Economics Review

Monetary Policy

The Federal Reserve (the "Fed") regulates and manages the money supply in accordance with the levels of output (and employment) and prices. It has three tools at its disposal to alter the money supply:

1. Open market operations: The Fed buys and sells government securities to commercial banks and to the general public. The buying of bonds increases the money supply by putting dollars into circulation, and the selling of bonds decreases money supply by removing dollars from circulation. This is the primary tool used by the Fed to alter money supply.

2. Reserve ratio: This is the mandated percentage of deposits that banks are required to keep. If the Fed increases the reserve ratio, it reduces the money supply by increasing the amount of cash that a bank has to keep in its vault (required reserves). By increasing the required reserves for banks, the Fed decreases the amount of the banks' excess reserves and, hence, decreases the amount of money that banks have to loan. If the Fed reduces the reserve ratio, it increases money supply by decreasing the amount of required reserves and, hence, increasing the amount of excess reserves and loanable funds.

3. Discount rate: This is the interest rate that the Fed charges on money loaned to commercial banks. Many short-term interest rates are tied to the discount rate. If the Fed increases the discount rate, it decreases money supply (through the money multiplier) by decreasing borrowing (increased interest rates). If the Fed decreases the discount rate, it increases the money supply (through the money multiplier) by stimulating borrowing (decreased interest rates). Because banks typically do not borrow much money from the Fed and because success of this monetary policy depends upon the actions of borrowers, altering the discount rate to change money supply is not used often. Instead, altering the discount rate is often used to send a signal to financial markets as to the type of monetary policy the Fed is undertaking.

Easy (Expansionary) Monetary Policy

Policies to increase the money supply are used when growth in the economy is "too slow." That is, the economy is faced with unemployment and deflation. To increase the money supply the Fed would:

- buy securities
- reduce reserve ratio
- lower discount rate

Money supply interest investment GDP

An expansionary monetary policy is effective when the economy is sluggish (falling GDP). It stimulates investment, which ultimately expands firm production and employment. If it is invoked when the economy is overheated (rapidly expanding GDP and inflation) then an expansionary monetary policy further fuels inflation. If prices are rising due to cost-push factors and the economy is sluggish, as in our problem, then increasing money supply to expand the economy may have little impact on price levels.

Tight (Contractionary) Monetary Policy

Policies to decrease the money supply are used when growth in the economy is "too fast." That is, the economy is faced with cost-push inflation created by labor shortages. To decrease the money supply the Fed would:

- sell securities
- increase reserve ratio
- raise discount rate

Money supply interest investment GDP

A contractionary monetary policy is effective when the economy is overheated (rapidly increasing GDP and inflation). It is used to decrease investment and slow economic expansion. If invoked when the economy is sluggish (declining GDP and high levels of unemployment), then a contractionary monetary policy further deepens the recession. If prices are rising because of cost-push factors—and not because the economy is overheating—tight monetary policies may have little impact on slowing inflation.

Thus, contracting the money supply as a solution for our problem would, in theory, decrease GDP, increase unemployment, and have little impact on prices.

Fiscal Policy

Advocates of fiscal policy believe that the government's decisions about spending and taxing can influence the equilibrium of the nation's GDP. More specifically, a fundamental function of the government's spending and taxing policy is to stabilize the economy. This stabilization is achieved in part through the manipulation of the public budget—government spending and tax collections—for the expressed purpose of increasing output and employment or reducing the rate of inflation.

In addition to its role in stabilizing the economy, the federal government is also concerned with the provision of public goods and services and the redistribution of income. In this regard, the specific types of spending and taxing policies used for stabilization are important. For example, the government could engage in an expansionary policy by increasing the dollars going toward education, by serving as employer of last resort for low-skilled, unemployed workers, or by decreasing income taxes for the wealthy. While all of these scenarios might have the same expansionary impact on the economy as a whole, they would have very different distributional impacts. One policy helps the middle class (the primary recipients of public education), one helps the poor (low-skilled and unemployed), and one helps the wealthy (tax breaks).

Fiscal policy can be targeted toward either the supply or demand side of the economy. Supply-side policies include all policies targeted toward production in the business sector (e.g., changing incentives for investment). Demand-side policies include all policies targeted toward spending by consumers (e.g., altering employment opportunities or taxes on consumption).

Easy (Expansionary) Fiscal Policy

Increasing government spending or decreasing taxes is used when growth in the economy is "too slow." That is, the economy is faced with a recession, high levels of unemployment, and slow growth in GDP. Expansionary fiscal policy includes:

- increased government spending
- lower taxes
- a combination of the two

If the budget is balanced, an expansionary fiscal policy will increase the deficit as government spending is increased. Critics of fiscal policy measures argue that this expansion by the government "crowds out" expansion of private firms by competing for investment funds used to finance spending.

Assuming that crowding out effects are minimal, expansionary fiscal policy is effective when the economy needs stimulation. It stimulates spending (of consumers or firms), which in turn stimulates production and reduces unemployment. If it is undertaken when (demand-pull) inflationary pressures are present or when the economy is at full employment, it will overheat the economy and create (increased rates of) inflation. If prices are rising because of (non-labor) cost-push factors and the economy is sluggish (as in our problem), expansionary fiscal policies can expand the economy with little impact on price levels.

Tight (Contractionary) Fiscal Policy

Decreasing government spending or increasing taxes is used when growth in the economy is overheated. That is, contractionary policies are most effective when the economy faces excess demand for workers (by firms) or for goods (by consumers). These pressures underlie inflationary pressures and GDP growth that is "too rapid." Contractionary fiscal policy includes:

- decreased government spending
- increased taxes
- a combination of the two

If the budget is balanced at the outset, a contractionary fiscal policy would move the government toward a budget surplus. This surplus slows economic growth and production. Contractionary fiscal policy is effective when the economy contains (demand-side) inflationary pressures. By decreasing spending (of consumers or firms), production is slowed and the demand for workers decreases. If it is undertaken when the economy is in a recession, it will further reduce economic growth and exacerbate unemployment. If prices are rising because of (non-labor) cost-push factors and the economy is sluggish (as in our problem), contractionary fiscal policies will increase sluggishness of the economy and will have little impact on price levels.

Concept Definitions

The curriculum is designed to teach the following concepts:

Budget deficit: A situation where the flow of expenditures exceeds the flow of income for the federal government. A deficit occurs when taxes on income and expenditures are insufficient to meet the payments for goods and services and interest on the national debt. Contrast with national debt.

Consumer Price Index (CPI): A measure of the average price of a fixed "market basket" of consumer goods and services that are commonly bought by households. This statistic is computed monthly by the Bureau of Labor Statistics.

Contractionary policy: A decrease in aggregate demand or supply that is brought about by a decrease in government spending, an increase in taxes, or a combination of the two (fiscal policy) or a decrease in money supply (monetary policy). Contractionary policies are used when the economy is overheating.

Cost-push inflation arises with sustained increases in the cost of production that cause the price of the product to increase

"Crowding out": When the federal government borrows money, the associated rise in interest rates decreases planned investment spending by private firms and individuals. As a result, government expenditures are said to "crowd out" those by private firms.

Demand: Purchases of a good or service that people are actually able and willing to make, given prices and choices available to them. The "**law of demand**" states that there is a negative (or inverse) relationship between price and quantity demanded. That is, as price increases (decreases) the amount of a good purchased decreases (increases). Consumers' demand is determined by their tastes, income, and price of other goods. The **demand schedule** is a table showing the quantities of a good that will be purchased at various prices. The **demand curve** is a curve that relates the price of a product and the quantity of the product that individuals are able and willing to purchase. **Aggregate demand** is the total demand for goods and services in the economy by households (for consumer goods), by firms and government (for investment goods), and by other countries (exports).

Demand-push inflation arises when aggregate demand exceeds aggregate supply and consumers bid up prices

Demand-side theories: Views that emphasize increasing aggregate demand as a means of maintaining economic stability in the economy. Should the economy be at the downturn of the business cycle, demand-side theorists believe that aggregate demand should be stimulated through expansionary policies. Should the economy be overheating, demand-side theorists believe that aggregate demand should be slowed through contractionary policies.

Discount rate: The rate of interest at which the Federal Reserve lends to the banking system. Short-term interest rates are geared to the discount rate through the banking system. If the capital market thinks that changes in the rate are likely to last for some time, long-term rates will also change.

Economic indicators: Statistics about the economy that allow analysis of current economic performance and predictions of future performance

Expansionary policy: An increase in aggregate demand or supply brought about by an increase in government spending, a decrease in taxes, or a combination of the two (fiscal policy) or an increase in money supply (monetary policy). Expansionary policies are used when the economy needs to be stimulated.

Federal Reserve System: The central banking system in the United States. The system consists of 12 regional banks and branches under control of the Federal Reserve Board. Although the Governors of the Board are appointed by the President of the United States, the financial capital of the reserve banks is owned by the member banks, making the "Fed" an independent agency. The Board effectively acts as a central bank and approves the discount rate and reserve ratio, and generally regulates the operation of the banking system. The Federal Open Market Committee, a subcommittee of the Board, effectively has the power to influence money supply through open market operations.

Fiscal policy: An attempt to attain certain economic goals, such as achieving full employment and increasing Gross Domestic Product (GDP), by varying the government's purchases of goods and services and its rate of taxation. The spending authorization and rates of taxation are established by Congress.

Government spending: Payments for goods, services, and interest made by the government. Fiscal policy includes the amount spent for goods and services by the federal government. The multiplier effect associated with government spending results from spending by any level of government.

Gross Domestic Product (GDP): The dollar value of all final goods and services produced by resources located in the country during a year

Inflation: An upward movement in the average level of prices. The result is diminished purchasing power of a given sum of money. Inflation is contrasted with **deflation**, which is a downward movement in the average level of prices. **Demand-push inflation** arises when aggregate demand exceeds aggregate supply and consumers bid up prices. **Cost-push inflation** arises with sustained increases in the cost of production that cause the price of the product to increase.

Interest rates: The price of loanable funds, which is usually expressed as annual percentage and measures the yearly cost of borrowing. The price paid per dollar borrowed per period of time. **Nominal interest rates**: The interest rate taken at its face value (that is, the interest rate expressed in current dollars and not adjusted for inflation). **Real interest rates:** The actual return to capital. Because comparing nominal interest rates includes a purely monetary component, the value of the rate must be purged of changes in prices to be compared over time. The rate obtained after eliminating the element of price change is the real interest rate.

Monetary policy: An attempt to attain certain economic goals, such as lowering the rate of unemployment or inflation. This can be done by varying the money supply, interest, and (in some cases) conditions of credit. The Board of Governors of the Federal Reserve establishes the policies.

Multiplier: The recipients of income will save a portion and spend a portion of it. Of the portion spent, the income generated to the next recipient will be partially saved and partially spent. The result of this continued pattern is that the total increase in aggregate income will, in the end, be several times larger than the increase in the initial income received (that is, it will be some multiple of the increase in initial income). The expression that gives the value of this multiple is the multiplier.

National debt: The total amount of money owed by the federal government to the owners of government securities. It is equal to the sum of the past budget deficits (less budget surpluses). Contrast with budget deficit.

Open market operations: The buying and selling of federal government securities by the Federal Reserve banks

Opportunity costs: The real sacrifice involved in achieving something. The value of the next best opportunity that is foregone in order to achieve a particular thing.

Reserve requirements: The proportion of deposits that a bank or other depository institution is legally required to hold in cash reserve. The proportion is set by the Federal Reserve as a monetary policy tool.

Scarcity: A condition where less of something exists than people would like if the good had no cost. Scarcity arises because resources are limited and cannot accommodate all of our unlimited wants.

Supply: The amount of a good or service that firms are prepared to sell at a given price. The firm determines how much of a good to supply using its marginal cost curve. **Industry supply** is the summation of all individual firms' marginal cost curves (in a constant cost industry). The **supply schedule** is a table showing the amount of a product that will be produced at a given price. The **supply curve** relates the quantity of a good supplied by a firm (or market) and each price. The **law of supply** dictates that the curve is upsloping, indicating that more will be produced as the price of the good increases. **Aggregate supply** is the total amount of goods and services available for consumption and consists of both domestically produced goods and services and imports.

Supply-side theories: Views that emphasize increasing aggregate supply as a means of maintaining economic stability. Should the economy be at the downturn of the business cycle, supply-side theorists believe that aggregate supply should be stimulated through expansionary policies. Should the economy be overheating, supply-side theorists believe that aggregate supply should be slowed through contractionary policies.

Tax: A compulsory transfer of money from individuals, institutions, or groups to the government. The tax may be based on either wealth or income or as a surcharge to prices. Taxation is one of the key elements in fiscal policy and a primary means by which a government finances its expenditures.

Tradeoff: An exchange relationship denoting how much of one good (or resource) is needed to get another good (or resource).

Unemployment rate: The number of people able and willing to work expressed as a percentage of the labor force. Labor force includes working individuals and unemployed individuals but does not include individuals who do not wish to work (e.g., retirees).

