Chapter 27: Basic Macroeconomic Relationships

In order to fully understand the causes of short-run business cycles and long-run economic growth, it is important to understand underlying economic relationships. The level of disposable income affects consumer spending and saving decisions. Interest rates affect the willingness of firms to invest in plant and equipment. These changes in consumer and investment spending result in changes in national output. Chapter 27 examines the relationships among factors that can multiply to cause widespread changes in the national economy.

Of all of the factors that affect consumption and saving, disposable income is the most important. Households can only do two things with their income: spend it or save it. The consumption function demonstrates that those with lower disposable incomes spend a higher percentage of their incomes and save less (or even dissave), while those with higher disposable incomes spend a smaller percentage of their incomes and have a higher percentage of saving.

The average propensity to consume (APC) is the percentage of total income spent, while the average propensity to save (APS) is the percentage of total income saved. By definition, APC + APS = 1, because the percentages of income spent and saved must add up to total income. Of even more interest is what happens when incomes change. The marginal propensity to consume (MPC) is the percentage of the change in income spent, while the marginal propensity to save (MPS) is the percentage of the change in income saved. As with the average propensities, MPC + MPS = 1, or 100% of the change in income.

While disposable income is the most important determinant, other factors also affect the level of household spending and saving. The wealth effect illustrates that when household wealth increases, consumption increases and saving decreases. Borrowing allows households to temporarily increase consumption, but it reduces future consumption when the loan must be repaid. Households increase consumption ahead of expected inflation, while they decrease consumption and save money when they fear a pending recession may result in unemployment. Changes in real interest rates also slightly affect spending and saving. Lower interest rates increase spending, as lower loan payments entice consumers to buy homes and cars on credit. At the same time, the low interest rates discourage households from saving.

The firm's decision to invest in plant and equipment depends on the marginal benefit and marginal cost of the investment. Therefore, if the expected rate of return on the investment is greater than the real interest rate for the loan to make the purchase, the firm will make the investment. Other factors that can affect business investment include the costs to operate and maintain the capital, business taxes, changes in technology, the stock of capital goods on hand, planned inventory changes, and expectations for business conditions.

While household consumption tends to remain relatively stable, investment spending is the most volatile component of the economy. In fact, unexpected changes in investment spending account for most of the changes in output and employment in the business cycle. Changes in investment result from changes in business expectations, the durability of capital, the irregularity of innovation, and the level of profit.

When investment spending changes, real GDP changes by more than the initial change in spending. Because spending by one entity is income to another—and that

income is then spent to another—an increase in the initial spending multiplies through the economy, causing a greater increase in national output. The multiplier can be calculated in several ways: 1/MPS or 1/(1–MPC) or Change in Real GDP / Initial Change in Spending. To calculate the effect of a change in spending on real GDP: Change in Real GDP = Multiplier x Initial Change in Spending. The higher the marginal propensity to consume, the higher the multiplier, and the greater the effect of changes in investment spending on real GDP.

Material from Chapter 27 will likely be included in a few multiple-choice questions on the AP Macroeconomics Exam. It is important to be able to calculate marginal propensities to consume and save, as well as the multiplier and the effects of an initial change in spending on real GDP. It is important to recognize the factors that affect household consumption (especially the wealth effect and real interest rates), as well as the factors that affect business investment (especially expected rates of return and real interest rates).