Contractionary Policy

by Sophia

1. Tools of Fiscal Policy

As a reminder, there are two tools of fiscal policy:

1. Government spending
2. Taxation

Fiscal policy focuses on the policies in these two areas. The idea is that the government can use these two tools to stabilize our economy's movement through business cycles.

1a. Government Spending

So, we know that the government spends a lot of money in many areas, to name a few:

- National defense
- Education and healthcare
- Welfare programs
- Infrastructure

If the government wants to stimulate the economy, it can spend more money in order to create jobs and give people more money to spend.

This tutorial, however, is going to focus on what the government does when they want to contract the economy.

Let's begin by reviewing the equation for calculating GDP using the expenditure approach. Remember that Y is our economic activity or GDP, comprised of the following components:

⚗️ **FORMULA TO KNOW**

Expenditure (Domestic)
$$Y = C + I + G$$
where:
C = *Consumer purchases*
I = *Investment in capital (generally by businesses)*
G = *Government purchases*

Now, in expansionary policy, the hope is that if the government increases spending, this will, in turn, encourage greater consumer spending and business investment.

Unfortunately, if they end up increasing taxes in order to pay for that increased government spending, it will be counterproductive.

⚙️ **THINK ABOUT IT**

If the government creates more programs and tries to give you more money to spend, but at the same time they increase your taxes, now they are taking that money away from you. Hence, it is completely counterproductive.

So, without increasing taxes, what does our government have to do? Well, they have to borrow money, and the way our government borrows money is by selling Treasury securities to finance the increased government spending needed to stimulate the economy.

Essentially, the government takes on debt. Keep in mind, though, that when they repay the debt, tax revenue will be needed, which we will cover next.

1b. Taxation

Taxation is the second tool of fiscal policy. Federal, state, and local governments all collect taxes from citizens in order to fund programs.
Another way to stimulate the economy, which would be expansionary policy, is to cut taxes, to give people more money to spend.

So, by either increasing government spending or cutting taxes, the government is attempting to get people to spend money by injecting money into the economy.

As a reminder, expansionary fiscal policy is when government spending is greater than tax revenue, because they are either increasing government spending, or cutting taxes, or both.

⭐ **BIG IDEA**

Expansionary fiscal policy: Government spending > Tax revenue.
However, this tutorial is focused on contractionary policy, so let's dive in.

2. Contractionary Policy

Now, **contractionary policy** is either monetary or fiscal policy that is enacted to slow economic growth as measured by the GDP growth rate. Here, we are focusing solely on fiscal policy, not monetary policy.

Now, contractionary policy would do the opposite of what we discussed in the beginning, with expansionary policy.

By either decreasing government spending or raising taxes, the government is then attempting to slow down the economy by getting people to spend less money. Basically, instead of injecting money into the economy, they are now taking money out.

So, contractionary fiscal policy is when tax revenue is greater than government expenditures.

⭐ BIG IDEA

Contractionary fiscal policy: Tax revenue > Government expenditures.

📄 TERM TO KNOW

Contractionary Policy
Either monetary or fiscal policy that is enacted to slow economic growth (as measured by the GDP growth rate)

2a. Multiplier Effect
As with expansionary policy, if the government decreases spending or raises taxes (G, in our expenditure formula), this could have a multiplied effect by discouraging consumer spending and business investment (C & I).

⤳ EXAMPLE Suppose you get laid off as a government employee, as a result of decreased spending. Now you have less money to go out and spend in restaurants, on vacations, etc. In turn, those places of business now have less money, because you are not spending money with them. Therefore, they have less money to pay their workers, and those workers will, in turn, have less money to spend elsewhere.

⭐ BIG IDEA

For every $1 the government withdraws from the economy, this will result in GDP decreasing by more than $1, because of that multiplied effect.
We can find the potential multiplied effect by calculating a consumption multiplier, using the following formula:

🧪 FORMULA TO KNOW

Consumption Multiplier

$$Consumption\ Multiplier = \frac{1}{1 - MPC}$$

$where$:

MPC = Consumers' Marginal Propensity to Consume

Now, MPC is our consumers' marginal propensity to consume. It is the percentage of additional income that is being *spent* in the economy versus saved.

> 📝 **TRY IT**
>
> Suppose the government wants to decrease GDP by cutting $10 billion in government spending, and we know that the MPC is .75. What overall effect will this have on the economy? Will it only withdraw $10 billion, or more?
>
> Let's start by calculating our consumption multiplier, using our MPC of 0.75.
>
> > *Multiplier = 1 / (1 - 0.75)*
> >
> > *Multiplier = 1 / 0.25 = 4*
>
> Therefore, this government spending cut will have a multiplied effect by four times. If the government spending decreases by $10 billion, it could ultimately result in $40 billion less in overall economic activity.
>
> > *$10 billion x 4 = $40 billion*

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3. Phillips Curve

So, why does the government engage in a contractionary policy? Well, they really only do it when there is a major inflationary risk. It is the only way to cool down the economy and slow down the rate of inflation to reduce economic activity.

This will naturally cause an increase in unemployment, which is never the goal, necessarily, but it is the only way to go about taking away this inflationary risk.

When our unemployment rate gets too far below our natural rate of unemployment--around 5%--this poses a major inflationary risk. Therefore, politicians have to consider this trade-off. When they decide that the inflationary risk is high, they are willing to accept higher levels of unemployment.

The Phillips curve illustrates this relationship between inflation and unemployment. This curve suggests that there is an inverse relationship between annual inflation rates and unemployment rates in an economy.

The idea is that when we have very low unemployment, like 2% on the curve above, which is far below our full employment rate of about 5%, this corresponds with a very high inflation rate of 10%.

When we have very low inflation, this will increase the unemployment rate.

⭐ BIG IDEA

- ↓ Unemployment = ↑ Inflation
- ↓ Inflation = ↑ Unemployment

Now, in the curve above, if inflation is very high at 10%, for example, the government could spend less money or raise taxes, as we discussed with contractionary policy.

If we move along the curve from 10% to a more acceptable inflation rate, like 2%--which is typically the annual goal--we could definitely that goal.

However, the trade-off is a higher unemployment rate at 7%, which is over our natural rate of unemployment of 5%.

The reason this happened is that overall demand in the economy fell as the government took money out of the economy. Therefore, you can see what happens when the Fed engages in these contractionary policies.

When the economy is experiencing extremely low unemployment, like this 2% example, inflation is rather high. So, in this case, the Fed can reduce inflation and bring unemployment to its natural rate of around 5%. Now, the numbers in this example are extremes, but it is entirely possible that the government could bring this inflation rate down to result in a 5% unemployment rate.

Critics of this model sometimes point to the 1970s, when our economy experienced very high rates of inflation at the same time as high unemployment. This is known as stagflation.

We would not be able to explain this with the simplified model above, because there were times in the 1970s when inflation was well over 10% coupled with an unemployment rate over 8%.

This would place us on a point well outside of the curve. We can't simply move along this simplified Phillips curve and find that combination of unemployment and inflation.
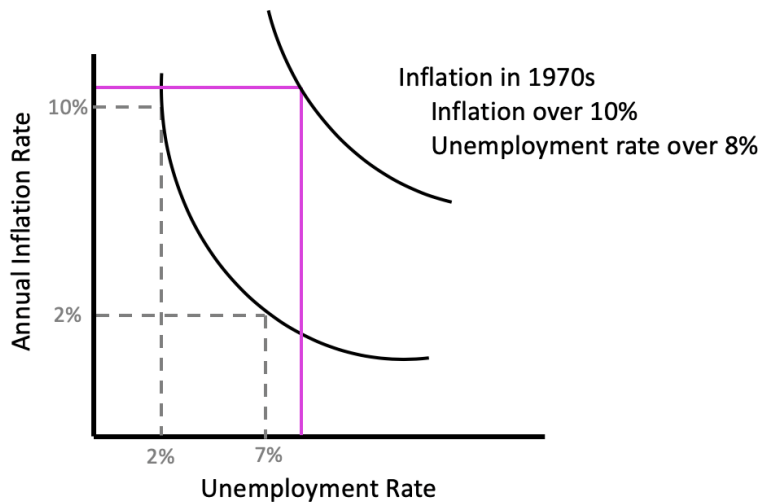
Therefore, we would actually need to suggest that this Phillips curve could move over time, resulting in a much higher Phillips curve on this example graph.

Now, here is an interesting Phillips curve that plots all of the different combinations of unemployment and inflation rates that our economy experienced between 2000 and 2013.

U.S. Phillips Curve: Inflation vs Unemployment - 1/2000 to 8/2014

$$Y = 4.726 - 0.3639X$$
$$R^2 = .271$$
$$R = -.521$$
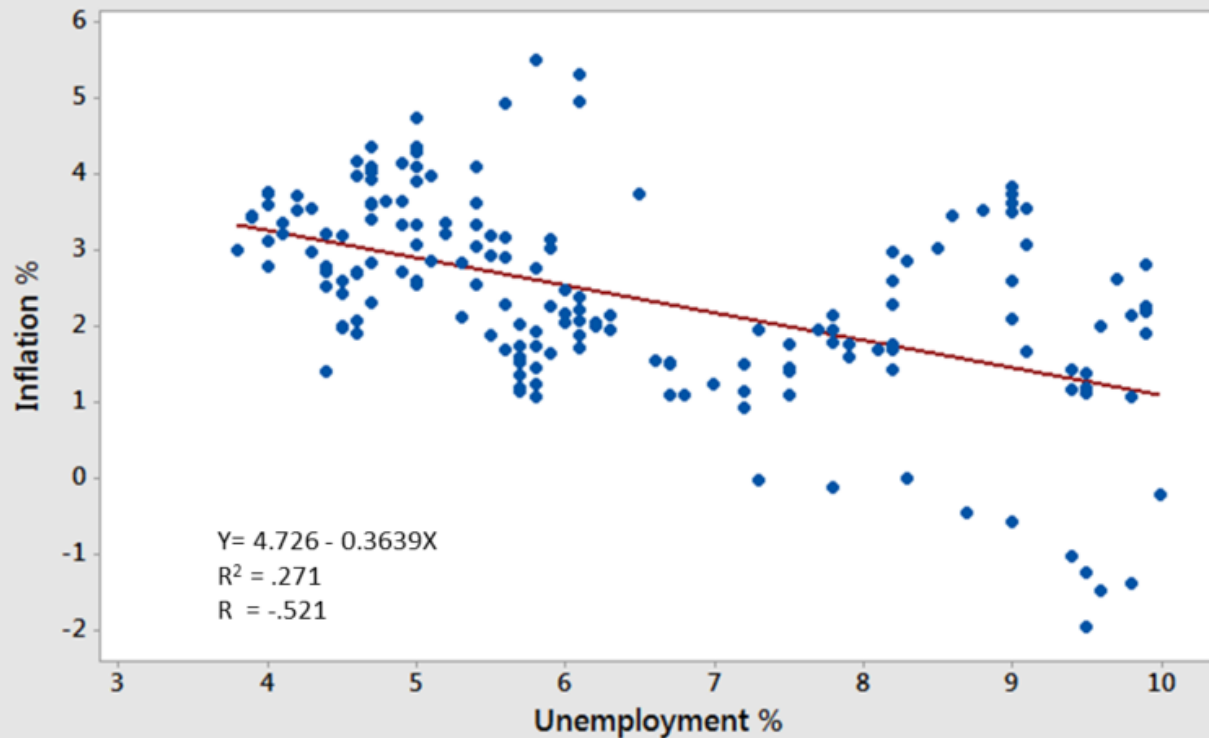
Source Data: FRED Database
Inflation: CPI for All Urban Consumers

As you can see, the general relationship does exist between inflation and unemployment, but at different levels. So, the Phillips curve could be at different points.

✓ SUMMARY

Today we learned that the **tools of fiscal policy** are **government spending** and **taxation**. During inflation, the government can implement **contractionary policy**, decreasing spending and/or increasing taxes. In either case, contractionary policy can have a **multiplier effect**. Lastly, we learned that a **Phillips curve** shows the relationship between unemployment and inflation.

Source: Adapted from Sophia instructor Kate Eskra.

🗎 TERMS TO KNOW

Contractionary Policy

Either monetary or fiscal policy that is enacted to slow economic growth (as measured by the GDP growth rate).