1944

Foreign Trade Policy and Employment

Hyman P. Minsky Ph.D.

FOREIGN TRADE POLICY AND EMPLOYMENT

The employment economics of Lord Keynes and his followers have been used as a basis for advocating various forms of foreign trade restrictions on the grounds that, by minimizing the drains (leakages) due to foreign trade, a "full employment" program can be made more effective. This paper represents an attempt to prove that, by proper co-ordination of re-employment programs by nations, an effective expansion can take place without any such restrictions being used.

A concept necessary to our study is that of the "international margin" as discussed by Professor Iversen in Economic Fragments. The international margin of a country depends upon the relative size of its ownership of internationally accepted media of exchange (gold, foreign securities, ability to borrow on long term) and its imports. (really ratio of imports and exports) If its ownership of foreign exchange is great compared to its imports, then a country can have an unfavorable balance on current account for quite a long period of time without being forced to attempt to change it. In such cases the country's international margin is large.

Obviously, countries which have a great international margin are to a great extent the independent in regard to expansion policies. Therefore, in any co-ordinated system of expansion, the initiative rests with these independent countries. Amongst such countries, in the immediate postwar world, the United States will be pre-eminent.

A problem which concerns some writers in the field of international trade is the possibility of a chronic shortage of American dollars. They assert that the world as a whole desires to purchase more American goods than America desires to purchase from the rest of the world. They also assert that, even if the United States did behave like a creditor nation, the problem would remain. The argument is phrased by Kindleberger in a memorandum, International Monetary Stabilization, page 6, as follows: "The rise in B's exports, however, results in an increase in incomes in B, most of which in turn is spent for imports from A. This rise in imports may be larger than the increase in exports which prompted it, with the result that the original stimulus to the favorable balance of trade in B eventually produces an unfavorable balance." 'A' represents the United States, 'B', the countries suffering from the "chronic shortage" of dollars.

Such an argument rests upon the effect of an increase in exports upon the income in country B. In analyzing changes in income, some form of the multiplier analysis is a useful tool. The multiplier which is used in this paper, frankly, is a means of tracing expenditures; not spending is assumed to be the only drain from the stream of income payments. The concept of "drains" or "leakages" from the money flows, the effects of the possibility of holding money or its equivalent, is the subject of analysis of this entire process. Expenditure on investment goods is equivalent in its effect upon future income to expenditure upon consumption goods; the effect remains the same regardless of whether the objects of

the expenditures are investment or consumption goods.

The symbols to be used and their definitions are as follows:

d: the marginal propensity to spend upon domestic goods

m: the marginal propensity to spend upon imported goods

h: the marginal propensity to not spend; i.e., a concept equivalent to hoarding

Δx: the autonomous increase in exports for the country under consideration; i.e., an increment in exports

ΔY: the increment in income.

Throughout this paper, all increments are considered to continue for the period under discussion; thus an eventual total rise in income can be discussed. A further assumption made is that all of the marginal propensities remain constant throughout the income region under discussion. In addition, the multiplier will be considered as a "time sequence" affair, even though the definition of the "day" and other concepts necessarily entails considerable difficulty. However, the working out of the process in time is the most fruitful way of looking at business cycle matters. A gross imperfection in this paper is that almost all discussion is in terms of the eventual states, and the "interim" relations are not discussed. Certain of our conclusions may be vitiated by a more completely dynamic analysis. In the first part of the paper, the assumption is made that the supply curves for factors and products are infinitely elastic; i.e., the quantity used (produced) can be increased without increasing the price.

We also have $m + d + h = 1$, for, according to our definitions of the "marginal propensities", the latter are exclusive and exhaustive means for the disposal of income. We therefore have the following sequences:

	Day 1	2	3	4		Sum
Income	Δx	$d\Delta x$	$d^2\Delta x$	$d^3\Delta x$	.....	$\frac{\Delta x}{1-d}$
Imports		$m\Delta x$	$md\Delta x$	$md^2\Delta x$	.....	$\frac{m\Delta x}{1-d}$
Increase in cash balances		$h\Delta x$	$hd\Delta x$	$hd^2\Delta x$	.....	$\frac{h\Delta x}{1-d}$
Sum	Δx	Δx	$d\Delta x$	$d^2\Delta x$		

The sum of the various ways to dispose income is equal to the previous days' income.

Returning to the quotation from Mr. Kindleberger's work, we are given that the rise in imports is greater than the increase in exports, Δx. Thus:

$$\frac{m\Delta x}{1-d} > \Delta x$$

$$1 - d = m + h$$

$$\frac{m}{m+h} > 1$$

$$\frac{1}{1+\frac{h}{m}} > 1$$

$$\frac{h}{m} < 0$$

$m > 0$, or there would be no problem of the nature envisaged by Mr. Kindleberger; e.g., if the marginal propensity to import is negative, a rise in exports can only result in a decrease in imports, therefore further improving the trade position of a country.

Therefore $h < 0$; i.e., the marginal propensity to save is negative — with a rise in income, the total volume of saving decreases. This means that $m + d > 1$. The spending

habits of the members of the community are such that a rise in income will lead to expenditures greater than the increment of income. Such behavior is characterized by Samuelson and others as "unstable."

Studies of the marginal propensity to consume found the aggregate marginal propensity to consume well less than 1, which implies that $h > 0$. However, we cannot, on a priori grounds, exclude this negative marginal propensity to save, and this result certainly calls for interpretation.

The total increment volume of "saving" or "hoarding" out of the new level of income is equal to $\frac{h\Delta x}{1-d}$ and if $h < 0$ and $d < 1$, the entire term is < 0. The pattern of individual behavior which is implied by a negative marginal propensity to save is such that a $2.00 rise in income results in expenditures of more than $1.00. Such behavior cannot long continue unless there is a source of individually held hoards which can be drawn upon. The rise in exports may cause such favorable business anticipations that stores of idle money are brought into use.

Or more usually, the banking system will, on the basis of these more favorable anticipations, extend credit. Conceptually, both the increase in velocity, the result of the drawing upon hoards, and the increase of money by the banking system can be brought under the category of new income-creating expenditure. Inasmuch as in the world as it existed just prior to the outbreak of this war, great volumes of income-creating expenditures were introduced into the economy by fiscal measures, and insofar as in the postwar world such measures may be considered as an exceedingly likely method

of expansion, fiscal expansion is a very important method of inserting income-creating expenditure into the economy. All three methods are equivalent in their direct effect upon income and employment levels, differing primarily in secondary effects. Therefore the language of fiscal expansion will be used, although it must be remembered that all are equivalent.

Instead of assuming a negative "marginal propensity to save" on the part of the community, we shall assume that $h > 0$ and that the fiscal authorities (or the banking system, or individual dishoarding) insert $(\lambda-1)\Delta x$ of new income-creating expenditures into the system. Therefore the total income-creating expenditure becomes $\lambda \Delta x$; and $\frac{\lambda \Delta x}{m+h} = \Delta y$. According to Kindleberger,

$$\frac{m \lambda \Delta x}{m+h} > \Delta x$$

$$\lambda > 1 + \frac{h}{m}$$

$$\lambda - 1 > \frac{h}{m} \quad 1/$$

In order to have the foreign exchange result which is envisaged by Kindleberger, the fiscal authorities must insert more than $\frac{h}{m} \Delta x$ of new income into the community. Since h and m are both greater than zero, we find that an unfavorable foreign trade position will not result from an increase of exports unless there is a secondary expansion too great in magnitude; and we also find that, due to the increase in exports, a country may engage in internal expansion without

---

1/ See J.J. Polak, Balance of Payments Problems of Countries Reconstructing with the Help of Foreign Loans, Quarterly Journal of Economics, February, 1943, Appendix, page 233. His expansion ratio, q, is the same as my λ.

The basic work in this paper had been finished prior to the appearance of the article, but I have profited from reading it.

causing its foreign trade balance to become less favorable than it was before the increase in exports.

$\lambda - 1 = \frac{h}{m}$, may be considered as a measure of fiscal independence; if $\lambda - 1$ is large, a country will be considered fiscally independent; if it is small, the country will lack independence in fiscal policy; that is, aside from its international margin.

The extent of the possible expansion depends upon the relative size of the marginal propensity to import and the marginal propensity to save.

Country	h	m	$\lambda - 1$	$K = \frac{1}{h+m}$
1	$\frac{1}{20}$	$\frac{1}{2}$	.1	1.8
2	$\frac{15}{100}$	$\frac{1}{20}$	3	5
3	$\frac{1}{20}$	$\frac{1}{20}$	1	10
4	$\frac{9}{20}$	$\frac{9}{20}$	1	1.1

In country 1, when its export surplus rises, by, say, one million dollars, the fiscal authorities will be able to spend only one hundred thousand dollars more; income will rise by two millions; one-half of the increase will be spent on imported goods, and imports will equal exports.

In country 3, an equal export surplus will enable the fiscal authorities to add three millions to the income stream; income will rise by twenty millions, imports by one million.

Both countries 3 and 4 will be able to add only one million dollars by fiscal measures. In country 3, however, income will rise by twenty millions, imports by one million; while in country 4 income will rise to two and two-tenths millions with imports rising by one million.

The country with a small propensity to save and a large propensity to import would have both little expansionist independence and a small multiplier effect. A country with a large propensity to save and a small propensity to import would be, to a great extent, fiscally independent. The last two examples illustrate that it is not alone the propensity to save, or the propensity to import which determines expansion possibilities; it is their relative magnitude. If they are about equal, a country will not be able to engage in extensive internal expansion without soon running into difficulties. However, where they are both small, a small increase in expenditures by the government results in a large rise in income; where they are both large, the rise in income will be small.

The relation $\lambda - /$ may be considered as a measure of the independence of fiscal policy on the part of any particular country. Barring a large stock of some accepted medium of international exchange (e.g., gold or long-term loans), those countries whose marginal propensity to save is less than their marginal propensity to import, will, when embarking upon a program of fiscal expansion, find that whatever favorable balance on current account they have soon disappears and a policy either of retrenchment internally or of abandoning free international trade necessary. The case of Denmark, described by Iversen, falls into this category. Its large propensity to import plus the relatively small propensity to save resulted in an exchange deficit. Denmark did not have a large gold stock and it either had to borrow abroad, depreciate (either internally or internationally) or adopt exchange control. It chose exchange control. We can assume

that if a country must choose between free international trade and full employment policies, it will, in our era, choose full employment. Our problem is to reconcile the two insofar as it is possible.

If $h = 0$, we have $d + m = 1$. $k = \frac{1}{m}$. $\frac{\Delta x}{m} = \Delta y$. Therefore $m\left(\frac{\Delta x}{m}\right) = \Delta x$; i.e., if the marginal propensity to save is zero, imports will eventually rise to the level where they always equal exports. This means that, for example, if American exports increase and the fiscal authorities follow a policy of compensating for leakages due to savings out of the increased income, then imports will eventually increase to be just equal to the level of exports. Thus, if $E = (\lambda - 1)\Delta x = \Delta h\left(\frac{\Delta x}{m}\right)$, the amount of income-creating expenditure, E, is just enough to compensate for the non-spending out of the increase in income due to the increase in exports.

Δx = rise in exports

$\frac{\Delta x}{m+h} = \Delta y$

$h\left(\frac{\Delta x}{m+h}\right)$ = increase in savings out of rise in exports; also the insert into the income stream by fiscal authorities.

$\frac{h\,\Delta x}{(m+h)^2}$ = rise in income out of insert

$\frac{h^2 \Delta x}{(m+h)^2}$ = second governmental insert

\- - -

\- - -

The sum of governmental inserts is

$$\frac{h\,\Delta x}{m+h} + \frac{h^2 \Delta x}{(m+h)^2} + \text{- - - -}$$

$$= \frac{h\,\Delta x}{m+h}\left(1 + \frac{h}{m+h} + \frac{h^2}{(m+h)^2} + \text{- - - - - - -}\right)$$ and insofar as $m > 0$ and $h > 0$, we have $\frac{h}{m+h} < 1$ and we have the sum equal to $\frac{h\,\Delta x}{m+h}\left(\frac{1}{1 - \frac{h}{m+h}}\right) = \frac{h}{m}\Delta x$ which is $(\lambda - 1)\Delta x$.

Therefore, the sum of governmental income-creating expenditures designed to offset savings is equal to the volume of expansion in which a country can engage on the basis of a favorable balance on current account. The level to which income will rise due to a policy of offsetting savings is:

$$\frac{\Delta X}{m+h} + \frac{h\Delta X}{(m+h)^2} + \frac{h^2\Delta X}{(m+h)^2}$$

$$= \frac{\Delta X}{m+h}\left(1 + \frac{h}{m+h} + \frac{h^2}{(m+h)^2} + \cdots\cdots\right)$$

$$= \frac{\Delta X}{m+h}\left(\frac{1}{1-\frac{h}{m+h}}\right) = \frac{\Delta X}{m}$$

, which is the level of income when savings are identically equal to zero, and is the level at which imports are equal to exports.

Therefore, working at the problem of an exchange surplus or exchange deficit, we find that the exchange surplus can be laid to an insufficient expansion by the country experiencing the surplus, the exchange deficit to too great an expansion. We see, therefore, that by a proper manipulation of the levels of income, the exchanges can be brought into balance. The country with an import balance must contract; the country with an export surplus must expand.

However, looking at the postwar exchange problem with some "realism," we must take as our basic premise the impossibility for any country to contract employment. In the world as it exists, we must assume that the first effect of a decline in money flows is a fall in the level of employment; that whatever price-cost adjustments are made come later in the cyclical process. Each country must attempt to keep employment as near to a "full employment" level as is possible. Therefore, the "solution" would be in the direction of expansion in the fiscally independent countries and the countries with export surpluses. If a country must

choose between maintaining free international trade and maintaining a high level of employment, it will invariably, if it possesses any economic sovereignty, choose the full employment solution. However, by a proper co-ordination of policies, it is possible for the countries to maintain both full employment and free international trade.

The first premise is the maintenance of full employment in the "fiscally independent" countries, or the countries with a large international margin. They should not attempt to minimize the leakages due to imports. There should be sufficient co-ordination so that the knowledge of import surpluses in the expanding countries will result in expansion by the countries with an export balance until they have achieved a full employment level. The co-ordinating principal, therefore, for the behavior of the countries with little independence in expansion is to expand internally to the limit of their ability.

This expansion results in imports becoming equal to exports; therefore, for the countries taking the initative in expansion, the net leakage due to imports is zero, and the efficiency of an expansion program is greater than if leakages, while being minimized, were not "returned" and the countries with an export balance allowed the expansion in the other countries to be the only stimulating factor. Frankly, what is suggested is that each country attempt to maximize its own real income.

A problem arises when, let us say, the United States has achieved a full employment level and Britain (the rest

of the world) has expanded to the extent of its favorable balance and still has unemployment. Further expansion is possible only with an additional foreign exchange credit. This may be achieved by means of loans from the United States. These loans will enable a multiple expansion within Britain.

However, the problem of servicing this debt arises. A capital transfer of this nature eases the exchange problem of the country, but each period after the capital transfer the country will have to increase its exports over its imports by the amount of the debt service. This means that a portion of the investment should be directed toward lowering imports or increasing exports. The United States will then, while having an income stream as large as its previous income stream due to the interest payments, have some unemployed factors.

Further expansion is then indicated within the United States. This will enable still further expansion in Britain. The level of employment will rise in Britain; the volume of goods and services available for use in the United States will increase. The world will have moved to a new, higher level of income. This is obviously a long run solution. During the period of the working out of this process, Britain, prior to increasing its exports, will increase its imports; during this period the United States will either have to increase prices or decrease the offsets to savings; in other words, part of the increased investment abroad will serve to increase domestic income.

The amount of the investment abroad which goes to increase domestic exports is not equal to the marginal propensity to import of the other country times the magnitude of the loan. As a result of the loan, Britain will be able to to engage in a domestic expansion $(\lambda - 1)$ times the loan; $\Delta m \left(\frac{\lambda\ loan}{\Delta m + s h}\right)$ = imports; loan = imports; Britain will import the entire value of the loan from the United States, which obviously results in a further expansion within the United States. Therefore, the level of income expansion within the United States due to the export of a foreign credit trade will be equivalent to the expansion which would have resulted from an equivalent investment at "home."

If foreign loans are not available, Britain will still be faced with the necessity of increasing its level of employment. The loans may not be forthcoming because, at the existing factor prices and the existing relative prices for domestic and foreign goods, the rate of return on investment is not sufficient to induce investment. In order to increase employment, it is necessary to increase exports and decrease imports. This can be achieved by two methods which are logically equivalent; i.e., exchange depreciation or wage reduction.

To the extent that foreign goods are part of the "wage goods" of Keynes, both exchange depreciation and wage reduction will lower the real wages. 2/ In a country such as Britain,

2/ See Martin Bronfenbrenner, The Keynesian Equations and the Balance of Payments, Review of Economic Studies, June, 1940, Volume VII, Number 3, ppg. 180-185.

where the standard-of-living goods are imported, both wage reduction and exchange depreciation lead to a fall in real income. However, wage reductions will decrease the standard of living, but will not increase the cost of foreign capital goods. Exchange depreciation will increase not only the price of wage goods but also the price of investment goods. If a country is dependent upon foreign sources for its capital goods, a policy of exchange depreciation will increase the cost of investment.

However, in general, those countries which import investment goods are the countries with a high rate of return upon investment. Those countries which have a low rate of return on investment will produce a great amount of their own investment goods. A reduction of wages, without any decline in employment, will decrease imports and increase exports; however, the non-wage incomes will increase. Inasmuch as the non-wage incomes are the higher incomes and the consumption goods which the United States exports are of the kind which higher income groups tend to consume, the reduction of wages will not decrease these imports; therefore, the amount of freedom of action gained will not be as large as if the United States value of all incomes had been decreased.

Insofar as a country has a foreign debt which must be serviced, both wage reduction and exchange depreciation will make the foreign debt service in terms of effort more difficult. However, wage reductions will put the entire burden upon the working class; exchange depreciation will distribute this burden amongst all income groups. The effect of exchange

depreciation, therefore, will be more equitable internally and will also tend to be more effective in reducing imports and increasing exports.

As a result of its more favorable foreign trade position following the depreciation (we will discuss the depreciation result, recognizing that both results are equivalent in their foreign balance effects), Britain will be enabled to expand internally. The United States, which now has some unemployment, will also expand internally. The amount of depreciation necessary will not be so great as would be the case if this secondary expansion in both countries had not taken place. Goods which the United States imports from Britain will now be cheaper. The real income of the United States will have increased. British income will also have increased. This policy of depreciation, when a country is unable to achieve full employment without it, must be recognized as a legitimate means of getting fiscal "elbow room" to carry out its program of employment expansion. The depreciation should not be indulged in to gain a competitive advantage; it should really be understood to be a means of making internal fiscal expansion possible. The internal program of expansion following a depreciation should be carried to that extent where imports balance exports. If a country should depreciate to achieve this fiscal independence, it should not be accused of trying to reach full employment on the shoulders of other countries.

The depreciation, therefore, when a country cannot achieve full employment on the bases of its expansion margin at the old exchange rate, is the second principle indicated.

Inasmuch as such a depreciation means a fall in the real income of the country concerned, it would not be employed indiscriminately in a world where interdependence were prevalent.

As a result of the change in relative prices, due to the depreciation, on the margin of investment, it will become profitable to invest in certain industries in which it was not profitable to invest before in the depreciating country. Therefore, with the depreciation of Britain's currency, we can expect a flow of international investment to Britain -- another factor which, in a stable world, would make the necessary amount of depreciation smaller than it otherwise might be.

An alternative approach would be for the United States to continue its expansionist policy even after it had achieved full employment. Here an important, but not frequently mentioned, property of the multiplier should be analyzed. The multiplier traces the flow of increments of money income. The marginal propensity to consume as an aggregate is composed of the sums of marginal propensities to consume particular goods. As an expansionist policy is followed out, assuming a stable monetary spending and not-spending pattern, further expansion of the production of particular goods will cause a rise in the prices of these goods.

In terms of income effect, this rise in prices will not operate as leakages; in terms of the employment effect, the rise in prices will be equivalent to a drain. As an economy approaches full employment, more and more of these bottlenecks appear -- bottlenecks in the sense that the efficacy of the expansionist program is decreased insofar as the employment

effect is concerned. Therefore, the general statement may be made that the employment multiplier is equal to, or less than, the money income multiplier.

The relation between the money income multiplier and the employment multiplier depends upon the price elasticity of demand and/of supply of those goods for which the elasticity of supply is not infinite and the marginal propensity to consume these particular goods. That is, it depends upon the rise in price and the importance of the good in the budget.

If Δy is the rise in income, and $q_1 p_1$ (p = price, q = quantity) is the expenditure on a commodity prior to the rise in income, and $q_2 p_2$ is the expenditure on the commodity after the rise in income, ~~we know that~~ the ~~marginal~~ average propensity to consume this particular good, c, for this particular change in income ΔY, is $\frac{q_2 p_2 - q_1 p_1}{\Delta y}$. If there is no increase in price, $p_2 = p_1$ and we have $\frac{p_1 (q_2 - q_1)}{\Delta y} = c$, and obviously this is proportional to the increase in output and employment. If $p_2 > p_1$, i.e., the price rises, we have $\frac{p_2 q_2 - p_1 q_1}{\Delta y} > \frac{p_1 (q_2 - q_1)}{\Delta y}$. Now if there are n goods in the economy, the multiplier can be written as $k = \frac{1}{1 - \sum_{i=1}^{n} \frac{p_{i2} q_{i2} - p_{i1} q_{i1}}{\Delta y}}$ where $\sum_{i=1}^{n} \frac{p_{i2} q_{i2} - p_{i1} q_{i1}}{\Delta y}$ is obviously the total ~~marginal~~ average propensity to consume on the interval Δy associated with the rise in price in question. Now if $p_2 > p_1$, the multiplier would be greater than if $p_2 = p_1$, but the change in employment which results is proportional to $\frac{p_1 (q_2 - q_1)}{\Delta y}$; therefore the multiplier written above, while correctly expressing the rise in money incomes, overstates the rise in employment.

If to $\frac{p_2 q_2 - p_1 q_1}{\Delta y}$ we add and subtract $p_1 q_2$ in the numerator, we get $\frac{p_2 q_2 - p_1 q_2 + p_1 q_2 - p_1 q_1}{\Delta y} = \frac{q_2 (p_2 - p_1)}{\Delta y} + \frac{p_1 (q_2 - q_1)}{\Delta y}$.

The term $\frac{p_1(g_2 - g_1)}{\Delta Y}$ is proportional to the rise in employment; the term $g_2(p_2 - p_1)$ is proportional to the rise in prices; and, from the point of view of the employment multiplier, the term $\sum_{i=1}^{n} \frac{g_{2i}(p_{2i} - p_{1i})}{\Delta Y}$ is a leakage, equivalent to expenditures upon imports or not spending in its effect upon future income stream.

If we use k_e for the employment multiplier and k_m for the money income multiplier, we have

$$k_e = \frac{1}{1 - \sum_{i=1}^{n} \frac{p_{i1}(g_{i2} - g_{i1})}{\Delta Y}} \quad \text{and}$$

$$k_m = \frac{1}{1 - \left(\sum_{i=1}^{n} \frac{g_{2i}(p_{2i} - p_{1i})}{\Delta Y} + \sum_{i=1}^{n} \frac{p_{1i}(g_{2i} - g_{1i})}{\Delta Y} \right)}$$

and $k_e < k_m$.

The leakages from the employment stream due to the rise in prices will be reflected by higher incomes of the factors which are used in producing these goods. Insofar as this would be an increase in wages, we may expect the marginal propensity to spend not to change greatly; if it results in an increase in other incomes, the not spending may be expected to increase. Inasmuch as most of this higher income remains in the income stream, these leakages are not the same as the "once and for all" not spending leakages. (The increased imports by the other countries due to a rise in American imports will, of course, make the import drain not a "once and for all" drain.) The return on investment in these industries producing these higher priced goods will generally increase. This increased inducement to invest may induce a greater amount of investment, which may lighten the need for governmental expenditures.

The effect which is pertinent to our analysis is that

as one country, the United States, approaches full employment, while another country, Britain, still has a considerable quantity of unemployed resources, the prices of certain goods produced in the United States will rise. This will tend to lead to a substitution of British for American sources of supply. The rise in British exports will, according to our preceding analysis, allow for a multiple expansion; the decrease of American exports will either result in a fall in prices or in the necessity for further expansion.

Even after a country has achieved full employment, continuation of the expansion of monetary incomes may be desirable in order to increase imports and thereby stimulate other economies by working primarily through the relative price adjustments, which were the sole means of adjustment in the classical analysis. This price-income inflation in the fully employed economy is obviously a way of adjusting the relative prices of the factors and of securing an international balance. Its greater difficulty politically, however, would indicate that the alternative policy of deflation in the unemployed economy is desirable. However, the choice is primarily a "practical" one; a difference exists in the mechanism, not in its end result. The boom which may follow an inflation in an economy so given to expansionist periods as the American economy seems to be would indicate that the "in general" keeping of the domestic price level fairly stable is preferable.

Inasmuch as part of the mechanism of adjustment is the developing price differential between American and British sources of supply for the same commodity, the incentive to

invest in British sources of supply will increase, and if Britain is taken to represent the entire group of countries where the supply of capital goods is less plentiful than in the United States, the progressive capitalization of the world is one result of the processes of adjustment.

It is interesting to note that an analysis which began with the new orthodox underemployment assumptions evolved into a mechanism for adjustment which is based upon the movements of relative prices. There is no sharp distinction between full and less than full employment economies; as an economy approaches high levels of employment, the relative price-allocational effects of classical full employment economics comes into play, and that is what one would expect. However, it is too often forgotten that the relative price adjustments, both between and within economies, may become operative with a great deal of unemployed resources.

Adjustment after the war will be easier, and the post-war world will be more stable if there exists an international money such as the British Pound Sterling was before 1914. The United States, as the country with both the greatest fiscal independence and the greatest international margin, should adopt a fixed dollar policy -- invariant as to whether the current account be favorable or unfavorable. Other currencies should adjust their rate to the dollar, using the equality of imports and exports as their policy goal. If imports are greater than exports, a country may depreciate. If this trade position occurs with full employment, then the level of employment is being maintained by

some form of continued monetary expansion, which means either that the country is selling its investments abroad, a program which is not only legitimate but is also, in many cases, highly desirable (e.g., the repatriation of foreign-owned investments by the semi-colonial countries), or that the country may be borrowing on long term abroad. This may be voluntary investment or it may be the type of thing which, again, Iversen describes so well for Denmark. In this case, depreciation is necessary and desirable, even aside from the existence of full employment.

Now let us consider the alternative policy position, i.e., that of a country which has full employment and which still possesses an export surplus. This country, to a certain extent, is raising its own employment level at the expense of the other countries; however, it may at the same time, as indicated previously, be furnishing these exports in exchange for title to capital goods, and this may be a desirable process. However, it may be selling abroad primarily because of an undervalued currency; it may be accepting either gold, American dollars or notes from abroad, and may be using its export balance as a substitute for its own fiscal policy. This export balance, unless paralleled by the import of long-term assets, should be viewed as an undesirable phenomenon. The alternative policies available are (1) continuation of expansionist policies resulting in price rises, changes in relative prices, etc., or (2) currency appreciation. Again, internationally, these policies are equivalent. Their internal effects are different.

Both result in a rise in the standard of living insofar as part of the real income is drawn from abroad. Both result in increasing imports and decreasing exports.

To implement such a policy is another question. The policy suggested implies a surrender of sovereignty on the parts of the countries involved -- an agreement that certain techniques of international adjustment will not be used. However, the only real implication is that, given the conditions of factor supply, and the pattern of resources, and skills in a particular country, it will attempt to maximize real income, realizing all the while that the first condition for income maximization is full employment.

Secondly, each country must undertake to do what it can within the limits of its fiscal independence and international margin, to maximize its level of employment. This means, as has been pointed out by many, that the first condition for world stability is the internal stability and expansion of the major countries. However, the surrender of sovereignty here is such that the large countries must not attempt to minimize the deflationary effects of imports. The co-ordination of policies would be such that the import leakages would not be deflationary in the aggregate, for they would be followed by an expansion within the exporting countries.

Obviously, within a closed economy there are no import leakages. In a co-ordinated international fiscal policy such as has here been suggested, the foreign trade leakages would be deflationary only in the first instance; the

secondary effects would be expansionist. Each country would be part of a closed world economy, and it would fit itself into this economy so that the net foreign trade effect would be neither inflationary nor deflationary upon its economy.

Basically, the economic problem is one of maximizing the production of goods and services. Any adjustment which does not fulfill that simple requirement is some form of economic "perpetual motion" machine.

The postwar readjustment within each country will be exceedingly difficult. The difficulty of adjustment will not be appreciably decreased if tariffs and other restrictions are removed. The unfortunate thing in the world is that resources are distributed in such a way that differentials in real income will, for the time being, have to continue. Free migration is not politically feasible. Nothing can be done to raise any country's standard of living beyond what its productivity will warrant. Within that limit, a program of full employment co-ordinated with relative price adjustments would tend to maximize real income.

$$a_{11}x_1 + a_{12}x_2 + \cdots + a_{1n}x_n = b_1$$

$$a_{21}x_1 + a_{22}x_2 + \cdots + a_{2n}x_n = b_2$$

$$a_{n1} \qquad\qquad a_{nn}x_n = b_n$$

$$\| a_{ij} \| \cdot \| x_j \| = \| b_i \|$$

$$\underline{A} \cdot \underline{X} = \underline{B}$$

$$K(x,y)$$

$$\int_0^1 K(x,y)\, f(y)\, dy = \varphi(x)$$