

8.6: Export and Import Demand

Learning Objective

1. Learn the determinants of export and import demand and the effects of changes in these variables.

Export demand refers to the demand by foreign countries for G&S produced domestically. Ultimately, these goods are exported to foreign residents. Import demand refers to demand by domestic residents for foreign-produced G&S. Imported G&S are not a part of domestic GNP. Recall from Chapter 2, [Section 2.3](#) that imports are subtracted from the national income identity because they are included as a part of consumption, investment, and government expenditures as well as in exports. Likewise in this model, consumption, investment, government, and export demand are assumed to include demand for imported goods. Thus imports must be subtracted to assure that only domestically produced G&S are included.

We will define current account demand as $CA^D = EX^D - IM^D$. The key determinants of current account demand in this model are assumed to be the domestic real currency value and disposable income.

First, let's define the real currency value, then show how it relates to the demand for exports and imports. The real British pound value in terms of U.S. dollars (also called the **real exchange rate** between dollars and pounds), $RE_{\$/\pounds}$, is a measure of the cost of a market basket of goods abroad relative to the cost of a similar basket domestically. It captures differences in prices, converted at the spot exchange rate, between the domestic country and the rest of the world. It is defined as

where $(E_{\$/\pounds})$ is the spot exchange rate, CB_{\pounds} is the cost of a market basket of goods in Britain, and $CB_{\$}$ is the cost of a comparable basket of goods in the United States. The top expression, $(E_{\$/\pounds}) CB_{\pounds}$, represents the cost of a British market basket of goods converted to U.S. dollars. Thus if $RE_{\$/\pounds} > 1$, then a British basket of goods costs more than a comparable U.S. basket of goods. If $RE_{\$/\pounds} < 1$, then a U.S. basket of goods costs more than a British basket. Also note that $RE_{\$/\pounds}$ is a unitless number. If $RE_{\$/\pounds} = 2$, for example, it means that British goods cost twice as much as U.S. goods, on average, at the current spot exchange rate.

Note that we could also have defined the reciprocal real exchange rate, $RE_{\pounds/\$}$. This real exchange rate is the real value of the pound in terms of U.S. dollars. Since the real exchange rate can be defined in two separate ways between any two currencies, it can be confusing to say things like “the real exchange rate rises” since the listener may not know which real exchange rate the speaker has in mind. Thus it is always preferable to say the real dollar value rises, or the real pound value falls, since this eliminates any potential confusion. In this text, I will always adhere to the convention of writing the spot exchange rate and the real exchange rate with the U.S. dollar in the numerator. Thus references to the real exchange rate in this text will always refer to that form.

Since the cost of a market basket of goods is used to create a country's price index, changes in CB will move together with changes in the country's price level (P) . For this reason, it is common to rewrite the real exchange rate using price levels rather than costs of market baskets and to continue to interpret the expression in the same way. For more information related to this, see Chapter 6, [Section 6.2](#). We will follow that convention here and rewrite $RE_{\$/\pounds}$ as

where P_{\pounds} is the British price index and $P_{\$}$ is the U.S. price index. From this point forward, we'll mean this expression whenever we discuss the real exchange rate.

Next, we'll discuss the connection to current account demand. To understand the relationship it is best to consider a change in the real exchange rate. Suppose $RE_{\$/\pounds}$ rises. This means that the real value of the pound rises and, simultaneously, the real U.S. dollar value falls. This also means that goods and services are becoming relatively more expensive, on average, in Britain compared to the United States.

Relatively cheaper G&S in the United States will tend to encourage U.S. exports since the British would prefer to buy some cheaper products in the United States. Similarly, relatively more expensive British G&S will tend to discourage U.S. imports from Britain. Since U.S. exports will rise and imports will fall with an increase in the real U.S. dollar value, current account demand, $CA^D = EX^D - IM^D$, will rise. Similarly, if the real U.S. dollar value falls, U.S. exports will fall and imports rise, causing a decrease in CA^D . Hence, there is a positive relationship between this real exchange rate (i.e., the real value of the pound) and U.S. current account demand.

Disposable income can also affect the current account demand. In this case, the effect is through imports. An increase in disposable income means that households have more money to spend. Some fraction of this will be consumed, the marginal propensity to

consume, and some fraction of that consumption will be for imported goods. Thus an increase in disposable income should result in an increase in imports and a subsequent reduction in current account demand. Thus changes in disposable income are negatively related to current account demand.

We can write current account demand in functional form as follows:

The expression indicates that current account demand is a function of $RE_{\$/\text{€}}$ and Y_d . The “+” sign above $RE_{\$/\text{€}}$ indicates the positive relationship between the real exchange rate (as defined) and current account demand. The “-” sign above the disposable income term indicates a negative relationship with current account demand.

Key Takeaways

- The key determinants of current account demand in the G&S model are assumed to be the domestic real currency value and disposable income.
- The real exchange rate captures differences in prices, converted at the spot exchange rate, between the domestic country and the rest of the world.
- In the G&S model, there is a positive relationship between the real exchange rate (as defined) and current account demand and a negative relationship between disposable income and current account demand.

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 *positive* or *negative*, the relationship between changes in the domestic price level and the real value of the domestic currency.
 - Of *positive* or *negative*, the relationship between changes in the foreign price level and the real value of the domestic currency.
 - Of *positive* or *negative*, the relationship between changes in the nominal value of the domestic currency and the real value of the domestic currency.
 - Of *increase*, *decrease*, or *stay the same*, the effect of a real appreciation of the domestic currency on current account demand in the G&S model.
 - Of *increase*, *decrease*, or *stay the same*, the effect of a depreciation of the domestic currency on current account demand in the G&S model.
 - Of *increase*, *decrease*, or *stay the same*, the effect of an increase in the domestic price level on current account demand in the G&S model.
 - Of *increase*, *decrease*, or *stay the same*, the effect of an increase in the foreign price level on current account demand in the G&S model.
 - Of *increase*, *decrease*, or *stay the same*, the effect of a decrease in real GNP on current account demand in the G&S model.
 - An expenditure by a domestic business for a microscope sold by a Swiss firm would represent demand recorded in this component of aggregate demand in the G&S model.
 - An expenditure by a foreign business for a microscope sold by a U.S. firm would represent demand recorded in this component of aggregate demand in the G&S model.

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