Microeconomic and microeconomic are inconsistent.

In microeconomics, there is no unemployment:

- People who are not working are either stubborn or dumb. Everyone who wants to work is working because if you are not working and want to work, you can just offer an employer a cheaper price and you will get hired.

\[ W = \text{wages} \quad q = \text{number of workers} \]

and there is no inflation:

\[ P = \text{prices} \quad q = \text{quantity of good} \]

A rise in prices in one sector leads to a fall in prices in other things so any inflationary effects are cancelled out.

However, in macroeconomics, there is both unemployment and inflation.

**Macroeconomics**

**Quantity Theory of Money**

\[ M \times V = P \times T \quad M = \text{Money Supply} (M_1 + M_2 + M_3...) \]
\[ M \times V = P \times Y \quad V = \text{Velocity of Money} \quad P = \text{Price level} \]
\[ Y = \text{Real GDP}; \ T = \text{total transactions} \]
Important points about quantity theory:
1. Government can only change M by printing money: $M \uparrow \rightarrow P \uparrow$ or $M \downarrow \rightarrow P \downarrow$
2. Monetarist only looks at changes in M ($\Delta M$): e.g., Reaganites
3. Keynesian looks at interest rates (i) which affects P: e.g., Alan Greenspan
4. Relationship between M and P depends on V, which is hard to determine
5. How do you define money? Where do you draw the line in the continuum between liquid assets (such as cash) and illiquid assets (like human capital).

German Hyperinflation after World War I

What does the IMF tell countries with high inflation to do?
1. Increase interest rates and decrease money supply.
2. Cut government spending
3. Raise taxes

Why doesn’t the German government do this things?
1. Reparation costs of 33.8 billion Marks were huge (equivalent to four years of GDP)
2. Government in chaos – no legitimacy or support and vast fear of communism
3. Since there was no tax base, not printing money meant not paying civil servants (policemen, government officials…), which would cause collapse of state.

However, there is no change in GDP because of inflation (!) because there are winners and losers in every transaction, income is shifted from one person to another. Inflation can only effect GDP if it is so high that people quit their jobs to protect their financial assets. But during inflation, velocity skyrockets. People wish to spend money as soon as they get it because it won’t be worth anything tomorrow.

Who are the winners and losers during high inflation?
Theoretically, people on fixed incomes are losers but who is really on a fixed-income? (Social Security and things are all scaled up with inflation)
A study has shown that inflation can be up to 15% and there will be no losers.

How did Germans stop inflation?
They changed the currency – this allowed them to stop printing money, collect taxes and balance their budget. This symbolically restored confidence in the German currency.

Important points from the exhibits at the end of the German hyperinflation case in coursepack:
1. As prices (inflation) goes up, exchange rate falls to even out purchasing power.
2. Hyperinflation doesn’t slowly decline – it suddenly stops. In order for monetary policy to work during inflation, the interest rates have to be higher than inflation to dampen it.
3. Velocity and prices (V & P) move up together.
4. Taxes lag inflation because of filing time so tax revenues completely collapse during hyperinflation.
5. Hyperinflation results in a large government deficit.
6. The government can avoid debt by: running up inflation or losing a war (the latter is not really something you should plan on).
7. During inflation, people sell government bonds – the government has to print money to cover these obligations that increases the money supply.

However, countries can survive inflation relatively unscathed. As we will see from Friday’s class, if given a choice between hyperinflation and depression, take the inflation every time.