

4. Keynes, Post Keynesian analysis, and the open economies of the twenty-first century

Paul Davidson

INTRODUCTION

It is often said by mainstream economists that Post Keynesian theory's contribution to economic theory is all negative in that it attacks orthodox (supply side) theory without providing a positive alternative coherent contribution. Moreover, it is claimed that this failure is due to the fact that Post Keynesian theory is based on the closed economy analysis of Keynes's *General Theory*, while the real world economies of the 21st century are open to world trade. Keynes might have had some relevance for the developed economies of the mid-20th century that were enmeshed in the Great Depression, but Keynes has little or nothing to offer to the open economies of a globalized economic system of the 21st century

These disparaging statements regarding both Keynes and the Post Keynesian analytical framework are wholly false and merely represent the best barbs that mainstream classical economists, who have been stung by the rapier of Post Keynesian analysis, can muster.

Section I of this paper will cite chapter and verse in Keynes's *General Theory* where insights and policies are suggested that are relevant today to nations in a globalized economic world. Section II briefly indicates how the orthodox theory of the efficiency of flexible exchange rates fails to meet the test of the facts. Section III focuses on one enormous positive contribution made by Tony Thirlwall that permits the analyst to understand the income effects of world trade, including the potential widening income inequalities between developed nations and those less developed countries that pursue economic industrial policies based on the law of comparative advantage. Tony Thirlwall deserves kudos for developing this analysis from the Keynes-Harrod multiplier literature of the 1930s. When mainstream economists finally recognize the importance of income effects of trade on open economies, then Tony Thirlwall's name will be cited for developing the pioneering work that Post Keynesians call Thirlwall's Law.

KEYNES AND THE OPEN ECONOMY

It is a paradox that Keynes, a man who spent most of his professional life working on the analysis of open economies, should be thought of as having developed a general theory that is only applicable to closed economies. It is true that much of Keynes's *General Theory of Employment Interest and Money*¹ is developed in a closed economy context. One possible reason for this closed economy focus is that Keynes wanted to demonstrate that even if one abstracted from international trade complications, a closed economy did not possess any automatic market mechanism that assured a full-employment equilibrium. Once this was demonstrated, however, Keynes did introduce some major open economy aspects in his general theory when he noted that

- a. Trade could modify the magnitude of the domestic employment multiplier [Keynes, 1936, p. 120],
- b. reductions in money wages would worsen the terms of trade and therefore reduce real income, though it could improve the balance of trade payments [Keynes, 1936, p. 263], and
- c. stimulating either domestic investment or foreign investment could increase domestic employment growth [Keynes, 1936, p. 335].

In our 21st-century economic system, under the influence of a resurgent classical economic analysis by mainstream economists, governments are afraid that deliberately stimulating any domestic component of aggregate demand via budget deficits will unleash inflationary forces. Accordingly, export-led growth is seen as the only alternative path for expanding domestic employment. A 'favorable balance [of trade], provided it is not too large, will prove extremely stimulating' to domestic employment [Keynes, 1936, p. 338], even if it does so at the expense of employment opportunities abroad.

In a passage that is particularly *a propos* to today's global economic setting, Keynes [1936 p. 335] noted that 'in a society where there is no question of direct investment under the aegis of public authority [due to fear of government deficits *per se*], the economic objects, with which it is reasonable for the government to be preoccupied, are the domestic interest rate and the balance of foreign trade'. If, however, nations permit free movement of capital funds across national boundaries, then 'the authorities had no direct control over the domestic rate of interest or the other inducements to home investment, [and] measures to increase the favorable balance of trade [are]...the only *direct* means at their disposal for increasing foreign investment' [Keynes, 1936, p. 336] and domestic employment.

Keynes explicitly noted that the domestic employment advantage gained by any government pursuing an export-led growth policy 'is liable to involve an

equal disadvantage to some other country' [Keynes, 1936, p. 338]. When many countries simultaneously pursue an 'immoderate policy' [Keynes, 1936, p. 338] of export-led growth (e.g., Japan, Germany and the NICs of Asia in the 1980s and Japan and China today), this aggravates the unemployment problem for these nations' trading partners.² Consequently, the trading partners of nations deliberately pursuing export-led growth policies are forced to engage in a 'senseless international competition for a favorable balance which injures all alike' [Keynes, 1936, pp. 338–9].

Any deliberate policy that aims to make a nation's industries more competitive in order to improve the trade balance requires either (a) forcing down nominal wages (including fringe benefits) to reduce labor production costs and/or (b) a devaluation of its exchange rate³ (or an appreciation of its trading partners's exchange rate). Competitive gains obtained by manipulating these wage or exchange rate variables can only foster further global stagnation and recession as one nation's attempt to regain a competitive edge via (a) or (b) passes the black queen of reduced profits and higher unemployment to other nations in the global economy.

Unlike the classical theorists of his day (and our day as well⁴) Keynes recognized that 'the mercantilists were aware of the fallacy of cheapness and the danger that excessive competition may turn the terms of trade against a country' [Keynes, 1936, p. 345] thereby reducing domestic living standards. In an open economy, turning the terms of trade against a country can mean that domestic workers may be working more while earning less in real terms.

Keynes realized that in an open global economy the only path to global full employment might require *every* nation to actively and independently undertake a program for public *domestic* investment to generate *domestic* full employment. Otherwise, the resulting laissez-faire system of 'prudent' fiscal finance in tandem with a system of free international monetary flows would create a global environment where *each* nation could solve its unemployment problem only by seeking international competitive advantages resulting in export-led growth. The pursuit of such policies simultaneously by many nations, however, 'injures all alike' [Keynes, 1936, pp. 338–9].

This warning from Keynes, however, went virtually unrecognized in the last decades of the 20th century when mainstream economists waxed enthusiastically about the export-led economic miracles of Japan, Germany and the Pacific rim Newly Industrialized Countries – and later China and India – without noting that these miraculous performances were at the expense of the rest of the world.

Whenever governments do not have the political will to stimulate directly any domestic component of aggregate spending to reduce unemployment, 'domestic prosperity [is] directly dependent on a competitive pursuit of [export] markets' [Keynes, 1936, p. 349]. This is a competition in which all nations cannot be winners, but all *can* become losers!

For each nation simultaneously to break out of a global slow-growth stagnating economic environment and promote global prosperity, the correct policy, Keynes insisted, is not to pursue an export-led growth policy. Instead it is a 'policy of an autonomous rate of interest, unimpeded by international preoccupations, and a national investment programme directed to an optimum level of employment which *is twice blessed* in the sense that *it helps ourselves and our neighbors at the same time. And it is the simultaneous pursuit of these policies by all countries together which is capable of restoring economic health and strength* internationally, whether we measure it by the level of domestic employment or by the volume of international trade' [Keynes, 1936, p.349, italics added].

From 1982 to 1986, the Reagan Administration unwittingly pursued this Keynesian truth by increasing military (public domestic investment) spending and cutting taxes to stimulate consumption without worrying about the economic repercussions on the United States' trade balance or federal government deficits. By mid-1982, the Federal Reserve was helping the Reagan 'Keynesian' economic expansion by reducing interest rates in order to avoid a massive international debt default. As a result the U.S. acted as the 'engine of growth' during the Reagan Administration and most of the OECD nations rapidly recovered from the (1978-1981) greatest global recession since The Great Depression of the 1930s. Unfortunately, as recovery occurred, most of the major trading partners of the US did not engage in a 'simultaneous pursuit of these policies' of increasing public spending and reducing interest rates. These other nations neither remembered nor understood Keynes's recommendation that only by the concurrent independent expansionary public investment policies of all nations could global economic health and strength be restored.⁵ Instead, some of America's trading partners took advantage of Reagan's 'Keynesian' policy, which stimulated US demand for imports, to pursue an export-led growth policy which, though initially successful, ultimately resulted in severe economic problems for countries such as Japan, much of Western Europe and the nations of southeast Asia.

Until we understand Keynes's *General Theory* lessons in an open economy context, we are doomed to repeat the past errors encouraged by 'the inadequacy of the *theoretical* foundations of the *laissez-faire* doctrine' [Keynes, 1936, p. 339] and by 'orthodox economists whose common sense has been insufficient to check their faulty logic' [Keynes, 1936, p.349]. In a *laissez-faire* environment, orthodox economists assume global full employment automatically follows, so that free trade must increase the global wealth of nations by reducing each nation's aggregate supply constraints through the law of comparative advantage.⁶

In a passage that is amazingly prescient for the economic environment since Breton Woods, Keynes warns that the law of comparative advantage is only

applicable *after* all nations have implemented domestic demand management policies assuring full employment. Whenever nations operate under a *laissez-faire* mentality that produces significant global unemployment, then

if a rich, old country were to neglect the struggle for markets its prosperity would droop and fail. But if [all] nations can learn to provide themselves with full employment by their domestic policy ... there need be no important economic forces calculated to set the interest of one country against that of its neighbors. There would still be room for the international division of labour and for international lending in appropriate conditions. But there would no longer be a pressing motive why one country need force its wares on another or repulse the offerings of its neighbor, not because this was necessary to enable it to pay for what it wished to purchase, but with the express object of upsetting equilibrium in the balance of payments so as to develop a balance of trade in its own favour [i.e., export-led growth policy]. *International trade would cease to be what it is, namely, a desperate expedient to maintain employment at home by forcing sales on foreign markets and restricting purchases, which, if successful, will merely shift the problem of unemployment to the neighbour which is worsted in the struggle*, but a willing and unimpeded exchange of goods and services in conditions of mutual advantage [Keynes, pp. 382–3 italics added].

Unfortunately, most governments have been misled by mainstream economists to believe that free trade *per se* is job-creating globally. Keynes's *General Theory* suggests otherwise. The post-Bretton Woods international payments system with flexible exchange rates has created perverse incentives that set trading partner against trading partner to perpetuate a world of slow growth (if not stagnation). Generalizing Keynes's *General Theory* to an open economy provides a rationale for designing an international payment system that creates incentives for each nation to pursue domestic demand policies that ensure full employment without the fear of any balance of payments constraint. Only then will the gains from the law of comparative advantage become relevant.

A consistent theme throughout Keynes's *General Theory* is that classical logic has assumed away questions that are fundamental to a market-oriented, money-using economy. These problems are particularly relevant for understanding the current international payments relations that involve liquidity, persistent and growing debt obligations, and the importance of stable rather than flexible exchange rates.

An example of the sanguine classical response to Post Keynesians raising these issues is Professor Milton Friedman's response to me in our 'debate' in the literature. Friedman [1974, p. 151] stated: 'A price may be flexible...yet be relatively stable, because demand and supply are relatively stable *over time*. ... [Of course] violent instability of prices in terms of a specific money would greatly reduce the usefulness of that money'. It is nice to know that as long as prices or exchange rates remain relatively stable, or 'sticky' over time, there is no harm in permitting them to be flexible. The problem arises when exchange

rates display volatility. Should there be a deliberate policy that intervenes in the market to maintain relative stability or should we allow a free market to determine the exchange rate? Keynes helped design the Bretton Woods Agreement to foster action and intervention to stabilize exchange rates and control international payment flows. Friedman sold the public on the beneficence of government inaction and the free market determination of exchange rates.

Nowhere is the difference between the Keynes view and the view of those who favor laissez-faire arrangements more evident than in regard to these questions of international capital movements and payments mechanisms and the desirability of a flexible exchange rate system. Keynes's *General Theory* analysis suggests that government monitoring and, when necessary, control of capital flows, is in society's interest. Such controls are not an infringement on the freedom of economic agents any more than the control of people's right to shout 'fire' in a crowded theater is an infringement of the individual's right of free speech.

Old Keynesians (e.g., Samuelson, Tobin, Solow) as well as New Keynesians have little to say about international capital movements and their potential detrimental effects on the balance of payments and global employment.⁷ Keynes, on the other hand, recognized that large, unfettered capital flows can create serious international payments problems for nations whose current accounts would otherwise be roughly in balance. Unfortunately, in a laissez-faire system of capital markets there is no way of distinguishing between the movement of floating and speculative funds that take refuge in one nation after another in the continuous search either for speculative gains, or precautionary purposes, or for hiding from the tax collector, or laundering illegal earnings vis-à-vis funds being used to promote genuine new investment for developing the world's resources.

The international movement of speculative, precautionary, terrorist funds or illegal funds (hot money), if it becomes significantly large, can be so disruptive to the global economy as to impoverish most, if not all, nations who organize production and exchange processes on an entrepreneurial basis. Keynes warned 'Loose funds may sweep round the world disorganizing all steady business. Nothing is more certain than that the movement of capital funds must be regulated' [Keynes, 1980, p. 25]

One of the more obvious dicta that follows from Keynes's revolutionary vision of the importance of liquidity in open economies is that

There is no country which can, in future, safely allow the flight of funds for political reasons or to evade domestic taxation or in anticipation of the owner turning refugee. Equally, there is no country that can safely receive fugitive funds which cannot safely be used for fixed investments and might turn it into a deficiency country against its will and contrary to the real facts [Keynes, 1980, p. 87]

Even in these days of global electronic communication, nations can monitor and control international capital flows only if they have the will and the necessary cooperation of other nations to do so. Monitoring and control of capital fund movements is a technical matter involving the reporting of records that are kept in the accounting system of every banking community. As long as governments have the power to tax and central bankers have the power to audit and regulate their respective domestic banking systems, large scale international capital flows can be monitored and regulated, provided there is international cooperation in this matter. As long as currency is issued only in small denominations, the physical bulkiness of moving large currency sums secretly across borders ensures that it cannot be a major threat to any capital monitoring and control policy.

In recent years, however, governments' willingness to avoid capital fund monitoring has made it easy to hide not only legally earned income and wealth from tax collectors but also profits from drug and other illegal activities and terrorist funding from law enforcement agencies. This laissez-faire attitude encourages uncivilized behavior by self-interested economic agents – and thereby imposes an important, if often neglected, real cost on society. During the 1980s flight capital drained resources from the relatively poor nations towards the richer ones, resulting in a more global inequitable redistribution of income and wealth.

Cooperation between nations in monitoring, reporting and controlling disruptive capital funds movements among nations can be readily accomplished by the international payments mechanism if some form of an international clearing union payments system of a type that as I have discussed in detail elsewhere [Davidson, 2002] were to be instituted.⁸ My proposed system is developed from Keynes's Bretton Woods proposal for an international clearing union, but it does not require a Supra National Central Bank as Keynes's proposal did.

The successful implementation of my proposed international payments scheme in tandem with some rules for coordinating incomes policies among nations would ensure very inelastic expectation elasticities regarding the rates of exchange among various nations' monies. These inelastic expectations would mean that individuals will no longer be impelled to engage in disruptive international speculative and precautionary financial transactions. Thus, within a very short span of calendar time after a new payments scheme similar to the one proposed here is implemented, problems of speculative and precautionary 'hot money' flows as well as funds used to organize anti-social and illegal activities such as terrorist organizations and drug cartels and movements of income and wealth to avoid the tax collector or law enforcement officers will quickly shrink to relative insignificance.

The free world embarked on its great classical experiment of floating rates in 1973. Since 1973, there have been periodic bouts of great inflation, increasing rates of global unemployment, persistent growth in international debt, and an

increasingly inequitable international distribution of global income. Some of the rich nations got richer, while many of the poor nations became poorer at least relatively and, at times, suffered huge ‘capital flight’ losses.

Moreover, since 1982, one nation – the United States – has been able to take advantage of the existing international payments system to obtain a ‘free lunch’, that is, to run the massive perpetual trade deficits that has made the richest nation in the world also the world’s largest debtor. Although residents of most other nations may resent the ability of the United States to use the international payments system to obtain this ‘free lunch’, they are hesitant to change a system that is heralded by modern classical economists as the only mechanism that permits everyone the freedom to choose. To be against the existing system is considered to be anti-free market and for controls by government, a particularly unpopular position in these days when State planning has apparently failed so spectacularly in Eastern Europe. In the absence of a complete collapse of the international monetary payments system, however, unless an attractive feasible alternative to the current system is put on the public agenda for discussion and development, the status quo will remain. It is an old adage in political science that ‘you can’t beat somebody with nobody!’

Any suggestions for reforming the international payments mechanism should build on whatever advantages the current system possesses, while providing rules to prevent any one nation from enjoying a free lunch – unless a free lunch is available to all. It is possible to provide all with a free lunch (i.e., increased global employment) if a new payments system has a built-in expansionary bias that encourages all nations to operate closer to full employment than the existing system does.

THE FACTS VERSUS THE THEORY OF FLEXIBLE EXCHANGE RATES

Because of the success of the Keynesian Revolution in stimulating domestic full employment via conscious policies between the end of World War II and the mid-1960s, the problem of wage-cost inflation became endemic to most of the developed countries of the world. Without the persistent threat of large-scale unemployment, workers and labor unions in many OECD nations became more truculent in their wage demands. By the late 1960s many developed nations were forced to pursue so-called ‘stop-go’ policies that generated small planned recessions to reduce the market power of labor to demand inflationary wage increases. These recessions were then followed by Keynesian policies of expansionary domestic spending, moving the economy back towards full employment until the next round of inflationary wage demands were tabled by workers. Thus the nomenclature of ‘stop-go’ policies.

Any nation that can pursue a successful export-led growth policy during the flexible exchange rate system that followed the Bretton Woods system breakdown in 1973 is able to export to its trading partners not only its unemployment propensities but also any inflationary tendencies. In a fixed exchange rate system, on the other hand, export-led growth policy does not provide a nation any advantage in permitting more employment and growth *with lower inflation rates* compared with Keynesian policies that stimulate domestic components of aggregate demand to achieve greater employment. Moreover, under a fixed exchange rate system, it is possible for all nations to simultaneously pursue coordinated growth oriented policies by stimulating domestic components of effective demand without necessarily running into balance of payments difficulties as long as the ratio of each nation's growth rate relative to its trading partners' growth rate is equal to the ratio of the elasticity of demand for its exports compared to the its elasticity of demand for imports (according to Thirlwall's Law⁹).

In other words, a flexible exchange rate regime guarantees that for every 'successful' economy that pursues a mercantilist trade surplus policy that can promote employment growth without significant inflation, there must be one or more offsetting 'failure' nations importing inflation and unemployment while being plagued with persistent trade deficits. For every winner on the flexible rate system, there must be one or more losers. A fixed exchange rate regime in tandem with intelligent domestic demand and incomes management policies, on the other hand, can provide entrepreneurs with profitable expansionary market opportunities in a global environment where all nations are winners. A fixed exchange rate system combined with intelligent international cooperative Keynesian policies, therefore, holds out the promise that all nations can avail themselves of a free lunch.

Since the breakdown of Bretton Woods, it has been popular to assume that freely fluctuating exchange rates in a laissez-faire market system are efficient. Every well-trained mainstream economist, whose work is logically consistent with a Walrasian, Arrow-Debreu microfoundation, 'knows' that the beneficial effects of a freely flexible exchange rate include (1) the impossibility of any one country running a persistent balance of payments deficit and (2) each nation is able to pursue monetary and fiscal policies for full employment without inflation independent of what is occurring in its trading partners¹⁰.

The facts since the breakup of Bretton Woods, however, do not appear to be consistent with these Panglossian promises. Between 1980 and 2005, when the United States (perhaps unwittingly) took over as the engine of growth role for the global community, it has run persistent annual trade deficits. The persistent balance of payments deficits that the United States has experienced in the past quarter of a century, has permitted the economic growth miracles of (1) Japan and Germany in the 1980s, (2) the newly industrialized Pacific Rim countries

in most of the 1990s and (3) China, India and Ireland in the early years of the 21st century. The US trade deficit has permitted these nations to run high export-led growth rates during the years suggested in the last century. In that sense the United States deficits have been the engine of growth for the successful nations of the rest of the world.

Meanwhile, in the last quarter century, the floating exchange rate system, rather than encouraging the flow of capital from capital-rich developed nations to capital-poor less developed economies, has often encouraged capital flight in the opposite direction, thereby draining resources from the relatively poor nations of Africa and Latin America towards the richer ones. The result has been a growing global inequitable redistribution of income and wealth, thereby increasing the immiseration of the majority of the people on this planet.

In sum, then, during this period of floating rates since the 1970s, the world has not achieved the state of economic bliss promised by classical theory. If anything, the economic situation for a majority of the world's population has deteriorated.

In a world operated according to classical axioms, export-led growth should be no more desirable in terms of generating employment without inflation than internally generated demand-led growth. Classical economics assumes that the economy will track the long-run full employment growth trend no matter what the primary source of demand growth. Yet the facts of the 1980s demonstrate that all 'successful' economies tend to pursue export-led growth rather than domestic demand induced expansion. Nations such as Germany, Japan, Taiwan, Singapore, Hong Kong, and South Korea were not only applauded for their economic miracles by leading Monetarist and Old and New Keynesian scholars, but they were held up as shining examples of the proper functioning of a classical economy operating free from oppressive government intervention. Yet there is nothing in classical theory that justifies relying primarily on export-led growth!

THIRLWALL'S LAW

Professor A.P. Thirlwall (1979) has developed Keynes's multiplier mechanism into a demand-driven model of economic growth that does not make the classical presumption of continuous global full employment. In his formulation, Thirlwall posits traditional export and import demand functions:

$$X_a = (P_d/P_f)^z Y^{erw} \quad (1)$$

$$M_a = (P_d/P_f)^u Y^{ea} \quad (2)$$

where X_a and M_a are exports from nation A and imports into A during a period, (P_d/P_f) is the ratio of domestic prices to foreign prices expressed in terms of the domestic currency of A, z is the price elasticity of demand for imports, Y is income for each region, e_a is A's income elasticity of demand for imports, and e_{rw} is the rest of the world's income elasticity of demand for A's exports. If either z and u are small and/or relative prices do not change significantly, then, as a first approximation, one can ignore substitution effects and concentrate on income effects. Taking the natural logs of equations (1) and (2) and ignoring substitution effects, one obtains Thirlwall's Law of the growth of income, which is consistent with an unchanged trade balance, as

$$y_a = x/e_a \quad (3)$$

where y_a is the rate of growth of Nation A's GNP, x is the rate of growth of A's exports, and e_a is A's income elasticity of demand for imports. Since the growth of exports for A depends primarily on the rest of the world's growth in income (y_{rw}) and the world's income elasticity of demand for A's exports (e_{rw}), i.e.,

$$x = (e_{rw})(y_{rw}) \quad (4)$$

equation (3) can be written as

$$y_a = [e_{rw} y_{rw}]/e_a \quad (5)$$

The rate of growth that a nation can maintain without running into a balance of payments problem depends on the rest of the world's growth and the relevant income elasticities for imports and exports. If the growth of imports is to exactly equal the growth in the value of exports,

$$e_{rw} y_{rw} = y_a e_a \quad (6)$$

then,

$$[y_a/y_{rw}] = e_{rw}/e_a \quad (7)$$

i.e. the ratio of the growth of income in nation A compared to growth in income in the rest of the world is equal to the ratio of the income elasticity of demand for A's exports by the rest of the world to A's income elasticity of demand for imports. Thus, for example, if $e_{rw}/e_a < 1$, and if growth in A is constrained by the need to maintain balance of payments equilibrium, then nation A is condemned to grow at a slower rate than the rest of the world.

If, for example, less developed nations (LDCs) of the world have a comparative advantage in exports of raw materials and other basic commodities, for which Engel's curves suggest that the developed world will have a low income elasticity of demand, while the LDCs have a high income elasticity of demand for the manufactured products and services of the developed world, then for most LDCs

$$[e_{rw}/e_{ldc}] < 1 \quad (8)$$

Accordingly, if economic development and balance of payments equilibrium is left to the free market, the LDCs are condemned to relative poverty, and the global inequality of income will become larger over time.

Moreover, if the rate of population growth in the LDCs (p_{ldc}) is greater than the rate of population growth in the developed world (p_{dw}), that is, if $p_{ldc} > p_{dw}$, then the rate of growth of GNP per capita of the LDCs will experience a greater relative decline to the standard of living of the developed world, i.e.,

$$[y_{ldc}/p_{ldc}] < < [y_{dw}/p_{dw}] \quad (9)$$

In the absence of Keynesian policies to stimulate growth, the long-term growth rate of the developed world taken as a whole tends to be in the 1–2.5 per cent range. As long as the developed world's population growth is less than its long-term growth rate, however, these nations can still enjoy a rising living standard.

If, however, we accept the reasonable values for the parameters implied in inequality (9), then since $y_{ldc} < y_{dw}$, we get $1 < y_{dw} < 2.5$; a dreary prognostication for the global economy emerges. As long as the world permits the free market to determine the balance of payments constraint on each nation, then a shrinking proportion of the world's population may continue to get richer (or at least hold their own), while a growing proportion of the earth's population is likely to become poorer, if not absolutely then at least relatively. Moreover, the slower the rate of growth in income of the rich, the more rapidly the poor are likely to sink into poverty.

Thus, there is an obvious case to explore if there are some policy interventions that can be developed to prevent market determined balance of payments constraints from condemning the majority of the world's population to increasing poverty. Only if the rich can achieve the historically high real rates of growth experienced in the first 25 years since World War II (where Keynesian rather than free market policies were actively pursued domestically and internationally by the developed world) can we hope to significantly improve the economic lot of the poorer nations of the world.

Since the US has apparently not been significantly constrained by payments deficits in the last quarter century, equation (8) can be interpreted in a different

light for the U.S. Given the U.S. rate of growth under Reagan and since, then, if one assumes the import and export income elasticities of demand (e_{rw} and e_d) are fixed, then solving equation (8) for y_{rw} yields the income growth that would have been required of the US's trading partners in order to eliminate the US trade deficit. Alternatively, if y_{rw} is presumed unchanged, then solving for e_{rw} would give the required income elasticity necessary to avoid a US trade deficit.

Consequently, Thirlwall's Law analysis demonstrates that international financial payment imbalances can have severe real consequences, i.e., money is never neutral in an open economy. This suggests that the nations of the world should cooperate in developing an international monetary and payments system similar to Keynes's clearing union and/or my international clearing union mechanism mentioned above that permits and encourages the globalized economy of the 21st century to grow at a close to full employment rate.

NOTES

1. John Maynard Keynes, *The General Theory of Employment Interest and Money* (New York: Harcourt, 1936). All page references to passages from this book will be cited in the text of this chapter accompanying the relevant quote or discussion. References to any other writings of Keynes or any other will appear as endnotes.
2. Nations with banking institutions which make it difficult for foreign authorities to obtain information regarding bank accounts held by their residents are likely to encourage the influx of funds trying to escape national tax collectors, criminal investigators, and the central banks of nations that try to limit capital outflows. Thus, it is not surprising, that often exchange rates reflect speculative, and flight capital flows rather than purchasing power parities.
3. For example, in 1977 the Carter Administration's attempted to 'talk down the dollar'. In the Spring of 1993, Secretary of Treasury Bentsen tried to talk up the yen. In January 1994, the New York Times quoted Secretary Bentsen as saying that 'allowing the yen to decline would not be an acceptable way for Japan to try to escape from its recession'.
4. Most mainstream economists were appalled by President Reagan's boasts regarding the higher dollar that was achieved in the early years of his Administration.
5. Even as this is being written nations are still ignoring this Keynesian 'truth' to the detriment of over 38 million unemployed people in the OECD nations and many more in Eastern Europe and the former Soviet Union.
6. In this matter, Keynes pointed out, 'the [orthodox] faculty of economists prove to have been guilty of presumptuous error' [Keynes, 1936, p. 339].
7. As I point out in my book, *Post Keynesian Macroeconomic Theory* [Davidson, 1994], both Old and New Keynesian analysis is based on the restrictive classical axioms that Keynes threw out in developing his *General Theory*. It is no wonder therefore that these 'Keynesians' subscribe to the classical view of international trade – if they think about it at all.
8. To argue, from the outset, that international cooperation in sharing records and helping enforce capital flows cannot be achieved, is unduly pessimistic. It paints a picture of the human condition where nations were willing to cooperate in world wars at a cost of the lives of a large portion of their youth in the 20th century, but unwilling to cooperate even if it costs the recipient nations a 'fast buck' in the 21st century.
9. For a discussion of Thirlwall's Law see Section III *infra*.
10. In 1968, Professor Harry Johnson wrote [in *The Times* of London, 12/9] 'the basic argument for floating exchange rates is so simple that most people have considerable difficulty in un-

derstanding it. ... a floating exchange rate would save a country from having to reverse its full employment policies because they lead to inflation and deficit'.

REFERENCES

- Davidson, P. (1994), *Post Keynesian Macroeconomic Theory*, Cheltenham, UK and Northampton, MA, USA: Elgar.
- Davidson, P. (2002), *Financial Markets, Money and the Real World*, Cheltenham, UK and Northampton, MA, USA: Elgar.
- Friedman, M. (1974), 'A Response To His Critics', in R.G. Gordon (ed.), *Milton Friedman's Monetary Framework: A Debate With His Critics*, Chicago: Chicago University Press.
- Keynes, J.M. (1936), *The General Theory of Employment Interest and Money*, New York, Harcourt.
- Keynes, J.M. (1980), *The Collected Writings of John Maynard Keynes*, 25 volumes, ed. D. Moggridge, London, Macmillan.
- Thirlwall, A.P. (1979), 'The Balance of Payments Constraint As An Explanation of International Growth Rate Differences', *Banca Nazionale del Lavoro Quarterly Review*, **128**.