

ECON10003 – Introductory Macroeconomics

Study Notes

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1 Macroeconomic questions and the circular flow of income

Macroeconomics studies the economy as a whole: the total volume of production, the overall level of prices, the utilisation of labour, the growth of productive capacity, and the economy's transactions with the rest of the world. It does not replace microeconomics. Households still choose consumption and labour supply; firms still choose output and investment. Macroeconomics asks what happens when those choices are added up, and when they interact through markets for goods, labour, money and foreign exchange.

The questions that organise the subject are therefore questions about *aggregates*. Is production near the economy's capacity, or is there spare capacity? How many people who want work can find it? Is the general price level stable, rising, or falling? Is the capital stock and the stock of useful knowledge growing fast enough to raise living standards? Is the country spending more on foreign goods and assets than it is earning from them, and is that pattern sustainable? Policy questions follow: what instruments, if any, can move those aggregates toward stated objectives, and at what cost.

■ Definition

An *economic aggregate* is a total constructed from many individual transactions or stocks: production, expenditure, income, employment, the general price level, the money stock, the exchange rate, or the current-account balance. Macroeconomic theory explains how those aggregates are determined and how they move together.

Aggregation is not a mere adding-up exercise. When one household saves more, that household's wealth rises. When many households try to save more at once, planned spending on goods can fall, firms can cut production, and aggregate income can fall. The circular flow of income is the device that makes that interdependence visible. It is also the reason the same total can be read as production, as income, and as expenditure: every dollar of spending on currently produced output is a dollar of revenue, and every dollar of revenue is a dollar of income for someone.

1.1 From individual markets to the macroeconomy

A single market can clear at a price that equates quantity demanded and quantity supplied. The labour market, the market for newly produced goods, the market for loanable funds, and the foreign-exchange market cannot be treated as four separate stories, because the same households and firms appear in all of them. A fall in planned investment is a fall in demand for goods; it is also a fall in the demand for labour and, if it is financed by borrowing, a change in the demand for funds. Macroeconomic models keep some of those links and shut others down, on purpose. The Keynesian model of national income determination holds prices fixed and traces spending through to output. The aggregate demand / aggregate supply (AD–AS) model lets the price level adjust. The neoclassical growth model looks through short-run demand fluctuations and asks how capital and technology set potential output. Each model is an answer to a restricted question. Using the wrong model for the question is a common source of error, not a failure of the models themselves.

■ Key concept

The circular flow of income is the organising picture of macroeconomics because it forces three claims to be held at once: (1) production generates income; (2) income is spent, saved, paid in tax, or used to buy imports; (3) spending on currently produced domestic output comes from consumption, investment, government purchases, and exports. Equilibrium in the flow is a statement about *consistency* among those claims, not a statement that the resulting level of output is desirable.

Stocks and flows have to be kept distinct. Income, consumption, investment, tax, exports and imports are *flows*: they are measured per unit of time. The capital stock, the public debt, household wealth, the money stock and net foreign liabilities are *stocks*: they are measured at a point in time. Investment is the flow that adds to the capital stock (after depreciation). A budget deficit is the flow that adds to public debt. A current-account deficit is the flow that adds to net foreign liabilities. Macroeconomic arguments that mix a stock with a flow (“the debt is large, therefore this year’s deficit is large”) are confused before any theory is applied.

The circular flow is also why the same total can be labelled production, income or expenditure. A baker sells a loaf. That sale is production (value added in baking), it is expenditure by the household, and it is income to the baker (and to whoever supplied the flour, once intermediate use is netted out). Adding up every such transaction, without double-counting intermediates, is the national-accounts programme of topic 2. The circular flow says that programme must have three matching totals. Whether those totals sit at full employment is a different question, answered by the Keynesian and AD–AS models.

1.2 A two-sector flow, then government and the rest of the world

Begin with households and firms. Households supply labour and own firms. Firms hire labour and produce goods and services. In a closed economy with no government and no capital accumulation, households would spend all of their income on consumption, firms would sell all of their output, and the flow of payments for goods would equal the flow of wages and profits. That picture is too thin to be useful, but it already contains the identity that production, income and expenditure are three views of the same total.

Saving and investment open a second circuit. Households (and firms) that do not spend all of their income on consumption are saving. Saving is a *leakage* from the spending stream: it is income not spent on currently produced consumption goods. Investment (the purchase of new capital goods, dwellings, and inventory accumulation) is an *injection*: it is spending on currently produced output that does not come from household consumption. Financial institutions and markets stand between the two. They channel saving into the financing of investment, and they set interest rates that influence both.

Government opens a third circuit. Taxes (net of transfer payments) are a leakage. Government purchases of goods and services are an injection. Transfers (age pensions, unemployment payments) are not government purchases; they rearrange who has income, and they show up as household consumption or saving.

The rest of the world opens a fourth. Imports are a leakage: they are spending that does not land on domestic output. Exports are an injection: they are foreign spending that does. The difference, net exports, can be positive or negative.

Write the household budget as $Y = C + S + T$, where T is net tax (taxes less transfers). Substitute into the expenditure identity $Y = C + I + G + X - M$ and cancel C to obtain $S + T + M = I + G + X$. Each extra dollar of income is split among consumption, saving, net tax and, when spent, a fraction that lands on imports. Those three leakages are why an injection does not raise income one-for-one. They are also why the three-sector story (households, firms, government) and the four-sector story (plus the rest of the world) are the same identity with extra terms, not two rival theories.

Investment in the flow is *gross capital formation*: new dwellings, machinery, intellectual property products, cultivated biological resources, and the change in inventories. Buying an existing factory or an existing house is a transfer of an asset, not an injection. Inventory investment is the hinge between production and sales: if firms produce more than is sold, inventories rise and measured I rises even though no one “decided” to buy extra capital. That is how the *ex post* identity is forced to hold even when *ex ante* plans do not.