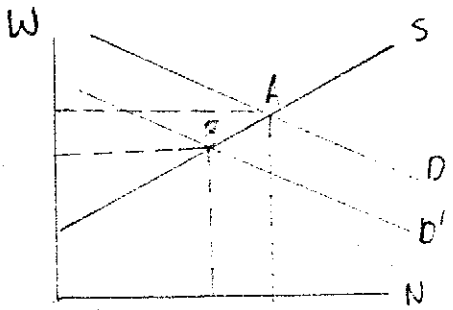
LECTURE VIII

We are going to look at the way a purely competitive market adjusts to a reduction in the demand for labor. The essence of what I said last time was that in the face of a reduction in the demand for labor, the supply curve and demand curve for labor (or any resource) looks like this:



In a perfectly competitive market, where information is widespread and people are free to leave, the effect would be a reduction in wages and the level of employment -- but no unemployment. After the adjustment process you are at equilibrium again. Supply is equal to demand at point B.

The Nineteenth Century Market in the U.S.

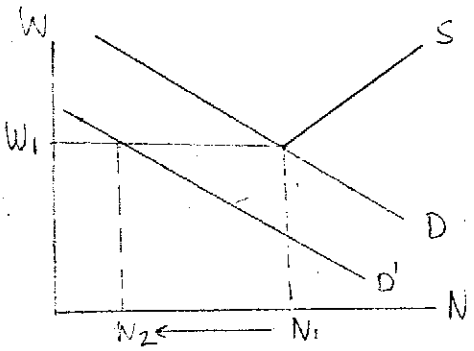
People seek nonmarket uses for the resources they own. We are talking about markets that existed a century ago in the United States when finding a job was a relatively simple thing to do as long as you were willing to take any job that came along and as long as you did not have a high "reservation price" (a high demand for salary on the employer). You knew when the demand for labor was declining because bad times hit; and small communities felt it. And, they sought alternatives, most of which were found in family-owned businesses (largely agricultural but not always). As a result, in the decline of economic activity there was a decline in income. People still worked but they did not get as much from their work as they had previously.

The Labor Market Today

The actual history of the labor market suggests that a much more complex situation exists today. We do not

have the nonmarket alternatives open to us the way we did then. So that, if we are laid off today, the situation is somewhat different.

I will again draw a diagram that reflects a reduction in demand. However, the supply curve now is going to be very different from the first supply curve. This supply curve has a shape which is clearly different:



The flat portion reflects a certain wage inflexibility, that there are factors operating in this labor market which will prevent wages from falling. I will put in the same reduction in demand and what happens? Is supply equal to demand? No. Because, how much labor is going to be supplied at a wage of W1 = N1? How much will be purchased? = N2. THE DIFFERENCE IS CALLED UNEMPLOYMENT. The market is in equilibrium. There is no tendency for the market to move away from this point given the nature of this supply curve and given the reduction in demand.

Again, given a supply curve of labor showing the different quantities of labor that will be offered to the market at different wage rates, the higher the wage the more labor will be offered to the market. If the wage is too low it doesn't pay for people to work in market activities; they work at home. With the reduction in the demand for workers, competition brings the wage down and workers leave the market.

Causes of a Reduction in Demand for Labor.

Minimum wage laws, labor contracts (i.e., union contract which prevent the wage from falling in the face of a reduction in demand). These came into being in the United States in the 1930s, thus helping to develop a supply surve looking something like what we have looked at. What kind of government program encourages people to remain unemployed and not look for

jobs at current wage rates? Unemployment compensation. These are interferences (artificial in a sense) to the market mechanism, which prevents wages from adjusting downward.

One of the big debates taking place at the present time centers on whether or not we should have a lower minimum wage for teenagers. There are a large number of organizations that are starting to realize that that short of thing would probably improve the chances of reducing the teenage unemployment rate.

Modern Complexity.

But, then, there is this other issue which, although it isn't as easy to identify as minimum wage laws or unions is nevertheless very important in producing this type of supply curve, and that is the complexity of the economy. How does a more complex economy contribute to a supply curve of this type? What kind of behavior occurs in an economy where there is so much specialization and division of labor that in the face of a reduction in the demand for some of those resources wages are prevented from falling?

What seems to occur is that it takes time for information about alternatives to get around. For example, suppose you were laid off from a joab which is a reasonably narrowly defined kind of work. You may not be sure why you are liad off. Someone offers you a job but at a wage less than you were making. So, you pass it by and you wait. And, over the course of time you confront the fact that there aren't any jobs available to you at your original wage because there has been a general reduction in the demand for workers. The longer it takes for you to adjust downward your expectations regarding wages, you remain unemployed.

The point is that it takes time for people to learn they are experiencing a general reduction in demand and that the only way to gain employment is to lower their wage sights. Also, what happens over time is that inflation serves to lower the real value of that wage rate (in which case that too would serve to hide the wage reduction).

THE RESULT CAN BE A LOWER LEVEL OF EMPLOYMENT AND YET EQUILIBRIUM. And, with a lower level of employment less

income received means less money spent. This will be maintained over time in the circular flow, and only something else happening over time will bring the economy out of this.

It is the reduction in demand which is the result of a leakage and which translates the leakage (the reduction in expenditures) into a reduction in employment, which is then continued as a reduction in expenditures in the second round. Looking at this situation you can see what the real meaning of supply-side economics is. Since the 1930s the effect has been with unemployment, how to get demand back up. Now, there is more balance and a greater concentration on getting supply back up.

Suppose you lower income taxes. That would encourage people to go back to work, because although they are looking for a higher wage that is a before tax wage. If you lower the tax they would be willing to accept a lower gross wage. Unfortunately, through the first two years of the "tax cut", it was offset by increased social security taxes and people being pushed up into higher tax brackets.

THE DEMAND SIDE

The issue now is what influences aggregate demand. The total expenditures. Thinking in terms of different kinds of spending that take place in the economy, aggregate demand ("Y") or income involves expenditures, as follows: (1) consumption; (2) investment; (3) government; and (4) imports/exports.

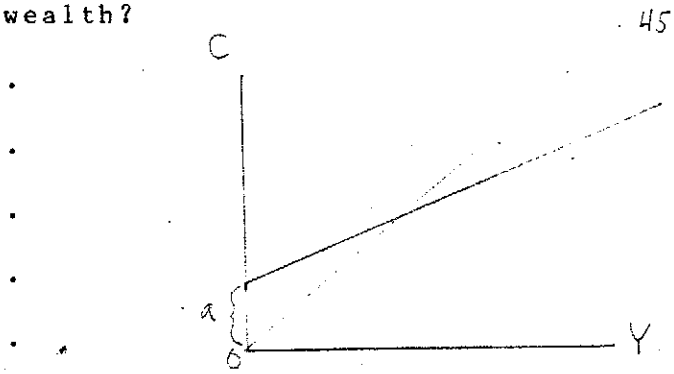
Consumption.

This is the most important quantitative categroy of expenditure. What is consumption? It is simply the using up of resources. The important factors that influence consumption from a macroeconomic point of view is a function of two things:

(a) first, on the wealth of the economy; that is, how much has been accumulated in the economy over the course of time; and

(b) income, because income is a reflection of production. Whenever something is produced it is creating income for the economy in a real sense. Because people are receiving those things.

If we measure consumption on the vertical axis and income on the horizontal axis, where are we measuring wealth?

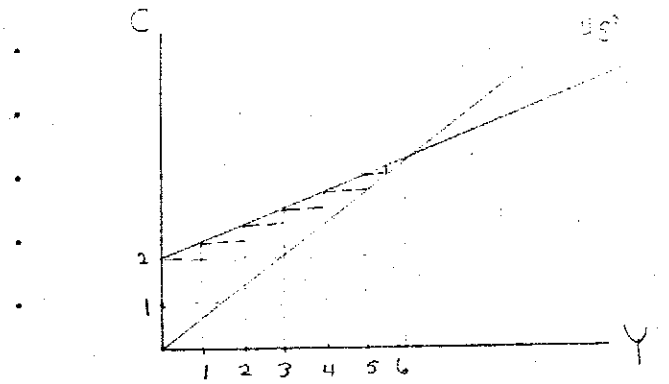


The point is that we are not measuring wealth. However, even if income were zero, wealth would still contribute to some level of consumption. How would I show the amount of consumption if income were zero. It would be somewhere along the vertical axis. In other words, at a zero level of income we still have positive consumption. "a" would equal autonomous consumption (consumption existing without any source of income). If income rises consumption would increase. By how much?

If we were to draw a line reflecting the fact that as income increases consumption increases, but by less than the increase in income, that line would have to be less than a 45 degree line, indicating that for every change in income thereis going to be a change in consumption, where the change in consumption over the change in income has a value of less than one:

$$\frac{\Delta C}{\Delta Y} < 1$$

The slope of the line (the consumption function) is called the "marginal propensity to consume" or MPC.

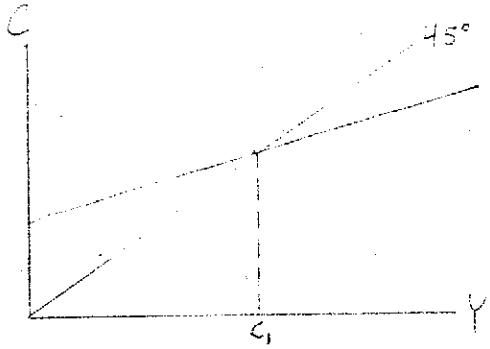


$$\frac{\Delta C}{\Delta Y} = C$$

That portion of additions to income that is spent on consumption. We are assuming for our purposes that the MPC is constant (that it is a straight line). The consumption function as a whole takes the form: c = a + slope of c x Y (where c = MPC).

If I were to ask you what is the level of consumption expenditure, could you tell me? The answer is no. All you know is what the different levels of consumption will be at different levels of income. The consumption function tells us something about consumption expenditures (insofar as we are dealing with an economy that only has consumption expenditures). We have no investment or government spending -- just consumption. This tells us that expenditures are determined by income and wealth. Every expenditure made is received by people as income. Not every dollar is spent.

Now, what line tells us that every dollar spent is received? A 45 degree line.



We are measuring dollars both horizontally and vertically. It has a slope of one. We can call this our income supply line because the one line represents the receipts and the other the expenditures made. In order for equilibrium to be present, we must have every dollar spent received and every dollar received spent.

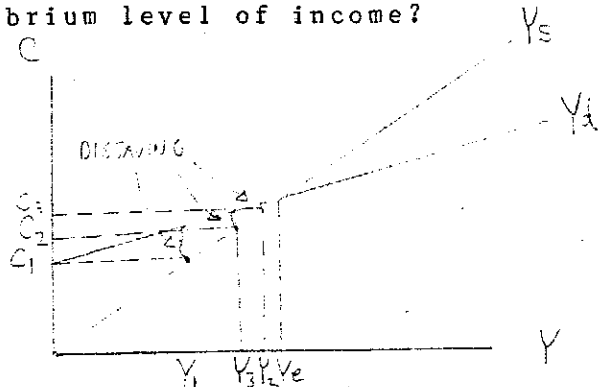
C1 would be the equilibrium level of consumption.

Rembember that the society has no income at all if it does not produce. The issue is whether when we finally develop this theory of national income does it help us to understand why national income increases, decreases or remains the same.

<u>An Economy in Disequilibrium</u>.

We are going to start with a disequilibrium situation,

with a level of income which is not Ye, which is less than Ye or Y1. How do we know that this is a disequilibrium level of income?



What is there that is taking place when income is at that level -- consumption is greater than income. The amount spent is greater than the amount received. The income received, however, is just Y1. That expenditure, however, will be received as income. So, we want to move from the expenditure line to the income received line. Now, that C1 has created income equal to Y2. Every dollar spent is received. Not every dollar is spent. At Y2 are we at equilibrium? No. Why not? Because consumption is still greater than income.

At an expenditure of C2 income is equal to Y3. Y3 generates a higher level of consumption (reading the consumption expenditure off the consumption function). So, this process continues until you get to a point where what is spent is equal to what is received and what is received is equal to what is spent. WE ARE AT EQUILIBRIUM.

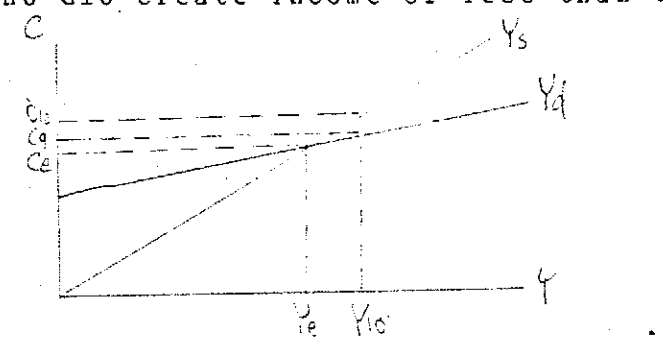
The level of economic activity can be viewed from the point of equilibrium or disequilibrium. If it is viewed for disequilibrium there is a tendency to move towards equilibrium. So, the economy can always be viewed as moving toward an equilibrium, and if we take this view then we know we might be able to understand in which direction it is moving. Is it moving up toward a higher equilibrium or down toward a lower equilibrium? That is why all economic theories involve a movement toward equilibrium.

SAVINGS AND DISSAVINGS

With income at Y1 expenditures are greater than income. Therefore, we are DISSAVING. We are taking from wealth and spending it. Those expenditures are

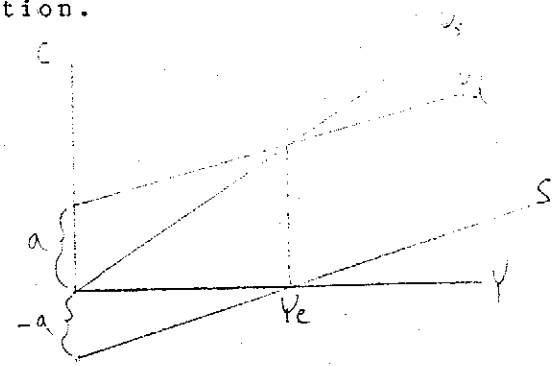
income and are received as income. But, even at income Y2 there is still going to be some dissaving which is going to create even higher income. The higher level of consumption yields a higher level of income equal to that higher level of consumption (which is higher than the previous level of income). But, you get to a point where that level of income Ye generates a level of expenditure "c.e", and that level of expenditure produces a level of income of Ye; and, it keeps on going that way until the equilibrium is disturbed and the curve shifts for some reason.

You can do the same thing from a higher level of income moving in the other direction. Starting at Y10. The income is now greater than the consumption, which means that people are SAVING. So, this level of consumption at Y10 and C10 create income of less than Y10, say Y9.



That income of Y9 generates consumption of less than Y9. Again, until the equilibrium is reached.

Savings is equal to income minues consumption (S = Y - C). So, if we have our income and our consumption how can we get a savings function from that? When income is "0", "a" is the amount we take out of saving for consumption.



What would our savings be when income is "0"? Our savings would be a negative "-a".

There is another point of interest to us -- _____. What is the value of savings at _____? -- "0". Now, we have two points on that savings function. If you took the savings function and added it to the consumption function you get the 45 degree line. Thus, the slope of the savings function and the slope of the consumption function will equal "one".

(THE SLOPE OF THE SAVINGS FUNCTION IS THE CHANGE IN SAVINGS OVER THE CHANGE IN INCOME -- THE MARGINAL PROPENSITY TO SAVE [MPS]. THE SLOPE OF THE CONSUMPTION FUNCTION IS THE MARGINAL PROPENSITY TO CONSUME [MPC]. THE TWO ADDED TOGETHER HAVE TO EQUAL "1".)

$MPS = \frac{\Delta S}{\Delta Y}$

Derivation of the Savings Function.

In order to get the savings function we need the consumption function and the income line, keeping in mind the definition of savings (income minus consumption). It may be that your level of income is such that your consumption is greater than income, in which case savings will be negative. For every particular level of income you want to subtract consumption to obtain savings. Up until this point (Ye) every level of income generates a level of consumption which exceeds that level of income; therefore, savings will be negative.

Notice that as income rises the negative savings is getting smaller and smaller. Beyond point Ye each level of income is generating expenditure which is less than the level of income and savings is positive.

When you take resources away from wealth you are dissaving. When you are putting resources into wealth you are saving.

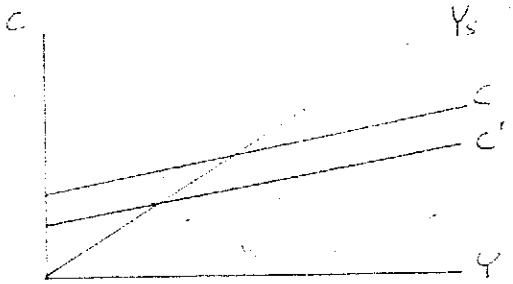
As far as we have gone (since we have only talked about consumption), there is a tendency for the economy when it only consumes to add nothing to accumulated wealth, to produce a level of income where there is no savings (or dissavings either). When the MPC is constant it is equal to the average propensity to consume.

SUMMARY

What is happening as we start with the consumption expenditure? Out of the money received money will be

spent and out of that money spent it will be received, etc. There is this reiteration of expenditure based on what had been received. So, the initial expenditure generates a level of income that is considerably grater than the initial expenditure. Each individual is a producer as well as a consumer, and in response to the available dollars will produce something, then receive dollars and respend current income.

Instead of everyone spending all that was received, let's say some was saved. Less income would be generated. Because each reiteration involves a smaller amount of spending. The process whereby this occurs is known as the "MULTIPLIER" process. The extent to whcih the multiplier operates is determined by the MPC. This is diagrammatically represented as follows:



Depending on what proportion of income received is respent income will vary. Under these two consumption functions C has the greater income because out of the money received a larger amount is spent, which means the next person receives more, and so on.