

Dunbar's Big Review Sheet—AP Macroeconomics Exam

Content Area [Hubbard Textbook pages] (percentage coverage on AP Macroeconomics Exam)

I. Basic Economic Concepts (8-12%)

Three Fundamental Questions [8]: (1) what goods and services will be produced, (2) how will the goods and services be produced, and (3) who will receive the goods and services produced?

A. Scarcity [4, 38]: where unlimited wants meets limited resources.

Choice [5]: (1) people are rational, (2) people respond to economic incentives, and (3) optimal decisions are made at the margin.

Opportunity costs [8, 39, 247]: highest-valued alternative that must be given up to engage in an activity.

B. Production possibilities curve/frontier (PPC or PPF) [38]: curve showing the maximum attainable combinations of two products that may be produced with available resources and current technology.

C. Absolute advantage [46, 248]: ability to produce more of a good or service than competitors using the same amount of resources.

Comparative advantage [47, 247]: ability to produce a good or service at a lower opportunity cost than competitors.

Specialization [44]: focusing on producing a good or service that you have the comparative advantage in producing.

Exchange/mutually advantageous trade [10, 44, 47, 249]: result of specialization, able to achieve points beyond the production possibilities curve (PPC or PPF).

D. Demand curve [68]: curve showing the relationship between the price of a product and the quantity of the product demanded.

Supply curve [76]: curve showing the relationship between the price of a product and the quantity of product supplied.

Market equilibrium [80]: situation where quantity demanded equals quantity supplied.

E. Business cycle [634, 696]: alternative periods of economic expansion and economic recession. Expansion is when total production and total employment is increasing while a recession is when total production and total employment is decreasing.

Unemployment [660, 668]: to be counted as unemployed you have to be available for work and looked for a job in the last four weeks. Unemployment rate is the percentage of labor force that is unemployed.

Inflation [634, 674]: inflation rate is the percentage increase in the price level from one year to the next. Measuring the price level can be done by calculating the consumer price index (CPI) [674-677], producer price index (PPI) [677-678], or the GDP deflator [648]. CPI is most commonly used.

Economic growth [634, 697, 730]: ability of an economy to produce increasing quantities of goods and services.

II. Measurement of Economic Performance (12-16%)

A. National income accounts [648-649]: gross national product (GNP) is the value of final goods and services produced by residents of the U.S., even if production takes

place outside the U.S. Net national product (NNP) it is the GNP minus the value of depreciation due to worn-out machinery, equipment, buildings, etc. National income is the NNP minus the value of sales taxes. Personal income is subtracting the profits corporations retain and add transfer payments received by households from the government. Disposable personal income is personal income minus personal tax payments.

1. Circular flow of income and products [637]: *check List of Essential Graphs.*

2. Gross domestic product [635]: market value of all final goods and services produced in a country during a period of time, typically one year.

3. Components of gross domestic product [638-640]: (1) consumption – spending by households on goods and services, not including new houses; (2) investment – spending by firms on new factories, office buildings, machinery, and additions to inventories, and spending by households on new houses; (3) government purchases – spending by federal, state, and local governments on goods and services; and (4) net exports – exports minus imports.

4. Real versus nominal gross domestic product [645-647]: real GDP is the value of final goods and services evaluated at base-year prices while nominal GDP is the value of final goods and services evaluated at current-year prices.

B. Inflation measurement and adjustment [674]: *see I. E. for more information.*

1. Price indices: consumer price index (CPI) [674-677], producer price index (PPI) [677-678], and GDP deflator [648]: CPI is the average of the prices of the goods and services purchased by the typical urban family of four. Four problems with CPI is (1) substitution bias, (2) increase in quality of bias, (3) new product bias, and (4) outlet bias. PPI is the average of the prices received by producers of goods and services at all stages of the production process. GDP deflator is the nominal GDP divided by the real GDP and then multiplied by 100.

2. Nominal and real interest rate [680-681]: nominal interest rate is the stated interest rate on a loan while the real interest rate is the nominal interest rate minus the inflation rate.

3. Convert dollar values in the past to dollar values in the present [678]:
Value in 2006 dollars = value in 1980 dollars \times (CPI in 2006/CPI in 1980)

4. Costs of inflation [682-684]: even if it is anticipated, the menu costs (cost to firms of changing prices) and the fact that tax laws are based on nominal wage rather than real wage may hurt people. Unanticipated inflation is worse because firms or consumers may make deals for future increases in something like wages and the inflation rate is drastically lower than the anticipated inflation rate and the firm may potentially go out of business.

C. Unemployment [660]: unemployment rate is the percentage of the labor force that is unemployed.

1. Causes, costs, and measurement [660-663]: unemployment is a natural part of the economy and it's usually due to the three main types of employment

(below). Unemployment is calculated through the *Current Population Survey* (often known as the household survey).

2. Criticisms associated with the measurement of the unemployment rate [663]: doesn't count for increases or decreases in discouraged workers; counts part-time jobs as employed even if the person wants/needs a full-time job. Also, the survey answers are never verified.

3. Types of unemployment [668-669]: (1) frictional unemployment – short-term unemployment that arises from the process of matching workers with jobs; (2) structural unemployment – unemployment arising from a persistent mismatch between the skills and characteristics of workers and the requirements of jobs; and (3) cyclical unemployment – unemployment caused by a business cycle recession.

4. Natural rate of unemployment and factors that affect it [669]: normal rate of unemployment (estimated to now be around 5%); frictional unemployment plus structural unemployment.

III. National Income and Price Determination (10-15%)

A. Aggregate demand [812, 818]: curve that shows the relationship between the price level and the quantity of real GDP demanded by households, firms, and the government.

1. Determinants of aggregate demand [814-815, 818]: (1) changes in government policies, (2) changes in the expectations of households and firms, and (3) changes in foreign variables.

2. Multiplier (spending multiplier) [791-797]: increase in equilibrium real GDP divided by the increase in autonomous expenditure (expenditure that does not depend on the level of GDP).

3. Crowding-out effects [710, 944-946]: decline in private expenditures as a result of an increase in government purchases.

B. Aggregate supply [813, 819, 823]: curve that shows the relationship between the price level and the quantity of real GDP supplied by firms.

1. Short-run and long-run analyses [819-821]: in the short-run some firms and workers fail to predict accurately changes in the price level so it is curved upwards. In the long-run the aggregate supply curve is at potential GDP and is unaffected by price level.

2. Supply shock [822]: unexpected event that causes the short-run aggregate supply curve to shift.

3. Sticky-price and sticky-wage models versus flexible wages and prices [820-821]: because prices are “sticky” (don't respond quickly to changes in demand or supply) the short-run aggregate curve is sloped upwards. If they were flexible wages and prices they would automatically shift back to potential GDP.

4. Determinants of aggregate supply [821-823]: short-run – (1) increases in the labor force and in the capital stock, (2) technological change, (3) expected changes in the future price level, (4) adjustments of workers and firms to errors in past expectations about the price level, and (5) unexpected changes in the price of

an important natural resource. Long-run – shifts right every year usually; due to potential real GDP increasing every year.

C. Macroeconomic equilibrium [824]: where aggregate demand meets aggregate supply.

1. Real output and price level [824]: shown from the x and y coordinates of macroeconomic equilibrium.

2. Short and long-run [824]: in the short-run macroeconomic equilibrium is wherever short-run aggregate supply and short-run aggregate demand meet at that specific time frame, but in the long-run the short-run aggregate demand and supply curve intersect at a point on the long-run aggregate supply curve.

3. Actual versus full-employment output [669, 821-822]: if short-run equilibrium is to the left of the long-run aggregate supply line then unemployment is up and output is down. If short-run equilibrium is to the right of long-run aggregate supply line then unemployment is down and output is up.

4. Impact of economic fluctuations on the economy's output and price level [824-827]: during a recession total output and price level will be down and during an expansion price level and output increase in the short-run but output always shifts back to potential real GDP in the long-run.

IV. Financial Sector (15-20%)

A. Money, banking, and financial markets [852]

1. Definition of financial assets: money [852-853], stocks [215], bonds [215]: money – assets that people are generally willing to accept in exchange for goods and services or for payment of debts. The four functions of money is (1) medium of exchange, (2) unit of account, (3) store of value, and (4) standard of deferred payment. Stocks – a financial security that represents partial ownership of a firm. Bonds – a financial security that represents a promise to repay a fixed amount of funds.

2. Time value of money (present and future value) [233]:
Present Value = $(\text{Future Value}_n)/((1+i)^n)$

3. Measures of money supply: M1 [856] M2 [858]: M1 – sum of currency in circulation, checking account deposits in banks, and holdings of traveler's checks. M2 – M1 plus savings account balances, small-denomination time deposits, balances in money market deposit accounts in banks, and noninstitutional money market fund shares.

4. Banks and creation of money, multiple-deposit expansion, money creation using T-accounts, and the use of the money multiplier [860]: *see List of Essential Graphs.*

5. Money demand and its determinants [890-891]: interest rate on y-axis and quantity of money on x-axis and money demand curve is downward sloping. Two main determinants are real GDP and price level. An increase in real GDP and/or an increase in price level shifts money demand to the right.

6. Money market, how equilibrium in the money market determines the equilibrium interest rate [890-891]: money supply is vertical, unaffected by

nominal interest rate, and where the money demand and money supply intersect is equilibrium and that determines the nominal interest rate and the quantity of money out there.

7. Loanable funds market in determining the real interest rate [707-711]: on y-axis is real interest rate and on the x-axis is loanable funds. Where demand meets supply is equilibrium and thus you can go down to see the quantity and go sideways from it to see the real interest rate.

B. Central bank and control of the money supply [868]: (1) Whenever banks gain reserves, they make new loans, and the money supply expands. (2) Whenever banks lose reserves, they reduce their loans, and the money supply contracts.

1. Tools of central bank policy, fractional reserve banking, and the Federal Reserve System [870-872]: Tools – (1) open market operations, (2) discount policy, and (3) reserve requirements. Fractional reserve banking is a banking system in which banks keep less than 100 percent of deposits as reserves. The Federal Reserve System is the central bank of the United States.

2. Quantity theory of money [872-874]: theory of the connection between money and prices that assumes that the velocity of money is constant.

3. Effect of monetary policy on real output growth and inflation [871]: By selling T-bills the Fed decreases the money supply and by buying T-bills the Fed increases the money supply. If the Fed lowers their discount rate then banks will borrow more and the money supply will increase. If the Fed decreases its reserve requirements then the money supply will increase.

4. Real versus nominal interest rates [680-682]: nominal interest rate is the stated interest rate on a loan while the real interest rate is the nominal interest rate minus inflation.

V. Inflation, Unemployment, and Stabilization Policies (20-30%)

A. Fiscal [815, 930] and monetary [815, 871, 888] policies: fiscal – changes in federal taxes or purchases. Monetary – (1) buying/selling of T-bills, (2) discount rate, and (3) the required reserves ratio.

1. Demand-side effects [815, 935-938]: decrease in taxes, increase in government purchases, buying T-bills, lowering the discount rate, and lowering the required reserves ratio all lead to an aggregate demand shift to the right.

2. Supply-side effects [910-911, 941-942]: Decreasing corporate income taxes may lead to more labor or capital growth, so that would lead to short-run aggregate supply to shift to the right. Also, long-run aggregate supply shifts right every year due to economic growth. An increase in the labor force and in the capital stock, positive technological change, decrease in expected future price level, workers and firms adjust to over-estimating the price level, and a decrease in the price of an important natural resource all lead the short-run aggregate supply curve to shift to the right.

3. Policy mix [931-934, 938]: sometimes a policy mix is the best way to go. A dollar spent by the government does more than a dollar kept by a consumer because of the multiplier effect. But keeping the budget deficit under control is

also a priority. Government also doesn't want crowding out because of excessive government expenditures.

4. Government deficits and debt [951-952]: each year the federal budget is in deficit, the federal government debt grows. If the debt grows too large, like a consumer in debt, they have to cut back on spending or raise taxes.

B. Inflation and unemployment [888-889, 912-913]

1. Types of inflation [674, 716]

a) Demand-pull inflation: caused by an increase in aggregate demand.

b) Cost-push inflation: caused by a significant increase in the price of an input with economy-wide importance.

2. The Phillips curve [974-976]: short run [979-981] versus long run [981-982]: On the y-axis is inflation rate and on the x-axis is unemployment rate. The Phillips curve in the short-run is downward sloping while the long-run Phillips curve is vertical.

3. Role of expectations including inflationary expectations [984-985]: where the long-run Phillips curve and the short-run Phillips curve meet is at the expected inflation rate.

VI. Economic Growth and Productivity (5-10%)

A. Investment in human capital [735]: more knowledge and skills in workers is a positive technological change so aggregate supply shifts to the right.

B. Investment in physical capital [735]: better machinery and equipment is a positive technological change so aggregate supply shifts to the right.

C. Research and development, and technological progress [735]: three sources of technological change – (1) better machinery and equipment, (2) increases in human capital, and (3) better means of organizing and managing production.

D. Growth policy [754-756]: U.S. government tries to continuously increase real GDP output.

E. Side note: simple graph for showing positive technological change is having on the y-axis is real GDP per hour worked and on the x-axis is capital per hour worked. Graph is like the upper half of a sideways parabola with the origin at (0,0) and a positive technological change is a shift up.

VII. Open Economy: International Trade and Finance (10-15%)

A. Balance of payments accounts [1006]: the balance of payments is a record a country's trade with other countries in goods, services, and assets. The three accounts are (1) current account, (2) financial account, and (3) capital account.

1. Balance of trade [1006]: difference between the value of the goods a country exports and the value of goods a country imports. Part of the current account.

2. Current account [1006]: part of the balance of payments that records a country's net exports, net investment income, and net transfers.

3. Financial account [1006]: part of the balance of payments that records purchases of assets a country has made abroad and foreign purchases of assets in the country.

4. Capital account [1009]: part of the balance of payments that records relatively minor transactions, such as migrants' transfers, and sales and purchases of nonproduced, nonfinancial assets.

B. Foreign exchange market [1010-1013]: nominal exchange rate is the value of one country's currency in terms of another country's currency.

1. Demand for and supply of foreign exchange [1014-1016]: Determinants – (1) changes in the demand for U.S.-produced goods and services and changes in the demand for foreign-produced goods and service, (2) changes in the desire to invest in the U.S. and changes in the desire to invest in foreign countries, and (3) changes in the expectations of currency traders about the likely future value of the dollar and the likely future value of foreign currencies.

2. Exchange rate determination [1017]:

Real exchange rate = Nominal exchange rate \times (domestic price level/foreign price level)

3. Currency appreciation and depreciation and their effect on a country's net exports [1014]: if currency appreciates then a country's net exports will decrease and if the currency depreciates then a country's net exports will increase.

C. Net exports and capital flows [1007, 1018]: when net exports are negative there will be a net capital inflow. When net exports are positive there will be a net capital outflow.

1. How they affect financial and goods markets [1008-1009]:

D. International exchange rates/exchange rate systems [1036]: floating currency – the outcome of a country allowing its currency's exchange rate to be determined by demand and supply. Managed float exchange rate system – current exchange rate system, under which the value of most currencies is determined by demand and supply, with occasional government intervention. Fixed exchange rate system – system under which countries agree to keep the exchange rates among their currencies fixed.

E. Effects of trade restrictions [1040]: when a government imposes tariffs (tax on imports) or quotas (limit on the quantity of an import) then the price of those products will go up.