

8.7: The Aggregate Demand Function

Learning Objective

1. Combine the individual demand functions into an aggregate demand (AD) function.

Notice that the right side indicates that if disposable income were to rise, consumption demand would rise but current account demand, which is negatively related to disposable income, would fall. This would seem to make ambiguous the effect of a disposable income change on aggregate demand. However, by thinking carefully about the circular flow definitions, we can recall that consumption expenditures consist of the sum of expenditures on domestically produced goods and imported goods. This was the reason imports are subtracted away in the national income identity. This also means that the marginal propensity to spend on imported goods must be lower than the total marginal propensity to consume, again since imports are a fraction of total consumption spending. This implies that the negative effect on imports from a \$1 increase in disposable income must be less than the positive impact on consumption demand.

We indicate the net positive effect on aggregate demand of changes in disposable income with the “+” sign above Y_d on the left-hand side. The positive impact of changes in the real exchange rate, investment demand, and government demand is obvious and is also shown.

We can write the aggregate demand function in several different ways. To be more explicit, we can include all the fundamental variables affecting aggregate demand by writing out the disposable income and real exchange rate terms as follows:

Writing the expression in this way allows us to indicate that the spot exchange rate, the price levels domestically and abroad, and domestic taxes and transfer payments also affect aggregate demand. For example, increases in autonomous transfer payments will raise aggregate demand since it raises disposable income, which in turn raises demand. Increases in taxes, however, will lower disposable income, which in turn will lower aggregate demand. Similarly, an increase in the spot exchange rate (as defined) or the foreign price level will raise aggregate demand, since both changes will increase the real exchange rate. However, an increase in the domestic price level will reduce the real exchange rate (because it is in the denominator) and thus reduce aggregate demand.

key takeaway

- Aggregate demand is positively related to changes in disposable income, the real exchange rate (as defined), and investment and government demands.

exercise

1. **Jeopardy Questions.** As in the popular television game show, you are given an answer to a question and you must respond with the question. For example, if the answer is “a tax on imports,” then the correct question is “What is a tariff?”
 - Of *increase, decrease, or stay the same*, the effect of a real appreciation of the domestic currency on aggregate demand in the G&S model.
 - Of *increase, decrease, or stay the same*, the effect of an increase in investment demand on aggregate demand in the G&S model.
 - Of *increase, decrease, or stay the same*, the effect of an increase in disposable income on aggregate demand in the G&S model.
 - Of *increase, decrease, or stay the same*, the effect of an increase in income taxes on aggregate demand in the G&S model.
 - Of *increase, decrease, or stay the same*, the effect of an increase in government demand on aggregate demand in the G&S model.
 - Of *increase, decrease, or stay the same*, the effect of an increase in the real currency value on aggregate demand in the G&S model.
 - Of *increase, decrease, or stay the same*, the effect of an increase in the domestic price level on aggregate demand in the G&S model.

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