rate. New Classical economists working with rational expectations, on the other hand, claim that as long as there are no shock effects, neither the monetary policy nor the fiscal policy would be effective. They, too, recommend a small and balanced budget and decrease in government expenditures.

Today, globalization, liberalization of international trade, free flow of capital and funds have emphasised again the price stability and productivity because of international competition, hence policies to a great extent in accordance with the Keynesian policy recommendations are being recommended this time by the New Keynesian economists in the USA and Post-Keynesian economists in Britain.

In conclusion, the appropriate choice of the right policy necessitates a thorough understanding of the Keynesian System and a thorough consideration of the efficiency of monetary and fiscal policies in terms of increasing the real income level for different periods and economic conditions as well as a thorough considerations of the factors affecting the choice of these policies rather than efficiency only, like the changes in the composition of income and time require for a policy to show its effect.

2. KEYENSIAN REVOLUTION

The Classical System fell from favour after the Great Depression in 1929-34, especially since it could not solve nor explain the ongoing problems of unemployment, depression and business cycles. Hence, the Keynesian System has become dominant both in academic circles and policy implementations. This domination in the academic circles lasted until the 70s.

Keynes has reached completely different conclusions by introducing many new concepts and functional relationships, what is known as The Keynesian Revolution.

According to the Keynesian macroeconomic system, the economy would not automatically come to the full employment equilibrium. On the contrary, the Keynesian System visualizes a macroeconomic system where the economy, when left to itself, ends up at a less than full employment equilibrium due to the lack of effective demand and hence involuntary unemployment.

In order to increase the effective demand, the government should intervene on a macro level and increase the aggregate or effective demand, hence the real income (production level) and employment level by the appropriate monetary and fiscal policies. Undoubtedly, when there is a demand inflation, to prevent the inflationary gap and

demand inflation created by the inflationary gap, the government is expected to reduce the level of effective demand again through monetary and fiscal policies.

2.1. REPRESENTATION OF THE KEYNESIAN SYSTEM WITH NEW CONCEPTS AND FUNCTIONAL RELATIONSHIPS KEYNES INTRODUCED

While Keynes was establishing a more realistic macroeconomic system representing the developed economy and reaching the conclusion that the economy may experience unemployment, he introduced five new macro concepts and functional relationships that are different from the Classical System. Without considering these new concepts and functional relationships and test their validity, it is not likely to fully understand the Keynesian System; the unemployment equilibrium and the policy recommendations.

1. Money is not only demanded for transactions purposes; there is also a part of money demanded for speculative purposes depending on the prices of bonds and on the relation between bond prices and interest rates. The speculator considers how much money to keep and that part constitutes the "liquidity preference curve". The demand for money positively related to the income level showing the transactions motive is defined as "demand for active balances" whereas the demand for money negatively related to interest rate showing the speculative motive is defined as "demand for idle balances". Even though the money market was represented as (M=k.P. y; 1>k>0) in the Classical System, Keynes represents the money market by the following formula:

i. $M = k.Y + L(r)$ $\vartheta M/\vartheta Y = k$, $1 > k > 0$; $\vartheta M/\vartheta r (= \vartheta M/\vartheta L) < 0$

M: Nominal Money Supply

k: Marshall k

Y: Nominal Income Level

r: Real Interest Rate

The righthand side of the demand for money shows both the demand for active balances and the demand for idle balances separately. If one would like to express the money demand and the money supply in real terms rather than nominal terms, then the two sides of the equations should be divided by P (General Price Lvel). In this case, the money market equilibrium will be represented as below:

ii. $M/P = k.(P.y/P) + (L/P)(r)$

   $M/P = k(y) + l(r)$

M/P: Real value of the Quantity of Money supplied

In the Keynesian System, the demand for idle balances and its negative interest elasticity are of great importance: One peculiarity of the demand for idle balances is that at lower interest rates, the speculative demand is very high, i.e., the negative interest elasticity of the demand for idle balances is substantially high. Even at this stage, it can be seen clearly that the efficiency of the monetary policy will not be much because there will be not much of a decrease in the interest rates due to an increase in the money supply

and accordingly an increase in the demand for idle balance. As an extreme assumption, we can accept that the negative interest elasticity of demand for idle balances at a certain and very low interest rate as infinite ($-L_{er} = \infty$). It is also called "the liquidity trap". In case the economy is at the liquidity trap, the efficiency of the monetary policy becomes zero because regardless of how much the money supply would be increased, the interest rates could not be decreased any further and thus the investments could not be increased.

2.   Keynes assumed that both savings and consumptions are positively related to the real income level although the Classicals assumed savings are positively related to the interest rate and negatively related to the consumption (s= s (r); s'> 0; c = c(r); c'<0 and s' + c'= 0),

In the Keynesian System, for a simple economy without the government:
iii.   s = s (y);   s' > 0,   c = c (y);   c' > 0 and s' + c' = 1

The derivative of savings (s') gives the Marginal Propensity to Save (MPS), the derivative of consumptions (c') gives the Marginal Propensity to Consume (MPC). Keynes assumes that at high levels of income MPS would be high and MPC would be low.

In case if government is included in the model, we assume that savings and consumptions depend on the "disposable income" rather than the real income. Disposable income is the total net income of household that remains after paying the taxes and receiving public transfers. This relationship is of great importance and still valid today. Consumptions and savings depending on the real income and investments depending on the interest rate, they together construct the aggregate demand. And the real income and the production level is determined via this aggregate (or effective) demand, not via the labor supply and labor demand equilibrium as it is the case of the Classical system.

3.   The third concept Keynes introduced in his analyses is the marginal efficiency of investment (MEI). When the Classical economists acknowledged that the investments depend on the interest and are negatively related, they were assuming the profit maximizing condition (MPPK = r) for investment decisions. MPKK is subject to the law of diminishing returns, thus, in the Classical System, the investment function was negatively related to the interest rate and the negative interest elasticity of investments seemed to be high ($-i_{er} >1$).

Keynes, on the other hand, claimed that the investment analysis based on MPKK would not yield correct answers. According to Keynes, in case of an increase in the demand for investment, the prices for investment goods would also increase and the profitability of investments would fall leading to a decrease in the demand for investment goods. Thus, Keynes introduced a cash concept called marginal efficiency of investments (MEI) which covers these changes in the prices of investment goods.

iv.   MEI = r

Yet this concept has an important consequence. Although the investment function is negatively related to the interest rate, the negative elasticity of investments is low (i' <1); which means that a decrease in the interest rates will bring about a very small increase in the investment level. If the negative elasticity of investment function is accepted as zero below a certain interest rate as an extreme assumption (i' = 0), this time, a decrease in the interest rates will not give rise to any increase in the investments. Under this extreme condition, monetary policy would not have any effect in increasing the real income and employment levels; hence only fiscal policies would be effective.

The fact that the interest elasticity of investment being low in the Keynesian System would make it clear why the economy would not automatically reach the full employment equilibrium (assuming a low negative interest elasticity of investments combined with high MPS and low MPC at high income levels) because the equilibrium at s=i will not give the full employment real income; i.e. as the sum of investment and consumption expenditures together constitute the aggregate or effective demand, there will be "lack of effective demand". In the Classical System, the full equilibrium was reached in the labor market at the intersection of labor supply and labor demand. In the Keynesian System, the aggregate production or income level would be attained via the aggregate of effective demand level.

Hence, in a simple Keynesian System without the government and foreign trade:

v.   [c (y) + i(r)] = [c(y) + s(y)]

     c(y) + i(r) will be demonstrating the aggregate demand. Or, if we subtract c(y) from the equation, we can assume that the equilibrium income level is given by the investment-saving equity:

vi.   i(r) = s(y)

Following Keynes, assuming low interest elasticity of investments and high MPS (and low MPC) at high levels of real income, the equilibrium real income level will be determined via the effective demand (or investment-saving equity), leading to unemployment equilibrium. We can identify this situation as the "lack of effective demand" or "deflationary gap". Even if the interest rate is zero, since the savings level will be below the full equilibrium savings level at the full-employment, it will give "saving-investment discrepancy".

4.   Keynes did not say much different than the Classical economists in terms of the production function and labor demand. In the Keynesian System, the production in the short run will depend on the employment level (Y = y(N); y' >0, y'' <0). The quantity of capital, the level of technology and the natural resources are presumed to be constant ın the short run. Hence the production level can only be increased by an increase in labor. Yet, the labor is subject to MPLL. Thus, the equilibrium condition for the profit

maximizing firms requires that the marginal physical productivity of labor equals the real wage (MPPL = w). In this case, the labor demand is negatively related to real wage.

On the other hand, the 4th novelty Keynes introduced to macro analyses has to do with labor supply. Classical economists presume that the full employment is reached in the labor market under perfect competition and maximization conditions. Since investments and savings are not related to the income level but to the interest rate, there would be no lack-of-effective demand (or surplus) which will result in unemployment. That means, Say's Law is in effect.

However, Keynes accepted the existence of strong labor unions, and their institutional role in setting the wage level. Hence, in the labor market perfect competition conditions do not exist in the labor market. But the fact that wages are determined by the labor unions, in other words, "rigidity" of wages is not the main reason for the unemployment equilibrium in the Keynesian System. If it were so, then basically the Keynesian System would not have been much different from the Classical System in terms of the outcome. As mentioned before, the main reason of unemployment equilibrium is the "lack of effective demand" or "investment-saving discrepancy".

Production on the other hand is adjusted according to the aggregate demand level. At this point, firms arrange their production and are willing to pay real wages which equal the marginal physical productivity (MPPL=w). Labor unions considering the aggregate demand and aggregate production level, set their maximum wages and estimate their maximum real wage level depending on the prices. Otherwise, if the labor unions assign very high real wages, the employment would decrease further, and voluntary unemployment would increase.

Undoubtedly, this analysis neglects various second wave impacts of wages and changes in the prices on other parameters and functions and hence makes the analyses simpler. As a matter of fact, the changes in the prices will cause "price expectations" to change as well. This in return might affect both investments and savings as well as consumptions. Again, while the change in real wages will have a direct effect on labor demand as a cost element, on the other hand, it may affect the MPS and MPC. The changes in prices might additionally affect saving and consumption via the value of liquid wealth which is called the Pigou effect.

Beside the comments and assumptions mentioned above one can come across different interpretations based on Keynesian principles. For instance, workers have delusion about money and thus labor demand depends on real wage as well as cash wage.

Perhaps none of the comments related to the labor supply and labor market equilibrium are satisfactory, and they contain institutional assumptions. Wage always remains as an exogenous parameter which is determined by external factors or the delusion of money

hypothesis seems valid. But still, the Keynesian economists believe that the Keynesian System appears to be more realistic than the Classical Systems.

In the following sections, the Keynesian system will be analysed through the demand side of the economy by means of IS-LM curves; the production function, labor supply and demand hence the supply side will not enter the picture. Therefore, the second wave effects of changes in the wages and prices on IS-LM curves will be neglected. Supply side policies are also not going to be analysed.

5.   The fifth important concept and function Keynes introduced in his analyses is that the import propensity, how the real imports depend on the real income in a given country. In parallel way, a country's exports are related to the real income level of the importing countries which constitutes a data regarding real income level of the foreign countries. In the Keynesian System, when working with open market models, the aggregate supply and demand equations are formulated as follows:

vii. $c(y) + i(r) + g + x = y + m = c(y) + s(y) + t(y) + m(y)$
   and
viii. $y = c(Yd) + i(r) + g + x - m(y)$
      or
         $i(r) + g + x = s(y) + t(y) + m(y)$

In the Classical System, import and export were related only on changes of the level of general prices. Today though, since gold system is forsaken, changes in the foreign exchange rates should be considered.

Since the purpose of this article is to identify the most fundamental principles of monetary and fiscal policies, we will work with closed economy model assuming that there is no government. Nevertheless, this approach should not mean that we don't attach any importance to Keynes' contribution in foreign economic relations.

2.2. MACROECONOMIC PRINCIPLES OF THE KEYNESIAN SYSTEM

In his book Keynes basically put forward a macro system which is usually called as the "generalized" Keynesian System. Yet, he also referred to a macro system which provided the possibility to demonstrate the macro analyses at a simpler level for many cases. In this "simple" Keynesian System, the effects of the monetary parameters on real parameters and specifically on real income and employment are neglected completely. In this case, the monetary policy would not be effective at all while the fiscal policy would be fully effective. In order to demonstrate the simple Keynesian System, further assumptions are introduced together: existence of liquidity trap (in other words, the negative interest elasticity of the demand for idle balances is infinite ($-L_{er}=\infty$) and the negative interest elasticity of investments is zero ($-i_{er}=0$). When we disregard these extreme assumptions and presume that the negative interest elasticity of demand for idle balances is both infinite at certain interest rates and very high at certain other interest

rates, and the negative interest elasticity of investments is not zero but considerably low, then we have the "generalized" Keynesian System comprising "investment-saving discrepancy". In this system, an increase in money the supply leads to an increase in the real income and employment; yet the monetary policy does not seem to be too much effective. Compared to the simple Keynesian System, the efficiency of the fiscal policies would be lower because the interest rates would also rise. Nevertheless, fiscal policy is more effective than monetary policy.

2.3. UNEMPLOYMENT EQUILIBRIUM IN THE KEYNESIAN SYSTEM

In order to identify the simple Keynesian System and generalized Keynesian System, IS-LM Analysis will be used and international trade will be excluded:

(1) $M/P = k(y) + l(r)$

(2) $i(r) + g = s(y) + t(y)$

Here

g: represents the real level of government expenditures computed as a net figure.

t(y): represents the real level taxes as a function of real income computed as a net figure; that means transfer payments is subtracted from total tax revenue.

Other symbols are known.

The first equation gives the money market equilibrium and represented by the LM curve showing the geometrical locations of r,y-combinations providing money market equilibria. The second equation gives the goods market equilibrium and represented by the IS curve showing the geometric location of r,y-combinations providing investment-saving equilibria (investment + government spending = saving + tax). LM has a positive slope whereas IS curve is negatively sloped. The point of intersection of LM and IS curves gives the macroeconomic equilibrium. At this intersection point both money market and goods market are simultaneously in equilibrium, that means there is no dichotomy.

-Equilibrium in the Simple Keynesian System

The negative interest elasticity of investments being zero after a certain rate of interest ($-i_{er} = 0$ assumption) makes IS curve a steep vertical line from that interest rate on. LM curve passes below that. In this case, regardless of the interest rate and monetary parameters, only one real income level will exist(y_0). This situation is shown in Figure 1(a). This income level is assumed to below full employment income level y_F.
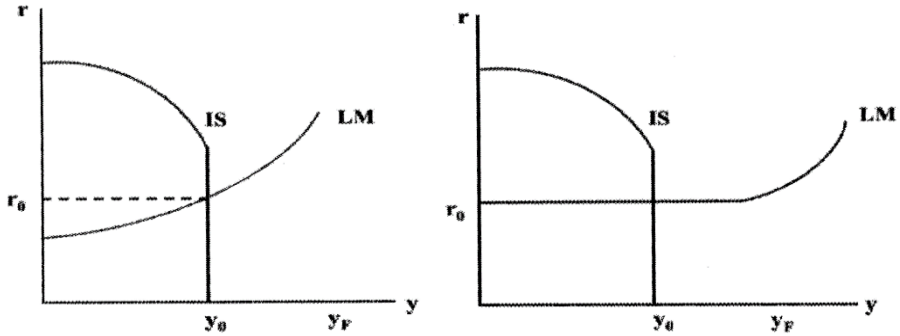
Fig. 1(a) and (b) Simple Keynesian System

In figure 1(b), $-i_{er} = 0$ assumption combined with $-L_{er} = \infty$ at r_0, which means the existence of liquidity trap is presumed. In this case, the interest will not change and maintain its position at r_0 level.

What is important here is whether the interest rate changes or not, as a result of $-i_{er}=0$ assumption, one single real income level will prevail in the economy.

-Equilibrium in the Generalized Keynesian System

For a more realistic investment function, it is assumed that the negative interest elasticity of investments is $0>-i_{er}>1$; and again $-L_{er} \neq \infty$, that means no liquidity trap, which summarizing the generalized Keynesian System. The intersection of IS and LM curves gives the equilibrium interest rate and equilibrium income level. This is shown in Figure 2. As can be seen, the equilibrium real income level (y_0) is much below than the full-employment real income level (y_F). Even if the interest rates are decreased to zero, full employment cannot be reached.
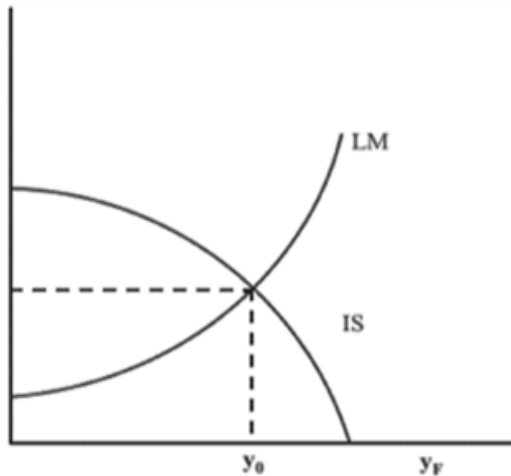

Fig. 2 Generalized Keynesian System

3. PRINCIPLES OF MONETARY AND FISCAL POLICIES IN THE KEYNESIAN SYSTEM

Fiscal and monetary policies in the Keynesian system were being implemented in the period following the 1929-34 Great Depression, mostly in the depression periods of the business cycle, and within the framework recommended by Keynes. Thus, monetary policy was not much effective in terms of recovering from as well as evading the depression period and reaching full employment; this policy could only be used as a supplementary policy. On the other hand, fiscal policy - especially increasing the government expenditures- is more effective. Lowering the taxes, though, is less effective compared to increasing the government expenditures, but it still is a useful tool; as decreasing the taxes will increase the disposable income. This, according to MPC, will increase the consumption, consequentially raising aggregate demand, real income and employment levels. However, according to MPS, a part of the new higher disposable income cannot be directed to consumption. That is why decreasing the taxes is a less effective fiscal policy tool.

3.1. Monetary and Fiscal Policies in the Simple Keynesian System

In the Simple Keynesian System containing the most extreme assumptions, monetary policy is not effective because of the existence of the extreme assumptions. That means, even if money supply is increased this rise would not change the interest rate due to the liquidity trap (LM curve's being inelastic hence horizontal, i.e. having infinite elasticity, $-L_{er} = \infty$). Alternatively, even if the liquidity trap does not exist, and hence the interest rate changes; this change in the interest rate will not bring about a change in the real income level due to $-i_{er} = 0$ assumption (IS curve's being vertical). As it can be followed in figures 3(a) and 3(b), if there is an increase in the money supply; in 3(b), this increase will slip down for the part of positive section of LM curve where there is no liquidity trap. The interest rate will not be affected and stays at (r_0). The income level cannot be increased. In figure 3(a), because liquidity trap was presumably not present, interest rate drops down to (r_1) instead of (r_0) while real income level (y_0) again remains the same. Since there is liquidity trap in Figure 3(b), interest rate also remains at (r_0).

As opposed to the fact that the monetary policy is ineffective, fiscal policy will be fully effective. Raising (g) or lowering $t(y)$ would create a shift to the right in IS curve. Same level of rise in the government expenditures would cause a greater shift in IS curve compared to the same level of decrease in taxes. In this case when there is no liquidity trap 3(a) real income goes up to (y_2) interest rate goes up to (r_2). In case there is the liquidity trap 3(b), while real income rises to (y_2), interest rate remains the same at (r_0).
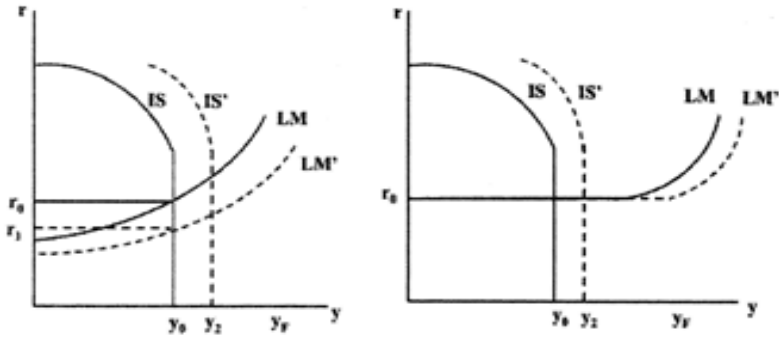
Fig. 3 (a) and (b) Monetary and Fiscal Policies in the Simple Keynesian System

In Simple Keynesian System, it is easily seen from the figures why fiscal policy will be fully effective. In case of a rise in government expenditures or a decrease in taxes, their effects are reflected completely on real income, and real income also rises due to the multiplier effect. Interest rate does not change, even it does, and that change will not lead to a decrease in the real income. In short, multiplier effect mechanism functions without any interest lost.

Besides this, another point playing an important role in the efficiency of fiscal policy is as follows: if government expenditures are raised sufficiently (or when taxes are decreased sufficiently) IS curve will shift to the right enough to reach full employment equilibrium sooner or later. This is valid for both simple Keynesian System and generalized Keynesian System.

3.2. MONETARY AND FISCAL POLICIES IN THE GENERALIZED KEYNESIAN SYSTEM

In the more realistic generalized Keynesian System, the monetary policy is effective. Yet, according to Keynes (for depression periods) this effect is not much either. This essentially stems from the fact that the negative interest elasticity of demand for idle balances is too high and the negative interest elasticity of investments is too low. The first assumption increases the slope of LM curve and makes it flatter. In this case, an increase in the money supply will shift the LM curve to the right (LM' in Figure, yet interest rate will not be decrease much. The fact that the negative interest elasticity of the investments is low would reveal an IS curve which is relatively steep. In this case, a fall in the interest rate would not cause much of an increase in the real income. This is shown in Figure 4. Due to the increase in the money supply, LM shifts to the right as LM'; equilibrium has changed to r_1 and y_1. Both the decrease in the interest rate and the increase in the real income are very little. Raising (g) or lowering t(y) would create a shift to the right in IS curve to IS'. The interest rate goes up to (r_2) and real income rises to (y_2).

As it can clearly be seen, fiscal policy will bring about a much greater increase in real income than the monetary policy:
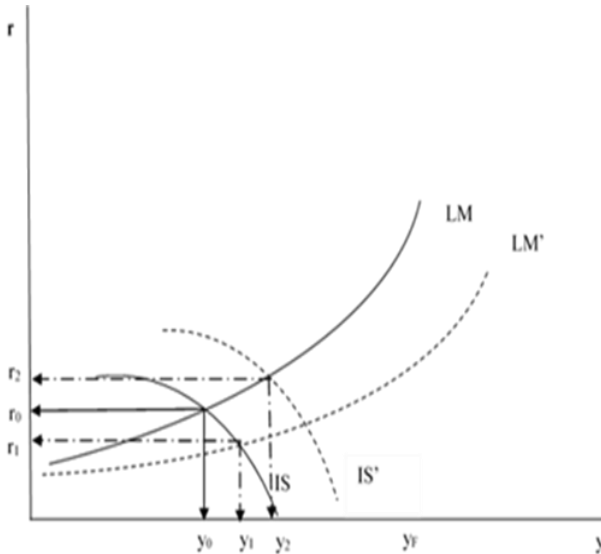
Fig. 4 Monetary and Fiscal Policies in the Generalized Keynesian System

The figure shows that, hypothetically, even if we decrease the interest rate down to zero via an increase in the money supply, we will be at (y_2) equilibrium income level yet reaching full employment income level (y_F) will still not be attainable. (Second wave effects and drawbacks of the money supply increase together with the price increases requires a separate analysis). On the other hand, if the government expenditures are increased enough and/or taxes are decreased enough, the economy will reach full employment equilibrium y_F, this is the reason why Keynes recommended fiscal policy for depression periods.

4. EFFICIENCY OF KEYNESIAN MONETARY AND FISCAL POLICIES FOR DEPRESSION AND BOOM PERIODS

From the above analysis covering the implementation of fiscal and monetary policies in a developed economy for depression period it can easily be concluded that fiscal policies are more effective in terms of raising the real income level; especially raising government expenditures is more effective than decreasing the tax propensity. Monetary policies (and increasing the money supply) are not much effective in that sense. Hence, for the depression periods, fiscal policies are essential: monetary policies could be adopted as subsidiary to fiscal policies. The outcomes of this analysis are based on the more realistic Generalized Keynes System.

However, when we have a look at this analysis from a broader perspective for the periods the economy enters after the depression, these policy recommendations may change. To analyze this, real income and interest are supposed to be dealt in a much broader range. Such a perspective is introduced in Figure 5, and LM and IS curves are

shown in much broader range as well. Again, the hidden assumptions in this analysis are that we are dealing with a developed country and working with the generalized Keynesian System.
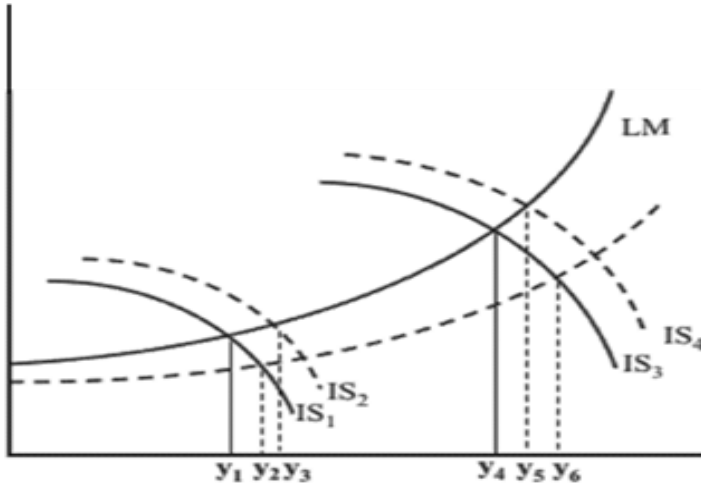

Fig. 5 Monetary and Fiscal Policies for Low Low Income (Depression and Recession) and High Income (Boom and Recovery) Periods

4.1. THE EFFICIENCY OF FISCAL AND MONETARY POLICIES DURING DEPRESSION AND RECESSION PERIODS

As can be followed in Figure 5, in case of low income (depression) periods high elasticity of LM will make the LM curve flat, hence the shift in LM is only a bit high to the right as LM' (via an increase in money supply) for depression periods. Let us assume that the economy is at a low level of equilibrium income y_1, at the intersection of IS_1 and LM. The increase in money supply will raise the real income level up to y_2 only (intersection of IS_1 and LM'), which is lower than y_3. However, in case of implementing fiscal policy (increasing government expenditures and/or decreasing tax) the IS curve shifts to the right, the real income equilibrium will reach a much higher level such as y_3 (intersection of IS_2 and LM). In short, as Keynes indicated, during the depression periods fiscal policy is more effective than monetary policy. (As Keynes also pointed out, adopting a subsidiary monetary policy will shift the y_3 even a bit further at the intersection of IS_2 and LM')

4.2. THE EFFICIENCY OF FISCAL AND MONETARY POLICIES DURING BOOM AND RECOVERY

This time let us assume that initially, the economy is at a high level of equilibrium income y_4, at the intersection of IS_3 and LM. At these high-income levels, the negative interest elasticity of the LM curve seems to be low now making the LM curve to be steeper. Thus, LM' curve appears to drift apart from the initial LM curve vastly as a result of an increase in the money supply (for a certain interest rate horizontal distances are the

same, but when LM curve gets steep, shifts get more and more distant). In this case, monetary policy would be more effective. Likewise, in case of an increase in money supply, the real income level will be increased up to y_6 (intersection of IS_3 and LM'). After all, in case the IS_3 curve shifts to the right as IS_4 through fiscal policy, the real income level will go up to y_5 only (intersection of IS_4 and LM), which is lower compared to y_6. The fact that the income level is being high at the initial period and the money supply getting relatively too tight (stretching) for the economy make up the characteristics of recession periods (a small fall in the already high income and a slight slowdown in the growth rate) rather than the depression periods. Thus, even though the analysis is kept within the framework of the Generalized Keynesian System, contrary to depression periods, this time, we can conclude that the fiscal policy is less effective than the monetary policy.

5. CHOSING THE RIGHT POLICY

The policies in the above analysis (a: increasing government expenditures; b: lowering tax propensity) and monetary policy (increasing money supply) were studied from the point of view of their "efficiency" only. Here, what is meant by efficiency is how much the real income level will be raised through any policy implementation. How the money supply will be increased is not going to be covered in this analysis. Nevertheless, the most implemented method in the developed economies is via open market operations (OMO: selling government bonds and stocks in the financial market) alongside with the rediscount rate applied by Central Banks which are independent of government.

However, fiscal and monetary policy would be affecting the economy in different aspects, besides raising the real income. To reach a definite decision about which policy to be implemented, some other important factors should be considered.

5.1. FACTORS AFFECTING THE CHOICE BETWEEN MONETARY AND FISCAL POLICY

The factors affecting the choice between the monetary and fiscal policies other than their efficiency are covered as:

- *Changes in the Composition of Income*

Fiscal and monetary policies would not only change the real income; they, at the same time, change the composition of income.

An increase in the government expenditures will increase the share of the government (expenditures). Since in the meantime, the interest rate will rise, the private investment and the share of private investment in total investment decrease.

A decrease in taxes will increase the private consumption via the disposable income. This will lead to an increase in the share of the consumption. Despite of this fact, the government expenditures not changing but the real income increasing means that the share of the government expenditures will fall to an extent. On the other hand, the real interest rate will increase parallel to the increase in the real income and this will result again in a slight decrease in private investment. That is to say, the share of the total

investment will decrease and the share of the private investment in the total investment level will also decrease.

Increasing the money supply will decrease the interest rate, and this, in return, will increase the private investment. That means, an increase of the share of total investments and an increase in the share of private investment in the total investment would occur.

- *Certainty of an Increase in Real Income at The Desired Amount*

It is worthwhile to elaborate on the possibility of the realization of a change in real income as a criterion for different policies; and not only elaborate on the increase in real income whether being sufficient or insufficient through different policies implemented (efficiency of policies) Likewise:

In case of an increase in government expenditures, through the multiplier effect this policy will drive consumption and real income upward.

In case of a decrease in taxes, the disposable income will, for sure, increase. Yet, this change (increase) in the disposable income may not immediately result in a rise in the consumption. If, by chance, households are convinced that this fall in the taxes is only temporary, then they might not necessarily increase their consumption; or they might increase their consumption less than expected. This, in turn, will reduce the efficiency of the tax policy in practice.

Increasing the money supply and thus decreasing the interest rate have a definite impact on the investment decisions of firms and entrepreneurs; here there is a certainty. The fact that it would take some time is another issue; nonetheless, as it is studied in the previous sections, the fact that this increase is not much in the depression periods because of the high elasticity of LM has directly to do with "efficiency", and not with "certainty".

- *Different Policies leading to Different Lags*

The last important criterion seems to be criterion of "lags. Two types of lags can be considered. The first one is the lag in decision phase. The second lag is the time required to pass for a policy for yielding results (i.e., increasing the real income). What is meant by "lag" turns out to be the sum of these two periods.

Once it is decided to increase the government expenditures, this would immediately affect the economy and raise the real income. However, the decision of the increase in government expenditures will be agreed upon in the parliament. Meanwhile, in the parliament, long discussion will continue not only how much government expenditures would be raised, but also on the other issues like toward which fields this government spending would be directed, which geographical regions would be benefiting from it, etc. That is why, the decision of an increase in government expenditures might take time. Moreover, sometimes a government spending decision might be providing higher or lower increases in real income than what is actually intended.

Once decided, lowering the taxes would make its effect felt immediately. The fact that households would not increase their consumption expenditures immediately as they might be perceiving it as being permanent is another topic to cover. But here, we would like to

emphasize that the change in taxes is, again, a matter of the parliamentary agreement. Since it relates to various social groups, there might be delays and the final decision coming from the parliament and it would usually not appear to be the most appropriate change of tax propensity.

Increasing the money supply is materialized in a very short time by the professional board members of the Central Bank which is independent from the government. In this decision phase, there is no lag, and the error margin is quite low. On the other hand, the effect of a decrease in the interest rate will take some time on the investment decisions. Yet, the lags in the money supply increase would be much less compared to lags in the fiscal policies.

Hence, the decision on which policy to be implemented necessitates a thorough consideration of the efficiency analysis but also all of these three factors.

REFERENCES

[1] G. Ackley, "Macroeconomic Theory," New York, 1961.

[2] W. J. Baumol, "Economic Dynamics," New York, 1959.

[3] Ö.H. Birol and A.H. Gencer, *"The Keynesian System: Fiscal And Monetary Policy Guidelines."* The Global Science and Technology Forum Journal on Business Review (GTSF), GBR Vol: 3, No: 3, pp. 106-119, June 2014.

[4] Ö. H. Birol and M. Hiç, "A Short-Run Macroeconomic Model for Less Developed and Newly Industrializing Countries based on the Keynesian Aggregate Demand Function." The Global Science and Technology Forum Journal on Business Review (GTSF), GBR Vol: 2, No: 2, pp.132-144, October 2012.

[5] Ö.H. Birol, "Keynesgil Sistem'in Gelişmesi." (The Evaluation of Keynesian System) İstanbul Üniversitesi İktisat Fakültesi Mecmuası (Special Edition), No: 4652, Vol: 56, Sayı: 1, pp. 131-162, İstanbul 2007.

[6] M. Blaug, "Economic Theory in Retrospect," 4th ed., Cambridge, 1985.

[7] A. S. Blinder, "The Fall and Rise of Keynesian Economics," Economic Record, Vol. 64, No. 187, Dec. 1988.

[8] W.H. Branson, "Macroeconomic Theory and Policy," New York, 1979.

[9] A. Coddington: "Keynesian Economics: The Search for First Principles," JEL, Dec. 1976.

[10] R. Dornbusch and S. Fisher, "Macroeconomics," New York, 1990.

[11] R.T, Froyen, "Macroeconomics," Macmillan Co., 1990.

[12] A. Hansen, "Business Cycles and National Income," New York, 1951.

[13] R.G. Hawtrey, "Currency and Credit," London, 1950.

[14] M. Hiç,"Monetary Theory and Policy," İstanbul, 1994.

[15] R.L. Klein, "The Keynesian Revolution," New York, 1961

[16] A. Leijonhufvud, "On Keynesian Economics and the Economics of Keynes: A Study in Monetary Policy," Oxford University Press Inc., 1973.

[17] N. G. Mankiw, "A Quick Refresher Course in Macroeconomics," JEL, Vol. XXVIII, Dec. 1990.

[18] A. Marshall, "Currency and Credit," London, 1912.

[19] R.L. Miller and R.E. Meiners, "Intermediate Economics," New York, 1986.

[20] R.A. Musgrave and P.B. Musgrave, "Public Finance in Theory and Practive," New York, 1984.

[21] J. Naisbitt and P. Aburdene, "MegaTrends 2000," New York 1990.

[22] A.C. Pigou, "Industrial Fluctuations," London, 1927.

[23] J.A. Schumpeter, "History of Economic Analysis," New York, 1955.

[24] Solow, 1956. "A Contribution to the Theory of Economic Growth," Quarterly Journal of Economics, Vol. 70, No. 1, pp. 65-94.

[25] The New York Times, November 28, 2008: "What Would Keynes Have Done?" by N. Gregory Mankiw.

[26] Reuters (Chicago), Jan 27, 2014: "What would Keynes have done?" by John Wasik

[27] Today's Economist, October 4, 2010, "What Would Keynes Say Today?" by Nancy Folbre.

[28] US News, July 17, 2012: "How Would Keynes Save Our Economy? Could economic ideas from a century ago help us now? You be the judge." by Tom Sightings.