Learning Module 3: Fiscal Policy

LOS 3a: compare monetary and fiscal policy

Fiscal Policy

Fiscal policy refers to government decisions on taxation and spending. These decisions affect a number of factors in the economy, including:

- Distribution of wealth and income across different parts of a country.
- The allocation of resources in all sectors of the economy.
- The aggregate demand for goods and services and, therefore, the level of economic activity.

Monetary Policy

Generally, monetary policy refers to the actions of a central bank that are aimed at determining or influencing the money supply and credit within the economy. Also, one of the major objectives of monetary policy is to ensure financial and price stability.

Instruments of Monetary Policies

Monetary policies use quite a number of instruments through central banks to accomplish their objectives. Some of them include:

- Interest rates.
- Open market operations.
- Bank reserve requirements.
- Selective credit controls.

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Similarities Between Monetary Policies and Fiscal Policies

- They are both macroeconomic tools.
- They are policies geared towards the attainment of economic stability and growth.
- They are both government policies.

Differences Between Monetary Policies and Fiscal Policies

- While monetary policies are government policies implemented through the central bank, fiscal policies are implemented by the government's policymakers through laws.
- Monetary policies use tools such as bank rate variation policies, open market operations, changes in reserve ratios, and selective credit controls for implementation. In contrast, fiscal policies use tax and government expenditure as tools for implementation.

Monetary and fiscal policies can be seen as government policies and tools used to control macroeconomic variables and financial markets. Whenever economic activities start to slow down, these tools are used to accelerate growth. Similarly, when the economy starts to overheat, they moderate inflation.

Both monetary and fiscal policies aim to create an economic environment where growth is positive and stable. Inflation should be stable and low. In such a good economic environment, corporations can focus on their investment decisions. They can maximize profits for their shareholders. Households, on the other hand, can feel secure with their savings.

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Question

Which of the following is *least likely* an instrument of monetary policy?

A. Open market operations.
B. Change in reserve requirements.
C. Decisions about taxation and spending.

Solution

The correct answer is C.

Decisions about taxation and spending are tools used in fiscal policy through government policies.

A and B are incorrect. Changes in reserve requirements, open market operations, selective credit controls, and bank rate variation policies are all monetary policies.

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LOS 3b: describe roles and objectives of fiscal policy as well as arguments as to whether the size of a national debt relative to GDP matters

Roles and Objectives of Fiscal Policies

The primary goal of the fiscal policy is to control the economy of a given country by influencing the aggregate national output, which is basically real GDP.

Fiscal Policy and Aggregate Demand

Aggregate demand is the total amount that households and businesses intend to spend. Fiscal policy can boost overall demand through:

- Decreasing corporation taxes stimulates business profits and expenditures.
- Introducing new public expenditures for social welfare and infrastructure projects.
- Reducing personal income tax resulting in increased disposable income.
- Lowering sales taxes leads to decreased prices for consumers.

Note that the effectiveness of the Fiscal policies on aggregate demand, changes over time, and economy to economy. Economists fall into two opposing categories about the effectiveness of fiscal policy: Keynesians and Monetarists.

According to **Keynesians**, fiscal policy can substantially affect aggregate demand, economic output, and employment, especially when an economy has a notable amount of unused capacity.

Monetarists hold a different view. They argue that fiscal changes provide only a temporary impact on aggregate demand. Instead, they stress that monetary policy is a more effective tool for managing or amplifying inflationary pressures.

During economic downturns, governments have the option to increase expenditures (expansionary fiscal policy) in an effort to elevate employment and production.

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Conversely, during periods of economic prosperity characterized by full employment and rapid wage and price growth, governments may opt to curtail spending and enhance taxes (contractionary fiscal policy).

Recall that budget surplus is the positive difference between government revenue and expenditure for a fixed period of time, such as a fiscal or calendar year. The budget deficit is the opposite of the budget surplus: the negative difference between government revenue and expenditure.

Often, analysts analyze the fluctuations of budget surplus or deficit from year to year to ascertain whether the fiscal policy is expansionary or contractionary. Specifically, an increase in budget surplus implies contractionary fiscal policy, while an increase in budget deficit implies expansionary fiscal policy.

Automatic Stabilizers

Automatic stabilizers are fiscal policies that automatically adjust tax rates and transfer payments in a manner that is intended to stabilize incomes, consumption, and business spending over the business cycle.

Note that automatic stabilizers work automatically, without the need for policymakers to identify shocks.

For instance, when the economy slows down and unemployment rises, the government's spending on social insurance and unemployment benefits will increase. This will boost aggregate demand, helping to prevent the economy from contracting further.

On the other hand, if the economy is booming, with high employment and incomes, then progressive income and profit taxes will rise. This progressive taxes take a larger percentage of income from high-income earners than low-income earners. As incomes rise, so do tax revenues. This will help to reduce the budget deficit or increase the budget surplus.

Automatic stabilizers are different from discretionary fiscal policies. Automatic stabilizers are built into the tax and transfer system and automatically adjust in response to economic changes.

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On the other hand, discretionary fiscal policies are implemented by the government in response to a specific economic event or shock.

Deficits and the National Debt

A government deficit occurs when it spends more than it collects in taxes and other revenue. The national debt is the accumulation of the government deficits over time.

The solvency of a country can be assessed using the ratio of debt to GDP and the ratio of interest payments to GDP.

The interpretation of the debt-to-GDP ratio is straightforward. A country's solvency is considered to be in jeopardy when its debt-to-GDP ratio reaches a level that is considered to be unsustainable.

The ratio of interest payments to GDP measures government payments to service the debt as a percentage of national output.

Is it a cause for concern if a country's national debt is large relative to its gross domestic product (GDP)? There are arguments, both opposing and supporting, whether the size of a national debt relative to GDP matters.

Arguments Opposing that National Debt Matters

- The national debt is not as big of a problem as it seems because most of it is owed to people and institutions within the country.
- Some of the debt that the government borrowed was used to finance productive investments, such as infrastructure and education. These investments can lead to increased economic output and tax revenues in the future.
- Substantial fiscal deficits may call for tax reforms that eliminate distortions caused by existing tax systems.
- Ricardian equivalence: Fiscal deficits might not have a net effect as the private sector

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could counterbalance it by boosting their savings, expecting taxes to rise in the future.

- When an economy experiences unemployment, debt is not necessarily redirecting activities away from productive purposes. In fact, the debt could potentially be linked to a rise in employment.

Arguments Supporting that National Debt Matters

- A high debt-to-GDP ratio might result in increased tax rates as there is a search for greater tax revenues. This could cause a lack of motivation for economic activities because elevated marginal tax rates decrease labor input and entrepreneurial actions, ultimately resulting in diminished growth over time.

- If the financial markets start to doubt a government's capabilities, the central bank might be forced to print money to finance the government deficit. This is because when confidence is lost, it becomes harder for the government to borrow money by selling bonds, as investors may demand higher interest rates or be unwilling to buy the bonds.

- Government borrowing can sometimes hinder investment by the private sector, a phenomenon called ‘crowding out.’ If there is a limited pool of savings available for investment, increased demand from the government will result in increased interest rates, leading to decreased investment by the private sector.

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Question

Which one of the following is *most likely* a disadvantage of national debt?

A. The national debt can cause inflation.

B. A country acquires additional funds for growth.

C. The national debt can stimulate economic growth in the short term.

Solution

The correct answer is A.

Excessive national debt can lead to inflation, especially if the government resorts to printing money to service its debt. This is considered a disadvantage as inflation erodes the purchasing power of a currency and can lead to a host of other economic problems.

B is incorrect. By borrowing money, the government can acquire additional funds that can be invested in projects that promote economic growth. For example, the government can invest in infrastructure projects to create jobs and stimulate economic activity. However, it is important to manage the level of debt carefully to ensure that it does not become unsustainable. Additionally, the effectiveness of this approach depends on the government's ability to invest the borrowed funds wisely and generate a return on investment that exceeds the cost of borrowing.

C is incorrect. This is considered an advantage because, by borrowing funds, the government can invest in infrastructure, public services, and other projects that can stimulate economic activity, create jobs, and lead to economic growth. This can be particularly important during times of economic downturn when private sector investment is low. However, managing the debt levels carefully is crucial to ensure it does not become unsustainable in the long term.

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LOS 3c: describe tools of fiscal policy, including their advantages and disadvantages

The government possesses two major fiscal tools for influencing the economy. These tools can be divided into spending tools and revenue tools. Spending tools refer to the overall government spending. On the other hand, revenue tools refer to taxes collected by the government.

Government Spending Tools

Capital Expenditure

Capital expenditure refers to what a government spends on amenities such as schools, roads, and hospitals. This spending adds to a country's capital stock. Besides, it affects the productivity of a country. Moreover, as the government increases its spending on such facilities, it increases the country's capital stock. Since such facilities highly encourage investment, the total productivity of a country also increases due to an increase in investments.

Current Government Spending

Current government spending includes goods and services, which it regularly provides. Such services include defense, health, and education. This expenditure aims at improving a country's labor productivity.

Transfer Payments

Transfer payments are payments that the government makes through the social security systems. Transfer payments ensure a minimum level of income for low-income individuals. Also, they provide ways in which the government can change the distribution of income in society.

These benefits include state pensions, housing benefits, income support, and tax credits. It should be stated that such payments are not included in the calculation of the GDP because they are not attached to any factor of production.

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Justifications for Government Spending

- Providing services such as defense for the benefit of all citizens.
- Enhancing infrastructure in the form of capital spending.
- Assuring the less-wealthy individuals a certain minimum income level and
- Increasing the employment level and low inflation.
- To provide funding for the creation of risky but inventive new items.

Government Revenue Tools

Indirect Taxes

Indirect taxes refer to taxes imposed on specific goods such as cigarettes, alcohol, fuel, and services. VAT is an example of an indirect tax. Health and education can be excluded from indirect taxes.

Direct Taxes

Levies on profit, income, and wealth are direct taxes. Taxes charged on a deceased property can both raise revenue and distribute wealth. They include capital gains tax, national insurance tax, and corporate taxes.

Desirable Qualities of a Tax Policy Desirable:

1. **Simplicity:** This means taxes should be easy for people to follow and for tax agencies to enforce.
2. **Efficiency:** Taxes shouldn't disrupt individual choices in the market.
3. **Fairness:** Similar situations should lead to similar tax payments, and wealthier individuals should pay more.

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4. **Adequate Revenue:** Taxes should generate enough money for government needs, although it might clash with the principles of fairness and efficiency.

Problems Related to Tax Policy

1. **Incentives:** Some economists are of the opinion that income taxes diminish the motivation to work, save, and invest and that the cumulative tax load has become too much.
2. **Fairness:** Determining the fairness of the tax system can be challenging. One approach is to measure the tax burden borne by various population segments, categorized by their income levels, and then evaluate how tax alterations impact these groups. Naturally, this approach requires extensive data collection and analysis, making it a demanding task for researchers and, hence, should be regarded as incomplete.
3. **Tax reform:** Discussions about modifying tax policies are ongoing. Various questions arise, such as: Should a uniform tax rate be applied to labor income? Should all investments be instantly deductible from corporate taxes?

Advantages of Different Fiscal Policy Tools

- Indirect taxes can be quickly adjusted after the announcement, instantly influencing spending, and generating government revenue at little to no cost.

- Social policies such as discouraging the consumption of alcohol or tobacco can be quickly implemented by increasing taxes on these products.

Disadvantages of Using Different Fiscal Policy Tools

- Direct taxes, such as income taxes, are challenging to alter without significant notice, often requiring several months, as payroll computer systems need adjustments.

- Plans for capital expenditures, such as infrastructure projects, typically require an extended period, often several years, to fully develop and execute. For example, constructing infrastructure like roads or hospitals involves detailed planning, securing

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legal authorizations, and the actual execution, each of which takes considerable time.

The Fiscal Multiplier

The Fiscal multiplier assists in modeling the effect of Taxes and government spending on aggregate demand.

Typically, a conventional macroeconomic model posits that government spending (G) directly increases aggregate demand (AD) while reducing it through taxes (T). Moreover, the government is increased by payment of transfer benefits (B). As such, the net effect of the government sector on the aggregate demand is mathematically expressed as:

$$G - T + B = \text{Budget Surplus or Deficit}$$

Denote the net taxes (taxes minus transfers) by NT. Also, denote the net disposable income by YD. As such, the relationship between the national income or output (Y) can be expressed as:

$$YD = Y - NT = (1 - t)Y$$

Where:

t = Net tax rate.

From the above equation, net taxes can be seen as a proportion of the national output (Y) so that the total revenue net revenue is tY.

Note that Those who benefit from increased government spending will usually save a fraction $(1 - c)$ of each extra dollar of disposable income, where 'c' represents the marginal propensity to consume (MPC) of the additional income.

If we ignore taxes, it is easy to see that \$c will be utilized by the recipients to buy more goods and services. Note that these recipients will spend a proportion of $c^2 (= c \times c = c^2)$. This process persists with both income and expenditure increasing at a steady rate of 'c' as it circulates from one entity to another throughout the economy, forming the sum of infinite geometric series given

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by:

$$\frac{1}{1-c},\ 0 < c < 1$$

The above expression implies that for every additional spending, total income and spending rise by $\frac{1}{1-c}$ (ignoring taxes).

Before moving on, we must introduce marginal propensity to save (MPS), denoted by s. It is the amount saved out of an additional dollar of disposable income. As such,

$$c + s = 1$$

So that,

$$s = 1 - c$$

Recall that fiscal policies include government spending (G), net taxes (NT), and tax rates, t.

Households allocate a portion 'c' of their disposable income, YD, which means they spend:

$$cYD = c(Y - NT) = c(1 - t)Y$$

Where:

Y = Total income or output.

NT = Net taxes (taxes minus transfers).

t = Net tax rate.

Note that the marginal propensity to consume in the presence of taxes is then $c(1-t)$. As such, when the government elevates its expenditure by a certain amount, G, the disposable income rises by $(1 - t)G$, leading to increased consumer spending by $c(1-t)G$.

Assuming there are unused sources of capital and labor in the economy, the recipients of the additional consumption spending will have $(1 - t)c(1 - t)G$ additional disposable income and will spend c.

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This cumulative additional expenditure and income will persist in propagating throughout the economy at a diminishing rate, as $0 < c(1 - t) < 1$, forming a decreasing geometric series with a common ratio of $c(1 - t)$ which sum to

$\frac{1}{1-c(1-t)}$

The above expression is called a multiplier:

$$\text{Fiscal Multiplier} = \frac{1}{1 - c(1 - t)}$$

The fiscal multiplier holds significant importance in macroeconomics as it informs us about the magnitude of change in output resulting from exogenous alterations in government spending or taxation. In other words, variations in government spending (G) or tax rates will impact the output of an economy via the value of the multiplier.

Example: Calculating and Interpreting Fiscal Multiplier

Assume that in an economy, the tax rate is 25%, and the marginal propensity to consume is 80%; then the fiscal multiplier will be calculated as:

$$\frac{1}{1 - c(1 - t)} = \frac{1}{[1 - 0.8\,(1 - 0.25)]} = \frac{1}{0.40} = 2.5$$

This implies that if the government increases spending (G) by USD 1 billion, the overall incomes and expenditures will rise by USD 2.5 billion.

Balanced Budget Deficit

Note that if a government increases government spending(G) by the same magnitude as it raises taxes, the aggregate output will increase. This is due to the multiplier effect.

As the marginal propensity to consume from disposable income is less than 1, a one-dollar decrease in YD causes only a $c drop in spending. Therefore, the total reduction in spending is smaller than the tax increase by a multiple of c. Maintaining a balanced budget results in

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increased output, subsequently causing more increases in both output and income due to the multiplier effect.

It may be intuitive to think that increasing government spending (G) while raising taxes by the same amount would keep the government's budget deficit/surplus unchanged. However, the rise in output leads to additional tax revenue and further changes in the budgetary position.

It is possible that the government can modify the initial change in spending to precisely offset the total change in total revenues, at which the balance budget multiplier is 1. Note that there is an associated output with this balanced budget multiplier.

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Question

Which of the following statements is the *most accurate* regarding fiscal tools?

A. Direct taxes are useful for discouraging alcoholism.
B. Indirect taxes cannot be modified quickly; therefore, they are irrelevant fiscal.
   policy tools
C. Government capital spending decisions are slow to plan, implement, and execute; thus, they are of little use for the short-term stabilization of the economy.

Solution

The correct answer is C.

The implementation of capital spending is slower compared to the implementation of changes in indirect taxes.

A is incorrect. Indirect taxes have a greater effect on alcohol consumption as compared to direct taxes.

B is incorrect. Indirect taxes can be modified quickly. In fact, among all the tools, their implementation is the easiest and fastest.

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LOS 3d: explain the implementation of fiscal policy and the difficulties of implementation as well as whether a fiscal policy is expansionary or contractionary

Recall that fiscal policy refers to all the methods used by a government to influence the economy through tax rates and government expenditures. For example, a government may decide to reduce taxes. These moves should, in theory, stimulate the economy and, thereby, increase aggregate demand. Such policies are called discretionary fiscal policies.

Understanding Deficits and Fiscal Stance

Policymakers need to know if the budget deficit truly reflects the government's fiscal stance, meaning if fiscal policy stimulates or reduces economic growth. But several factors make the actual government deficit a complex measure.

Fluctuations in Deficit Size

The size of the deficit can fluctuate due to various reasons not necessarily related to intentional fiscal policy changes. For instance, automatic stabilizers, like income tax, VAT, and social benefits, can alter the budget deficit without any policy change. This automatic adjustment reduces the economy's sensitivity to shocks and stabilizes employment and output levels without any deliberate policy changes.

Use of Structural Budget Deficit

Economists often use the structural budget deficit as a fiscal stance indicator, which is the deficit that would exist if the economy operated at full employment or full potential output. For example, during the 2009-2010 period, when unemployment was around 9-10% in the United States and Europe, the actual budget deficits would have been substantially lower if the economies were at full employment, as tax revenues would be higher and social transfers lower.

Distinction Between Real and Nominal Interest Rates

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Another factor that complicates using actual government deficits as a fiscal stance measure is the distinction between real and nominal interest rates and the role of inflation adjustment when applied to budget deficits. It is more logical to consider only the inflation-adjusted (or real) interest payments because inflation erodes the real value of the outstanding debt.

Use of Automatic and Discretionary Fiscal Adjustments

Lastly, governments use both automatic and discretionary fiscal adjustments to influence aggregate demand. Discretionary adjustments involve intentional changes in taxes and/or spending to stabilize the economy. However, a pertinent question arises as to why fiscal policy cannot entirely stabilize aggregate demand, thereby ensuring full employment at all times.

Difficulties in Implementing Fiscal Policy

Note that fiscal policy cannot completely stabilize aggregate demand. Below are some of the difficulties experienced in the implementation of fiscal policy.

Recognition Lag, Action Lag, and Impact Lag

It may take time before noticing a slow growth in the economy. Also, policymakers may recognize a problem when it is too late (recognition lag). Consequently, action against the problem may come when it is too late to be effective (action lag). Upon implementation of a policy, there could be a time lag between the time of implementation and the time the impact of the policy manifests in the economy (impact lag).

Uncertainty About the Economic Future

Another dimension of time in this process relates to the unpredictability of the economy's direction regardless of policy alterations. It is hard to rely on macroeconomic forecasting models to create policies because of their relative inaccuracy. For example, announcing fiscal adjustments will automatically lead to a change in the behavior of the private sector.

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Other Macroeconomic Issues

- **Crowding out**: Crowding out refers to a case where the consumption of goods, services, and investments reduces due to increased government spending. When the government increases its borrowing, interest rates increase. Due to crowding out, an expansionary fiscal policy – financed by debt – may sometimes end up decreasing aggregate demand.

- If the government tries to boost demand to fight unemployment and inflation, it might lead to higher wages and prices, causing inflation. Policymakers may avoid further adjusting fiscal policy to prevent this.

- When the budget deficit is already large relative to GDP, and further fiscal stimulus is necessary, increasing the deficit may be viewed as unacceptable by financial markets. This can lead to higher interest rates on government debt and political pressure to address the deficit, even when further stimulus is needed.

- Accurately measuring the level of full employment is challenging, and fiscal expansion raises demand. However, if the economy is already at full employment, which changes with shifts in productive capacity and workers' willingness to work at different wage levels, it could lead to inflationary pressures instead of increased output.

- If the lack of demand is not the reason for unused resources but rather a low supply of labor or other factors, then discretionary fiscal policy will not increase demand and will be ineffective, potentially leading to inflationary pressures.

Determining whether a Fiscal Policy is Expansionary or Contractionary

Expansionary Fiscal Policy

Expansionary policies are adopted to stimulate the economy during a recession. For instance, during a recession, the government employs idle resources and tries to boost economic output. This increased spending increases aggregate demand, hence a higher real GDP.

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Generally, expansionary policy attempts to raise employment rates and output and often results in an increase in the budget deficit or a reduction in the budget surplus.

The expansionary policy includes:

- **Increased Government Spending**: This could be in the form of increased public works, infrastructure projects, government salaries, etc.
- **Tax Cuts**: Reducing taxes increases disposable income for households and can also reduce operating costs for businesses, thereby encouraging spending and investment.
- **Increased Transfer Payments**: This includes increasing payments for social programs like unemployment benefits, social security, etc.
- **Decreasing Interest Rates**: Though this is primarily a tool of monetary policy, it's worth mentioning that lower interest rates can also encourage borrowing and investment, which is expansionary in nature.

Contractionary Fiscal Policy

Contractionary policy is typically adopted when the economy is overheating, i.e., growing too quickly and causing high inflation. It can be explained as a decline in government expenditure or a rise in taxes.

Contractionary policies often lead to a decrease in the budget deficit or an increase in the budget surplus. Contractionary fiscal policies include:

- **Decreased Government Spending**: Reducing spending on public works, infrastructure projects, government salaries, etc.
- **Tax Increases**: Raising taxes decreases disposable income for households and increases operating costs for businesses, thereby discouraging spending and investment.
- **Decreased Transfer Payments**: This includes reducing payments for social programs like unemployment benefits, social security, etc.

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- **Increasing Interest Rates**: Again, primarily a tool of monetary policy, higher interest rates can discourage borrowing and investment, which is contractionary in nature.

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Question

Which of the following most accurately explains the term impact lag of a fiscal policy?

A. Policymakers may recognize a problem in the economy when it is already too late.
B. Policymakers may take action against an economic problem when it is already too late.
C. Once the government has implemented a policy, it may take time before the impact of the policy manifests in the economy.

Solution

The correct answer is C.

It may take a lot more time for the impact of an implemented policy to manifest in the economy. This is called the impact lag.

A is incorrect. When policymakers recognize a problem in the economy when it's too late, economists call it a recognition lag.

B is incorrect. Taking action against an economic problem when it is already too late is referred to as action lag.

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