

Objectives for Chapter 14: Explanations of Consumer Spending

At the end of Chapter 14, you will be able to answer the following questions:

1. Define "*disposable income*". "*average propensity to consume*". "*marginal propensity to consume*". (Review)
2. Explain the "*permanent income theory*" of consumption
3. Use the permanent income theory to explain the results of the 1968 tax surcharge and the 1975 tax rebate.
4. Explain the "*life cycle theory*" of consumption
5. Explain how each of the following affects consumption:
 - a. consumer expectations (*confidence*)
 - b. consumer **debt**
 - c. consumer **wealth**
 - d. the **price level** -- Use this to explain why the aggregate demand curve slopes downward.
 - e. the **rate of interest**
 - f. the **income distribution of the population**
6. Use the explanations of this chapter to explain the current change in consumer spending.

Chapter 14: Consumer Spending (latest revision September 2004)

In Chapter 13, we put consumer spending, business investment spending, government spending, and net exports together to illustrate how they determine the equilibrium Real GDP. In this chapter and the next chapters, we shall analyze each of these form of spending individually. This chapter considers consumer spending. **Consumer spending is the largest category of total spending, representing about 2/3 of the total spending.** The state of the economy is often determined by the behaviors of consumers. So it is vitally important that we understand the factors that affect these consumer behaviors.

1. Disposable Income

We already encountered an explanation of consumer spending in Chapter 13. It was Keynes who argued that **the amount of consumer spending depended upon the amount of disposable income.** Disposable income, remember, is equal to the national income minus taxes plus transfers. According to Keynes, as disposable income rises, consumer spending rises and the percent of disposable income spent on consumer goods falls. (He called this percent of disposable income spent on consumption the *“average propensity to consume”*.)

Keynes work was published in 1936. After World War II, much economic research was done regarding consumer spending. When one measured consumer spending by looking at individuals in the same year, Keynes’ statement appeared true. Those with higher incomes did spend more and did indeed spend a lower percent of their incomes on consumer goods. But when one looked at consumer spending of the nation over time, one got a different result. As the national income rose from year to year, consumer spending did rise but the percent of national income spent on consumer goods did not fall. Instead, it stayed basically constant. This was perplexing. It took until the late 1950s to resolve the paradox. From this resolution came two theories on consumer spending. These theories are still the dominant theories today.

1A. The Permanent Income Theory of Consumer Spending

Milton Friedman published the Permanent Income Theory of Consumption in 1957. We shall encounter him several times in this course. He later won a Nobel Prize in Economics. In essence, his theory argues that disposable income needs to be defined better. **Disposable income needs to be broken into two parts.** The first part he called *“permanent income”*. For our purposes, we can call this “expected income”. Ask a person what he or she expects to earn next year. If he or she would share this information, a reasonable estimate could be made. We know what we are earning this year. We know what we earned in previous years. We know what work we do. So we have a good idea what our earnings will be next year. **Friedman argued that this permanent income determines how much we will spend.** Based on our permanent income, we decide where we will live, where we will shop, what kinds of clothes we will wear, what kinds of food we will eat, and so on.

The second part of disposable income Friedman called **“transitory income”**. Something that is “transitory” is something that “comes and goes”. The key aspect is that transitory changes in income are **one-time only** events. They will not be repeated. **According to Friedman, these transitory changes in income will mainly affect savings. They will have little effect on consumer spending.** Transitory changes in income can be negative or positive. Let us illustrate with a negative change first. Imagine that you are working and that you get the flu. There is nothing you can do about it. You must rest up and miss an entire week of work. You have no paid sick days. Next week, you go back to work and all is back to normal. At the end of this pay period, your pay will be unusually low. You missed a week of work. But the next pay period, your pay should be back to normal. How will you adjust to one period of low pay? You will not move to a cheaper residence. You will not get rid of your car. You will not stop eating. You may cut back your spending a bit. But you will maintain most of your lifestyle. **You will adjust by going into debt or by using up past savings.** Now let us illustrate with a positive change. Other workers at work get the flu. You are asked to work many hours of overtime, for which you are paid at a premium rate. The other workers miss one week of work only. At the end of the pay period, your pay will be unusually high. But that will not be repeated again. What happens to the extra pay? Some of it may be spent on a fun night out or on something you have not been able to buy. But you will not change your basic lifestyle. You will live where you have been living, drive the same car, eat the same foods, and so on. Much of the extra pay will affect savings. **You will either add it to your savings or (more likely) use it to pay old debts.**

We saw illustrations of the principle of the permanent income theory in the 1960s and 1970s. In the mid-1960s, the United States was facing its first experience of inflation. The inflation was resulting from an increase in government spending, largely related to the Vietnam War. President Johnson needed to act against the inflation with fiscal policy. He did not see any end to the spending on the Vietnam War. And he did not want to reduce government spending on any of his other programs (collectively known as The Great Society). So the only choice left was to raise taxes. But President Johnson was facing a very difficult re-election campaign. So he chose the **Tax Surcharge**. Passed in 1967, it went into effect in 1968. The surcharge meant that everyone’s tax was raised by 10%. Whatever you ended up owing the United States government, you would now owe them 10% more. But this was for one year only. (At the end of that year, it was extended for a second year.) The thinking was that if taxes rose, disposable income would fall. With lower disposable income, consumer spending would fall. This would help reduce inflation rates. But, of course, **the rise in taxes was a one-time only event**. As the permanent income theory predicted, people took the money basically out of savings. Consumer spending did not fall. Inflation rates did not fall. And President Johnson withdrew from the race for re-election after the early primaries.

In late 1974, the country was entering a very deep recession. President Ford needed to respond to the recession with fiscal policy. He chose to lower taxes. But he chose a method that would be politically popular – the **Tax Rebate of 1975**. People paid their 1974 taxes as usual. But in early 1975, they got a rebate. That is, they got part of their

tax money back (this was in addition to their refund). I received a check for \$70. The thinking was that the tax rebate would increase disposable income. With higher disposable income, people would increase consumer spending. The increase in consumer spending would help eliminate the recession. **But this too was a one-time only event.** As predicted by the permanent income theory, people saved most of their rebate and spent very little of it. I used mine to pay off old bills, as did many people. The fact that consumer spending did not rise as expected meant that the recession dragged on. President Ford was defeated at the next election in a very close vote.

In 2001, taxes were lowered. President Bush decided to jump start the process by sending people a rebate check for part of their tax cut. Single people got up to \$300 and married couples got up to \$600. The thinking was that people would spend their rebate checks, helping to prevent the economy from going into recession. This event is harder to analyze. The tax cut is a permanent change. The rebate check would be cancelled when people calculate their income taxes the following year (they would get less of a refund or would have to pay more to the government for having received the rebate check). **Yet the rebate check itself was a transitory event.** As predicted by the permanent income theory, consumer spending did not rise significantly. The economy was heading into recession before the events of September 11, 2001 threw the economy into a short tailspin.

Test Your Understanding

Japanese workers are paid differently from American workers. For Japanese workers, a sizable portion of their yearly income goes in the form of a semi-annual bonus. The bonus is usually paid at the end of June and again at the end of December. To some degree, the amount of the bonus is based on the performance of the company. Japanese workers save a considerably higher portion of their incomes than do American workers. Use the permanent income theory to explain how this method of paying workers might contribute to the higher savings rate in Japan.

1B. The Life Cycle Theory of Consumer Spending

The life cycle theory of consumer spending was developed at about the same time as the permanent income theory. Its creator also won a Nobel Prize in Economics. It is very similar to the permanent income theory. **Basically, it says that consumer spending does not depend on this year's disposable income. Rather, consumer spending depends on disposable income expected over a long time period (one's lifetime).**

To illustrate, assume there are two people – Mary and Jose. Both have just graduated from school. During the past year, each worked while in school and each earned \$10,000 of income. Each now desires to buy a car. Mary is graduating with a degree in Philosophy. Jose is graduating from medical school. Which person buys the Lexus? Of course, you answered that it would be Jose. How can Jose even think of buying a Lexus when his income was only \$10,000. The answer is that he looks to his lifetime income. As a doctor, he can expect to earn several hundreds of thousands of dollars each year. Mary's expected lifetime earnings are much lower. Why would any bank lend Jose the money to buy a Lexus when his income was only \$10,000? The answer is that they too look to his expected lifetime earnings.

This theory is similar to the permanent income theory. **Expected lifetime earnings are similar in concept to permanent income.** But the perspective of the life cycle

theory is a bit different. This difference allows us to highlight two additional factors that affect consumer spending. **The first is the certainty of the expectation.** It is one thing to expect a high lifetime income. But how sure can one be that one will actually earn this high lifetime income? If I am going to be a doctor, I can be quite certain of achieving this high lifetime income. Most doctors will earn this high amount. But if I am going to be a musician or an actor, I will be less sure. Many musicians and actors earn very high incomes. But many others earn little at all. And if I am going to sell real estate, I am very unsure of my income. Some years, I may sell many homes and earn a very high income. Other years, I may sell few homes or perhaps no homes at all. ***The more certain one is of one's future income, the higher the percent of one's income one will spend. And the more uncertain one is of one's future income, the higher the percent of one's income one will save.***

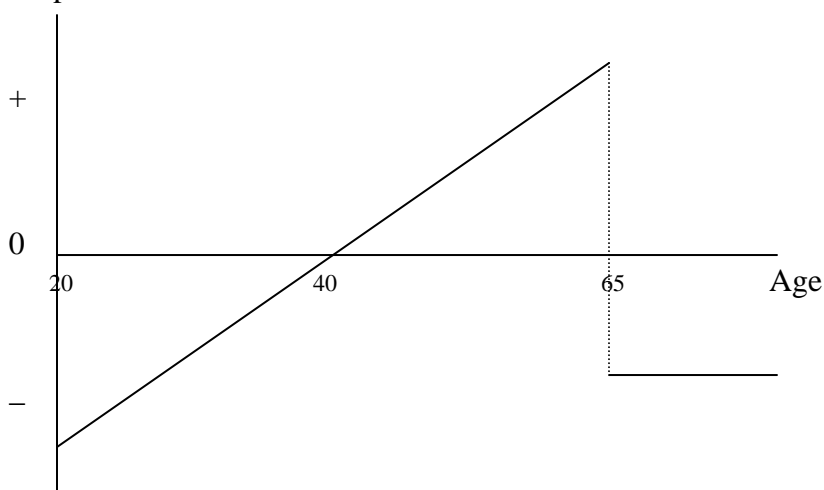
Test Your Understanding

As noted on Page 4, Japanese people save a much higher percent of their incomes than do American people. Japanese people are also three times more likely to work in a business owned by their own family than are American people. Explain how their greater likelihood of working in a business owned by their own family could contribute to their higher savings rate.

The other factor highlighted by the life cycle theory is **the age distribution of the population.** Consider the following life cycle.

Savings

Disposable Income



In this chart, let us assume that you form a household separate from your family at age 20. The chart shows that, in your 20s and perhaps your 30s, your savings as a percent of disposable income is negative. Your debt exceeds your savings. This occurs for several reasons. **First, your income is at the lowest it will be in your lifetime.** It only begins to grow in your late 20s. **Second, your need for consumer goods is at its highest.** You need to pay for school, cars, and so forth. Then, comes the need to pay for a home and for all the goods that are required by owning a home and by having children. **You need money the most just when you are earning the least. So you use the financial system**

to help you through. In your 40s, 50s, and early 60s (and possibly late 30s), your savings as a percent of disposable income are positive and growing. **First, your income is reaching the peak it will reach in your lifetime (commonly around age 55).** **Second, your expenses are decreasing as your home is set and your children go out on their own.** **Third, you now fully see a major reason for saving --- retirement. The theory tells us that we do most of the saving we do in our lifetimes in our 40s, 50s, and early 60s.** Finally, after age 65, you retire. You use up the savings you have accumulated for retirement. (Actually, most people do not use up all of these savings. Instead, they leave a bequest to their children.) **But you have used the financial system so that you could spend throughout your lifetime the income you will earn mainly in your 40s, 50s, and early 60s.** The financial system is indeed an amazing institution.

The fact that we save differently at different ages is important in explaining saving and spending behavior. Remember that we have the baby boom (1946 to 1964), followed by a baby bust (1965 to 1985), followed by the baby boom echo. Prior to the baby boom, there was another baby bust (1929 to 1945). When the baby boomers were in their 20s and 30s, and the prior generation was in its 40s and 50s, the savings rate fell. There were many spenders and few savers. As the baby boomers age, national savings should rise. Then as the baby boomers are in the retirement years, national savings should fall once again.

2. Real Interest Rates

Three other factors that affect consumer spending have already been discussed. One is the real interest rate. (Remember that “real” means that the interest rate is adjusted for inflation ---nominal interest rate minus the inflation rate.) ***The relation is that as real interest rates rise (fall), consumer spending falls (rises).*** There are two reasons for this. **First, as real interest rates rise, it become more expensive to borrow.** If people borrow less, they will spend less on consumer goods. **Second, as real interest rates rise, it is more rewarding to save.** If people save more, they will spend less on consumer goods.

Internet Assignment

Go to the following site. <http://www.stls.frb.org/fred/data/rates.html> Or go to Interest Rates on the Links to the Internet on my web site. Click on “federal funds rate”, “6 month Certificate of Deposit”, “6 month Treasury Bill rate”, and “30 year Conventional Mortgage Rate”. Based on these four sets of data, what has been happening to interest rates over the most recent months? Are all of these measures changing in the same direction at the same time? Given what has been happening to interest rates, what do you predict will happen to consumer spending in the coming months? Why?

3. Income Distribution

A second factor that has already been discussed has been the income distribution. ***Income distribution has an effect on consumer spending because people with different incomes spend differently.*** Suppose that income were taken from the very rich and given to the very poor. What would happen to consumer spending? The answer is that it would rise. Poor people are more likely to spend the income and less likely to save it. The rich people would have been more likely to save and less likely to spend.

Test Your Understanding

1. When he ran for President in 1992, Bill Clinton proposed to add two new and higher tax brackets. These would raise taxes for single people with taxable income over \$140,000 and for married couples with taxable income over \$250,000. This was subsequently enacted. His proposal was to use this money to lower the tax rates for middle-income people. This was never enacted. If his full proposal had been enacted, with taxes raised for the upper-income people and lowered for middle-income people, what would the effect have been on consumer spending? Explain why.
2. Has the trend in the distribution of income been toward greater equality or greater inequality since 1980? What affect would this have on consumer spending?

4. Consumer Expectations

Yet a third factor that affects consumer spending that has already been discussed in consumer expectations. *If consumers expect a recession in the near future, they will be pessimistic and their consumer spending will decline. If consumers expect an expansion in the near future, they will be optimistic and their consumer spending will rise. And if consumers expect inflation in the near future, they will increase their consumer spending now in order to buy before the prices rise.* Since consumer spending is about 2/3 of total spending, these changes in consumer spending can become **self-fulfilling prophecies**.

The measure of consumer expectations we have is called **“consumer confidence”**. A private organization called The Conference Board takes this measure and publishes it every month. The University of Michigan also does a measure of consumer confidence. Their measures make big news because consumer confidence can have a very large effect on the direction of the economy.

Internet Assignment

Go to the following site: <http://www.conferenceboard.org> Or go to Consumer Confidence on the Links to the Internet on my web site. Click on Latest CCI Release. Briefly describe the current state of consumer confidence in America. Based on this, what prediction can you make as to the direction of consumer spending in the near future? Why?

5. Consumer Debt

There are two other factors that affect consumer spending. These have not been discussed previously. One is consumer debt. *It is obvious that if consumers believe they have too much debt, they will decrease their consumer spending and use their income to pay off old debt. It is less obvious but true that, if consumers are comfortable with the amount of debt they have, they will increase their consumer spending.* Just what is the “right” amount of debt? There is no good answer to this question. But history seems to show that *consumers begin to become uncomfortable with the amount of debt they have when the total consumer debt equals about 20% of disposable income.* Total consumer debt here refers to credit card debt, bank loans, installment debt at stores, and so forth. It does not include home mortgages. There is no good reason to explain the 20% figure. But it has held reasonably true in the past.

Internet Assignment

Go to the Economic Report of the President on the Links to the Internet on my web site. Click on current year statistical tables. The click on Consumer credit outstanding in the Money Stock, Credit, and Finance section. Record the date for the most recent 3 years – by month where possible. Then go back to the menu. Click on Total and Per capita disposable income in the National Income or Expenditure Section. Record the data for the same time period. Then, divide to arrive at the ratio of consumer debt to disposable income. What has been happening to it over this time? Based on this, what prediction can you make about consumer spending in the near future? Why?

6. Wealth

The final factor that affects consumer spending is wealth. Do not confuse “wealth” with “income”. Income is the value that is earned in a year. **Wealth is the value of everything that is owned.** One can be wealthy with a modest income (for example, one bought a new home 30 years ago). Or one can have a high income and no wealth (one spent all of one’s income). **Wealth has an independent effect on consumer spending. The effect is smaller than that of income; a reasonable estimate is that the marginal propensity to consume out of wealth is about 0.06.** This means that if wealth rises \$1, with no change in anything else, consumer spending will rise \$0.06.

The rise in wealth was an important reason for the rise in consumer spending in the 1990s. For many people, wealth rose for one of two reasons. **The first was the dramatic rise in stock prices.** Almost one half of Americans own stock either directly or indirectly (through mutual funds, pension funds, and so forth). **The second was the dramatic rise in real estate prices,** especially in California. As their homes increased in value, people were able to borrow money, using the house as collateral, (a so-called second mortgage). This borrowed money was then spent on consumer goods that they could never have afforded on the basis of their incomes alone.

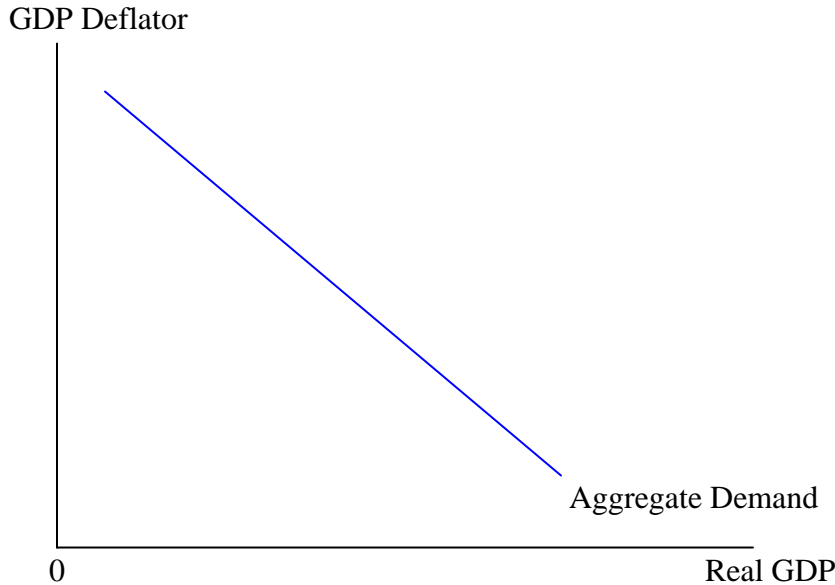
Internet Assignment

Go to the Economic Report of the President on the Links to the Internet on my web site. Click on current year statistical tables. The click on Common Stock Prices in the Corporate Profits and Finance section. Use the NYSE index. Assume you took \$10,000 and bought the stock included in this index in 1990. How much would they have been worth in September of 2000? What effect would this increase have had on consumer spending? Why? How much would they be worth in the most recent month? What effect would this have on consumer spending? Why?

Assignment

Assume you bought the average house in the county in 1975. The price would probably have been about \$65,000. Look up in the newspaper (Sunday edition). What is the average price of a house in the county worth today? (Of course, your house that was average in 1975 would not be average today.) Based on this increase, what would happen to consumer spending? Why?

The effect of wealth on consumer spending helps explain the shape of the aggregate demand curve. When we drew the aggregate demand curve in Chapter 9, we said that it was downward sloping. This means that as the GDP Deflator rises, aggregate demand falls.



In the chapter on inflation, we said that **inflation (rising prices) makes people poorer by decreasing the value of financial wealth**. If prices rise 10%, every dollar I have in a checking account, a savings account, or any other financial asset goes down in value by 10%. We know that when people are poorer (that is, when the value of their wealth decreases), they will spend less on consumer goods. Since consumer spending is about 2/3 of aggregate demand, aggregate demand will decrease. This is what the graph says: **when the price level (GDP Deflator) rises, aggregate demand will fall**.

Internet Assignment

Go to the following site: <http://www.bea.doc.gov/bea/pubs.htm> Go to the most recent month. Click on Selected NIPA Table. Then, click on Quantity and Price Indexes. What has been happening to the Implicit Price Deflator over the period shown? What effect should this have on consumer spending? Explain why.

Summary

We can summarize this chapter by listing those factors that are likely to cause consumer spending to increase. These include:

- (1) *an increase in permanent income or lifetime expected income (but not an increase in the transitory part of disposable income)*
- (2) *a greater certainty that the expected lifetime income will actually result*
- (3) *a shift in the age distribution of the population with more people in their 20s and 30s or in their retirement years and fewer people in their 40s, 50s, and early 60s*
- (4) *a decrease in real interest rates*
- (5) *a shift in the income distribution of the population with more people in the lower income categories*
- (6) *a change in consumer expectations so that consumers are more confident of a good economic future*
- (7) *a change in consumer expectations so that consumers expect greater inflation*

(8) a decrease in consumer debt as a percent of disposable income

(9) an increase in consumer wealth, such as from rising stock prices or real estate prices

(10) a decrease in the GDP Deflator

The opposite changes will, of course, cause consumer spending to decrease.

Assignment

Examine the following data:

	1991	1992	1993	1994	1995	1996	1997
Real Per Capita Disposable Income	\$17,809	\$18,113	\$18,221	\$18,431	\$18,861	\$19,116	\$19,497
Nominal Interest Rate	8.77%	8.14%	7.22%	7.96%	7.59%	7.37%	7.27%
Nominal Interest Rate -Mortgage	9.32%	8.24%	7.20%	7.49%	7.87%	7.80%	7.71%
Rise in CPI	4.2%	3.0%	3.0%	2.6%	2.8%	3.0%	2.3%
Rise in GDP Deflator	4.0%	2.8%	2.6%	2.4%	2.5%	2.3%	2.0%
Index of Consumer Confidence (1985 = 100)	78	71	60	90	102	119	138
Common Stock Prices (Dow Jones Average)	2,929	3,284	3,522	3,794	4,494	5,743	7,441
Consumer Debt as a % of Disposable Income	17.8%	16.8%	17.3%	19.0%	20.4%	21.0%	20.9%

You are asked to make a prediction about the amount of consumer spending that will occur in **1998**. Will consumer spending rise or fall in 1998? Use the data here, as well as any other information you know (such as what has been happening to the age distribution or income distribution of the population) to make your prediction.

Which of the above data would indicate the consumer spending is likely to **rise** in 1998?

Which of the above data would indicate the consumer spending is likely to **fall** in 1998?

Based on your answer to the two questions above, what is likely to happen to consumer spending in 1998.

Then, log on to the Internet. Find out what happened to consumer spending in 1998. Go to the Economic Report of the President on Links to the Internet on my web site. Click on current year statistical tables. The click on Table 1.1. How good was your prediction. (Present some real data.)

Practice Quiz for Chapter 14

- Which of the following will affect mainly savings (with little effect on consumer spending)?
 - permanent income
 - transitory income
 - life cycle income
 - disposable income
- The 1968 tax surcharge and the 1975 tax rebate had little effect on consumption because:
 - they affected only permanent income
 - they did not affect disposable income
 - they affected only people over age 60
 - they affected only transitory income
- According to the [life cycle theory](#), consumption will **rise** if more of the population is between ages:
 - 20 to 30
 - 35 to 45
 - 50 to 60

4. If real interest rates fall, consumer spending will
a. rise b. fall c. stay the same
5. If disposable income is taken from very rich people and given to very poor people, aggregate consumption will:
a. rise b. fall c. not be affected
6. If the Index of Consumer Confidence rises from 85 to 110 (1985 = 100), consumer spending will
a. rise b. fall c. stay the same
7. If consumers believe that high rates of inflation will occur next year, consumer spending today will
a. rise b. fall c. stay the same
8. If consumer debt were 50% of disposable income, consumer spending will
a. rise b. fall c. stay the same
9. If stock market prices and real estate prices increase, consumer spending will
a. rise b. fall c. stay the same
10. If the GDP Deflator (measuring the price level) rises, consumer spending will
a. rise b. fall c. stay the same

Answers: 1. B 2. D 3. A 4. A 5. A 6. A 7. A 8. B 9. A 10. B