

Unemployment

In January 2007, with the presidential election 23 months in the future, the national unemployment rate was 4.6%, which was close to what economists call the *natural rate of unemployment*, defined as the state of the labor market when the number of people seeking jobs is approximately equal to the number of jobs available. When the unemployment rate equals its natural rate, there are two causes of unemployment. **Frictional** unemployment is the most benign type of unemployment, meaning that potential employers are screening job applicants and job seekers are considering alternative job offers. Some frictional unemployment is economically efficient in a market economy; it provides time for employers and workers to find the best matches. Some frictional unemployment is also necessary to send the appropriate signals to market participants. If workers have unrealistically high reservation wages, a spell of unemployment may give them the incentive to reduce their wage demands or to exit the labor force. If employers' wage offers are too low, it will take time for wage competition among potential employers to increase the equilibrium wage rate for those jobs.

The second type of unemployment is more troubling, and is particularly important to social workers. **Structural unemployment** exists when there is a mismatch between the skill requirements of available jobs and the human capital of job seekers. Structural unemployment is prevalent when there are structural changes in the economy. During the 1980s the Reagan and Bush I administrations, with the cooperation of Congress, relaxed restrictions on imported goods, which led to **outsourcing**, whereby American companies substituted foreign manufacturing workers for American manufacturing workers. American workers, who lost their manufacturing jobs in the double-dip recessions from 1979 to 1983, or during the short recessions of 1992 or 2001, found that their experiences in manufacturing jobs were ill-suited for more human-capital intensive service jobs. In the case of structural unemployment, whose skills are no longer in demand must undergo retraining, or, in the case of older workers, accept early retirement. Creating more jobs does not alleviate structural unemployment if available job seekers do not have the skills those jobs require. Social workers can help their clients diagnose the reason for their inability to find a job and help them secure job training.

Figure 13-1 traces the trend in the unemployment rate from the sixth year of the Bush II Administration through November 2012, when Barack Obama was reelected as President of the USA. Note the gentle increase in the unemployment rate during 2007; by the end of the year the unemployment rate stood at 5%, which was well below the historical average of 6.2%. Some construction workers and real estate brokers were losing their jobs as the **housing bubble** burst. If those people could employ alternative job skills, they should have matched up with new job opportunities. If there was a mismatch between the skills of the newly unemployed and the requirements of available jobs, then the **duration** of job search would increase.

Figure 13-1

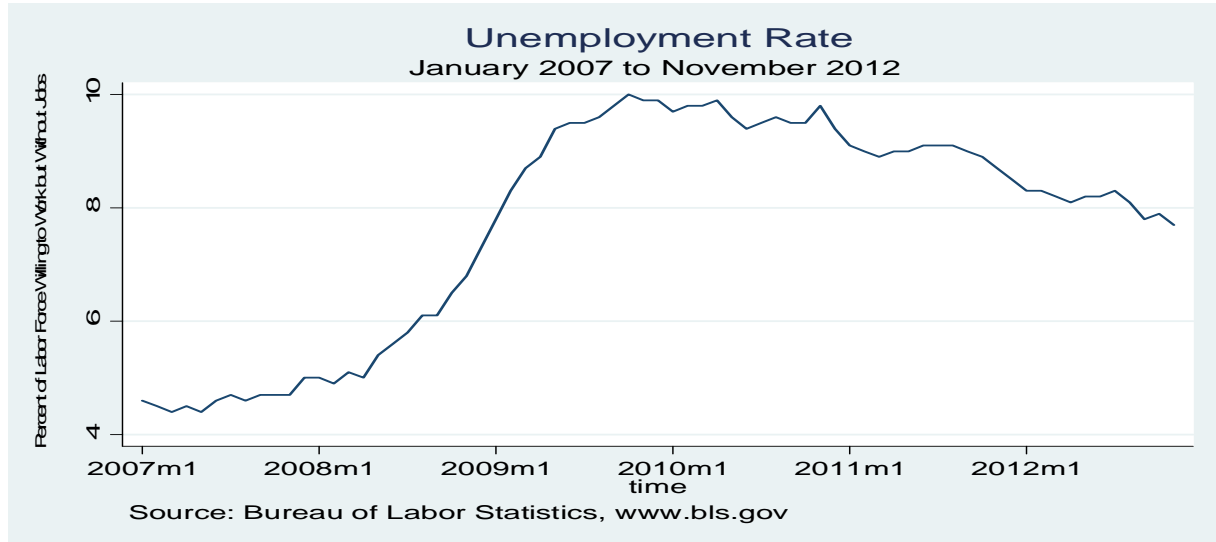
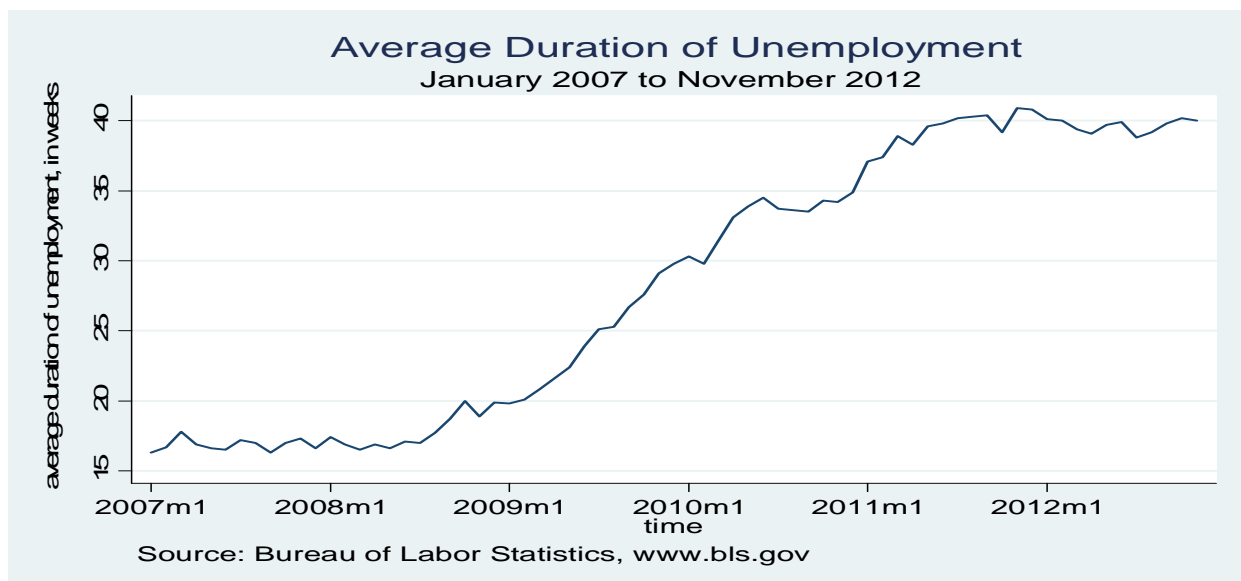


Figure 13-2 shows the duration of unemployment over the same time period. From January 2007 through mid-2008 the average duration of unemployment remained roughly constant at 17.8 weeks, only slightly above the long-run average of 13.5 weeks. Note that by the time of the November election in 2008 it was clear that both the unemployment rate and the average duration of unemployment were increasing rapidly. This is an illustration of the unemployment rate as a **lagging indicator**. During bad time, employers are reluctant to terminate workers, both because of a touch of altruism and because replacing those workers would require expensive investments in specific training. Alternatively, when the economy recovers, employers don't want to hire workers until they are assured the upturn is permanent.

Figure 13-2



When Barack Obama was inaugurated on January 20, 2009, it was clear to objective observers that the American economy had entered an economic recession, defined as a pause in the growth of the economy. In fact, The Great Recession was technically a depression – an actual decline in economic output, which persisted through 2009. Because the US population is growing, the number of new job seekers entering the labor market (e.g., recent graduates and mothers returning to the labor force when their children start school) exceeds the number leaving the labor force, typically due to retirement. Unless the economy grows, job seekers begin to exceed the number of available jobs, leading to **cyclical** or **demand deficient** unemployment, which exists when the number of job seekers exceeds the number of jobs available. The problem of cyclical unemployment is that the economy grinds to a halt, literally dropping inside of its production possibility curve. And something very strange happens. Employers cut back on their hiring plans because they are not selling all that they produce; as inventories build up because production exceeds sales, firms reduce their job offers and **layoff** current workers. Layoffs result when optimistic employers reassure their employees that, while they cannot afford to pay them in the short term, they will recall those workers when business picks up. Workers who lose their jobs through no fault of their own can apply for unemployment compensation, which pays them a fraction of their monthly wage until business conditions improve. During normal times, 26 weeks of unemployment benefits suffice; but, as figure 13-2 shows, the average duration of unemployment exceeded 26 weeks in mid-2010, and continued to increase until plateauing at 40 weeks in early 2011.

To fight the recession President Obama proposed and the Democratic Congress passed a stimulus package. Because Democrats needed 60 votes in the Senate, they added enough tax cuts to the stimulus package to attract the 3 Republican votes needed to end a Republican filibuster. As history was to show, the stimulus was too little to push the economy out of a recession. Republicans exploited the continued worsening of the economy by exploiting the frustration of their political base – 60% of the top 2% of the income distribution, along with Southern whites angered over the election of the first African-American president. As President Obama took his oath of office for the first time, Republican members of Congress met to devise a strategy to deny Barack Obama a second term. This meant that Republican Senators filibustered virtually every law the Republican House of Representatives passed, and blocked most of Obama's judicial and sub-cabinet level appointments. Senator Mitch McConnell, the minority leader of the Senate, Republicans' *first priority* was to deny Barack Obama a second term as president. It was clear this meant that Republicans were willing to prevent an economic recovery to achieve their political ends. As the economy worsened, it was President Obama, rather than the Republicans, whom the public blamed. In the mid-term elections of 2010 the Republicans took over the House of Representatives and narrowed the Democrats' majority in the Senate. Republicans also took many governorships and state legislatures, which allowed them to rig congressional districts to assure Republicans would control the House for the next ten years (until reapportionment in 2020). Indeed, although Republicans received fewer votes than Democrats in the 2012 House races, Republicans kept control of the House as planned, although the Democrats picked up two additional Senate seats, extending their majority to 55 to 45, which is insufficient to overcome future Republican filibusters.

Gross Domestic Product and the Business Cycle

I hope you appreciate the importance of measurement in objective economic analysis. If economic theories are to serve as something other than stories, we must compare real world events with the predictions gleaned from our theories. If our theories do not conform to reality, we must modify the theory. When people seek to modify the data to conform to their theories, they are violating the scientific method; they are more like religious zealots willing to fight for their version of the truth rather than humble scientists pursuing an elusive truth. In 1929 economists developed the **gross domestic product** to measure the total output generated in the economy during a calendar year.

To calculate GDP the Bureau of Economic Analysis adds together the total production of four distinct categories of goods and services: consumption, investment, government, and net exports. Recall from chapter 2 that households purchase goods and services using their disposable income – that is, income after taxes. The value of consumption includes **durable goods** (like automobiles and personal computers: commodities that last more than a year), nondurable goods (like food and clothing: commodities that last less than a year), and consumer services (like haircuts, education, and medical care: commodities that are consumed at the moment of production). The rule for defining consumer goods is simple: all commodities purchased by the household sector (except for new houses themselves) are defined as consumer goods. Since we want to count all production, but count all production only once, investment goods must exclude consumer goods. Investment goods include structures (both residential and commercial), equipment, and computer software. In addition, goods intended for consumers, but not sold in the year produced, are *inventory investments*. Since many government expenditures are **transfer payments** (e.g., social security, Medicare, Medicaid, unemployment and workers compensation), those payments are not counted as government *production*, since those funds were used to purchase consumer goods or services, and no production is to be counted twice. Finally, some commodities are consumed in the US, but produced in other countries – these **imports** are part of some other country's GDP, and are deducted from consumer goods, investment goods, or government goods. However, goods produced in the USA but sold to residents of other countries are **exports** and are included as part of the US GDP.

A few details about how the GDP is calculated and how it is used to measure the health of the overall, or **macro** economy. To make sure we count only final goods in GDP, and that we count them only once, GDP is calculated by summing the **value added** of each business and government entity. For instance, a loaf of bread proceeds through several transactions on its way to market. A farmer grows grain, which he sells to the miller for \$0.70. The miller grinds the wheat, adds some ingredients, and sells the flour to the baker for \$1.50. We subtract the \$0.80 the miller paid the farmer and other suppliers, and calculate the miller's value added at $\$1.50 - \$0.80 = \$0.70$. Baker further increases the value of the flour by baking bread worth \$2.25. If she sells the bread to a grocery store chain, we subtract her **material costs** of \$1.50 from the selling price of \$2.25, producing \$0.75 to obtain the baker's value added. If the grocery store chain marks up the price to \$2.50, then its value added to the bread is \$0.25. If the process stops at any point at the end of the year, the production to that point is part of the inventory of the farmer, the miller, the baker, or the grocery chain, and counted as an inventory investment. If the transactions result in a consumer purchase, the bread is treated as a consumer good.

Ultimately the Gross Domestic Product is the value of consumer goods (C), investment goods (I), government purchases (G), and net exports (X):

$$GDP_t = C_t + I_t + G_t + X_t$$

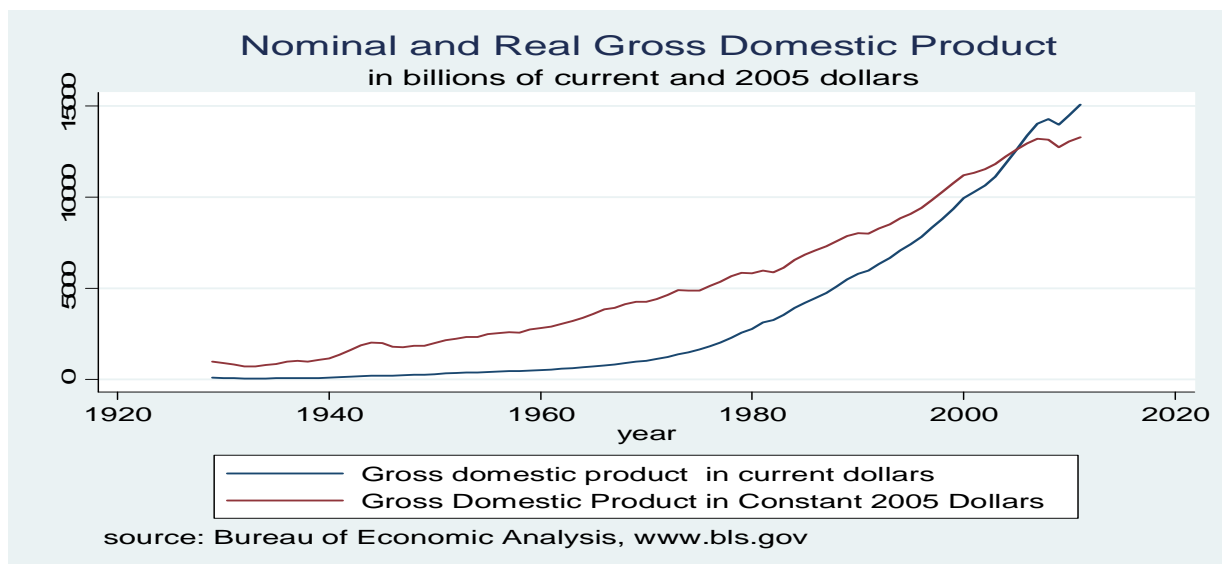
Obviously each year's GDP is computed using the price for which each good is sold for that year. This creates a potential problem when comparing one year's GDP with another. The dollar value of GDP can increase either because more goods are produced, or because those goods sell for higher prices, due to **price inflation**. In order to neutralize the effect of inflation and to measure the change in economic activity in comparable prices, government statisticians use the **GDP price deflator**. Early in 2013¹ government statisticians will compute price each component of the 2012 GDP in terms of the **base year**, currently 2005. For the aggregate of all goods, the GDP price deflator is computed as:

$$PI_{2012} = \frac{\sum P_{2012} Q_{2012}}{\sum P_{2005} Q_{2012}} .$$

That is the GDP price deflator weights each price by its respective quantity; so gasoline prices count for a lot, the price of bacon for considerably less.

Figure 13-3 plots the nominal GDP (GDP in current prices: the blue line) and in constant 2005 prices; note that the two lines intersect in 2005. Since we wish to compare changes in output, not prices, we will hereafter consider real, or inflation-adjusted GDP, unless otherwise indicated. In 1929, nominal GDP was \$103.6 billion in 1929 dollars, or \$976.1 billion in 2005 dollars; this implies that prices in 2005 were 9.42 times their level in 1929. Nominal GDP was \$15,075.7 billion (\$15.0757 trillion) in 2012, but only \$13,299.1 billion in 2005 dollars (2012 prices were 13.3% higher than in 2005).

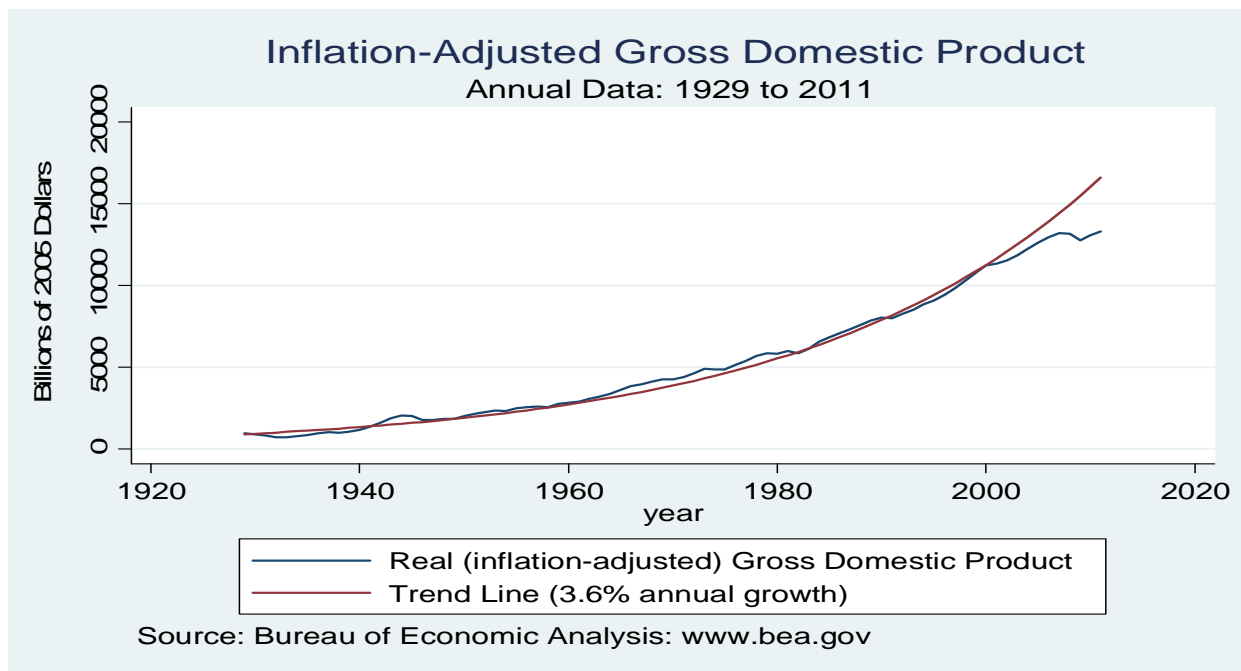
Figure 13-3



¹ I am writing this chapter on December 30, 2012.

Figure 13-4 plots real GDP against its underlying exponential growth trend. Between 1929 and 2011 inflation-adjusted real GDP grew at a compound rate of 3.6% a year. There are stretches when the actual GDP is below the growth line. The period 1929 to 1939 was the **Great Depression** following the stock market crash and associated banking failures that caused real GDP to decline at a rate of 9.14% per year from 1929 to 1933, requiring growth of 6.75% per year to return to the growth path. Real GDP then grew by an average of 12.3% per year through the World War II years, followed by a modest recession in 1946 and as the economy returned to civilian production. What followed were nearly thirty years of prosperity (1947 to 1975), when real GDP remained above its long-run trend line, and there was an expanding middle class. In the late 1970's the great prosperity gave way to regressionary economics of the Reagan era, when tax cuts for the rich were followed by large deficits and retarded economic growth. After a brief period of growth during the Clinton Administration, due to tax rate increases and government spending cuts, George W. Bush cut taxes to their lowest levels since the Great Depression, but growth was anemic and, at the end of his term, nonexistent.

Figure 13-4



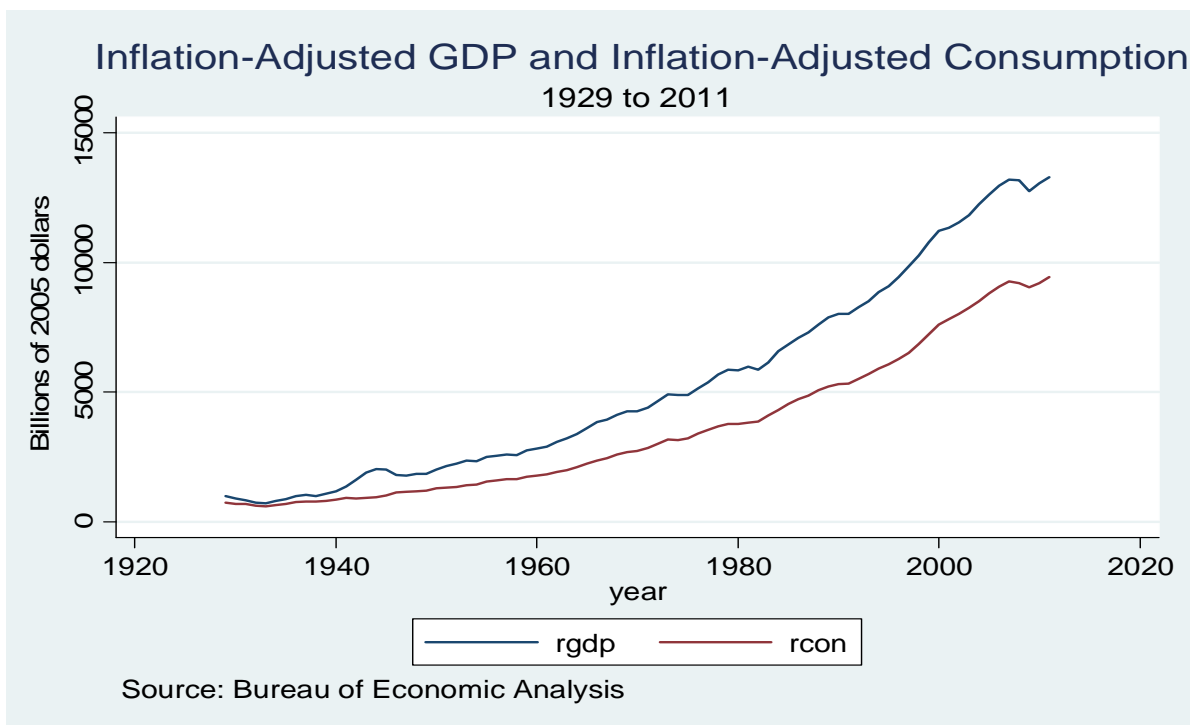
Keynesian Economics and Fiscal Policy

The Great Depression was a profound surprise to economists at the time. The classical economists – from Adam Smith through economists of the 1920s – believed religiously that economic downturns would be self-correcting. If more workers sought employment than there were jobs available, the obvious remedy was declining wages. As we saw in chapter eight, a reduction in the demand for labor means that wage rates should increase so that labor market equilibrium would be established at a lower employment level, after workers whose reservation wages exceeded the market wage exited the labor force. The 1930s, however, showed the folly of this belief. Declining wage rates

meant declining household income, which in turn reduced demand for goods and services, decreasing the price of those goods, and the demand for labor.

In 1936 John Maynard Keynes, a British economist, wrote his *General Theory of Employment, Money and Interest* that explained why the macro economy is not self-correcting in the face of devastating financial crises such as those who caused the Great Depression (1929-1939) and the Great Recession (2007 to the present). Consumption is **pro-cyclical** explained Keynes because consumption depends most heavily on **disposable personal income**: household income after taxes. Figure 13-5 shows how inflation-adjusted consumer spending nearly parallels the GDP – when the latter declines, so does the former.² We cannot depend on consumers to spend us out of a recession.

Figure 13-5



Keynes also showed that investment spending is correlated with GDP, although investment spending is much more volatile than real GDP is. Remember from chapters 2 and 3 that investment means incurring a cost in the present with the uncertain hope that increased production capacity will increase future profits. When the economy is expanding, businesses are keen to invest, and when the economy is contracting, businesses reduce their investment spending, further magnifying the recession. To make matters worse, **precautionary saving** by businesses³ and households further reduce consumption. The only recourse, argued Keynes, is for the federal government to borrow those funds that businesses and households do not wish to spend.

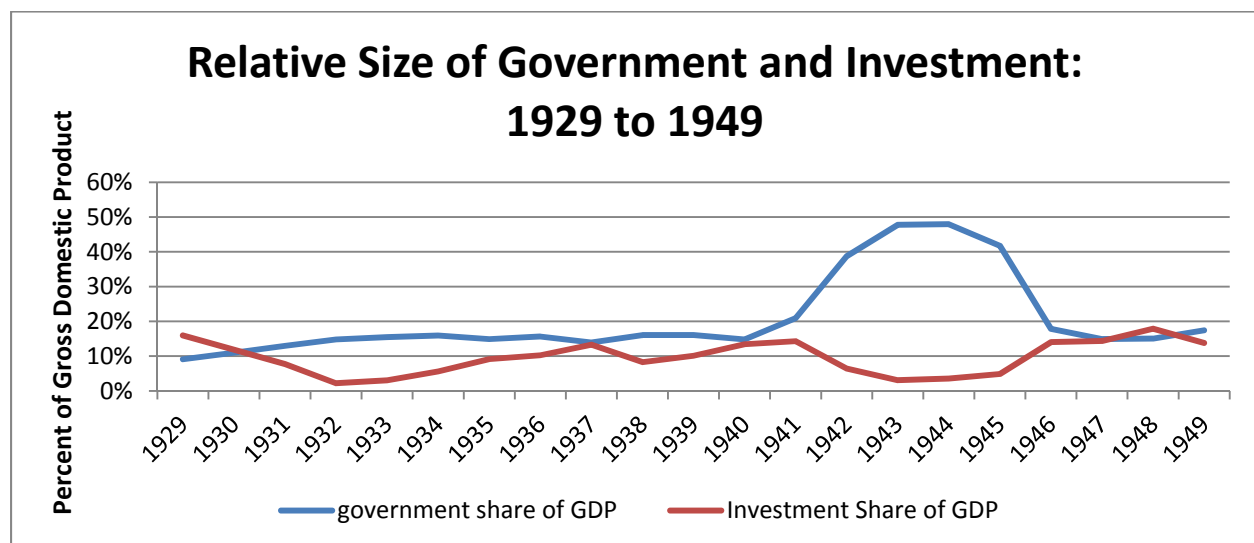
² The correlation between inflation-adjusted GDP and inflation-adjusted consumer spending is 0.9985.

³ Businesses save by retaining profits, rather than paying the owners dividends. When the economy is bad, corporate executives are reluctant to increase dividends, lest those payments be unsustainable.

Fiscal policy is the practice of using the federal budget to stimulate the economy during economic downturns and facilitating investment during economic expansions. Recall from chapters 2 and 3 that taxes reduce household consumption, freeing resources to finance essential government services like enforcement of property rights and contracts. If government purchases or transfers exceed tax revenue, then the government borrows the difference. If the economy is operating at full employment (on its production possibility curve), then government borrowing raises interest rates and **crowd out** investment. During a recession, however, the economy operates inside the production possibility curve; it is possible to increase government spending without decreasing either consumption or investment. As shown in Figure 13-6a, the economy starts at point D, inside its production possibility curve. Increasing government purchases from G_0 to G_1 allows unemployed people to accept government jobs. They then spend their disposable income on consumer goods and set aside some of their income as savings, which they deposit in banks. The increase in consumer spending leads businesses to hire additional workers.

By the time the Roosevelt Administration took office in 1933, the Great Depression had already lasted three and a half years; Herbert Hoover's cheerful reassurance that "prosperity is just around the corner," rang hollow. Between 1929 and 1933, investment fell from 15.9% of GDP to only 2.2% of GDP in 1932. While the government share increased from 9% to 14.8% of GDP, the sum of government and investment spending fell from 25% to 17% of GDP. Since business was not borrowing for investment, it would have productive for government to borrow household and business savings, returning that money to circulate in the economy. However, Herbert Hoover, state governors, and city mayors strove to balance their budgets, which required raising taxes or cutting government spending. By 1932 the nominal GDP had fallen by 45.56% from its 1929 level (from \$103.6 billion to \$58.7%). After controlling for price decreases of 25.8%, inflation-adjusted GDP had declined by 26.67%. In other words the typical household's income in 1932 had declined by 25% since 1929.

Figure 13-6



Between 1933 and 1940, the government spending share of GDP remained roughly constant at 15% of GDP, which proved inadequate to offset the decline in investment. In 1940 nominal GDP was still below its 1929 level; real GDP 4.5% higher in 1940 than in 1929. In one year alone (1941) inflation-adjusted GDP increased by 17% government purchases increased from 14.8% to 21% of GDP. Fairly soon the rapid increase in government spending (and the federal deficit) threatened to overheat the economy. To avoid inflation, the government rationed key commodities, especially gasoline, and imposed wage and price controls. Ironically, these controls led to a practice that bedevils the economy today. Because defense contractors could not offer higher wages to attract the engineers and other professional workers they needed, American companies began offering fringe benefits, particularly health insurance benefits for workers and their families. After World War II, when European countries and Canada established government financed (single-payer) health care systems, the US continued to rely on private insurance coverage, with all the associated problems of adverse selection, fraud, and bureaucracy.

After World War II, Congress passed and President Truman signed the Employment Act, which stated "The Congress hereby declares that it is the continuing policy of the Federal Government ... to promote maximum employment, production and purchasing power."⁴ This law was a watered-down version of the 1945 *Full Employment* bill that promised that all Americans "*are entitled* to an opportunity for useful, remunerative, regular and *full-time* employment... To this end the Federal Government shall provide such volume of Federal investment and expenditure as may be needed,..., to assure continuing full employment."⁵ The Employment Act allowed the Federal government to do what the Full Employment Bill would not have: a deliberate and sustained reduction of the share of government spending from 41.7% in 1945 (down from a high of 47.9% in 1944) to only 15% in 1946, which is where government spending was in 1933. Liberals and progressive politicians and even Keynes himself feared that such a massive reduction in government spending would return the economy to depression. What they overlooked, however, was that the backlog of investment and consumer spending during the war would take over for government spending. While there was a slight reduction in real GDP from its peak in 1944, the return of women to household production made way for returning war veterans in the labor force, assisted by the GI Bill of Rights, which financed the college education of millions of veterans, thereby delaying their labor-force participation.

Despite brief interruptions in 1946-1948 (when Republicans controlled both the House of Representatives and the Senate), the Congress was dominated by Democrats who kept the unemployment rate to an average of 4.7% and the inflation rate to an average below 3%. During the 1960's Democrats controlled both the Presidency and both houses of Congress, passing the Civil Rights Act, Medicare, and declared war on poverty. Unfortunately, the War in Vietnam destroyed liberal support for the Johnson Administration, and an opportunistic Richard Nixon used a white backlash against Civil Rights to claim the White House in 1968. Ironically, the passage of liberal legislation continued; it was during the Nixon Administration that Congress passed (and Nixon signed) laws establishing the

⁴ http://research.stlouisfed.org/publications/review/86/11/Employment_Nov1986.pdf

⁵ *Ibid.*

Environmental Protection Agency, the Equal Employment Opportunity Commission, and the Civil Rights Administration. Nixon supported the Equal Rights Amendment, even though enough conservative state legislatures, including Nevada, did not.⁶ Since conservatives did not actually have an economic policy to counter the activist Democratic policy, Richard Nixon declared, "We are all Keynesians now."

Although the Johnson Administration had partly offset the cost of the Vietnam War with a tax surcharge in 1968, Nixon and the Democratic Congress cut taxes in 1969, generating a budget deficit at full employment. This situation led to a classic excess demand inflation. Government borrowing pushed up the interest rate, which is consistent when the demand for loanable funds (from business, government, and household borrowing) exceeded private saving. In an attempt to maintain his popularity with business, Nixon's Federal Reserve Chairman, Arthur Burns, embarked on a policy of monetary policy. This resulted in The Great Inflation, and a rethinking of the efficacy of Keynesian fiscal policy.

The Federal Reserve and Monetary Policy

Semester after semester, students in ECON 180 seem to have the most difficulty understanding the nature of money and monetary policy. Most obviously, money includes coins (minted by the Treasury) and currency, actually Federal Reserve notes. The Federal Reserve Act of 1913 established a central bank disguised as twelve regional banks. The "Fed" is established as a bank for banks. Most money in the USA is actually in the form of bank deposits. When you write a check on your account with, say, the Bank of America, to a merchant who has a checking account at Wells Fargo, the Fed simply credits the (reserve) account of Wells Fargo and debits the account of Bank of America; the majority of the money supply (M1) is actually a series of computer records. When bank customers want cash, the bank obtains cash from its reserve account. The Fed carefully regulates the ratio of reserves (vault cash and deposits with the Fed) to prevent explosions in the money supply, which would generate inflation.

Think for a moment what happens when a bank loans money to a customer, say a student buying a new car. The bank writes a check to the customer, which is an increase in the money supply. Obviously, the customer will spend that check almost immediately, but the dealership will deposit the check in its checking account – money changed hands, but the money the bank created with its loan still exists. Table 13-1 shows the balance sheet for a hypothetical bank, which belongs to the Federal Reserve and faces a 10% required reserve ratio for checking deposits and 5% for savings deposits. The bank's liabilities are the \$100 million that it owes to its depositors, who have deposited \$60 million in checking accounts (also known as **demand deposits**⁷) and \$40 million in savings accounts (also

⁶ States failing to ratify the Equal Rights Amendment were Alabama, Arizona, Arkansas, Florida, Georgia, Illinois, Louisiana, Mississippi, Missouri, Nevada, Oklahoma, South Carolina, Utah, and Virginia. Of this group, only Illinois, Nevada, and Virginia voted for Barack Obama in either 2008 or 2012.

⁷ The term **demand deposits** means that depositors can withdraw their deposits any time they want – by writing a check or using a debit card.

known as **time deposits**⁸). On the asset size, the bank holds \$50 million in consumer loans, \$30 million in government bonds, and \$20 million in reserves (\$5 million in vault cash and \$15 million in deposits with the Federal Reserve).

Figure 13-1: Bank with Excess Reserves

Assets		Liabilities	
Loans	\$50 million	Demand deposits	\$60 million
Government bonds	\$30 million	Time deposits	\$40 million
Legal Reserves			
Vault Cash	\$5 million		
Deposits with Fed	\$15 million		
Total	\$100 million	Total	\$100 million

Required reserves equal $.1(\$60 \text{ million}) + .05(\$40 \text{ million}) = (\$6 + \$2) \text{ million} = \$8 \text{ million}$. Subtracting required reserves from legal reserves yields **excess reserves** of \$12 million. *If* the bank decides to loan \$12 million to the public (businesses, households, or local governments), then the money supply would increase accordingly. The bank has an incentive to loan its excess reserves because vault cash and deposits with the Fed earn no interest income. However, the bank may decide to purchase (federal) government bonds instead of making loans. In periods of potential inflation (if the money supply threatens to grow faster than real gross domestic product), the Fed may fight inflation by selling government bonds. If banks buy those bonds with excess reserves, then potential money growth is prevented. If members of the public purchase those bonds, they write checks to the Fed from their checking accounts, reducing bank reserves.

Figure 13-2 shows the position of a bank immediately after loaning its excess reserves. Its demand deposits increase by \$12 million, as do its assets; remember, assets and liabilities must always be equal.⁹

Figure 13-2: Immediately After Loaning Excess Reserves

Assets		Liabilities	
Loans	\$62 million	Demand deposits	\$72 million
Government bonds	\$30 million	Time deposits	\$40 million
Legal Reserves			
Vault Cash	\$5 million		
Deposits with Fed	\$15 million		
Total	\$112 million	Total	\$112 million

Technically the bank in Figure 13-2 would still have excess reserves: required reserves would have increased by 10% of the \$12 million loan. Meaning that excess reserved

⁸ Time deposits typically earn interest and can be withdrawn only upon conditions stipulated by the bank. Because of competition for customer business, most banks allow depositors to freely transfer funds from time deposits to demand deposits.

⁹ Figures 13-1 and 13-2 are simplified balance sheets, which do not include such items as net worth and claims by shareholders.

declined from \$12 million to \$10.8 million. However, this state of affairs would not last long. Borrowers would spend their loans almost immediately, paying interest over the life of their loans.¹⁰ Figure 13-3 shows that after the borrowers have spent those loans, the bank is loaned up (has no excess reserves). However, the *banking system* still has excess reserves of \$10.8 million. As those excess reserves move from bank to bank,¹¹ the money supply can continue to expand until all excess reserves are (1) loaned out, (2) withdrawn as cash by bank customers, or (3) used to purchase bonds.

Figure 13-3: After Excess Reserves have left the bank

Assets		Liabilities	
Loans	\$62 million	Demand deposits	\$60 million
Government bonds	\$30 million	Time deposits	\$40 million
Legal Reserves			
Vault Cash	\$3 million		
Deposits with Fed	\$5 million		
Total	\$100 million	Total	\$100 million

The Federal Reserve (Fed) uses **monetary policy** to control the monetary base, and with it, the money supply. When the economy is overheating and inflation threatens, the Fed is very effective at absorbing excess reserves by selling government bonds. The Fed sells government bonds by offering them at a discount to banks; by purchasing government bonds at less than their market value, the bank realizes a capital gain when it sells the bond later, and receives a higher rate of interest. In 1979 President Jimmy Carter appointed Paul Volker as chairman of the Fed, who announced that the Fed would no longer allow the money supply to expand as fast as nominal GDP. When the economy was starved for money, a severe (double-dip) recession developed. Eventually, inflation was brought under control, but not before Carter lost re-election and the Reagan Administration embarked on tax cuts which largely shifted the tax burden from the rich to the middle class.

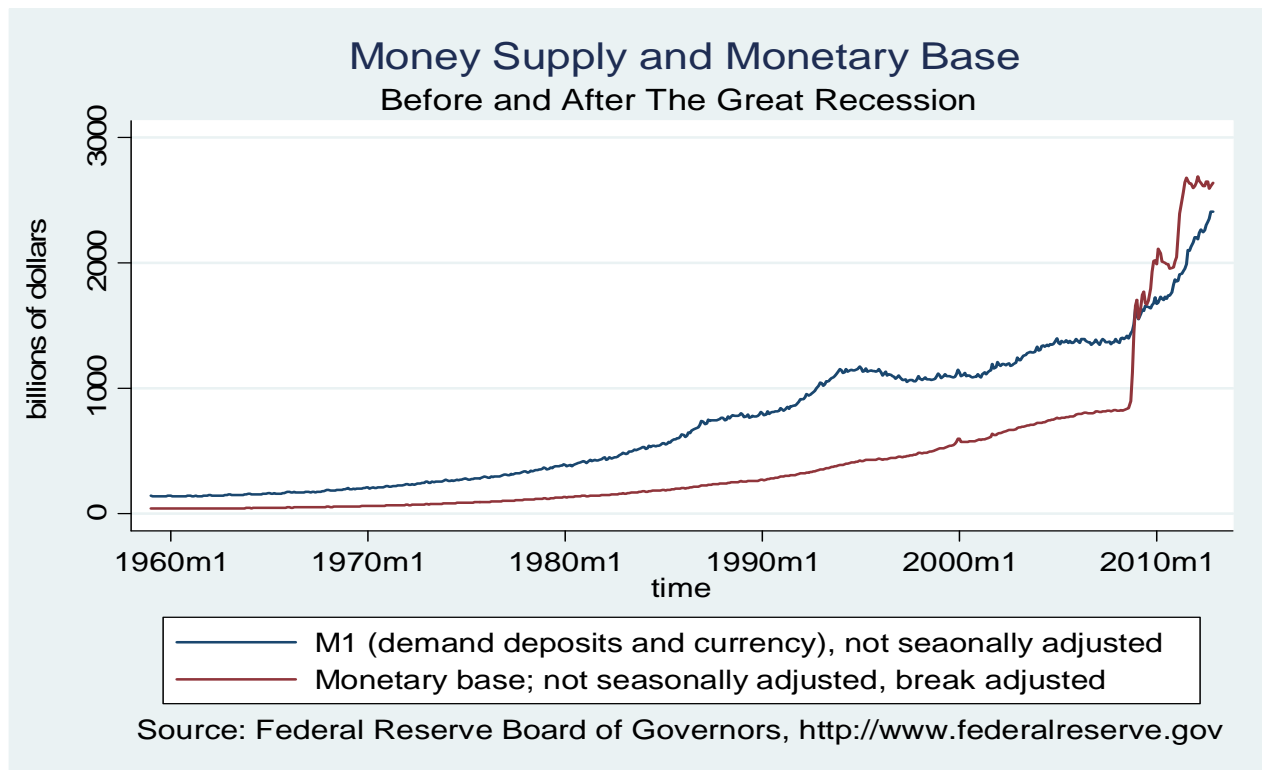
In theory the Fed should be able to stimulate the economy by purchasing government bonds from banks and the public. For instance, if the bank in Figure 13-3 sold \$30 million in bonds to the Fed, it would suddenly have excess reserves of \$30 billion, which it could lend to businesses for investment or to households to finance consumer durable goods. Alas, when the economy suffers an economic downturn, banks are reluctant to loan lest their borrowers fail to repay loans. Furthermore, neither businesses nor households are interested in borrowing money when they are uncertain whether they could repay the debt.

¹⁰ If you are familiar with the perennial Christmas favorite, *It's a Wonderful Life*, the Baily Savings and Loan nearly failed when depositors demanded their funds immediately, and George Baily used his honeymoon savings to stave off the crisis. He reminded depositors that they had agreed to wait 90 days for their money, since that money was tied up in the mortgages. Today many banks bundle their mortgages as "mortgage backed securities" and "collateralized debt obligations," which they sell to other banks or other speculators around the world. This moral hazard problem – banks don't worry about the credit worthiness of borrowers if they can sell those loans to naïve "investors" – was one of the factors leading to the debt crisis.

¹¹ When the merchants who received the spending from loans deposit their receipts, the Fed credits the receiving bank with the former excess reserves, which means the receiving bank can make loans if it so choose

Figure 13-7 shows this state of affairs dramatically. From January 1959 through December 2007, each 10% increase in the **monetary base** (vault cash plus deposits with the Fed) increased the money supply (currency in circulation plus demand deposits) by 8%. Notice the nearly vertical jump in the monetary base (red line) in 2009, while the money supply (the blue line) grew less modestly. Starting in January 2008, through November 2012, each 10% increase in the monetary base increased the money supply by 3.8%; the banking system is awash with cash, but that money isn't moving, meaning that households, businesses, state and local governments, and other countries, are not buying. During a severe recession, only fiscal policy seems to be effective at pushing the economy out of recession, back to its production possibility curve.

Figure 13-7



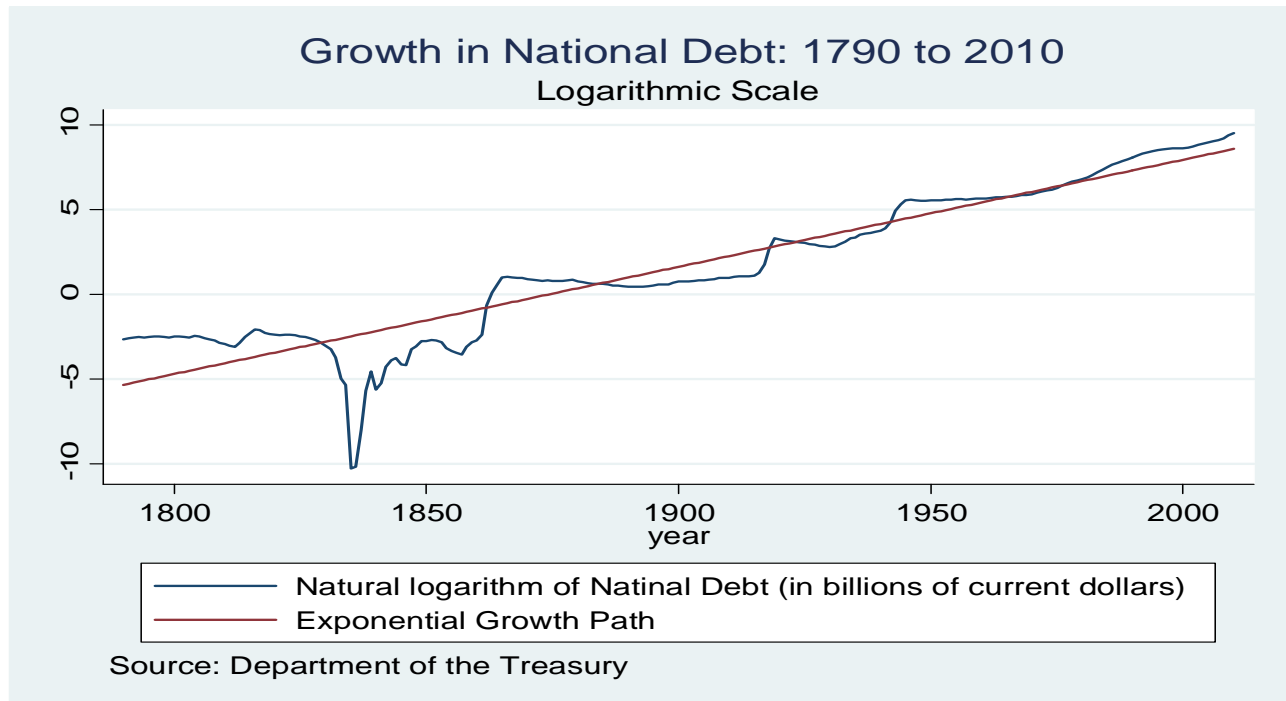
What about the National Debt?

We appear to be faced with a dilemma: when the economy is operating at less than full employment; that is, when the number of job seekers exceed the number of jobs available, household spending, investment spending, state and local government spending, and even export spending all are **pro-cyclical**. The only sector of the economy that can afford to operate in a **counter-cyclical fashion** is the federal government. By operating a **budget deficit** during periods of high unemployment, the federal government borrows savings that other sectors of the economy refuse to borrow. Cutting taxes increases household income, which in turn encourages household consumption. The drawback here is that households may use their disposable income to reduce their own debt. When households repay debt, banks receive excess reserves. If banks fail to loan out those

excess reserves, the economy stagnates. This is apparently what happens with the 40% of the Obama stimulus that took the form of tax cuts. Furthermore, another large portion of the stimulus was spent on propping up state and local government budgets. These transfers softened the impact of the Great Recession during 2008-2010 while the Democrats controlled Congress and many state legislatures; Republicans successfully used the relative wellbeing of government employees as a wedge issue against Democrats in the Tea Party revolt of 2010. As I write this on January 2, 2013, Congress temporarily avoided the fiscal cliff by extending the Bush-era tax cuts for all but the richest 2% of households,¹² but Republicans are promising another battle over the debt ceiling.

Figure 13-8 shows the national debt by year from 1790 through 2010; because of the huge change in the absolute size of the national debt – from \$71 million (\$21.04 per capita) in 1790 to \$13.5 trillion (\$44,068 per capita) in 2010 – I have measured the national debt on a logarithmic scale. The straight line actually reflects a compound growth rate of 6.5%. Note that the debt starts above the trend line in 1790, reflecting the debt from the Revolutionary War. Between 1790 and 1945 increases in the national debt largely reflect war debt, which spike during years of conflict and gradually decline during extended periods of peace. Note that the instead of dipping below the trend line after World War II, the national debt joined the trend line in the 1960s, then began growing beyond the trend line in the 1980s, although the growth in the national debt declined during the late 1990s, then began accelerating again with the Bush tax cuts in 2001.

Figure 13-8



¹² Tax rates were returned to the Clinton-era maximum rate of 39.6% for individual taxable incomes above \$400,000 and joint taxable income above \$450,000, and the capital gain tax rate was increased to 20%.

The national debt is a symptom, rather than a problem. During economic downturns, declines in tax revenue, and automatic increases in government spending are reflected in growth in the national debt. The time to attack the national debt is not when times are bad – unless your agenda is to make the economic downturn more severe to get rid of a pesky black president. Starting with Ronald Reagan in 1981, Republicans bought into the theory that cutting tax rates would increase tax revenue. In 1964, the top tax rate declined from 91% to 70%, and the economy grew. In 1981, the top tax rate decreased from 70% to 28%, and tax revenue declined and the deficit became a permanent fixture of the American economy – a **structural deficit** that continued even when the economy returned to full employment. In 1992 Bill Clinton ran on a platform to fight the then modest recession with typical Keynesian fiscal-policy tools: tax cuts to stimulate consumption and government spending to create jobs for the unemployed. But after his election, Clinton learned that the recession had ended by the time he took office on January 20, 1993. He reversed course and presented Congress with a budget that increased the maximum tax rate to 39.6%, and reduced government spending. Not a single Republican in either the House of Representatives or the Senate voted in favor of the budget. In 1994, Republicans recaptured the Senate (which they lost in 1982) and captured the House for the first time in 42 years. The lesson for Democrats was clear; if you dare be fiscally responsible, voters will punish you.

Conclusion

The Republican Party strove to become America's permanent majority party by catering to the worst: residual racism from the Civil Rights era, misogyny from the sexual revolution, anti-science, and inability to perceive one's economic self-interest. In 2010, it looked like they won again, successfully preventing the second round of stimulus by the Obama Administration. Then they lost the 2012 election and caved to tax increases for households with taxable income above \$450,000. Ultimately we end the economics of discrimination by asking: how can we discriminate between truth and falsehood, policy and bullshit?

Summary

1. **Unemployment** occurs when people who want jobs do not have them. There are three types of unemployment.
 - a. **Frictional unemployment:** a state of the economy when the number of available jobs equals the number of qualified job seekers. In a dynamic economy, there will always be a frictional unemployment rate of about 4%.
 - b. **Structural unemployment:** a situation when there is a miss-match between the skill requirements of available jobs and the skills possessed by job seekers; a solution to structural unemployment typically requires job training is the type of unemployment that social workers can diagnose and treat
 - c. **Cyclical (or demand deficient) unemployment:** the number of job seekers exceed the number of available jobs; the economy is operating inside its production possibility curve, and solving cyclical unemployment requires job creation.

2. As cyclical unemployment persists, the **duration of unemployment** also increases, often leading to a structural unemployment problem as the human capital of job seekers deteriorate.
3. Job creation is a serious problem during a period of prolonged unemployment because all sectors of **gross domestic product** are **pro-cyclical**: Consumer spending, investment spending, state and local government spending, and net exports all tend to decrease when the GDP decreases; only federal government spending is structured in such a way that it can behave in an **anti-cyclical** manner, expanding during economic downturns and decreasing during periods of economic expansion.
4. On order to distinguish between real and phantom changes in economic output (GDP), economists compute **real GDP**, which is GDP expressed in one year's (currently 2005's) prices. Real GDP removes the effect of inflation from current (nominal) GDP.
5. A **recession** occurs when real GDP stops growing, thereby falling below its long-run growth path. Technically, the US economy was in **depression** in 2008 & 2009 because real GDP actually decreased.
6. **Fiscal policy** is the use of the federal government budget to stimulate or dampen economic growth. During economic downturns, running a **budget deficit** stimulates the economy by encouraging consumption (through an increase in transfers or a decrease in tax collections) or by creating jobs through increases in federal government purchases. The Obama Administration pursued fiscal policy by continuing the bank bailouts started by the Bush Administration and through economic stimulus. Unfortunately, much of the economic stimulus, in the form of temporary tax cuts, resulted in increased saving, which failed to stimulate the economy. When the Tea Party Republicans took over the US House in 2011, focus changed from economic stimulus to attacking the deficit. However, economic **austerity** (cutting spending and/or increasing taxes) tends to dampen economic growth.
7. The **national debt** is the total amount of money the Federal Government owes. When the federal government runs a deficit, it issues **government bonds** that increase the national debt; the national debt decreases when the government runs a **budget surplus**, which last occurred in 2000, the last year of the Clinton Administration.
8. **Monetary policy** involves the use of purchases of US Treasury bonds by the **Federal Reserve System** (the Fed). Purchasing bonds creates excess reserves that banks can loan to business and/or households, thereby expanding the money supply. Unfortunately, since bank lending is pro-cyclical, monetary policy increased bank reserves, but did not increase bank lending. Monetary policy is more effective as an anti-inflation tool: when banks sell bonds, they absorb excess reserves, reducing bank lending and preventing (or fighting) inflation. **Contractionary monetary policy** succeeded in ending the **great inflation** of the 1970's and early 1980's.