

Workshop 7

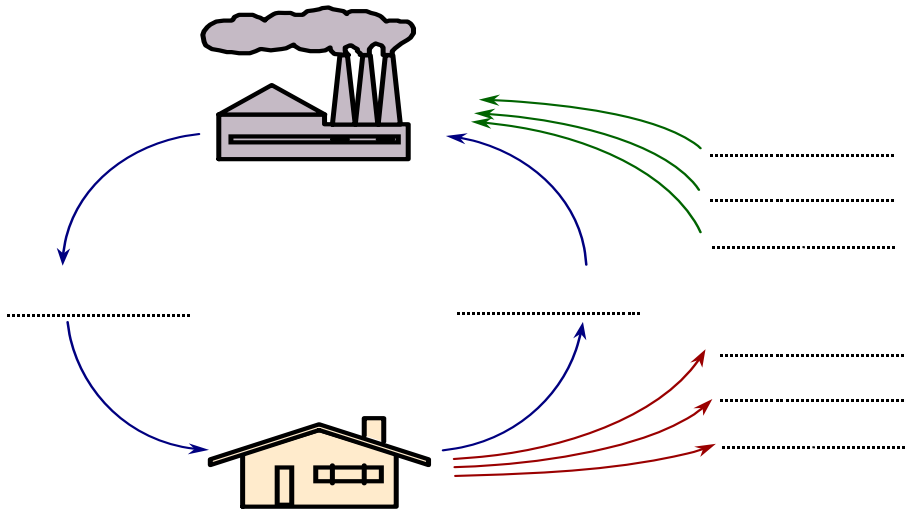
The National Economy

1. Position each of the following eight terms in the US's circular flow of income diagram below:
- Consumption (of domestically produced goods and services); Net saving; Net taxation; Government expenditure; Factor payments (national income); Expenditure on imports; Investment; Expenditure on exports.

Economists use specific letters to label each of these terms. The letters used are:

S, G, X, M, I, C_d, T, Y

Attach the correct letter to each of the terms you have written on the diagram.



2. Which of the following are changes in injections into, and which are changes in withdrawals from the US's circular flow of income? In each case, identify whether the change is an increase or a decrease. In each case, assume that this is the only change. (Cross-out wrong words.)
- (a) A council funds the building of new libraries. ... *Withdrawal/Injection* *Increase/Decrease*
 - (b) The government raises tax-free thresholds. *Withdrawal/Injection* *Increase/Decrease*
 - (c) The government reduces child benefit. *Withdrawal/Injection* *Increase/Decrease*
 - (d) Fewer tourists visit the US..... *Withdrawal/Injection* *Increase/Decrease*
 - (e) Firms, anticipating a rise in consumer demand, borrow more money in order to build up their stocks. *Withdrawal/Injection* *Increase/Decrease*
 - (f) Consumers demand more goods that are domestically produced (but total consumption does not change). *Withdrawal/Injection* *Increase/Decrease*
 - (g) People invest more money in banks and building societies. *Withdrawal/Injection* *Increase/Decrease*

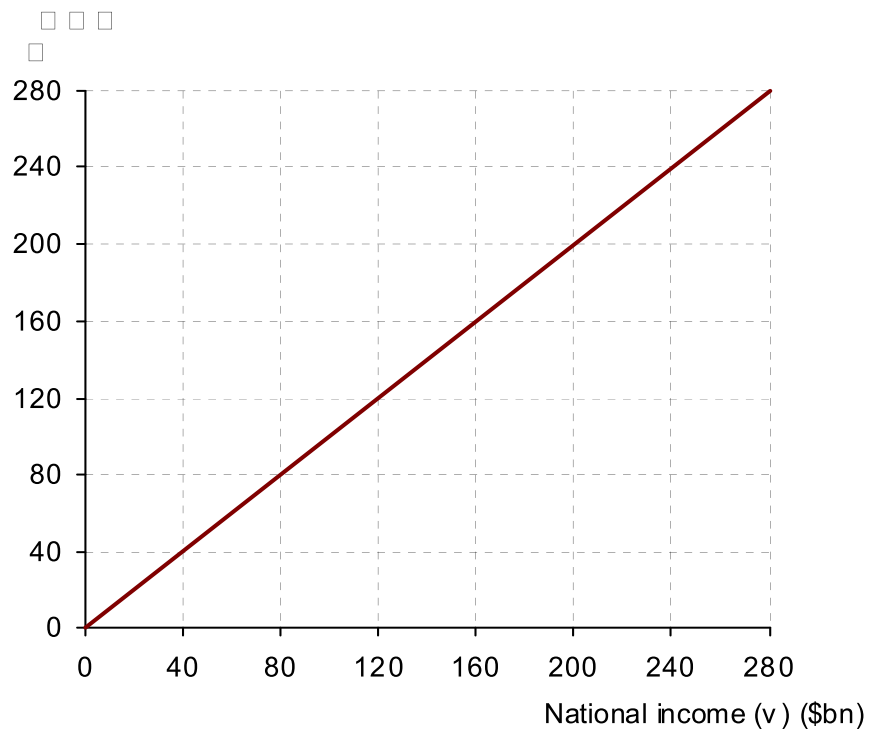
3. What will happen to the level of the US's national income if the following changes occur? (In each case assume other things remain unchanged.)
- (a) Firms are encouraged by lower interest rates to build new factories.
Rise / Fall / Impossible to tell without more information
 - (b) Consumers abroad are deterred by a high price for the dollar from buying imports from the US.
Rise / Fall / Impossible to tell without more information
 - (c) Both taxation and government expenditure are reduced.
Rise / Fall / Impossible to tell without more information
 - (d) People decide to save a larger proportion of their income.
Rise / Fall / Impossible to tell without more information
 - (e) Our trading partners overseas begin to recover from recession.
Rise / Fall / Impossible to tell without more information
4. What would be the effect of each of the following events on actual and potential economic growth? (Assume no other changes take place.)
- (a) A reduction in the level of investment.
Actual growth: *rise / fall / no effect*
Potential growth: *rise / fall / no effect*
 - (b) People save a larger proportion of their income.
Actual growth: *rise / fall / no effect*
Potential growth: *rise / fall / no effect*
 - (c) A reduction in the working week.
Actual growth: *rise / fall / no effect*
Potential growth: *rise / fall / no effect*
 - (d) Increased expenditure on education and training.
Actual growth: *rise / fall / no effect*
Potential growth: *rise / fall / no effect*
 - (e) The discovery of new more efficient techniques which could benefit industry generally
Actual growth: *rise / fall / no effect*
Potential growth: *rise / fall / no effect*
 - (f) A reduction in interest rates.
Actual growth: *rise / fall / no effect*
Potential growth: *rise / fall / no effect*

5. (a) Assuming that injections are constant at all levels of national income at \$20 billion, complete the following table.

Income (v) (\$bn)	40	80	120	160	200	240	280
Consumption (c) (\$bn)	40	70	100	130	160	190	220
Injections (g) (\$bn)							
Withdrawals (t) (\$bn)							
Aggregate expenditure (b) (\$bn)							

- (b) Calculate the marginal propensity to consume domestically produced goods (mpc_d).

- (c) On the diagram below, label the line shown and then plot Cd , J and aggregate expenditure (E) against national income (Y).



- (d) What will be the equilibrium level of income (where $E = Y$)?
- (e) What are withdrawals and injections at this level of income? W J
- (f) Plot the withdrawals line on the diagram.

You should now be able to see that there are two ways of finding the equilibrium level of national income.

(Q5. cont.)

Still referring to the table and diagram on the previous page, assume now that injections increase by \$20 billion at all levels of national income.

(g) Plot the new injections line on the diagram.

(h) Plot the new total expenditure (E) line on the diagram.

(i) Mark the new equilibrium level of national income.

(j) How much has national income increased?

(k) How many times bigger is the rise in national income than the rise in injections?

6. (a) If the multiplier is 5 and the government decides to increase its expenditure by \$10m, by how much will national income increase before equilibrium is restored?
.....

(b) Explain *why* an increase in injections will lead to a multiplied rise in national income.

.....
.....
.....

(c) The formula for the multiplier is $1/(1-mpc_d)$ or $1/mpw$ (where the mpc_d is the marginal propensity to consume domestic goods and services (DC_d/DY) and the mpw is the marginal propensity to withdraw (DW/DY).

Referring back to question 5 above, what are the values of the mpw and the mpc_d ?

$mpw =$ $mpc_d =$

(d) In question 5, what is the value of the multiplier?

(e) Assuming now that the multiplier is 5 (as in part (a) of this question), what are the values of the mpw and the mpc_d ?

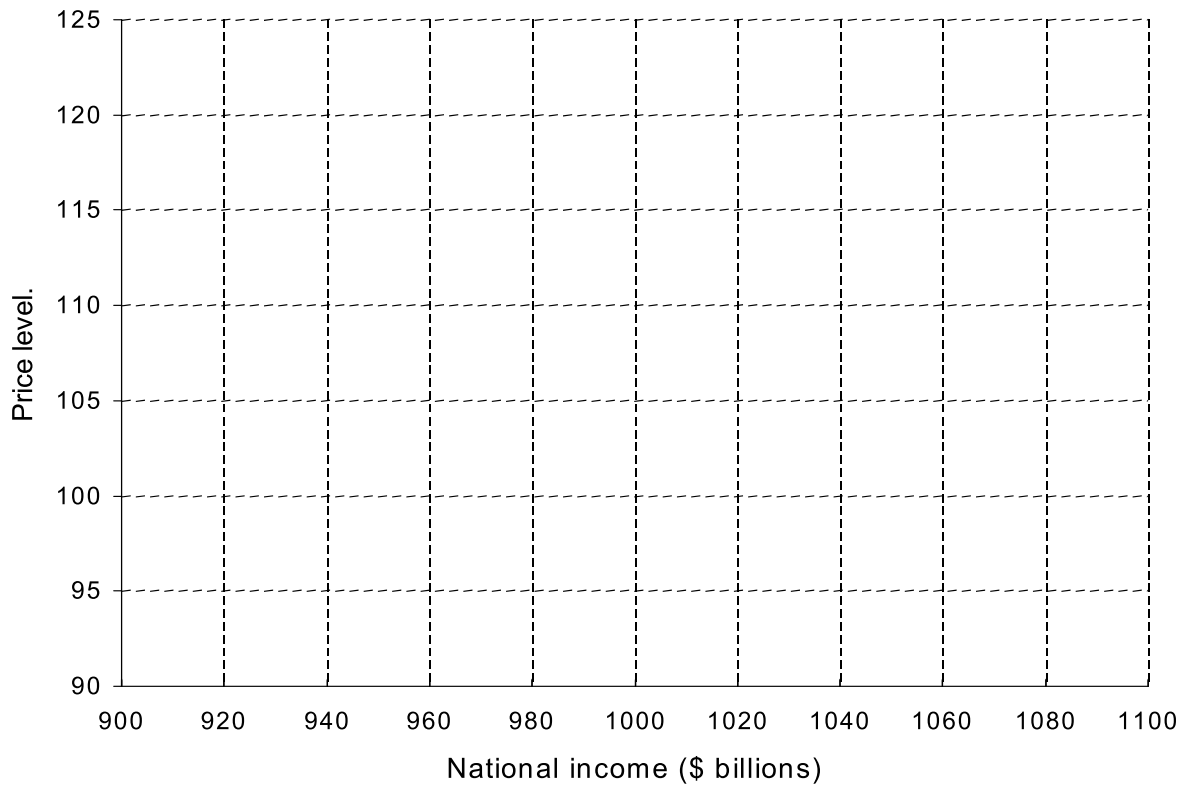
$mpw =$

$mpc_d =$

7. The following table gives the aggregate demand and aggregate supply schedules in February 2008 for a particular country. (Ignore the AD_2 and AS_2 columns until question (d) below and AD_3 until question (h).)

Price level	Aggregate demand (\$ billions)	<input type="checkbox"/> 2	<input type="checkbox"/> 3	Aggregate supply (\$ billions)	<input type="checkbox"/> 2
95	1000	_____	_____	950	_____
100	970	_____	_____	970	_____
105	950	_____	_____	100	_____
110	930	_____	_____	1030	_____
115	915	_____	_____	1060	_____
120	900	_____	_____	1090	_____

- (a) Draw the aggregate demand and aggregate supply curves on the following diagram, labelling them AD_1 and AS_1 .



- (b) What is the equilibrium level of national income?
- (c) What is the equilibrium price level?

(Q7. cont.)

Assume that over the next 12 months aggregate demand rises by \$70 billion at all price levels and that aggregate supply rises by \$20 billion at all price levels.

(d) Enter the new figures for aggregate demand and aggregate supply on the table in the columns AD_2 and AS_2 .

(e) Draw the new aggregate demand and supply curves on the diagram, labelling them AD_2 and AS_2 .

(f) What is the new equilibrium level of national income in February 2009?.....

(g) What is the rate of inflation in February 2009?

Assume that over the following 12 months aggregate demand rises by a further \$50 billion at all price levels but that there is no increase in aggregate supply beyond AS_2 .

(h) Enter the new figures for aggregate demand on the table in the column AD_3 .

(i) Draw the new aggregate demand curve on the diagram, labelling it AD_3 .

(j) What is the new equilibrium level of national income in February 2010?.....