**Economics – Macroeconomics Domain**

**SSEMA1 Illustrate the means by which economic activity is measured.**

Economic activity derives from the sectors of the economy we explored in the fundamentals and microeconomics domains. Individuals, businesses, markets, and governments all interact to create a country’s economy. The degree of strength or weakness of all economic activity in an economy will affect the individual components of that economy. For this reason, public and private entities constantly measure specific types of economic activity and synthesize the data to create a picture of the economy’s health. The pictures drawn by the data inform policy makers who may choose to intervene in the economy to meet economic goals.

1. **Identify and describe the macroeconomic goals of steady economic growth, stable prices, and full employment.**

The social economic goal of growth in most countries is measured by using changes in real gross domestic product over time. Countries want steady **economic growth** because it means the economy is moving in the right direction. Steady economic growth is usually associated with things like entrepreneurs starting new businesses, firms becoming more productive by adding capital or new technology, workers becoming more productive through increases in knowledge and skills, and productive resources being available in greater quantities for the economy. Standard SSEF6, element d, showed how to illustrate economic growth on a production possibilities curve indicating a growing economy.

**Price stability** refers to minimizing increases in the price level over time so that a country’s money will retain its purchasing power over time. Countries have many ways to measure changes in the price level in the economy, one of which is the Consumer Price Index. Countries want stable prices so individual, firms, and governments can correctly predict how much the money they have now will buy in the future. Our predictions, about changes in the purchasing power of our money over time, affects how we save, how much we save, and when we decide to spend our savings.

**Full employment** refers to the state of the economy when virtually all who are willing and able to work have the opportunity to do so. Countries have many ways to measure full employment. Countries want full employment because of the circular flow of the economy studied in standard SSMI1, element a. The income people receive from working affects their ability to buy products and pay taxes. If consumers become unemployed, they will have less income to spend, firms will receive less revenue, and entrepreneurs will earn less profit. Businesses may close because they cannot cover their costs, causing increased numbers of workers to become unemployed. If workers and entrepreneurs are earning lower incomes, they will pay less to the government in taxes, reducing the amount of public goods and services available. If governments cannot maintain roads or fund schools, the infrastructure needed to support economic activity will decline and the economy will contract.

1. **Define Gross Domestic Product (GDP) as the sum of Consumer Spending, Investment, Government Spending, and Net Exports (output expenditure model).**

**Gross Domestic Product (GDP**) is the sum of consumer spending, investment spending, government spending, and net exports. **Consumer spending** refers to the monetary value of what households spend on final goods and services in the product market in a given time period. **Investment** includes the monetary value of final capital goods businesses purchase in a given time period, the value of inventories produced by businesses, but not yet sold, by the end of the measurement time period, and the value of new home construction produced in the given time period. **Government spending** is the monetary value of any spending on final goods and services by a local, state, or national government in a given time period. **Net exports** refers to the monetary value of all final goods and services produced in one country but sold outside the country’s borders minus the monetary value of all final goods and services produced outside the country’s borders but sold within the country in a given time period. In other words, the value of a country’s exports minus the value of a country’s imports in a given time period. This method of calculating a country’s GDP is the **Output Expenditure Model**.

1. **Define unemployment rate, Consumer Price Index (CPI), inflation, real GDP, aggregate supply and aggregate demand and explain how each is used to evaluate the macroeconomic goals from SSEMA1a**

The **unemployment rate** is a statistic reported by the Federal Department of Labor’s Bureau of Labor Statistics (BLS). The BLS calculates the unemployment rate from data derived from a sample of 60,000 households as part of the Census Bureau’s Current Population Survey. The BLS reports the statistic monthly. To calculate the unemployment rate, take the number of unemployed people in the country divided by the number of people in the labor force and multiplying the quotient by 100. The result is the percentage of people in the labor force who are unemployed. Since some types of unemployment always exist, such as those graduating from college who start looking for a job, full employment does not mean zero percent unemployment. Economists usually indicate full employment is attained when the unemployment rate is somewhere between 4% and 6%. Those counted as unemployed meet several criteria. The person must be at least 16 years old, they cannot be in prison or a mental institution, they cannot have worked for pay in the measurement time-period, and they must be actively seeking a job.

Calculate the labor force by adding all unemployed people in a country to all the employed people. Those considered employed are 16 years old, not a member of the armed forces, and worked for pay in the time-period measured.

The **Consumer Price Index (CPI)** is also a statistic reported monthly by the BLS. The statistic measures the change in value of a basket of goods and services purchased by the average urban consumer. To calculate CPI, take the current value of the market basket, divide it by the value of the market basket in the base year, and multiply the quotient by 100 to get the index number. The base year is simply the year the BLS has chosen to be the year of comparison. As of the writing of this document, the BLS uses the value of the basket in 1982-1984. Statisticians use the resulting CPI number to calculate the inflation rate in the country.

**Inflation** is a sustained increase in the price level in an economy over time. One way to measure whether there is inflation in the economy is to calculate the inflation rate. The inflation rate is equal to the percent change in a price index number such as the CPI. Percent change in CPI is equal to the new CPI minus the old CPI divided by the old CPI times 100. If the result of this calculation is positive then the price level is rising. Most economists do not want the inflation rate to be zero percent and agree that some inflation will occur when an economy is growing. Increases in the price level become a concern when they happen too quickly, when they make it difficult for households and firms to plan for the future, when they occur because of shocks in markets for productive resources, or when they are a result of inappropriate public policy decisions.

**Real GDP** is the value of current gross domestic product adjusted for inflation. This is a more accurate view of a country’s productivity than just the current dollar value of the output expenditure model discussed in SSEMA1b. Before adjusting for inflation, an increase in GDP could be due to an increase in the prices of the final goods and service produced rather than an increase in the quantity of goods and services produced. To calculate real GDP, take the value of the output expenditure model from SSEMA1b, divide it by a price index number such as CPI, and multiply the quotient times 100. The result is GDP adjusted for changes in the price level. Most countries measure economic growth through calculating the percentage change in real GDP from one period to the next.

**Aggregate Demand** refers to the total quantity of all goods and services consumers are willing and able to purchase at each price level in a given period of time. The aggregate demand curve (AD) is downward-sloping showing an inverse relationship between price level and real GDP. Three effects explain the downward-sloping Aggregate Demand curve: the interest rate effect, the wealth effect (real balances), and the foreign purchases effect (net exports effect). The interest rate effect causes the downward slope of the aggregate demand curve because as price level rises, interest rates (the price of borrowing money) rises resulting in consumers and businesses spending less on interest sensitive purchases like cars, new homes, and physical capital. The wealth effect occurs when a rising price level reduces the purchasing power of consumers thus lowering the amount of consumption spending due to higher prices. Finally, the foreign purchases effect occurs when a higher price level in a country makes the relative price of the country’s exports higher, reducing demand for the country’s exports in other countries.

**Aggregate Supply** is the total quantity of final goods and services producers in an economy are willing and able to supply at each price level. Aggregate supply has both a short-run and a long-run curve. Aggregate supply in the short-run is typically an upward-sloping curve. This illustrates a direct or positive relationship between price level and the quantity of real GDP output supplied in the economy. It is upward-sloping in the short-run because wages and prices are slow to change due to contracts. Economists called this “sticky” wages and prices. In the long-run, economists generally view wages and prices as completely flexible. Therefore, the long-run aggregate supply curve is vertical at the full employment level of real GDP (real output or real national income). The long-run curve illustrates that, in the long-run, changes in price level have no effect on the long-run quantity of final goods and services the economy can produce.

Although it is beyond the scope of this element, graphing the aggregate demand and supply curves can help students visualize the effect of a change in the curves on the macroeconomic goals specified in SSEMA1a.

**Change in Aggregate Demand**

**Increase in Aggregate Demand –** Increases in aggregate demand can occur when changes in the economy lead households, businesses, governments, or foreign consumers of domestic exports to purchase a greater number of final goods and services at all price levels.

**Real GDP increases –** The change from Y1 to Y2 means more employment in the short-run. This change indicates economic growth only if the percent change in Real GDP is greater than the percent change in price level.

**Price Level Increases –** Price level increased from PL1 to PL2. This indicates an increase in the inflation rate. The amount of the increase would determine how well the country’s is meeting its price stability goals.

**Decrease in Aggregate Demand –** Decreases in aggregate demand can occur when changes in the economy lead households, businesses, governments, or foreign consumers of domestic exports to purchase a smaller number of final goods and services at price levels.

**Real GDP decreases –** The change from Y1 to Y2 means less employment in the short-run. This change indicates the economy is contracting rather than growing.

**Price Level decreases –** Price level decreased from PL1 to PL2. This indicates a decrease in the price level or deflation. Deflation is generally not desirable when it occurs because of a decrease in economic activity. When the price level falls, businesses are unable to sell their products at a price high enough to cover costs they have already incurred, putting producers at risk of failure.

**Increase in Aggregate Supply** – Increases in aggregate supply can occur when changes in the economy reduce the costs of production or increase productivity for industries throughout the country, allowing producers to supply a greater number of final goods and services at all price levels.

**Real GDP increases** – The change from Y1 to Y2 means more employment in the short-run. This change indicates economic growth in the short-run because the price level is lower.

**Price Level decreases –** Price level decreased from PL1 to PL2. A price level decrease caused by decreased production costs or increased productivity do not usually cause the problems associated with deflation from demand shifts since producers have a lower cost of production.

**Decrease in Aggregate Supply** – Decreases in aggregate supply can occur when changes in the economy increase the costs of production or decrease productivity for industries throughout the country, forcing producers to supply a fewer number of final goods and services at all price levels.

**Real GDP decrease** – The change from Y1 to Y2 means more less employment in the short-run. This change indicates the economy is contracting in the short-run.

**Price Level increases –** Price level increased from PL1 to PL2. This economic condition when an increase in the price level occurs with a decrease in Real GDP and employment is stagflation. It is difficult to recover because prices are high at the same time as incomes are falling. There is little incentive to spend and high incentive to save.

1. **Give examples of who benefits and who loses from unanticipated inflation.**

One of the reasons price stability is good for an economy is that it allows households, firms, governments, and the financial sector to make decisions in the present with confidence about the price level in the future. Two groups with an eye on changes in the price level are borrowers and lenders. Households, firms, governments, and financial institutions act as borrowers in the economy. Households take loans for major purchases like cars, college, and homes. Firms borrow to cover expenses in difficult times and to expand operations when the future looks bright. Governments borrow to fund shortfalls in tax revenue needed to provide public goods and services to citizens. Even financial institutions borrow overnight funds to cover their reserve requirements and take longer-term loans to fund expansion projects. All of the sectors act as lenders too. Anyone who holds a bond has lent funds to one of these sectors. Households, businesses, and banks lend to government when they buy Treasury or Municipal bonds. They lend to businesses when they buy corporate bonds. The price of borrowing money is the interest charged over the life of the loan. When lenders make a loan, they agree to a price for the loan. When making loans at fixed rates, an unanticipated rise in price level by more than the lender anticipated hurts the lender since the money repaid will have less purchasing power. **Unanticipated inflation** hurts lenders who lend at fixed rates. Borrowers who borrow at fixed rates will benefit from unanticipated inflation. Their interest rates remain stable as price rise and they pay back their loan with money that has less purchasing power than the money they borrowed.

1. **Identify seasonal, structural, cyclical, and frictional unemployment.**

Full employment does not mean the country’s unemployment rate is zero percent. Certain types of unemployment always exist even during the best economic times. There are four main types of unemployment. Three out of the four types are long-run unemployment because the rate of unemployment for these types are relatively stable over time. The fourth type is short-run because in good economic times it may be close to zero. It is the short-run type of unemployment that most often targeted by economic stabilization policies. SSEMA2 and SSEMA3 discuss these policies. The chart below describes the four types of unemployment.

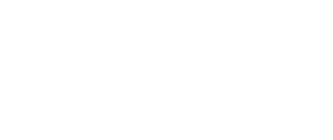
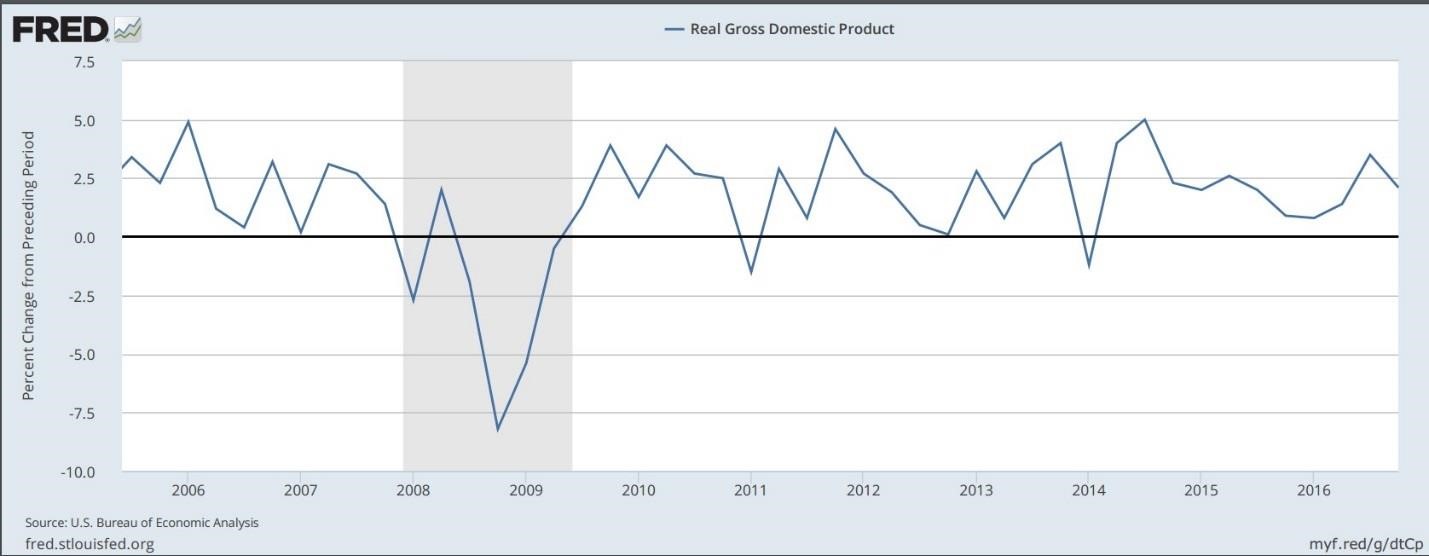
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| **Type of Unemployment** | **Description** | **Short or Long Run** | **Example** |
| **Cyclical** | The cyclically unemployed are unemployed due to a downturn in overall economic activity. If the economy expanded again, these workers would be able to go back to work. | Short-run | Thousands of restaurant workers lose their jobs because a recession has reduced the number of consumers who can afford to eat out. |
| **Frictional** | The frictionally unemployed are unemployed because they are graduating from high school or college, looking for better working conditions, or seeking a higher wage. | Long-run | In May, thousands of college graduates enter  the labor market looking for their first professional job. This happens every May, year after year. |
| **Structural** | Structurally unemployed people are unemployed because their human capital does not match the needs of employers hiring in the labor market. | Long-run | Thousands of high school students graduate without the literacy and math skills needed by the labor market. This happens every year. |
| **Seasonal**  **(Sub category of structural**  **unemployment)** | Seasonally unemployed people are unemployed because employers need their type of human capital during only one part of the year. | Long-run | Agricultural workers seek new jobs when the harvest season is finished. |

1. **Define the stages of the business cycle, including: peak, contraction, trough, recovery/expansion as well as recession and depression.**

The **business cycle** is an economic model illustrating how economic activity fluctuates over time. The y-axis in the model is Real GDP and the x-axis is Time. The x-axis values are usually months, quarters, or years. The business cycle graph looks a graph of waves from the field of Physics. The graph shows a period of rising Real GDP reaching a high point and then falling until reaching a low. After the lowest point, Real GDP recovers and begins to rise again. The whole cycle repeats itself. The graph below shows the business cycle model. The graph that follows the model shows real data about the U.S. economy.

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Time



Real GDP



Trough



Peak

