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Lecture 5, Parkin Chapter 6: Aggregate Demand & Aggregate Supply

The macro-economy consists of the goods & services market, the labor market, and the financial market. In this chapter, we look at the goods & services market.

The concept of ‘equilibrium’ in the goods & services market:

Equilibrium in the goods & services market occurs when the quantity of goods & services demanded = the quantity of goods & services supplied.

Let us first look at the Demand Side of the market for goods & services.

- Question: What is the level of aggregate demand for goods & services (Real GDP) in the economy?

Ans. The quantity of Real GDP demanded in a country at a certain point in time is the total amount of final goods and services produced within that country that people, businesses, the government, and foreigners plan to buy.

So, as we saw in chapter 4, the quantity of real GDP demanded, i.e. the expenditure level in the economy on final goods & services is the sum of the real consumption expenditure (C), investment expenditure (I), government expenditure (G), and export expenditure (X) minus import expenditure (M).

Therefore, the level of RGDP demanded, i.e., Aggregate Demand (AD) = C + I + G + X- M

The level of RGDP demanded depends on factors like:

1. The price level
2. Expectations
3. Fiscal & Monetary Policy
4. How the world economy is doing

A change in any of these factors would change the level of aggregate demand.

The aggregate demand curve: The aggregate demand curve shows us the level of aggregate demand for the economy at various price levels, holding all other things constant (examples: items 1, 2, & 3 above). It is a diagrammatic representation of the relationship between RGDP demanded & the price level.

Properties: This aggregate demand curve is downward sloping. So the level of RGDP demanded in the economy, i.e. the aggregate demand for goods & services rises as their
price falls & vice versa. This is to be expected, as we recall from our study of microeconomics. Essentially, the demand side of the economy arises from the utility maximizing and profit-maximizing decisions of the economic agents like households and firms respectively, who decide how much to spend on various goods, given the price level. (Diagram: see Fig. 6.6, Pg. 135, Ch. 6, Parkin)

Now, for a change in the price level we can figure out the level of aggregate demand by moving ALONG the AD curve.

- Question: What happens when the other things that we were holding constant (items 2, 3, & 4) change?

Then we have a SHIFT of the demand curve as seen in Figure 6.7 in Parkin, page 137. What this means is that if the other factors change, then aggregate demand will change even when price level stays the same.

Situations for which the aggregate demand curve shifts

<table>
<thead>
<tr>
<th>Decreases if:</th>
<th>Increases if:</th>
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<tbody>
<tr>
<td>C and/or I goes down due to expected future income, inflation, or profits decreasing</td>
<td>C and/or I goes up due to expected future income, inflation, or profits increasing</td>
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<tr>
<td>Contraction in fiscal policy under which Government Purchases (G) decrease; Taxes increase and/or Transfer payments decrease (leading to a decline in C due to a decrease in after-tax income of households)</td>
<td>Expansionary fiscal policy under which Government Purchases (G) increase; Taxes decrease and/or Transfer payments increase (leading to an increase in C due to an increase in after-tax income of households)</td>
</tr>
<tr>
<td>Contraction in monetary policy decreases the quantity of money and increases interest rates, leading to a fall in I</td>
<td>Expansionary monetary policy which increases the quantity of money and decreases interest rates, leading to an increase in I</td>
</tr>
<tr>
<td>The exchange rate increases or foreign income decreases, decreasing X - M</td>
<td>The exchange rate decreases or foreign income increases, increasing X - M</td>
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</table>
**Question from the class:** Do not higher taxes lead to higher government spending: so under what circumstances can higher taxes lead to less aggregate demand?

**Ans.** The government has no obligation to spend the taxes you pay on goods & services within the US economy. Suppose your tax dollars are used to fund reconstruction in Iraq, using raw materials & labor from the Middle East (non-American inputs). This obviously means that while taxes within the US may be going up, government spending might not be doing so and higher taxes could lead to less aggregate demand.

**The Supply Side of the market for goods & services**

The quantity of real GDP supplied depends on the amount of inputs used in production, given the technological state of the economy.

We will take labor (L) and capital (K) to be the inputs used in the production process for the rest of the course. Labor & capital are used to produce output (Y). We saw in microeconomics how firms decide how much labor & capital to use for production, given the prices of those inputs & output price, via the profit-maximization process.

Given how much aggregate labor & capital are used at inputs, we can figure out the amount of RGDP supplied from the aggregate production function of the economy.

So, \( Y = F(L, K, T) \), is the equation of the aggregate production function, where \( T \) is a parameter measuring the state of technology of the economy, such that for higher T output is higher.

So, given T, level of output (Y) is higher for higher L or K. More input usage gives rise to more output.

Example of a production function:

\[ Y = T \times L^2 \times K^3 \]

Let \( T = 3 \). What is \( Y \) for \( L = 2, K = 3; L = 2, K = 4; L = 3, K = 3 \)?

For \( L = 2, K = 3 \), what happens to \( Y \) when \( T \) increase to 4?

So, aggregate production depends on aggregate input usage in the economy, which in turn depends on the profit-maximizing decisions of firms. So amount of output supplied in the economy is essentially based on the firms’ profit- maximization process.

**Aggregate Supply:** It is the dollar value of aggregate output produced by firms in the economy.