7
KEYNESIAN BALANCE OF PAYMENTS THEORIES

7.1 The Absorption Model

The original Keynesian balance of payments theory was the absorption model developed by Alexander, of the IMF, in the early 1950s. As in all Keynesian models, the balance of payments, on current account, is analysed as a macroeconomic phenomenon in the goods market. The (current account) balance of payments will necessarily equal the difference between aggregate domestic output and aggregate domestic expenditure (with a surplus if output is larger and vice versa). This conclusion follows from a manipulation of the basic national income identity, which is that there are three ways of measuring national income: income, output (O) and expenditure (E), of which only the latter two are relevant here.

$$O=E \tag{7.1}$$

The expenditure is defined as the sum of consumers' expenditure (C), investment (I), government expenditure (G) and exports (X) less imports (M).

$$E=C+I+G+X-M \tag{7.2}$$

(7.2) can be substituted into (7.1) to give

$$O=C+I+G+X-M \tag{7.3}$$

(7.3) can be arranged as

$$X-M=O-(C+I+G) \tag{7.4}$$

This piece of manipulation is the absorption approach. Alexander called (C+I+G) absorption rather than the more usual 'total domestic expenditure'. The implication of the approach is simple. One should not seek to explain the balance of payments directly, rather one should look at the determinants of output and total domestic expenditure and the balance of payments will be automatically defined as a residual. Competitiveness, the exchange rate and any other factor will matter only in so far as it influences either TDE or output. These effects may be substantial or small but, critically, they may be apparently perverse. A devaluation will increase expenditure, and may even reduce output (or output may already be at a maximum). In this case, a devaluation would worsen the balance of payments, irrespective of the size of elasticities.

It is important to realise how neatly the absorption model complements the elasticities approach. The traditional approach ignored supply side effects (6.5.3) and income effects (6.5.4). The absorption approach looks only at these two effects. The two approaches can be

Copyright © 2010. Taylor & Francis Group. All rights reserved.

Gowland, David. International Economics (Routledge Revivals), Taylor & Francis Group, 2010. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/inflibnet-ebooks/detail.action?docID=592981.
Created from inflibnet-ebooks on 2020-05-05 01:02:03.

combined. It is also interesting to note that two of the basic implications of this approach, but not the conclusion, are included in the most elementary textbooks. It is common to see statements like

1. deflation can improve the balance of payments.
2. devaluation can improve the balance of payments but only if it is 'made to work' by deflation. (Strictly, this assumes that output is fixed.)

However, the obvious conclusion is not drawn.

3. the balance of payments can only be improved if there is deflation. ('Recognition of this point may be regarded as the fundamental contribution of the absorption approach though none of the authors cited seems to have appreciated all its implications' (Johnson, in Frenkel and Johnson (1970), p. 59).)

These three statements, and the many qualifications to them, are all drawn from the absorption model, as will be demonstrated. (1) is very simple. Deflation lowers TDE so it will improve the balance of payments. However, it will reduce output as well, so the improvement in the balance of payments will be less than the reduction in expenditure. As the absorption approach is the open economy version of the Keynesian model, this is usually illustrated by an analysis in which output is demand-determined. In this case output is X+(1–m) (C+I+G), where m is the marginal propensity to import, i.e. output is that which is necessary to satisfy export demand plus the part of home demand not spent on imports. In this case the fall in output is (1–m) times the fall in expenditure; exports are taken to be exogenous. This fall in output is obviously less than the fall in expenditure (unless m is negative). The improvement in the balance of payments is m times (the fall in expenditure).

In effect, a reduction in (C+I+G) automatically reduces imports and so improves the balance of payments. This conclusion is perhaps obvious and the analysis simplistic, but like so many other obvious facts, it took economists to point it out! (In such models, it is necessary for m to be less than 1 otherwise the model is unstable; this is not demonstrated as the model is only illustrative and it is difficult to see how m could exceed 1, so long as other influences are properly specified.)

The next statements, (2) and (3) above, are very easy to demonstrate. *So long as output is fixed,* an improvement in the balance of payments must be accompanied by a reduction in expenditure. Even if output can rise, it is necessary to ensure that output rises by more than expenditure. In both cases, any impact of a devaluation will be negated by income effects—as in the example in Chapter 6—unless expenditure is controlled by deflationary policies. Absorption analysis can be used to demonstrate this formally and to put into the appropriate framework statements made at a more elementary level. This is not its sole merit as it is a very flexible framework into which almost any analysis can be put. One of the most common and useful involves the concepts of 'expenditure switching' and 'expenditure reducing'. These would be better named 'output switching' and 'output reducing'. The balance of payments can be improved by either

1. a reduction in expenditure (absorption), without a fall in output (expenditure switching);

Copyright © 2010. Taylor & Francis Group. All rights reserved.

Gowland, David. International Economics (Routledge Revivals), Taylor & Francis Group, 2010. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/inflibnet-ebooks/detail.action?docID=592981.
Created from inflibnet-ebooks on 2020-05-05 01:02:03.

2. a reduction in expenditure accompanied by a fall, albeit smaller, in output (expenditure reducing).

Both of these possibilities follow from the basic equation (7.4) above, as do alternatives involving a *higher* level of output, which are usually eliminated from the analysis as impracticable. Policies are usually classified into these two categories by use of analysis based on the elasticities approach. Depreciation, for instance, is classified as expenditure switching. Broadly, a policy is expenditure switching if it would improve the balance of payments if there were no income effects. This, of course, is precisely the question answered by the elasticities model.

In brief then, the absorption approach focuses on the key factors omitted from the traditional approach and provides a general framework of analysis. This can be extended as in the next section, the Mundell model. Precise policy conclusions usually require additional assumptions, as in the fascinating special case of the New Cambridge school (7.4 below). The greatest single virtue of the absorption approach, however, stems from its very existence; the idea that the balance of payments is a macroeconomic variable.

7.2 The Mundell Model

Robert Mundell has been one of the great pioneers of international monetary economics over the last 25 years. The model which bears his name is only one of his many contributions and certainly he no longer thinks it an accurate description of reality, if he ever did. Nevertheless, the Mundell model is important for a number of reasons. One is that UK governments according to its logic from 1951 to 1967. Indeed, one of the reasons for its development was to explore the implications of their actions and those of many other governments who pursued similar policies. Another, more important reason is that it introduces the key concepts of external and internal balance which are central to all advanced Keynesian macroeconomic theory. Moreover, it incorporates the capital account into Keynesian analysis. Finally, the model serves as an introduction to the formal theory of policy making.

The modern theory of economic policy was largely invented by Tinbergen. He showed that a government could achieve as many *targets* as it had instruments available to do it. His whole approach was based on these concepts: that a government manipulates instruments, such as tax rates, so as to achieve targets, such as the level of employment. No government can achieve more targets than it has instruments; this follows from elementary algebra. It is basically the same as the proposition that one can solve n simultaneous equations for n variables. Rather controversially, Tinbergen and his followers went on to argue for *assigning* one instrument to each target. Unfortunately this rule may lead to extreme policies. For example, an assignment rule might be that the budget deficit is increased whenever unemployment is above target and interest rates whenever inflation is above target. As a higher budget deficit would lead to more inflation and higher interest rates to more unemployment, both the budget deficit and interest rates would be raised in order to offset the effect of the other. Tinbergians would argue that so long as the targets were achieved the level of the instruments would not matter, but few others agree. The framework can be extended to incorporate either a cost of changing an instrument or even the notion

Copyright © 2010. Taylor & Francis Group. All rights reserved.

Gowland, David. International Economics (Routledge Revivals), Taylor & Francis Group, 2010. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/inflibnet-ebooks/detail.action?docID=592981.
Created from inflibnet-ebooks on 2020-05-05 01:02:03.

that a variable can be both a target and an instrument. Nevertheless assignment remains controversial. The relevance of this debate to the present purpose is that the Mundell model implied an optimal assignment and, more important, was drawn up within the Tinbergian target-instrument framework. Many of the more sophisticated models which have followed have continued in this tradition.

Mundell suggested that a government has two instruments: the rate of interest (r) and the level of government spending (G) (or budget deficit). It has two targets: an optimal level of income, the internal target, and a balance of payments target, the external target.

The internal target might be full employment or more generally the level of nominal income which produces the least undesirable combination of unemployment and inflation. Within any conventional macroeconomic framework (e.g. IS-LM) this can be achieved by a large number of combinations of r and G. These combinations are plotted as BB in Figure 7.1, which has interest rates on one axis and G on the other. As, *ceteris paribus,* higher interest rates would reduce income and so require a higher level of G to offset this, BB is upward sloping. Each point along BB represents a combination of policies which will achieve the optimal target level of income. BB is called the internal balance line. As one moves to the right along BB, the increase in G is just enough to offset the increase in r and so keep income at its optimal level. All points to the right of BB imply that a policy has been chosen such that either interest rates are lower or government spending higher than is needed to generate the target level of income. Hence income will be above its target level so there will be excess inflation. Similarly all points to the left of BB imply excess unemployment.

Mundell's model of the balance of payments was in two parts:

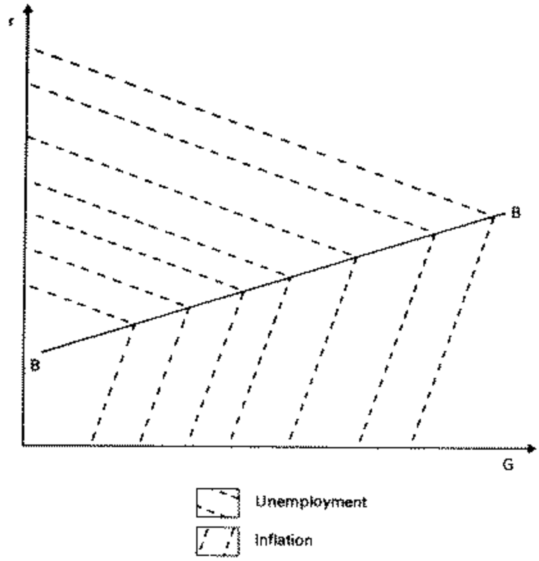
1. A model of current account. A higher level of G, or a lower level of r, worsens the current balance because the higher level of income means that more is imported, as in 7.1 above.
2. A model of the capital account. Capital flows are assumed to be interest-sensitive. Thus a higher rate of interest will produce capital inflows.

Governments are assumed to be interested in the sum of these two, a balance of payments definition akin to the balance for official settlements. A higher rate of interest will improve both the current and the capital accounts while a higher level of government spending will worsen the current account. Accordingly, various combinations of r and G will generate the target balance of payments which may be an exact balance or a planned surplus or deficit. These are plotted as FF in Figure 7.2; FF is called the external balance line. Like the internal balance line this is upward sloping—as one moves rightwards along FF, the adverse effect of a higher G is offset by a higher r. A combination of policies represented by a point to the left of FF will produce an excess surplus—since either interest rates are higher or government spending is lower than is necessary for the target (or both). Similarly, any point to the right of FF represents a policy combination which will produce a deficit.

Copyright © 2010. Taylor & Francis Group. All rights reserved.

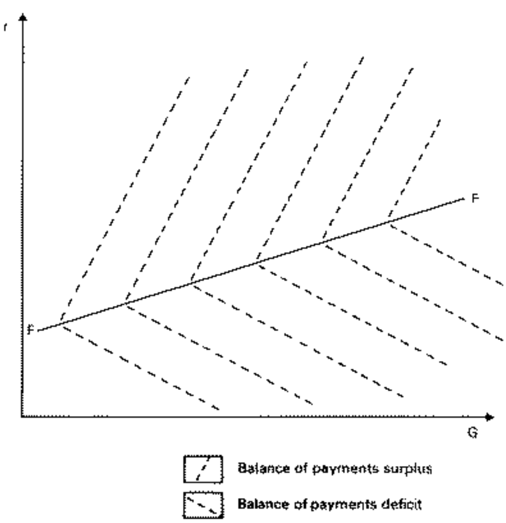
Gowland, David. International Economics (Routledge Revivals), Taylor & Francis Group, 2010. ProQuest Ebook Central,
http://ebookcentral.proquest.com/lib/inflibnet-ebooks/detail.action?docID=592981.
Created from inflibnet-ebooks on 2020-05-05 01:02:03.

Figure 7.1: Internal Balance



It is necessary to combine Figures 7.1 and 7.2, but to do this one needs to know their relative slopes. FF is the shallower of the two; this follows because interest rates influence balance of payments in two distinct ways. The resulting diagram—Figure 7.3—shows the outcome of policy options for both external and internal balance; this diagram gram is often called a Swan diagram after its inventor. The shaded area represents policies which produce an excess surplus and (excess) inflation, etc.

Figure 7.2: External Balance



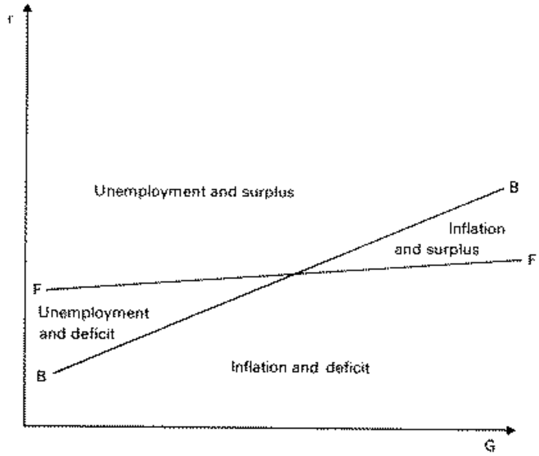
Copyright © 2010. Taylor & Francis Group. All rights reserved.

Gowland, David. International Economics (Routledge Revivals), Taylor & Francis Group, 2010. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/inflibnet-ebooks/detail.action?docID=592981.
Created from inflibnet-ebooks on 2020-05-05 01:02:03.

The aim of the Tinbergian approach is to produce crude rules that can be applied in the uncertain real world. The assignment which will work, *so long as BB is steeper than FF,* is:

1. assign G to the internal balance, i.e. increase G if there is excess unemployment and reduce it if there is excess inflation;
2. assign r to the external balance, i.e. reduce r when there is an (excess) surplus and increase it when there is an (excess) deficit.

Figure 7.3: Swan Diagram



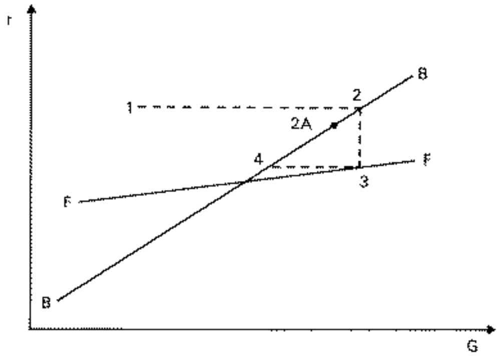
An example of the working of this rule is shown in Figure 7.4. It will also be assumed that the government gives priority to the internal balance. Say the economy starts at (1) with unemployment and a surplus. The goverment increases G to eliminate unemployment and so (2) is reached where unemployment has been eliminated. The government now reduces r to eliminate the surplus; (3) will therefore be reached. At this point, however, there will be inflation, so G has to be reduced. This process continues but the path is convergent to the optimum. Of course the government could use both tools simultaneously, in which case the path is less tortuous, for example (2A) is reached not (2).

As mentioned above, this policy was used in various countries in the 1950s and 1960s, especially the UK, so it is worth mentioning the defects of the model. The first is that governments are not—and cannot be—indifferent to the capital and current accounts. A £300 million current deficit and a £300 million capital inflow are not the same as a current account balance. If for no other reason the continual rise in overseas debts—since capital inflows are, after all, borrowing—will mean that interest payments mount and so a new deficit is created. More important, foreign wealth holders will not be prepared to go on lending in such circumstances; they may even withdraw their original loans. Finally, there is a theoretical problem—it should be the *change* in interest rates which induces the inflow not the level. The argument for this postulates stock adjustments by foreign wealth holders. In less high-falutin' language, foreign companies and banks look at interest rates and decide how much to put in each country. If interest rates were, say, 10 per cent in the UK, they

Copyright © 2010. Taylor & Francis Group. All rights reserved.

Gowland, David. International Economics (Routledge Revivals), Taylor & Francis Group, 2010. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/inflibnet-ebooks/detail.action?docID=592981.
Created from inflibnet-ebooks on 2020-05-05 01:02:03.

Figure 7.4: Convergence to Equilibrium



might decide their optimal holdings were £15,000 million. If rates are increased to 11 per cent, this might rise to £16,000 million, so there would be an inflow of £1000 million. Unless rates rise again, there would be no further inflow as the foreign holders are already in equilibrium. The UK government learned all this the hard way, by bitter experience in 1965–7.

Besides its historic interest, however, the Mundell model has proved fruitful as a base for more advanced work which has used these key concepts: *external balance; internal balance; assignment*. Whether for good or 111 is a moot point. One such development is analysed in the next section: an open economy IS-LM model.

7.3 An Open Economy IS-LM Model

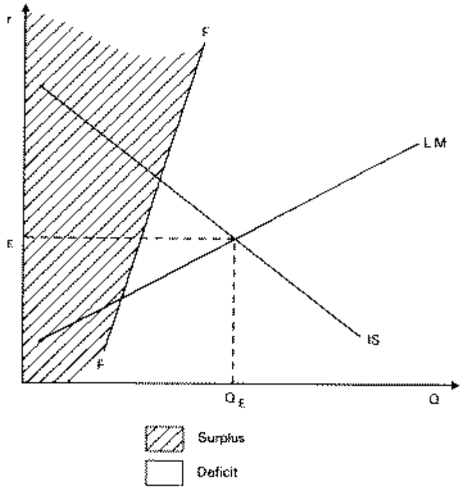
The IS-LM model is usually presented as either a closed economy model or as a pseudo-open economy version. In the latter case 'sterilisation' is assumed, i.e. balance of payments surpluses and deficits are not allowed to influence the money stock, as well as the obvious addition of exports and imports to the withdrawals and injections of the IS curve. As always one can have real income, prices or nominal income on the horizontal axis, in the first two cases price and real income respectively are held constant. It is simplest if prices are held constant, so this will be assumed here.

The first addition to the model is an explicit consideration of the balance of payments. The easiest way to do this is to add an external balance line (FF) to Figure 7.5 representing levels of income and interest rates which generate a balance of payments equilibrium. If one is interested only in the current account it is possible to argue that FF should be vertical—with exogenous exports and fixed price, imports should depend only on income, hence only one level of income will generate equilibrium. Alternatively it could slope backwards—if interest is paid on foreign deposits a higher rate of interest causes a deficit. Usually, however, a Mundell model upward sloping curve for the overall balance is used. Although real income, not government spending, is on the horizontal axis, the same arguments apply, as G influences the balance of payments through Y. Any point to the right of the FF curve represents a deficit (higher income and so more imports) and any point to the left a surplus. Obviously FF could be to the left or right of the equilibrium level of Y and r, Y_E, r_E, i.e.

Copyright © 2010. Taylor & Francis Group. All rights reserved.

Gowland, David. International Economics (Routledge Revivals), Taylor & Francis Group, 2010. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/inflibnet-ebooks/detail.action?docID=592981.
Created from inflibnet-ebooks on 2020-05-05 01:02:03.

Figure 7.5: An Open Economy IS-LM Model



there could be either a surplus or a deficit when the goods and the money markets are otherwise in equilibrium. In Figure 7.5 the initial deficit case is assumed—though as the argument is symmetric the reader can easily work through the alternative of an initial surplus.

The initial deficit reduces the money supply so the LM curve shifts to the left (Figure 7.6). A deficit reduces the money supply in a variety of ways. The simplest are

1. if the government supplies foreign currency to residents to purchase imports, this operates exactly like an open market operation;
2. the ownership of bank deposits may be effectively transferred to foreigners to pay for imports, e.g. if I write a cheque to pay for French wine and the French supplier keeps a deposit with a UK bank. (Foreign-owned deposits are excluded from UK definitions of money.)

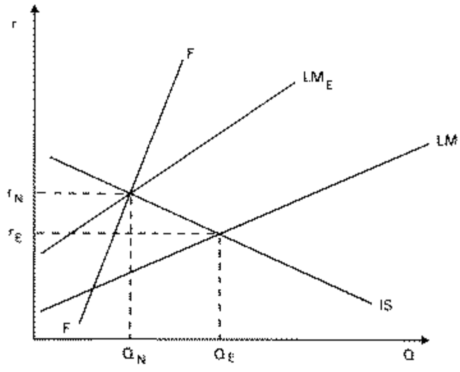
The economy will continue with a deficit and a falling money supply until the LM curve has shifted to LM_E at which point, in equilibrium, the level of income has fallen to Y_N, interest rates having risen to r_N and the balance of payments balances.

Alternatively, the government may seek to shift the FF curve, as in Figure 7.7, so that income does not fall. In principle this can be achieved by a devaluation (so long as the modified Marshall-Lerner condition is satisfied). In practice there are problems with the use of the exchange rate, discussed below in Chapters 9 and 10, but in the simple fixed-price case no such problems exist. A depreciation will improve the balance of payments at each level of income. Hence it increases the level of income consistent with the balance of payments equilibrium for a given interest rate, i.e. FF shifts rightwards. The authorities have three instruments in this model: money supply, government spending and exchange rate. Thus they can achieve three targets; income, interest rates and balance of payments. Suitable manipulation will make the realisation of any economic goals possible within this model. The real world example is not so amenable, as will be discussed in Chapter 10.

Copyright © 2010. Taylor & Francis Group. All rights reserved.

Gowland, David. International Economics (Routledge Revivals), Taylor & Francis Group, 2010. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/inflibnet-ebooks/detail.action?docID=592981.
Created from inflibnet-ebooks on 2020-05-05 01:02:03.

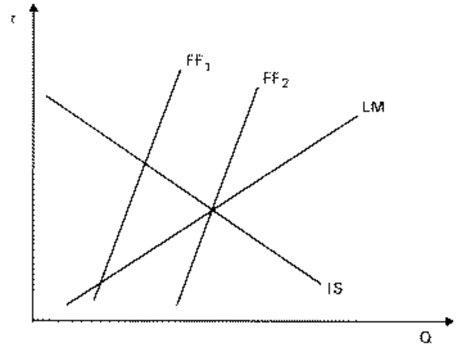
Figure 7.6: The LM Curve Shifts



7.4 The New Cambridge School

The New Cambridge School have been exceptionally influential in the UK in that they have almost single-handedly been responsible for the revival of the *macro*-economic case for import controls as a major feature of debates about economic policy. They have to a large extent formulated the economic policies of the 'Tribune' group of the Labour party for almost a decade. The Labour Party's current (1982) official policy. the 'Alternative Economic Strategy', is heavily influenced by their ideas. In fact the armoury of the New Cambridge economists includes weapons of analysis besides their balance of payments theory. However, none is as well known or as elegant in its derivation of apparent paradoxes from a simple model. Their model seeks to explain the overseas sector's financial surplus. This is the current account plus any purchases of real assets. If a country has a balance of payments deficit on current account of £300 million but non-residents had purchased £100 million of land, antiques (and any other real goods *not* currently produced) from this country, the overseas sector's financial surplus (and the relevant balance of payments deficit) would be £200 million. Transactions in existing real assets are small relative to exports so they will hereafter be ignored, but it is worth noting that X, M, S, T, G and I all have a very slightly different meaning from the standard definition.

Figure 7.7: Devaluation



Copyright © 2010. Taylor & Francis Group. All rights reserved.

Gowland, David. International Economics (Routledge Revivals), Taylor & Francis Group, 2010. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/inflibnet-ebooks/detail.action?docID=592981.
Created from inflibnet-ebooks on 2020-05-05 01:02:03.

As the New Cambridge model is a special case of the absorption approach, it also starts with the national income identity but in this case it is more convenient to use the injections equals withdrawals formulation (in nominal terms):

$$S+T+M=G+X+I$$

Alternatively, a diagrammatic formulation can be used (see appendix). This can be rewritten as

$$(S-I)+(T-G)+(M-X)=0$$

or as

$$(X-M)=(S-I)+(T-G) \quad (7.5)$$

The New Cambridge School turns this into a theory of the balance of payments by showing that (S–I) and (T–G) are both determined independently of (X–M) and of each other. Indeed, both are exogenous to this model:

$$(S-I) = k \quad (7.6)$$

The original version of the model said that (S–I) was a fixed amount, that is the private sector had a fixed *net* level of saving. This would arise in an elementary model if the MPC=1 and investment were exogenous. In fact, by citing econometric evidence, New Cambridge argued for a marginal propensity to *spend* of one, i.e. if incomes rise by £1 then consumers' expenditure and investment together would rise by £1, e.g. with a MPC of 0.7 and a marginal propensity to invest of 0.3. Later the model was modified to permit credit policy to have an exogenous effect on (S–I). Later still the model was further relaxed but the original assumption still captures the spirit of the model.

$$(T-G) = \bar{F} \quad (7.7)$$

The economy can be analysed as if the budget deficit $(\bar{F})$, strictly the public sector financial deficit, were exogenous and fixed by the government. This follows from the 'par tax' system. The details do not matter, save to say that both (7.6) and (7.7) are highly controversial. However, if these are accepted, then New Cambridge results follow automatically.

If (7.6) and (7.7) are substituted into (7.4) the crucial result is

$$(M-X) = \bar{F} - k \quad (7.8)$$

The overseas sector's financial surplus, the balance of payments deficit, is equal to the budget deficit less the constant net saving k. In other words, as F is a policy weapon, by manipulation of F the government can achieve any balance of payments deficit or surplus it wishes. More-over, this is the only way it, or anybody or anything else, can influence the balance of payments. Hence manipulation of F is both necessary and sufficient to determine (M–X).

Keynesian models basically find two formulae for a variable and then determine the equilibrium level of income (Y_E) as the only value which satisfies both, e.g. to take the simplest case

Copyright © 2010. Taylor & Francis Group. All rights reserved.

Gowland, David. International Economics (Routledge Revivals), Taylor & Francis Group, 2010. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/inflibnet-ebooks/detail.action?docID=592981.
Created from inflibnet-ebooks on 2020-05-05 01:02:03.

$$S=I \text{ and } S=0.1Y$$
$$\text{If } I=100 \therefore Y_E=1000$$

The equilibrium level of income is calculated as the only possible level at which saving can equal the exogenous level of investment and 0.1Y simultaneously. The New Cambridge model similarly determines income but uses two formulae for (M–X).

Exports are exogenous to the model, being determined by world trade, relative prices and similar factors. Thus they will be written as $\bar{X}$. New Cambridge have an import function with a unitary income elasticity and a zero price elasticity. Neither are very crucial to the model, although the first simplifies matters as the average propensity to import is equal to the marginal propensity, m. If the price elasticity were unity then the value of imports (M) would be a constant proportion (m) of Y, i.e. M=mY. As the New Cambridge estimate is O however, this means that the *volume of imports* (Q_m) is a constant proportion of the volume of output (Q), i.e.

$$Q_m=mQ$$

To get the value of imports it is necessary to multiply both sides by the price of imports, P_m. Thus

$$M=Q_mP_m=mQP_m \qquad (7.9)$$

It is more convenient to replace Q by $(\frac{Y}{P})$; as Y (nominal income) is equal to Q.P (the price level), hence $Q=\frac{Y}{P}$. Hence (7.9) becomes

$$M=mY\frac{P_m}{P}$$

$(\frac{P_m}{P}$ is the terms of trade and illustrates the impact of changing relative prices on the value of imports.) So,

$$M-X=mY\frac{P_m}{P}-\bar{X} \qquad (7.10)$$

(7.10) can be combined with (7.8) to give

$$F-k=mY\frac{P_m}{P}-\bar{X}$$

After rearrangement, this gives the equation for the equilibrium level of income:

$$Y=\frac{F-k+\bar{X}}{m}\left(\frac{P}{P_m}\right) \qquad (7.11)$$

This strange-looking equation is in fact the 'multiplier equation' in an unfamiliar guise—the analogue of $\frac{\bar{I}}{MPS}$ in the elementary model. $(F-k+\bar{X})$ is (net) injections. 'm' is the

Copyright © 2010. Taylor & Francis Group. All rights reserved.

Gowland, David. International Economics (Routledge Revivals), Taylor & Francis Group, 2010. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/inflibnet-ebooks/detail.action?docID=592981.
Created from inflibnet-ebooks on 2020-05-05 01:02:03.

marginal propensity to with draw. If the import function can be influenced income will alter—but not the level of imports. This is the 'paradox of imports', similar in all respects to the 'paradox of thrift'. Returning to the example used above

$$S = 0.1Y \quad I = 100 \quad Y_E = 1000$$

If people save a higher fraction of their income, income falls but saving is unchanged, at 100, e.g. if the savings propensity doubled

$$S = 0.2Y \quad I = 100 \quad \therefore Y_E = 500$$

This is the traditional paradox of thrift.

Variations in the savings function could be used as a tool of economic policy to influence income. For example if the government could reduce saving to either

$$S = 0.05Y \text{ or } S = 0.1Y - 100$$

income would double to 2000 and saving remain at 100.

In an analogous fashion the New Cambridge analysis uses import controls to reduce the level of imports at each level of income. This will increase income but leave the actual total of imports unchanged.

Similarly, devaluation is advocated as a means of improving the balance of payments at each level of income, even though it will not improve the balance of payments since the improvement at each level of income is exactly offset by the imports generated by the higher level of income. The advocacy of the use of exchange rate or import controls to increase income has been a feature of Keynesian analysis since Keynes's *volte face* on the tariff question in 1931. Indeed, the 'foreign trade multiplier' is a standard analytical tool. The New Cambridge contribution is the 'paradox of imports' (and a passionate advocacy of import controls). New Cambridge analysis presents an apparently bizarre reversal of assignments—the *internal* weapon (the budget deficit) is used to determine the *external* target (balance of payments) and the *external* instrument (import controls) the *internal* target, the level of income (and so employment). This is because import controls influence income but not the balance of payments while the budget deficit influences both income and the balance of payments. By the application of comparative advantage, import controls are used to influence income and the budget deficit the balance of payments. (Just as a doctor who is an expert typist would employ a mediocre typist (with no medical expertise) to type his letters in the elementary textbook example.)

New Cambridge analysis is open to criticism on three counts:

1. the validity of the assumptions concerning (S–I) and (T–G);
2. the danger of retaliation—even though the *level* of imports is unchanged the composition is not, hence foreign governments might take action to reduce UK exports,
3. the long-term damage that protection could do to the UK economy.

Copyright © 2010. Taylor & Francis Group. All rights reserved.

Gowland, David. International Economics (Routledge Revivals), Taylor & Francis Group, 2010. ProQuest Ebook Central,
http://ebookcentral.proquest.com/lib/inflibnet-ebooks/detail.action?docID=592981.
Created from inflibnet-ebooks on 2020-05-05 01:02:03.

In addition, the forecasting record of the New Cambridge school is hotly debated. None of this matters very much for the present purpose. The New Cambridge school provide an interesting example of Keynesian balance of payments analysis and a coherent presentation of the macroeconomic case for import controls and devaluation.

Appendix: A Diagrammatic Presentation of the New Cambridge Model

It is possible to represent the basic results of the New Cambridge school in a number of different ways. An algebraic method was used in the text, p 101 above, and so a diagrammatic method is used here. There are several alternative diagrammatic presentations which can be produced by a modification of one or other of the basic macroeconomic diagrams such as the IS-LM model or the 'Samuelson cross' national income diagram. The method of showing the key results of this school used here is therefore not unique but has the virtue of simplicity. This representation combines the Samuelson cross method of determining rational income with the alternative injections and withdrawals version of the elementary Keynesian model. The basic model is shown in Figure 7.8 (a) of which the upper half of the diagram shows the determination of the equilibrium level of national income (Y_1) where (planned) output is equal to planned expenditure, i.e. where the expenditure function (C+I+G+X−M) intersects the 45 line. The lower half of the diagram shows the level of injections and withdrawals, the equilibrium level of income being where planned injections (X+I+G) equals planned withdrawals (S+M+T). It is, however, more convenient to modify this condition to M=X+I+G–S–T. Imports (M) are a function of income so this is shown by the upward sloping line (as the version of the New Cambridge school used here has the MPM=APM at all levels of income, this is a straight line through the origin). The composite (X+I+G–S–T) can be regarded as independent of income so this is horizontal. At the equilibrium level of income (Y_1) imports (M_1) will be equal to (I+G+X–S–T) as shown.

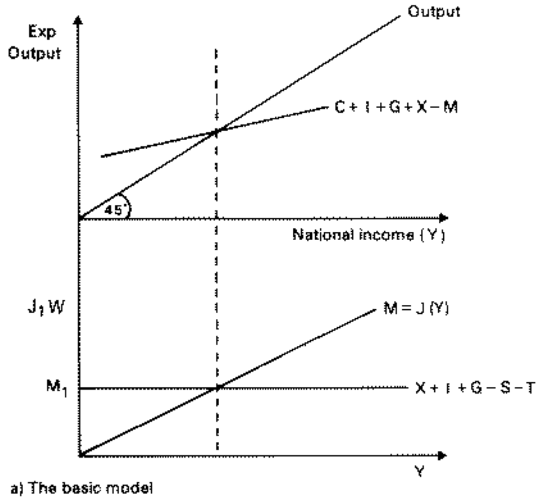
If government spending is increased, this acts as an injection into the system such that income rises. In the upper half of the diagram (Figure 7.8 (b) there is an upward parallel shift of the expenditure function by the amount of the increase in G (in this case Δ J) such that income rises from Y_1 to Y_2. The same result can be seen in the lower half. (X+G+I–S–T) shifts upwards by Δ J and at the new equilibrium level of income (Y_2) imports are $M_2 \cdot M_2 - M_1$ is necessarily the same as J, since otherwise the equilibrium condition would be violated. Hence imports have risen by exactly the same amount as G. As exports and taxation are unchanged, a rise in the budget deficit (G–T) causes an identical rise in the balance of payments deficit (M–X). The same diagram shows that an exogenous change in exports has no effect on the balance of payments. The rise in exports is also an increase in injections so a rise of Δ J in exports will cause income to rise from Y_1 to Y_2 and imports from M_1 to M_2. As Δ J is necessarily equal to (M_2–M_1), imports and exports rise by the same amount so the balance of payments is unchanged.

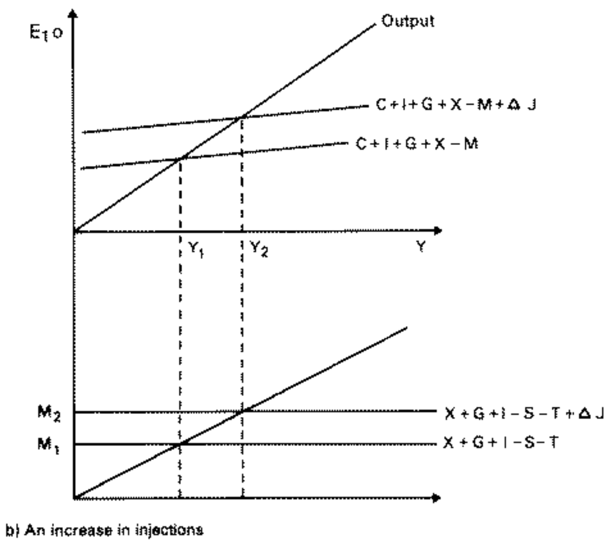
In the case of import controls, expenditure on domestically produced goods (C+I+G+X−M) is higher at each level of Y so the expenditure function shifts upwards (the nature of the shift depending on the form of the control; here both MPM and APM are lower but are still equal to each other). Income rises. In the lower half of the diagram the effect of the controls is to shift the import function, to show that less is imported at each

Copyright © 2010. Taylor & Francis Group. All rights reserved.

Gowland, David. International Economics (Routledge Revivals), Taylor & Francis Group, 2010. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/inflibnet-ebooks/detail.action?docID=592981.
Created from inflibnet-ebooks on 2020-05-05 01:02:03.

Figure 7.8: The New Cambridge School





level of income. In equilibrium, imports are still equal to M_1, i.e. to X+G+I–T–S. Thus, the balance of payments cannot have improved. A depreciation of sterling would produce both the exogenous change in exports and the shift of the import function, so both analyses would have to be combined but the result would be unchanged—i.e. a higher level of income and an unchanged balance of payments.

Copyright © 2010. Taylor & Francis Group. All rights reserved.

Gowland, David. International Economics (Routledge Revivals), Taylor & Francis Group, 2010. ProQuest Ebook Central,
http://ebookcentral.proquest.com/lib/inflibnet-ebooks/detail.action?docID=592981.
Created from inflibnet-ebooks on 2020-05-05 01:02:03.