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Toward a More Universal Currency: The Impact of the Clearing Mechanism on Developing Economies

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Toward a More Universal Currency:
The Impact of the Clearing Mechanism on Developing Economies

by

Evan Kaderbeck

An Abstract of a Thesis
in
Applied Economics

Submitted in Partial Fulfillment
Of the Requirements
For the Degree of

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Department of Economics and Finance

ABSTRACT OF THESIS

Toward a More Universal Currency: The Impact of the Clearing Mechanism on Developing Economies

As part of a broader plan to reform the system of international finance, experts have indicated the need to modify the system of international money. They point to problems such as the difficulties faced by developing countries in obtaining hard currency needed for imports, or the flows of hot money which make the financing of long-term development projects difficult. Some have called for a form of universal currency, used only in international trade. Developing nations especially need access to a clearing mechanism which would eliminate the transaction costs associated with obtaining hard currency, and reduce the opportunity costs of holding that currency. The application of the clearing mechanism to international finance was originally promoted by John Maynard Keynes, and has been resurrected, among others, by economists of the post-Keynesian school of thought. This paper will examine the context of the original proposal for a universal currency or clearing mechanism, consider the problems of the current paradigm of international finance and how the clearing mechanism could ameliorate them, and discuss whether regional clearing unions could be beneficial to developing nations in the absence of international finance reform.

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Dedicated to the pursuit of a higher standard of living for all people

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I. Introduction

This paper will explore the question: can clearing unions, on an international or regional scale, promote economic growth and improve the standard of living in developing countries? *Clearing* is the settlement of payments and claims between parties. Commercial banks use clearing arrangements in order to settle the obligations between them at the end of some period, usually one day. Here we examine the application of this concept to international trade. As part of his plan to redesign the post-World War II global financial and trade system, economist John Maynard Keynes proposed the creation of an International Clearing Union (ICU), through which all central banks would settle obligations. This proposal would be rejected at the 1944 Bretton Woods Conference in favor of a less robust International Monetary Fund. Still, since that time, several regional groups have engaged in regional clearing arrangements which sought to facilitate trade.

There are several key features of clearing arrangements between trading nations. First, the settlement of payments multilaterally in a defined clearing period enables countries to use their credit balances with some trading partners to pay their debts to others. Second, this arrangement may reduce the amount of foreign reserves a central bank must stock for precautionary reasons--mainly to cover trade debts. Third, a clearing institution, especially an international one, may use a "universal" or super-sovereign currency that is used only between trading central banks, preserving to all nations control over their domestic currencies, and ensuring access to international money for all trading nations. Fourth, a clearing union may require balance of payments equilibrium for each member nation, exerting a stabilizing force on

the global system. Fifth, a clearing union may employ fixed and adjustable exchange rates as a means to induce balanced trade.

Several important impacts of international clearing are discussed in this paper. First, are the cooperative and integrative effects between trading nations. With a clearing system in place, nations are bound by mutually agreed upon rules to trade in harmony. Dependency of peripheral nations on wealthier nations is abated as all are induced to compete on a more level playing field. Second, countries are steered toward stable growth, which is an important precursor to improved standard of living. Finally, the potential impacts on development, or improved standard of living are examined more closely.

Chapter 2 discusses some of the problems of international trade, framing the current paradigm as described by some economists as the *Washington Consensus*. We then examine the history of that arrangement, from Keynes original proposals for a clearing union to modern calls for reforms in the system of global trade. Chapter 3 establishes the methodology of examining the impact of the clearing mechanism, by outlining two approaches to modeling economic growth, and then addressing the mechanics of exchange rate regimes.

Chapter 4 examines the possibilities of regional payments arrangements, which establish the clearing mechanism among groups of countries. Second best solutions are considered. Chapter 5 examines a few case studies of these arrangements, the European Payments Union (1950-58), which was an early component of a decades-long experiment in continent-wide economic integration, and the Asian Clearing Union, which may be playing a similar role in a much slower process of integration in South Asia. Chapter 6 concludes with a discussion of the implications of international clearing for economic development.

II. Literature review

2.1 Keynes and the International Clearing Union

Worldwide economic development has been guided, since the end of World War II, by the Washington Consensus, a term coined in 1989 by John Williamson, referring to coordinating efforts of the US executive branch, the World Bank, and the International Monetary Fund. This triad of institutions, the last two of which were created by the Bretton Woods Agreement of 1944, have imposed fiscal discipline, financial and trade liberalization, and, since 1973, a flexible exchange rate system upon the global economy. These policies have shaped the development of the world's poor and peripheral countries. The economic development of these countries--their progress towards higher wages, improved education and healthcare systems, and longer lives--has been subject to the international financial and trade dominance of already developed nations (Marangos, 2017).

Many economists question the efficacy of these policies as many nations remain caught in underdevelopment, and as hundreds of millions of those nations' people remain mired in extreme poverty. Post-Keynesian economists, in particular, have suggested alternative approaches such as promoting national investment programs, targeting low interest rates, and re-establishing a system of adjustable pegged exchange rates (ibid, 2017). The Post-Keynesian development approach espouses a structural shift of the international trade system, discarding the Washington Consensus, and embracing the vision of John Maynard Keynes, a key policy architect at the Bretton Woods Conference, but one whose most important recommendations for trade policy would be passed over--namely, the creation of an International Clearing Union.

On May 18, 1943, John Maynard Keynes addressed the British House of Lords. Britain and The United States were laying plans for a post-World War II economic order. The purpose of Keynes' address was to explain the British plan to facilitate global trade. Although tariffs were a common impediment to trade in the late 19th and early 20th centuries, and were not expected to vanish in the coming peacetime, an equally problematic trade barrier was recognized, that of currency inconvertibility. Keynes called this a "superimposed obstacle," and argued that "a system of multilateral clearing" was necessary to facilitate trade (Keynes, 1980, pp. 269-80).

The central goal, Keynes argued, was to ensure that money earned through exports can be spent on the imports of any other country. He recommended the creation of a universal currency, which he called *bancor*, for the purpose of international transactions, and that each country should be granted a supply of this currency by his proposed International Clearing Union. This stock of universal currency should be available for spending and borrowing by all nations, as if all nations were depositors and borrowers at the same commercial bank (*ibid*, pp. 269-80).

Keynes often compared his scheme to that of a banking system. In a 1941 paper, he stated that the "idea underlying my proposals for a Currency Union is simple, namely to generalise the essential principle of banking, as it is exhibited within any closed system..." (*ibid*, p. 44). The Clearing Union (or Currency Union, as he called it in 1941) was a mechanism of cooperation among nations for the purpose of expanding trade for all.

Keynes emphasized in his address to the House of Lords that the system of multilateral clearing was "not a relief scheme." The idea is simply to increase the liquidity of money in international markets. He assured the members that no country would have "to put up a single dollar which they...prefer to employ in any other way whatever" (*ibid*, p. 276).

In another set of 1941 papers, “Proposals for an International Currency Union,” Keynes outlines his plan. First, central banks would be the sole managers of foreign exchange and would be the conduits of all foreign transactions. The central bank of each country or currency area could buy and sell stocks of other currencies, but only against their accounts with the ICU.¹ Central banks would also control capital flows. Checking movements of capital investment is central to Keynes’ vision of international exchange stability. While unencumbered capital investment had beneficial economic consequences in the past, circumstances were special. Where capital funds flowed from developed countries to poorer ones, for the purpose of development, this type of investment was productive. Sometime after World War I, however, speculation began to steer these flows, and this type of investment created instability. Keynes emphasizes, “nothing is more certain than that the movement of capital funds must be regulated;-which in itself will involve far-reaching departures from laissez-faire arrangements.” The ICU represented the foundation of new arrangements (ibid, pp. 30-4).

The ICU would establish a system of fixed exchange rates, and would tie those rates to gold. However, in a departure from earlier gold-standard systems, gold would enjoy only one-way convertibility. A country could settle its clearing account deficits with the ICU using its stocks of gold, but gold could not be withdrawn against a clearing account credit. Any gold collected by the ICU would be redistributed at the end of each year (ibid, p. 35). Keynes, among other economists, had begun to question the usefulness of gold in substantiating currencies, and worried about deflationary pressure resulting from limited stocks. He called the gold standard a “barbarous relic” and sought to reduce its role in international exchange (Steil, 2013, p. 138).

¹ Keynes was hopeful that after the war, British Commonwealth countries such as India, Australia, and New Zealand would retain the British pound sterling as their national currency.

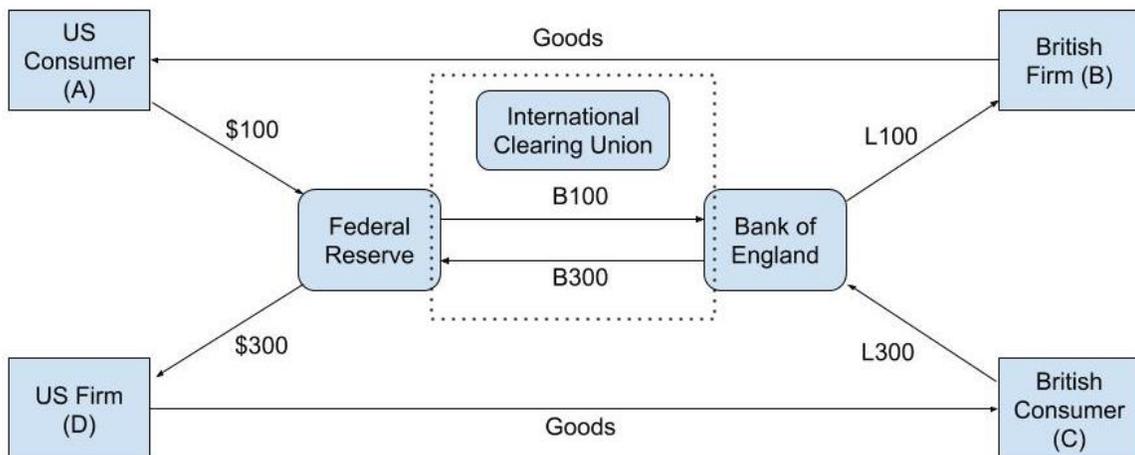
The limits of each country's clearing account would be determined by the average volume of its annual international trade over the last five years. Countries would be permitted to overdraw their accounts, but penalties and adjustments would be required if those overdrafts were not corrected by the end of the one-year settlement period. For countries whose central banks were in deficit at the end of the year, interest on their deficits would be assessed, and devaluation of its currency would be allowed, and if a country's deficit was greater than fifty percent of its allotment, devaluation would be required. Surplus central banks also faced penalties and adjustments. Countries with excess credit would be encouraged to upwardly revalue their currencies, and beyond the fifty percent threshold would be required to do so. Additionally, account surpluses could be seized by the ICU and added to the reserve fund, for future redistributions (Keynes, 1980, pp. 35-6).

Countries which found themselves in a creditor position with respect to trade, that is, possessing a current account surplus, would be required to dispose of that surplus, or pay penalties. Keynes expected that penalties would not actually be collected, but would incentivize creditor countries to adjust their policies to encourage more imports. In order to facilitate this, the ICU, which would generally maintain a fixed-rate system between all currencies and its internal *bancor*, would work with creditor countries to revalue their currencies. It would be the central task of the ICU to manage the trade behavior of member nations and steer trade towards balance (ibid, pp. 48-50).

It is important to emphasize that despite Keynes' admonitions about the necessity of "departures from laissez-faire arrangements," his intent was the creation of a more liberalized trade environment, not a more restrictive one. He insisted upon an "expansionary" trade system, and indicates the importance of trade in allowing the equilibration of a country's productivity

with the effective demand for its products in world markets. “...If we possess the productive capacity and the difficulty is the lack of markets as a result of restrictive policies throughout the world, then the remedy lies in expanding opportunities for export by removal of restrictive pressure, not in contracting imports” (ibid, p. 48). The purpose of the ICU was not to limit the freedom of nations to self-manage profit from their trade and other cross-border flows, but to maximize the overall volume of trade by ensuring that current account imbalances did not create purchasing power backwaters. Keynes was concerned that central banks’ excessive preference for liquidity withheld money from productive use. This liquidity preference was enhanced as countries remained uncertain about whether their export markets could supply sufficient foreign reserves to cover their imports on a spot basis. The stockpiling of reserves hampered demand for goods and starved product markets. A system of international clearing greatly reduced the need for money-hoarding by trading nations.

Figure 1: Bilateral Clearing



Source: Author’s configuration based on essays found in *The Collected Writings of John Maynard Keynes: Volume XXV, Activities 1940-44: Shaping the Post-war World: The Clearing Union* (Keynes, 1980).

Figure 1 illustrates how the International Clearing Union would function between any two countries. Imagine that only two transactions occurred between the US and Britain in a given one-year clearing period. Here, one US consumer, by way of their commercial bank, makes a purchase from a British firm. The ICU requires that all international transactions are channeled through central banks, so the commercial bank representing Consumer A directs 100 USD to the Federal Reserve, which then transfers 100 bancor to the Bank of England. The Bank of England makes available a 100 pound sterling payment to the commercial bank representing British Firm B. This assumes 1:1 dollar-to-bancor and pound-to-bancor exchange rates, as fixed by the ICU. The transaction between British Consumer C and US Firm D proceeds in the same fashion, with 300 bancor transferred to the clearing union account of the US Federal Reserve from the Bank of England on behalf of Consumer C. At the end of the year, the ICU, which holds no domestic currency and acts essentially as a ledger of transactions, records a clearing account surplus of 200 bancor for the US and a clearing account deficit of 200 bancor for Britain.

Discretionary or mandatory action on the part of each government to balance its clearing account, and thus also balance its trade, will be determined by the index-quota set by the ICU, in proportion to the average volume of trade of each nation over the last five years. Bancor currency is represented by this index-quota. The issuance of bancor to a participating central bank establishes the amount against which account credits and deficits will be measured, for the purpose of determining whether exchange rate adjustments or other corrective actions may or must occur. In the above example, if the US has an index-quota of 1,000 bancor, then it is within twenty-five percent of its index, and may take no action. If Britain has an index-quota of 500 bancor, it is in deficit by more than twenty-five percent of its index and will be allowed to devalue its currency, perhaps to a 2:1 pound-to-bancor ratio. If Britain's index-quota were only

400 bancor, then it would be at fifty percent of its required account value, and it would be *required* to depreciate its currency or to balance its account by surrendering gold reserves, which are also held at a fixed rate to bancor. Conversely, if the United States were in excess of fifty percent of its index-quota it would be required to upwardly revalue its currency. Of course, as in the case of Britain in this example, a deficit country would be unlikely to resist devaluation, as it would encourage the sale of exports. The significance of Keynes' adjustment requirements is most apparent with respect to surplus countries because revaluation may be harmful to national interests in the short-term. When countries revalue, exports may decrease, as foreign buyers find it more expensive to acquire the currency. As a result, overall economic growth may slow, and exporting industries may suffer as they bear the brunt of that slowdown in growth. In acceding to the ICU arrangements, nations agree to set aside optimal national outcomes in the interest of optimizing trade for all nations.

The Bretton Woods Conference and the years of prior negotiation between Britain and the United States resolved differently than Keynes had hoped. The British were not in a position to assert their goals for a post-war system, having relied heavily on United States support during the war, and facing continued reliance on US aid in the coming decade. Harry Dexter White, Assistant Secretary of the Treasury, was the chief representative for the United States in the Bretton Woods talks. His plan, which would install the US dollar as the world's reserve currency, would win the day. The White plan called for the creation of a stabilization fund that would assist member countries when they faced liquidity crises by allowing them to buy other members' currencies. To access this system, countries would agree to fixed exchange rates that would be governed by the fund, domestic economic policies that would maintain the balance of payments, and to gradually reduce tariffs and other trade barriers. The White version of

international financial stabilization was a system that first and foremost benefited the United States. Although White was not outspoken about this aspect of the fund plan, the currency demanded by countries with import demands would be the US dollar. At the time the US was a net exporter and sought new markets for its goods. The US also controlled most of the world's gold, which would back the US dollar and would therefore be the anchor of all the world's currencies. Through a system of rules-bound international stabilization and dollar promotion, the United States could deepen its advantage in trade (Steil, 2013, pp. 133-5).

White's stabilization fund would become known as the International Monetary Fund (IMF), really a clearing bank with similarities to Keynes' clearing bank, with two critical differences. One, the IMF would use the US dollar as its currency, rather than establishing a neutral currency internal to the clearing system. Second, the IMF structure would not set rules requiring the elimination of credit balances, which was a critical feature of the Keynes plan. Keynes acknowledged the possibility of compromise between White's plan and his, but the unclarity about the consequences facing creditor countries in the White plan was not consonant with Keynes' vision of a trading system in which nations were responsible for keeping a balance of trade (Keynes, 1980, p. 279).

It was clear that in the design of their respective plans, Keynes and White were both representing national interests as much as they were carefully considering trade stability and expansion for the wider world. White wished to amplify the strength of the United States' creditor status, while Keynes hoped to wipe clean Britain's slate, which was heavily dusted with war debt.

Still, there were commonalities in the White and Keynes plans. Both plans were interested in reducing barriers to trade, and in protecting world trade against contractionary

pressures. Both plans considered a fixed exchange rate regime necessary for stability., and incorporated gold as the basis of that fixed system. The White plan fixed the US dollar to gold, and all other currencies to the dollar. The Keynes plan did the same with the bancor in place of the dollar. Keynes, however, was wary about the reliance of trade on gold, both for macroeconomic and nationalistic reasons, so he incorporated the one-way gold convertibility rule in his ICU. The Keynes plan was also much more flexible on the adjustability of fixed rates, whereas White's fixing was more rigid, protecting the affordability of the dollar (Steil, 2013, pp. 147-50).

Both Keynes and White were concerned about the rapid movements of capital spending, or hot money flows, and were determined to limit these movements, which could be destabilizing, especially when capital investment fled deficit countries. White's plan would require member nations to accept foreign investment only as coordinated by their governments. Keynes hoped that governments would take on this role, but he was confident that if exchange rates accurately reflected productivity in each nation, and if creditor nations were required to spend their trade surpluses, capital investment would flow in the right direction (ibid, p. 150). Part of the beauty of the Keynes plan is that it attacked more problems with fewer rules. By establishing a universal payments system with basic incentives for nations to balance their accounts, countries could be relied upon to enact necessary trade precautions and promotions in their own interests. Intervention into the domestic and trade policies of sovereign nations by an international body would not be required.

Keynes was essentially dissolving a prisoners' dilemma with his plan. Countries, making trade and macroeconomic decisions in their own self-interest, would be expected to defect from cooperation in order to protect that self-interest. These protections might come in the form of

tariffs, quotas, export subsidies, or currency devaluations. Through the establishment of basic rules and a payments and clearing mechanism, each country would have greater transparency on the status and expected behaviors of other nations. For example, a deficit country, which might be tempted to enact import tariffs or export subsidies to balance its current account, would be less likely to do so as a member of the ICU. That country would see the trade surpluses of other countries on the ledger, and could be confident that within the one-year clearing period, those countries would upwardly revalue their currencies and start to buy on the world market. That deficit country would also devalue, but probably less so than if it was not expecting a complementary revaluation from its trade partners. The White plan also established a multilateral trading environment, but it was one without rules governing the adjustability of exchange rates for countries on both sides of a zero account balance. Because of this, deficit nations would have less confidence in the fairness of the system, while also being subject to a more rigorous set of rules in order to comply with it.

Rigorous rules are the centerpiece of the regime that guides international development today. White's IMF has transitioned from an agency that oversees a system of fixed exchange rates to one which attempts to clear the flotsam of speculative investment in a sea of floating national currencies primarily by anchoring developing economies below the rising tide. Beginning in 1970, just a few years after the Bretton Woods System began to coalesce, some countries began to float their currencies. There was a growing feeling among economists that floating exchange rates provided the best environment to maximize economic efficiency, and to achieve a "natural" equilibrium. This philosophy has its origins in Marshall's *The Pure Theory of Foreign Trade* (1879), and was breathed new life by Friedman's "The Case for Flexible Exchange Rates" (1953). As central banks abandoned their pegs to the dollar, the IMF

transitioned from lending combined with macro-level management of the foreign exchange system to lending combined with micromanagement of domestic economies. In concert with the neoliberal economic philosophy that was coming to prominence in the 1970's and 80's, this micromanagement usually involved privatization, deregulation, and forced openness to trade and investment (Chinn & Wei, 2013, pp. 168-9; Robinson, 1946, pp. 98-99; Steinwand & Stone, 2006, pp. 123-135).

It is ironic that the suspension of a system that at least in part provided broad regulation in international markets and its replacement with a free-market system where national currencies themselves become sources of profit and thus drivers of resource allocation has left many developing nations *more* rules-bound, as they struggle to comply with the conditions accompanying IMF disbursements of emergency funds. Keynes believed that broad rules alleviate the need for narrower ones, that general equilibrium in the global allocation of resources was possible, but that the world economy had to be underpinned by some constant guidelines in order for allocation to freely flow. Whereas his contemporaries saw gold as that underpinning, Keynes understood that principles were more important than precious metals. Fixed exchange rates and balanced trade were the runners on which the global economy must rock. Balance of payments equilibrium in each country would guarantee efficient distribution of resources and income, and countries could be steered toward that balance if they surrendered sovereignty over their exchange rates.

The shift in the IMF's role in international trade had followed two important changes in the early 1970's--the United States' abandonment of the gold standard and the widespread defection of trading nations from fixed exchange rates. Keynes would have cared less about the loss of the gold standard, but the transition to a floating exchange rate system completely severed

the international economy from the stabilizing forces that the Bretton Woods Agreement had intended to exert. This shift was truly a divorce from the Keynesian philosophy.

2.2 Competing philosophies of international trade

The current post-Bretton Woods international system has many critics. Some have taken aim at the dependency on international relief that has been engendered in developing nations. Others have questioned whether the architecture of international trade is really focused on development. Stiglitz, for example, argues that the IMF mainly promoted the interests of developed countries as it opens markets for trade and investment in the developing world. Steinwand and Stone (2006) conclude, “we now have a strong empirical basis for the claim that IMF lending is skewed by the foreign policy priorities of the United States at all stages of the project cycle.” Furthermore, “interference by the IMF’s principals undermines the IMF’s efforts to achieve its objectives” (Steinwand & Stone, 2006, p. 146).

The 2008-9 global financial crisis increased calls for international financial reform. Zhou Xiaochuan, former governor of the People’s Bank of China, penned an appeal in 2009 to end global dependency on the US dollar as the primary reserve currency. He called for the creation of a stable reserve currency “issued according to a clear set of rules,” and unhinged from the “sovereign interests of any single country” (Zhou, 2009, p. 1). *The Triffin Dilemma* provides the theoretical basis of Zhou’s argument. It explains that central banks issuing reserve currencies cannot reliably manage both world trade and domestic demand. Pursuing one of these agendas requires trade-offs in the other. The increased number and severity of financial crises since the 1970’s stand as evidence that the post-Bretton Woods floating exchange system is untenable.

Zhou points to Keynes' universal bancor currency as a component of a more farsighted solution to global financial instability, which was unfortunately not built into Bretton Woods system. To address the deficiencies of the system, the IMF created special drawing rights (SDRs) in 1968, which were essentially super-sovereign currency units issued to trading nations, but which remain in limited use. Zhou does not suggest an end to flexible rates, but he calls for the gradual expansion of the stock of special drawing rights and the extension of their use into trade, and for the establishment of a system of settlement between the SDR and national currencies (ibid, pp. 1-3). Such a system of settlement could mirror Keynes' multilateral clearing system.

Though economic growth has been rapid since the collapse of the Bretton Woods system, it has been unevenly distributed and the likelihood of foreign exchange crises is persistent in developing countries. The neoclassical argument that natural forces of the economy will create balanced trade is flimsy when real world circumstances are applied. This argument, manifest in many iterations of Marshall's "pure theory," is based on the expectation that trade imbalances necessitate income money-wage adjustments in trading nations, which lead to price adjustments in product markets or to exchange rate adjustments, which thereby steer trade back to equilibrium. In other words, trade imbalances can only be temporary aberrations in an otherwise self-levelling economic plane. Much in the way that ocean waves can only grow so large before gravity pulls them back into uniformity with the greater body of ocean water, trade fluctuations too are limited by natural law. A trade deficit or surplus can only persist for so long before it is corrected by price adjustments. Robinson (1946) calls this theory into question. She points out that while these adjustments may occur, they may occur by any inhumane means--through the fall of incomes of already desperately poor people, the loss of needed imports, or the exhaustion of precious natural resources. "The hidden hand will always do its work, but it may work by

strangulation” (Robinson, 1946, pp. 98-103). Likewise, while waves may always resolve themselves with the ocean, they may first make devastating landfall.

Robinson acknowledges the formal mechanics of the neoclassical theory, but criticizes its impact on humanity. Davidson (1982) challenges the model on its assumptions. He points to Friedman’s assertion that flexible exchange rates and prices will automatically bring about a balance of trade. In this model, money has no role other than as a means of settlement. In the real world, unpredictability is the norm (a factor which has itself entered formal modeling--for example in Hicks’ elasticity of expectations). Where there is uncertainty, there is also a preference for holding money, to cover unexpected costs or losses in income. Moreover, in a modern entrepreneurial economy, many transactions proceed in the form of forward contracts, where services are rendered according to some schedule of future payments. During the period of contract settlement, there is uncertainty about the changing value of promised payments of inflation and exchange rate fluctuations, giving rise to an increased preference for liquidity. Davidson refers to money as a “liquidity time machine,” the nature of which must be considered in our analysis of the global economy (Davidson, 1982, pp. 96-108).

In examining the causes of prolonged underdevelopment, economists have found that uneven balance of payments is both a cause and an effect of slow growth and development among nations. Once free trade is established, less productive industries become entrenched in debtor nations, and more productive industries take hold in creditor nations. Raul Prebisch and subsequent researchers determined that the terms of trade between center and periphery nations worsened as global economic growth persisted. Free trade left debtor nations in the dust. While center nations benefited from technological innovations in advanced industries that would push up the value of their exports, periphery nations would be pressured to produce more and more

primary goods, and would more exhaustively deplete their natural resources (Cypher, 2014, pp. 201-3).

A developing nation with low value exports and high value imports must acquire foreign reserves to settle its debts to other nations. Mostly, this is done with US dollars. To acquire US dollars or another reserve currency, a nation relies on free-floating exchange rates to determine the value of those currency transactions. Importing nations, especially those whose current account deficit to GDP ratio is high (Libya, Mozambique, and Liberia are the highest, according to 2015 CIA World Factbook data) must amass foreign reserves when exchange rates with their national currencies are favorable in order to service their debt when the exchange rates of their national currencies rise. This precautionary behavior by central banks limits their ability to use monetary policy to manage their domestic economies, and may thereby depress the effective demand of those nations.

This is one reason the Washington Consensus values the free-floating exchange system of post-1973. A high level of demand for US dollars worldwide gives the United States tremendous power to influence international trade. The US has a monopoly on the creation of the world's primary reserve currency. It can thus influence the liquidity of world trade while also running a perpetual current account deficit without facing a crisis of foreign reserve depletion.

Washington's interest in a new international payments regime is foreclosed by its stake in the current system, where its currency enjoys international acceptance, or near-*bancor* status.

Stability is critical to the performance of the global economy, and is therefore critical to the economic development of nations, where reliance on technology and capital goods from the developed world is high. Keynes' designs for the international system of trade--fixed exchange rates and a system of multilateral clearing--prioritize stability, and could therefore have profound

impacts on the ability of countries to grow and develop. If multilateral clearing can promote growth, how can we integrate it into existing growth models, to better formalize its impact on growth and development? Next, in Chapter 3, we examine the Solow and Harrod models of growth in order to fit the concept of multilateral clearing into broader theoretical context.

III. Theoretical context

3.1 The relationship between growth and development

In examining the impact of international clearing on a country's level of development, it will be important to distinguish between growth and development. Traditionally, economists have focused particularly on economic growth as a critical objective for any country, at any stage of development. The annual increase in the size of a country's economy, as measured by gross domestic product (GDP) or gross national income (GNI), is the central goal in the eyes of many economists. Economic growth is important. Given a low population growth rate, a modest to rapid increase in the size of a country's economy means a higher average income, or GNI per capita. Residents of a fast-growing nation enjoy increasing average incomes and presumably a higher standard of living, provided growth rates are understood in real terms, accounting for the average rise in prices. It is an article of faith among mainstream economists that specific dimensions of development, including improvements in health care and education, the protection of a clean and healthy natural environment, equity in the distribution of income, decreased gender inequality, and equity in political and economic opportunity, can all be accessed more readily in the presence of higher incomes. Economists who support the validity of the Kuznets hypothesis² further contend that although rising incomes may at first be associated with

² The Kuznets hypothesis holds that a country's Gini coefficient and GNI per capita are positively correlated below a certain income threshold, and negatively correlated above that threshold. The common interpretation is that as the economies of very poor countries grow, income inequality tends to increase. In wealthier countries, income growth corresponds with falling inequality. The Kuznets curve is therefore an inverted "U" shape resulting from the plotting of Gini values against income growth. It is not hard to find evidence contrary to the Kuznets hypothesis. Rising inequality in the US in the 2009-2013 period of expansion is an example. Furthermore, the assumption of rising inequality in poor but growing economies may be self-fulfilling, in that this assumption justifies the dismissal of policies aimed at fairly

decreased equity in the distribution of incomes and lackluster progress toward specific development goals, these growing pains are essential to the eventual achievement of a more developed state, which begins to strengthen along with per capita income growth beyond some income threshold (Cypher, 2014, pp. 35-37, 64-68).

Growth rates, however, even when adjusted for inflation, can be insufficient in providing information about the standard of living of large portions of a country's population. Real GNI per capita measurements are arithmetic averages, and therefore are sensitive to outliers in the population. These data tell us nothing about which segments of the population are enjoying the increased wealth. Many nations that have enjoyed high growth rates, such as Brazil and Mexico still have large populations living in poverty and even in extreme poverty. As of 2016, Brazil had over 8 million people in extreme poverty (CIA World Factbook), while Mexico had over 11 million in extreme poverty as of 2014 (*Multidimensional Measurement of Poverty in Mexico*, 2014).

There are other problems masked by a focus on growth. Gender inequality, access to education and healthcare, life expectancy, child and maternal mortality rates, government corruption, and environmental degradation are all economic issues that impact the standard of living and also vary not in accordance with the rise in national income, or even with the rise in average incomes. Some of these factors are taken up by composite economic indices such as the human development index (HDI), the inequality adjusted HDI (IHDI), and the gender inequality index (GII). When taken into account, these factors give a more holistic (if less easily quantifiable) picture of development as opposed to growth. The United Nations Development

distributing wealth in the least developed countries (LDCs). In other words, even if the Kuznets relationship can be observed in LDCs, it is not necessarily causal.

Project emphasizes the divergence between income growth and the increase in HDI scores, pointing out in a 2001 report that:

“Countries do not have to wait for economic prosperity to make progress in human development.... Costa Rica and Korea have both made impressive human development gains, reflected in HDIs of more than .80, but Costa Rica has achieved this human outcome with only half the income of Korea.... With the right policies, countries can advance faster in human development than in economic growth” (UNDP 2001, p. 13, as cited in Cypher, 2014, p. 63).

Nonetheless, growth is a factor embedded in HDI scores, and it is clearly critical to development at some level. Average incomes are at least a rough indicator of access to a variety of quality-of-life-improving services and goods, and can be understood as a precursor to other development factors. In other words, growth without development is possible, but development is not possible without growth. Despite the difference in the proportionality of increases in GNI per capita and HDI when comparing countries such as Costa Rica and South Korea, per capita income growth is present almost everywhere that development is occurring. Although we must not stop at income growth when considering a country’s development, we must have it. International clearing is one possible reform of the system of international trade that may strongly impact per capita income growth, and it may possibly affect other factors of development beyond growth.

3.2 The Solow growth model

Perhaps the most well-known growth model in economics is the Solow growth model, which predicts the combined growth effects of adding labor and capital to a steady-state economy.

While the Solow model considers labor and capital, all other impacts on growth are considered exogenous. Technological innovation and shifting trade relationships are exogenous to the model. For all its simplicity in design, there have been more than one generation of economists testing the Solow model--measuring its predictions against the empirical evidence of growth in various countries and regions, and in the eyes of some it has stood the test of time (Diniz, Barossi-Filho, & Silva, 2005).

The Solow model represents a closed economy. Though international factors are not formalized in the model, they are not altogether absent from it. Countries with low cost labor, and thus high potential rates of return to capital investment, will attract large amounts of capital investment. Once a flow is established, high rates of investment would continue, feeding rapid growth and generating higher income. As incomes rise, however, returns to capital diminish and the incentive to invest is eroded. The Solow model thereby predicts that incomes of competing and trading countries would converge. Wealthy nations will grow slowly because their higher incomes make investment costly, and poorer nations will grow rapidly as cheap labor attracts massive capital investment. This concept has been called *factor price equalization* (FPE), a term which originated with Samuelson (1948). The Solow model and its subsequent interpretations compose a body of theory in support of this equalization, which can be interpreted to suggest that unencumbered trade and capital investment between nations will lead to an eventual balance in global prosperity. Only, empirically, this convergence has not occurred. Several studies have

indicated the invisibility of FPE as a real trend in a rapidly growing and increasingly interconnected global economy (Oslington & Towers, 2010, p. 650). It is a weakness of the Solow model that trade factors are not considered directly, but rather as a specter surreptitiously operating behind the all-important rate-of-investment factor. If our understanding of growth is informed primarily by the Solow model, the clearing mechanism has little relevance. Concerns over transaction costs or any barriers to trade are overridden by the innate propensity of a less developed economy to attract capital flows. A Solow-informed growth perspective favors limited guidance in the direction of these flows, and is therefore incompatible with the establishment of balance of payments restrictions.

3.3 The Harrod trade multiplier

An alternative to the Solow model of economic growth is the Harrod model--or Harrod trade multiplier. In the manner of Keynes, Harrod cast growth in the context of an open economy, wherein trade and money flows between nations are the primary determinants of growth. Export growth is critical to any country's overall economic growth. Export income is the component of national income which is dependent on a country's trade relationships, and assuming an otherwise closed system of investment and savings, exports are the only injection into that system (Thirlwall, 1982, pp. 1-5).

Harrod indicates that an economy at full-employment levels must suffer a loss of employment or of income levels if there is a trade deficit. A leak in the current account is a leak of hard currency. The leak could be slowed if consumption levels dropped, provided the

propensity to import is greater than the propensity to consume generally, but this amelioration would be brought about only by falling incomes. The Harrod model is given by the expression:

$$y = x/m$$

Where y is equal to the rate of growth in income, x is equal to the rate of growth of exports, and m is equal to the income elasticity of demand for imports

The Harrod trade multiplier is the income elasticity of demand for imports (m). When the rate of export growth (x) is divided by this number, we get the overall rate of growth (y) of an open economy. The nearer the income elasticity of demand for imports is to zero, the more rapidly the economy will grow. In the Harrod growth framework, access to export markets is an essential component of growth. In a Keynesian trade regime, that is, one in which each country is steered by mutually agreed upon rules toward a balanced current account, the Harrod model may be more realistic. Thirlwall (1982) presumes that governments will intervene in the economy to ensure the availability of investment funds, but that they are quite limited in their ability to address balance of payments disequilibrium. The Harrod framework explains the propensity of economies to adjust their balance of payments, via changes in incomes or in the employment level, in response to changes in the volume of imports (Thirlwall, 1982, pp. 1-5). The model may also be adapted to account for capital flows, which, in an environment of unconstrained balance of payments, are expected to enter trade deficit countries as a source of foreign exchange. Thirlwall and Hussain (1982) integrate capital flows into the Harrod model

and still find substantial evidence to support the impact of export growth on overall economic growth (Thirlwall & Hussain, 1982, pp. 498-501).

3.4 Exchange rate adjustments

Keynes' International Clearing Union targeted export-led growth through a system of fixed exchange rates and adjustment requirements for surplus and deficit countries alike. The purpose of the system was to expand export markets for all countries. Without balance of trade equilibrium in all countries, export growth for some countries may result in a trade deficit and foreign exchange problems for others. In fact, if any country reports a trade surplus, at least one other country *must* report a trade deficit, which is why a fixed-rate system that places adjustment requirements only on deficit countries cannot prevent trade imbalances from occurring.

Fixed rates present an excellent mechanism for maintaining current account equilibrium across all countries. As a developing country with lower value exports trades for higher value imports, there is a tendency for the terms of trade to become less favorable for that country over time. As economies grow, those higher value imports become more and more expensive relative to the value of the developing country's exports, so a trade deficit takes shape. In a free-floating exchange rate regime, countries with less-valuable exports could expect to see the value of their currencies depreciate, and correspondingly boost sales of their exports. However, there is no guarantee that this depreciation will proceed to the point that trade comes into balance. A wealth of studies have been undertaken to determine the effectiveness of market-determined exchange rate adjustments in balancing trade, with mixed results.

The real exchange rate (RER) is given by the expression:

$$RER = ER(P^*/P)$$

Where P^* is the domestic price level, and P is the price level in the country in whose currency the exchange rate is expressed. For example, consider the yuan (RMB), for which the current exchange rate is 0.15 USD. At this rate, one dollar buys 6.67 yuan. If the exchange rate is appropriately valued, then a basket of goods which sells for one hundred dollars in the United States will sell for 667 yuan in China. However, if that basket sells for 600 yuan, then the RER is 0.90 [$.15(600/100)$], meaning that the nominal exchange rate of the yuan is undervalued by 10%, and that there is a difference in purchasing power within each country. According to prevailing theory, market forces will cause an adjustment to take place, so that the RER returns to unity. This adjustment will take place through the nominal exchange rate or through prices. Economic agents will observe the cheapness of goods in China and make them available in other countries, driving up the price of the yuan by virtue of increased demand, and consequently making the higher priced goods in the United States less competitive, driving those prices down. Friedman's (1953) argument for flexible exchange rates is based on the idea that fixed-rate systems place all the pressure of adjustment on domestic prices, which, along with wages, are stickier, or more resistant to change, making adjustment much more painful, and increasing the likelihood of eventual crisis (Gervais, Schembri, & Suchanek, 2016, p. 87).

Gervais, Schembri, and Suchanek (2016), in a study of 22 emerging market (developing) economies and the G7 countries, find that RER adjustments were more closely associated with reversals of both surpluses and deficits of the current account in countries with flexible exchange

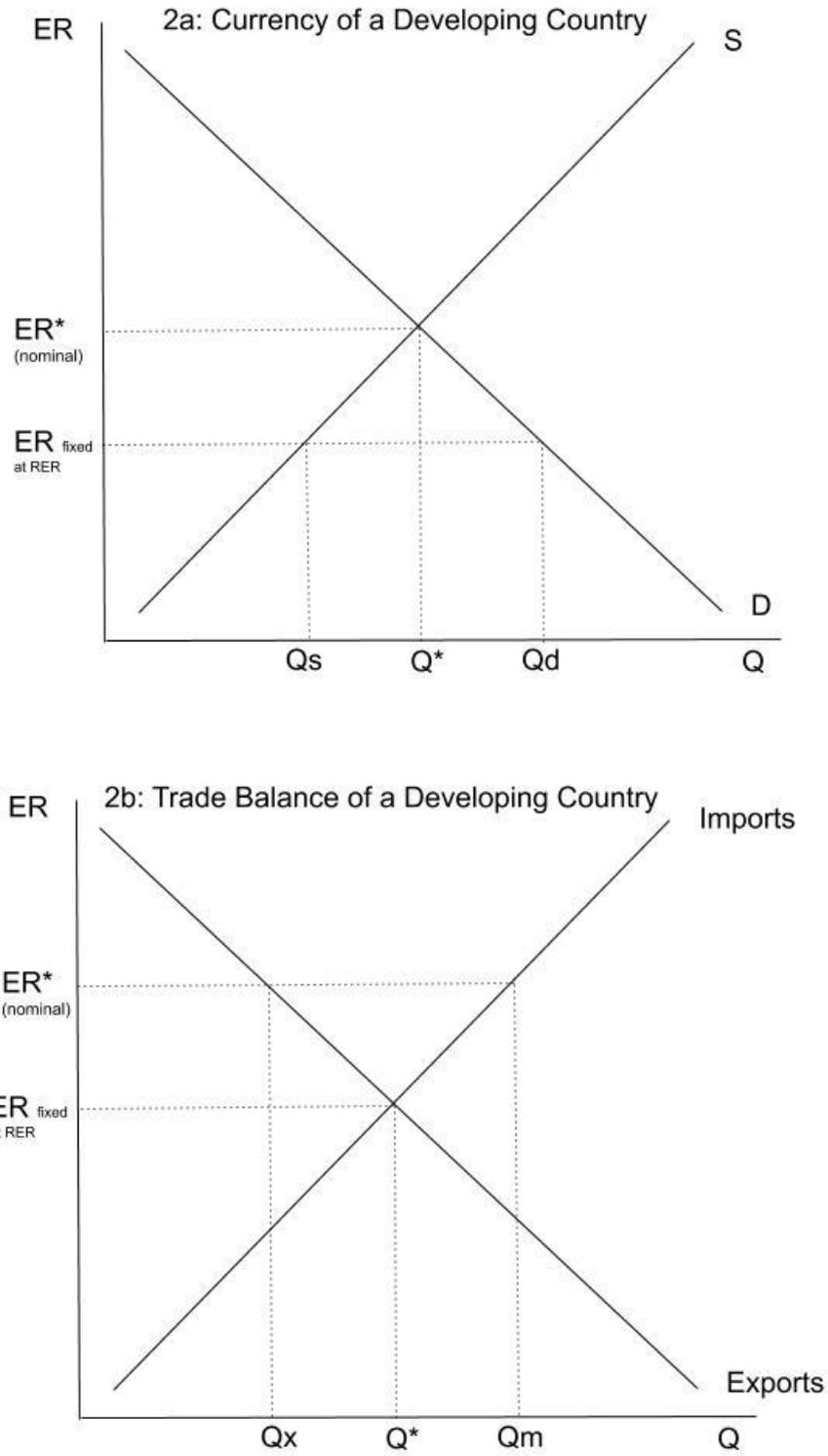
rate regimes. Fixed-rate countries had a slower adjustment process in both RER and in correcting current account imbalances. Moreover, in 70% of cases, current account deficit reversals were associated with accelerated GDP growth. The effects were most pronounced in developing countries (ibid, pp. 86-91).

However, several studies illustrate that despite a correlative connection between fluctuations in RER and current account reversion, purchasing power differences are persistent. While current account imbalances are volatile, RER adjustment is gradual (Kim, 2012, p. 631). One issue is that while trade balances are dependent on the prices of tradable goods, domestic prices, which are employed in RER calculations are based on a much broader basket of goods and services, many of which are non-tradable, such as homes and utilities. Another problem is that there are many transaction costs to trade, many of which may not be reflexive, leading to disparities even in the prices of tradable goods in various countries. Moreover, the gross substitutability of goods which is presumed by neoclassical economists may not resonate with the actual tastes and preferences of people of many cultures, and the many ethnic and nationalistic influences on those preferences for products. Ford and Horioka (2017) identify “frictions” in global financial and goods markets which contribute to the persistence of purchasing power disparity (Ford & Horioka, 2017, pp. 325-328). Even in flexible exchange rate regimes, central banks may be float-averse and seek to influence the exchange rate through adjustments in foreign reserve holdings. Several authors indicate the “non-linearity” of RER adjustments, which suggests that more dramatic deviations from parity may inspire purposeful action on the part of governments and central banks (Michael, Nobay and Peel, 1997; Copeland and Heravi, 2009; Kim, 2012). Institutional intervention, therefore, may be a driving force behind corrections in the RER and the current account. Corrections are often made purposefully,

when imbalance becomes severe or crisis looms, rather than automatically, as market forces calibrate with the changing economic landscape in real time. Chan (2015) identifies several episodes in countries with relatively fixed exchange rate regimes in which substantial inflows of foreign exchange were not accompanied by changes in the RER or by domestic price changes. In these episodes in India, Jordan, China, and elsewhere, central banks intervened to “sterilize” possible fluctuations, or the public took similar action by adjusting their preference for liquidity, or rate of savings (Chan, 2015, pp. 1-29).

Given that the “natural” adjustment of exchange rates to balance purchasing power and trade is not substantiated, the volatility presented by flexible exchange rate regimes threatens the growth potential of any country with a reliance on imports, if the Harrod model is applied. In a fixed-rate system, adjustments of exchange rates could be required that stimulate a more rapid balancing of the current account and the preservation of growth potential in developing economies.

Figure 2: Flexible exchange rates



Source: Author's configuration

Figure 2 illustrates the trade-off between exchange rate equilibrium and current account equilibrium. In a flexible exchange rate system, market forces will determine a developing country's currency exchange rate. That nominal rate is represented by ER^* . Advocates of neoliberal trade policies (encouraged by the "pure" trade theories of Marshall and Friedman) argue for the application of *laissez faire* philosophy to all markets--domestic, international, and foreign exchange alike. However, equilibrium in the market for currency (represented by the nominal rate ER^*) may not correspond to equilibrium in any one nation's balance of trade, and a trade surplus or deficit may result (represented above by Q_m-Q_x). Even when misvaluation of a currency is recognized, as determined by the real exchange rate (RER), corrections in the exchange rate may be slow to respond without government or central bank intervention (Michael, Nobay and Peel, 1997; Copeland and Heravi, 2009; Kim, 2012). This creates a situation in which deficit countries become dependent on capital flows from developed countries, flows which themselves are guided by exchange rate fluctuations and which affect those fluctuations. In an adjustable fixed-rate system like the International Clearing Union, a deficit country's currency would be devalued periodically, pushing the nominal value of that currency out of equilibrium (represented by Q_d-Q_s), but actively correcting the real exchange rate to unity, thereby steering the nation's current account toward equilibrium. Conversely, surplus nations' currencies would be revalued, reducing the required rate of devaluation for deficit countries.

A fixed but adjustable exchange rate regime may foster growth more effectively than a flexible rate system, if it is managed in good faith--in the interests of maximizing global growth, perhaps at the expense of more rapid national growth in some economies. This type of system

emphasizes reliance on international institutions in managing foreign exchange markets (which occurs on a *de facto* basis in a flexible rate system), but in doing so they allow foreign exchange to become a tool for maintaining equilibrium in trade, reducing the risk of foreign exchange crises for individual nations. With trade balanced over the clearing period, developing nations can maximize their export growth without exposing their economies to even greater growth in imports, which according to the Harrod model, is the critical feature of overall growth in an economy.

There is evidence to suggest that fixed exchange rate systems, even when implemented on a bilateral basis, may promote economic growth more effectively than flexible rate systems. One reason for this may be that in the absence of rate fluctuations contracts between international buyers and sellers are more predictable (Klein, 2006, pp. 372-373). On an international scale, fixed but adjustable exchange rates create a mechanism by which trade may be balanced in all nations, maximizing growth potential in developing countries which would otherwise see an erosion in their terms of trade and increasing dependence on exports.

The Harrod model, which explicitly integrates a balance of payments constraint on growth, provides the theoretical basis for the argument that a multilateral clearing system can support growth. If balanced trade is necessary for growth, a clearing system based on fixed exchange rates and mutually applied rules of adjustment can ensure that balance.

The clearing mechanism, applied internationally, presents a pathway to balanced growth of developing nations, but it may also provide more specific standard-of-living benefits. With a clearing system in place, along with balance of payment requirements, trading nations would be incentivized to manage capital flows. In this environment, investment may more likely be directed toward long-term goals and meaningful projects in developing countries. Hot money

flows would be cooled as governments began to exercise more discretion as to which foreign investments were allowed to proceed. Furthermore, as the clearing mechanism assures continued access to foreign exchange, it may enable broader access to international markets for all industries in a developing nation.

If it can be argued that a Keynesian system of international clearing would maximize growth potential by stabilizing money flows and by subverting the system of dependency which is established by the Washington Consensus, but that the likelihood of such a broad-based reform is low, could the establishment of clearing unions between regional groups of developing countries be a second-best solution that provides some of the growth and standard-of-living benefits to those countries? We examine this question in Chapter 4.

IV. Concepts in practice

4.1 Regional payments arrangements

Though Keynes' proposal for an International Clearing Union died at Bretton Woods, development economists of the Post-Keynesian school have continued to support reforms of international finance, including the creation of a universal currency and the imposition of a system of international clearing. While these reforms are far from becoming a reality--perhaps less likely today than in 1944--smaller clearing unions have taken shape among trading nations. These institutions are charged with managing the balance of payments between member nations, and controlling currency exchange rates. They manage levels of debt and require excessive credit to be spent on the economies of debtor members. The clearing union is only one aspect of the Post-Keynesian proposal for development, but it is especially significant in that it constitutes an agreement between countries that does not tilt the scales in favor of the wealthy nations. Clearing at the regional level, although it is probably less conducive to creating an environment of balanced trade and maximizing the growth of developing nations than is international clearing, could be a significant enough departure from the current global trade regime to create substantial growth and development in participating economies.

A clearing union is a monetary institution that is established between nations for the purpose of settling international payments for goods and services. When it is established between a group of neighboring trading nations, rather than between all trading nations it can be classified as a *regional payments arrangement* (RPA). RPAs allow the "clearing" of payments for international transactions over a certain time period--for example, one month--eliminating the

need for payment settlement at the time of transaction with hard currency. These institutions can be classified according to several dimensions, including mandatory participation, the extension of medium-term credit, and agreement on a balance of payments adjustment mechanism.

Auguste (1997) establishes a benchmark model with mandatory participation, meaning all transactions between participating countries must be channeled through the RPA, a condition qualifying the arrangement as a *union*. There are two versions of the model: one which is static in a given period of settlement, and one which represents the extension of medium-term credit to countries with payment deficits--a more dynamic model. The former model is a *clearing union* and the latter is defined as a *payments union*. The strength of either type depends on whether persistent deficit and surplus countries agree to make trade policy or exchange rate adjustments in order to keep their current account balances in unity. A strong RPA is one in which exchange rate adjustments are required (Auguste, 1997, pp. 45-50).

RPAs facilitate international trade by eliminating the requirement that payments be made in a convertible currency such as the US dollar. International buyers may pay in national currencies, while the exchange into a foreign currency is controlled by the clearing union. This eliminates a barrier to trade among developing nations whose foreign exchange reserves may be limited. Agreements such as the Asian Clearing Union, or ACU, allow for a grace period of payment settlement, which gives the clearing union time to call on the central banks of member nations for excess foreign exchange reserves and to buffer seasonal or periodic imbalances in trade which may otherwise bottleneck access to foreign reserves (Firouzdor, 2000).³

³ All RPAs must have some defined period for the clearing of payments, a time-frame in which all accumulated debits and credits may be aggregated and made due. Grace periods beyond this clearing period invoke its classification by Auguste as a *payments union*.

RPAAs mimic the interaction of commercial banks participating in a clearinghouse. A bank in a large clearinghouse can offer its customers quick clearing of payments to and depositing of funds from other banks, but the bank must monitor the solvency of those many other banks so that the integrity of the clearinghouse is not jeopardized. The more banks, the more risk. Likewise, countries in an RPA may be wary about entering into clearing arrangements with other countries in whose macroeconomic and trade policy they have no confidence or control. In this respect, it is more likely that countries will enter into such arrangements if they have trade characteristics that are in some way complementary. A powerful country with a consistent current account surplus may have little incentive to form a payments arrangement with a small country with a trade deficit, unless there is some assurance that these imbalances would be corrected. Arrangements built around this expectation are more sound (Auguste, 1997, pp. 47-50).

Auguste's benchmark model follows that of customs union theory, demonstrating that integration between countries is a second-best situation. Ideally, all countries would eliminate trade barriers, so that unnecessary transaction costs no longer impede welfare maximization.⁴ In Auguste's analysis, customs unions and RPAs are treated identically, because as in a customs union, where members reduce or eliminate tariffs, but cooperatively levy tariffs on external trade, RPA members reduce the costs of transaction between them through the elimination of

⁴ Transaction costs in international trade may include everything from transportation costs and contracts to customs duties and the costs of acquiring foreign exchange. Transportation costs and contract costs are probably unavoidable, and perhaps beneficial in some ways because they give rise to important industries and institutions which may give stability to the global economy. Additional costs arising from unintegrated economic systems are less desirable, in that they result in no productive economic activity. The beneficiaries of these costs are governments, which may replace customs duties with streams of income tax revenue as an economy grows, and currency speculators, who seek rents from the holding of foreign exchange while it is withheld from productive use. These less desirable costs may be resolved through various forms of economic and trade integration.

payments discrimination, while maintaining autonomy in other forms of trade policy. In some cases, they all accept each other's currency, even where that currency may be "soft" or inconvertible with the wider world, or they adhere to the use of an internal bank currency or ledger system similar to Keynes' *bancor*. This arrangement constitutes a reduction of transaction costs that, in Auguste's view, is effectively the same as a reduction of tariffs. The effects are trade diversion and trade creation. Trade is diverted from countries external to the RPA, while trade is created among the member countries. In the benchmark clearing or payments union, more trade is created than is diverted (*ibid*, p. 52-54, 140-47).

The reason for the increase in net trade is interesting. The common acceptance of the means of payment within an RPA, which induces increased trade therein, also reduces the need for foreign reserves. The stockpiling of foreign reserves--US dollars, gold, US Treasury securities--as a precautionary measure to balance trade presents an opportunity cost to countries engaging in trade; this practice reduces the ability of a central bank to extend domestic credit. As foreign reserves are not needed for intra-RPA trade, which is increased as external trade is diverted, a country can reduce the amount of foreign reserves held. This reduction in necessary reserves, which we can call foreign reserve savings, precipitates a net outflow of foreign reserves meaning that external trade is necessarily increased as well as intra-RPA trade.⁵ In other words, countries entering into an RPA will increase trade between them because of reduced transaction costs, but the more trade that is created between them, the more they will each bleed foreign reserves to external countries, thereby increasing trade between the RPA members and those external trade partners as well (*ibid*, pp. 77-78). However, is this outflow of foreign reserves a

⁵ All things being equal. The assumption is that countries maintain a constant level of risk that the country may be exposed to a crisis of foreign exchange before and after the establishment of the RPA. With trade diverted to intra-regional flows, this risk is reduced, and foreign exchange reserves may be liquidated until the pre-RPA threshold is achieved.

one-time shot, meaning that as member countries achieve a level of reserves matching their new level of liquidity preference, the outflow will stop, and net external trade will be reduced to a level below the pre-RPA level?

Auguste addresses this question with respect to the Solow model of economic growth. The Solow model can only account for the portion of growth that occurs as labor and capital are added to an economy and substituted for each other, to varying degrees, with diminishing marginal returns. Of course, the Solow model cannot accommodate changes to trade or payments relationships any more than it accommodates changes in technology. These are all exogenous factors. Some economists regard reductions in trade barriers as having an additive effect on growth, a “one-time shifting upwards of the production possibilities frontier” (Lucas, 1988, p. 3-42). However, the implementation of an RPA will have multiplicative growth effects on an economy. The foreign reserve savings of a participating country, although itself a one-time effect, creates an increased *rate* of investment, leading to increased capital accumulation and higher incomes (Auguste, 1997, p. 102). Here again, we can contrast the Harrod model, to which trade effects are endogenous, to the Solow model, which excludes them.

The dynamic impact on trade of a central bank’s liquidation of foreign reserves is an example of the hysteresis effects of changes in the macro- or international economy. Once new channels for trade are opened, they will remain open despite the absence of forces that created the new channels. A change in exchange rates, for example, may present an incentive for one country to increase trade with another, and there is a tendency for that trade to persist or grow, despite a clawing back of the initial change. Usually it is a matter of some threshold being reached that creates a new growth opportunity, and the existence of fixed costs into that opportunity that inclines it to persist (Denadai, 2016, pp. 583-585). Hysteresis effects such as

these may be interpreted as having institutional causes, in that they result from the existence of systems surrounding trade which are not easily broken. These effects may also be political or culturally inspired, as cultural relationships or relationships between governments may also strengthen once trade between nations has been initiated. In the case of RPAs, the liquidation of foreign reserves by participating countries may represent the fixed costs of establishing new external trade relationships, which will tend to persist barring some reversal of that liquidation.

Auguste questions another of the central assumptions of the Solow model, that of factor price equalization (Auguste, 1997, p. 106). According to FPE, incomes in developing countries are expected to converge with those of more developed countries. Again, historical evidence does not support this predicted phenomenon. While many of today's wealthy countries may be regarded as examples of this convergence because their incomes grew rapidly since the immediate post-WWII period, most countries have not benefited from any natural equilibration toward a standard of living comparable to that of the wealthy countries (Oslington & Towers, 2010, p. 650).

The persistent non-convergence of incomes may be exacerbated by the presence of payments barriers. Many developed countries, while not engaged in RPAs, do enjoy convertibility or "hardness" of currency, which makes it less costly to buy foreign goods and assets, as foreign reserves are less important to a country if its domestic currency is accepted as payment globally. Soft currency countries essentially pay more for foreign goods because they bear the transaction costs of keeping hard currencies in reserve, reducing real incomes.

4.2 Clearing and the preference for liquidity

Clearing unions counteract the excessive preference for liquidity which arises because of money's function as a store of value. According to Davidson (1982),

“The possession of liquidity is essential for the continuity of economic activity in a free market entrepreneurial economy where everyone recognizes that the economic future is statistically unpredictable and full of potential surprises....

Just as for each individual there is a level of transactions and precautionary balances which is perceived as necessary to hold to meet upcoming contractual obligations, so for each nation there is a level of international asset holding...which must be held as balances to bridge the gap between foreign receipts and upcoming foreign payments obligations” (Davidson, 1982; 104-7).

Liquidity, as Davidson emphasizes, is an endemic feature of the modern economy. Because the economy does not equilibrate at every instant, or even every day, the cloistering of money is required. In the Neoclassical paradigm, markets tend to clear in any momentary picture of the economy, but given the institutions and divisions of the real world, money is held in anticipated response to contracts coming due and to changes in institutions and levels of effective demand. This is a strategic and responsible position for economic agents to take. However, problems occur when this strategic response to real world economic uncertainty becomes entrenched as uncertainty increases. A vicious circle is created wherein growing uncertainty about expected

sales engenders an increased preference for liquidity, and increased holdings reduce the velocity of money, leading to decreased sales and worsening uncertainty.

Amato and Fantacci (2014) emphasize that the liquidity function is a feature of the capitalist system, not a “natural” feature of money. In other words, money could be stripped of this functionality without compromising its usefulness as a unit of account and a means of payment. Crises are exacerbated when money is removed from productive applications and kept as a store of value. The clearing function wipes out the excessive preference for liquidity. Credit held between nations is required to be put to productive use (Amato & Fantacci, 2014). RPAs may thereby reduce the vulnerability of member nations to economic downturns.

RPAs eliminate the storage of money by denying any benefit to creditors in maintaining their credit. Under the rules of a strong RPA, the most profitable use of a positive current account value is to spend on international goods and services. RPAs convert any transactions to an internal currency which cannot be cashed out and which cannot earn interest. Rather, the RPA charges fees on both creditor and debtor nations’ accounts, incentivizing a movement towards a zero balance. The internal currency of the RPA does not function as a store of value, but is the only established means of payment in international trade between member nations. Through clearing arrangements, the dependency gap between center and periphery nations is narrowed, as debtor nations are incentivized to produce more valuable goods (Lucarelli, 2016).

The banking principle, applied between trading nations, would reduce transaction costs, eliminate the volatility that comes with free-floating exchange rates, and defend against excessive precautionary and non-productive foreign exchange accumulation. Keynes’ original proposal that this principle be applied between all nations would have resulted in a structural overhaul of the international trade system, or better put, the *creation* of an international trade

system where there previously existed a largely unregulated melee of currency exchange, in which instability was the norm (Gnos and Rochon, 2004). Essentially, eliminating currency competition would create a more fluid system in which *products* were valued at face, rather than being distorted by the value of the *money* used to purchase them.

Can regional payments arrangements play a role in moving nations toward higher levels of development, or is it necessary to have a universal system? Davidson (2002) believes a universal system is necessary. In the post-1973 era, capital flight from poor nations worsened as international trade regulations were reduced. The free-market approach to international trade has been especially harmful to the poorest nations. The world has become more imbalanced in terms of wealth and income since the time of Keynes and since the failure of the Washington Consensus. One reason for this increasing inequality and instability is speculation in the currency market. Since 1973, exchange rates have been largely free-floating, incentivizing national banks and other agencies to seek investments in stable and appreciating currencies. These “hot-money” flows, according to Davidson, are a source of volatility and unpredictability, and have allowed rent-seekers to profit at the expense of the developing world (Davidson, 2002).

Free-floating exchange rates prevailing outside an RPA guarantee that if some nations establish current account surpluses, other nations will suffer trade deficits and hampered development. A fixed exchange rate system, combined with Keynesian demand management policies among nations would create a situation in which all nations could develop. It seems that such a system would require participation among all trading nations. Partial solutions, such as the European Payments Union or the Asian Clearing Union, could guarantee an improved international market for participating countries, but would not change the problematic nature of the free-market currency system. While participating nations could level the balance of

payments between them, imbalances with the rest of the world could persist, undermining the potential benefits of such unions (Davidson, 2004).

Keynes saw the necessity of implementing structural changes to the system of international trade, creating a payments system that would require the participation of all trading nations. The purpose was tied to the concerns of the developing world at the end of the world wars. A system based on stability and fairness would preserve political sovereignty in all nations while creating opportunities for industrial development worldwide.

Since Bretton Woods, there has been only limited experimentation with exchange rate regulation and organized payments systems. In total, eleven organizations that can be classified as regional payments arrangements have been created between ten regional groups. Most of these organizations were short-lived (Auguste, 1997, pp. 32-33), but in order to determine the impact of regional multilateral clearing on development, these institutions must be examined. Two of these RPAs, the European Payments Union and the Asian Clearing Union, are the focus of Chapter 5.

V. Cases and outcomes

If the Washington Consensus is not wholly discarded, would regional cooperation in defiance of that consensus serve to promote the development of countries by facilitating trade between them and reducing their tendency to hold foreign reserves as a store of value? The world has seen ten regional groups move in this direction since 1945.

5.1 The European Payments Union (1950-58)

The European Payments Union (EPU) was established in 1950 in order to facilitate trade between the war-torn national economies of Europe, precisely because the US dollar, established at Bretton Woods as the world's reserve currency, was in short supply in Europe. The EPU allowed international parties to complete transactions without first securing dollars; payments would be cleared by the union on a monthly basis. The organization was instrumental in accelerating European development in the post-war years because it reduced the barriers to trade imposed by currency exchange (Auguste, 1997).

In Western Europe in the post-war years, national economies were growing fast. While the EPU contributed to it, rapid growth had taken off before the formation of the union, and it continued thereafter for a variety of political and economic reasons. Comparing actual trade data to a counterfactual model in his analysis, Auguste (1997) finds that the EPU substantially created trade in Europe as well as globally, although trade was certainly diverted from some world regions. The EPU was responsible for an estimated 1.8 to 3.4 percent of the region's economic

growth in the period of its existence. It is estimated to have contributed as much as \$3.6 billion to 1958 gross national product (GNP) across the region (Auguste, 1997, pp. 216-218).

The EPU was critical in convincing the countries of developing Europe to abandon trade restrictions. While the EPU was on paper only a means of payments settlement, the umbrella institution of which it was a part, the Organization for European Economic Cooperation (OEEC), was intended also to bring down many other barriers to trade, especially quantitative restrictions (QRs). Governments were hesitant to give up their QRs in the absence of multilateral clearing, lest they expose their economies to excessive competition from other members of the OEEC. With the establishment of the EPU in 1950, governments acceded to OEEC requirements and overall increased the share of trade that was exempt from QRs from 56% in 1950 to 89% in 1953. This improvement, brought about by the one-time initiation of an RPA, contributed tremendously to the ability of Western European nations to acquire the needed resources for development from their neighbors (ibid, pp. 151-157). The EPU also contributed to substantial foreign reserve savings, estimated at 8% in 1950 and declining to 2% over the life of the union. In 1959, reserve stocks would have been half of their observed value, if not for the impact of the EPU throughout that decade (ibid, pp. 167-173).

5.2 The Asian Clearing Union (1975-)

The Asian Clearing Union, which manages currency exchanges between Iran, Pakistan, India, and six other south Asian countries--Maldives, Myanmar, Nepal, Bhutan, Bangladesh, and Sri Lanka--has had considerable success in contributing to the development of its member nations. According to Jalan (2003), the ACU reduced transaction costs and encouraged the growth of

trade between member nations from 51.7 Million USD to over 7 Billion USD in the period 1975-2003 (Jalan, 2003).

The ACU establishes trading advantages between member nations by creating a common currency, the ACU dollar, which is used only by the clearing union and is convertible into each member's national currency. Transactions are cleared multilaterally, meaning one member nation can use its trade surpluses with some nations to settle its debts with others. Therefore, transaction costs are reduced and the volume of trade increases across the region. ACU was formed mainly for the same reasons as the EPU--the nations of each region had a low supply of foreign exchange reserves and therefore needed a mechanism to facilitate trade (Goyal, 2015, pp. 106-7). The ACU allows the South Asian nations to trade with each other without first needing access to US dollars, and without first negotiating the value of free-floating national currencies.

The ACU has probably had a positive impact on development, not merely growth, in South Asia. According to Goyal (2015), "regional payment systems can protect against global instability, contribute to maintaining and enhancing regional cooperation, and help develop local financial institutions" (ibid, p. 110). Some characteristics of the ACU system have enhanced trade within the region. Namely, that "repeated interactions...and regular monitoring under centralized clearing improve information and trust" (ibid, p. 107). The strengthening of local financial institutions and the sense of regional cooperation that is enhanced by the existence of the ACU may have more broad-based effects on the standard of living of ordinary South Asians beyond the income effects of increased trade. However, the ACU is not a strong RPA. First, its use as a conduit for trade is optional to firms, and many firms still require hard currencies as payment for their products. Goyal recommends the expansion of the acceptance of local currencies as payment through the union, in order to maximize its transaction cost-reducing

effects and widely distribute the benefits of the broader access to goods that the ACU provides (ibid, pp. 110-11).

Shekhawat and Kathuria (2018) question the effectiveness of the ACU in creating stability for member nations. They measure exchange market pressure (EMP), a composite index combining exchange rate fluctuations, changes in foreign reserve holdings, and interest rate fluctuations. EMP is defined as follows:

$$EMP_t = \Delta E_t + \Delta R_t + \Delta d_t$$

Where: E represents the exchange rate, R represents the stock of foreign reserves, and d represents the interest rate (Shekhawat & Kathuria, 2018, p. 1035).

Combining these measures into one index gives an indication of the extent to which an economy is impacted by changes in other economies with which it trades. Whether a country is committed to a floating currency or to maintaining exchange rate stability, the inclusion of these three measures reveals the volatility of its economy as it adapts to varying levels of demand in others. While some countries may firmly stabilize their currencies against others, they must do so with the force of their reserve holdings or with interest rate adjustments. Other countries may express the volatility of their trade flows in the changing market value of their currencies (ibid, pp. 1033-1038).

It seems that a problem arises for participants in an RPA: while exchange rates may be stabilized between member nations, exchange rates with the rest of the world are not, and this external pressure is imported into the union. In a strong RPA, member nations commit to

balance of payments equilibrium. However, trade imbalances with the rest of the world require member nations to continue to employ adjustments in foreign reserve holdings and interest rates. Within the RPA, national currencies are pegged. For example, Nepal pegs its currency to that of India, its largest trade partner. Maintenance of this peg within the ACU is a matter of internal policy, with nominal adjustments used as a tool to create balanced internal trade. Yet both Nepal's and India's currencies are free-floating against currencies external to the ACU, meaning that in order for the Nepal Rastra Bank to maintain the peg, it must intervene with the extensive employment of its stock of foreign exchange. Nepal is not significantly shielded by its participation in the ACU from broader exchange market pressure. On the whole, ACU countries express levels of exchange market pressure that are similar to countries which do not participate in RPAs. Shekhawat and Kathuria argue that the ACU has probably not lived up to the expectation that it would reduce the required reserve holdings of member nations (ibid, p. 1044).

5.3 El Banco del Sur (2009-)

A limited number of cases have been made in the academic community for the creation of new regional clearing unions. Marshall and Rochon (2009) call for the creation of a central bank for all of South America that would have a clearing capability, establishing a super-sovereign Intra-bank currency that would leave in place all national currencies. This system would shield South America from the vicissitudes of US dollar-dominated markets--events such as the credit crisis of 2008-9, which re-energized the worldwide discussion about a movement away from an economic system tied so inextricably with Wall Street, as well as with Washington. Such an institution would allow coordination of trade among South American nations and begin to

unleash these nations--many struggling to emerge from the periphery--from their dependency on center nations such as the United States (Marshal & Rochon, 2009).

The Banco del Sur was established in 2009 in order to more closely integrate the economies of Latin American states. While countries proposed various designs for the bank, Ecuador and Brazil supported the creation of a super-sovereign currency and a clearing mechanism. President da Silva of Brazil remarked in 2007 that the bank must be founded on “the principles of parity and proportionality,” and must be structured in a way that maintains balance of payments equilibrium in member states and creates a system of payments. Da Silva emphasized that the purpose of the bank would be the “reduction of our region’s dependency vis-a-vis the international financial system” (Rosales & Furio, 2013, pp. 30-31). While the bank’s supporters, among them President Hugo Chavez of Venezuela, agreed that reduced dependency was a critical feature, the clearing function and balance of payments requirements were not ultimately included in the bank’s structure. The Banco del Sur exists, on paper, solely as a development fund (*ibid*, pp. 27-32). However, as of 2016, it had not been funded (Mares & Trinkunas, 2016). Venezuela, which was to be one of the major contributors to the fund, promising \$2 billion toward its initial funding, will not likely make good on this pledge at any near date, given the ongoing economic and political crisis that has embroiled the country.

There are mixed assessments of the impact of RPAs on member nations; the EPU presents the most promising results. In postwar Western Europe, multilateral clearing was instrumental in the rapid re-development and re-industrialization of participating economies. However, the EPU was only one piece of the development puzzle. Regional cooperation must be reinforced multidimensionally, and Western Europe has been committed to a long schedule of designs and

redesigns of its development process. The nations of Western Europe have also been regarded as close partners to the United States, both economically and politically, which was the strongest agent in the postwar development process. Other regions have been embraced less dearly.

Development interventions, especially those which involve changes to institutional arrangements, must be tailored to the specific needs of each stakeholder. The RPA is a promising development institution, but it must be one part of broader plans. Multilateral clearing is one economic manifestation of the will of nations to cooperate on trade, growth, and the improvement of the standard of living. There must be other features of this goodwill, and they may not all be economic in nature, but also political, cultural, and social.

VI. Conclusion

The clearing mechanism presents an opportunity for economic cooperation on an international or regional level, an avenue for reform of the system of international trade known as the Washington Consensus. In theory, there are several key features of the clearing mechanism that are important to reform. First, the creation of money exclusively for international trade. A universal or super-sovereign currency, distributed to all participating central banks according to countries' volume of trade, eliminates the world's reliance on several national currencies, mainly the United States dollar, as foreign exchange. This shift would eliminate the tradeoff described by the Triffin Dilemma, and reduce the need for central banks to keep large precautionary balances of hard currencies. The status of the US dollar as the world's primary reserve currency is a legacy of the special advantages of the United States in the immediate post-WWII period. Eliminating its special status would be broadly beneficial to developing countries, but it would be damaging to the United States economy. A sudden fall in the need for dollars might create rapid inflation in the US. As long as the US has control over the international system, it is unlikely to accept a diminishment of the dollar's special status.

The second important feature is the requirement of balance of payments equilibrium for all trading nations. At the end of each clearing period, credits and debits to each central bank's trading account are netted, and countries are required to dispose of their surpluses and cover their deficits. The dual-pronged requirement of trade balance, which is imposed on surplus and deficit countries alike, improves the possibility of balanced trade, and protects countries from persistent balance of payments deficits, and the foreign exchange crises they may be expected to cultivate. The role of the IMF in the Bretton Woods System and in the current system is to take action to

mitigate trade deficits in developing countries and prevent or respond to crises of foreign exchange in those countries. It has never had a role in promoting adjustment in surplus countries. This required adjustment by surplus countries was critical to Keynes' design of the International Clearing Union, and is critical to trade stability. Without this requirement, the adjustment of deficit countries is more painful, and in the long-run, impossible. Persistent trade surpluses in trading nations necessitate the existence of deficits in others. The absence of adjustment requirements on surplus nations is a fatal flaw in the current system, and it must be addressed.

Third, the maintenance of a fixed and adjustable exchange rate system provides an important balance of payments adjustment tool. The adjustment of exchange rates provides a means of steering economies towards trade equilibrium, without the political complications of domestic policies or import restrictions. Again, rate adjustments are recommended or imposed on *both* surplus and deficit countries. Natural adjustments of exchange rates and domestic prices towards purchasing power parity, which are predicted in neoclassical models of trade, may not occur consistently enough in a system of flexible exchange rates to produce reliable results in balancing trade. Frictional factors which resist this process have been observed. Moreover, exchange rates are subject to competitive interventions by central banks and governments which influence fluctuations. A fixed exchange rate system in which all parties agree to cooperate on rate adjustments in the interest of balanced trade is more likely to produce reliable results. The International Clearing Union embraced this concept, and reforms which move nations closer to cooperation on exchange rates will stabilize trade and thereby benefit developing countries.

Speculative or "hot money" flows are identified as one of the most damaging aspects of the modern international financial system. Speculative, rather than productive, investment

undermines the inelastic expectations on which modern entrepreneurs, operating on the basis of forward contracts, rely. Keynes and some of his disciples, including Davidson, argue that control of these flows is critical, although they leave the option as to the method of control to trading nations. They argue that a successfully implemented system of international payments under fixed and adjustable exchange rates will itself discourage speculation, reducing the disruptive high-velocity movements of hot money (Davidson, 1982, pp. 270-1). Given the current system of flexible and competitive exchange rates, active control of hot money capital flows is perhaps the most important policy a national government can pursue in reducing the instability unleashed by this system. One such policy is the Tobin tax. Tobin (1978), on competing views about the nature of the exchange rate regime, writes, “under either exchange rate regime the currency exchanges transmit disturbances originating in international financial markets” (Tobin, 1978, p. 154). In the wake of the collapse of the Bretton Woods System, Tobin suggested that the best mechanism for limiting the volatility of capital flows is a small tax. Although he believed that economic integration toward a single currency and unified monetary and fiscal policy was the ideal solution to problems of international finance, Tobin felt that a tax of just 1% was a far more practical, if second-best, solution. The burden of such a tax would fall heavily on speculators, as it eroded the economic rents they received from parking their money temporarily in offshore currency. Investments intended for productive purposes, though proportionally taxed, would rely on real growth in assets for their returns, minimizing the burden of a tax (ibid, pp. 152-5). Several studies have documented the effectiveness of several experiments with a national Tobin tax in tempering hot money flows, though only in large markets. Without universal implementation, as Tobin envisioned, these taxes also induce the migration of speculative traders to non-tax nations (Becchetti et al., 2014, pp. 138-9; Hanke et

al., 2010, pp. 58-9). Implemented on an international scale, a small tax on capital flows could discourage speculative transactions. Small reductions in productive investment resulting from the tax could be offset through government reinjection of tax revenues into capital projects.

Regional clearing unions may reduce transaction costs between member nations, but in so doing disincentivize trade with the rest of the world. Both the European Payments Union and the Asian Clearing Union were established to combat the international pressures of the US dollar on regional trade, but they may have somewhat limited member nations' trade expansion with other nations. This may be called regional protectionism, or extra-regional import substitution. By establishing a closer trading relationship through reduced barriers, the member nations of a clearing union, although they do not overtly discourage trade with non-member nations, effectively substitute extra-regional imports for intraregional imports. ACU member Bhutan, for example conducts 90% of its trade with India, and Bangladesh counts India as its second largest import partner.

Auguste (1997) finds that, on the whole, more trade is created than is diverted in an RPA, and argues that the EPU was a critical transitional arrangement toward higher levels of integration among European countries, and an important tool in creating foreign reserve savings. However, Shekhawat and Kathuria (2018), using a different methodology, find that the ACU has produced insignificant foreign reserve savings among South Asian member countries, and recommend against further integration of these economies.

Regional clearing unions may be halfway measures, and may be impotent in the Post-Keynesian perspective, but they represent realistic opportunities to reduce the barriers to development among the world's peripheral economies, which are based on the export of primary goods and which face considerable obstacles in creating capital-flight-resistant industrial growth.

Further investigation into their power to produce positive results for struggling economies must be undertaken, because they could provide some of the benefits of the long-eschewed International Clearing Union, and perhaps provide the stepping stones toward its eventual creation. If it seems unlikely that the Washington Consensus will be discarded in favor of an international consensus on trade that truly represents the interests of developing countries, then it is even more important that regional solutions such as RPA continue to be considered. The specific ways which RPAs integrate with other structural changes must be better understood.

Could the liberalization of international payments be a key to unlocking the predicted convergence of incomes? It will be important to identify whether countries engaged in payments or clearing arrangements have grown more quickly than non-participating countries. Certainly, the theoretical advantages of regional clearing and the rapid re-development of Western Europe after WWII support this expectation.

This paper set out to examine the impact of multilateral clearing on development, not just growth. That is, will clearing impact the standard of living? Growth is a precursor to development, but it is not a guarantee of it. Many economies grow quickly while development is slow. It has not been determined whether payments arrangements and associated fixed exchange rate regimes have direct standard-of-living impacts, outside of the growth effects they may stimulate. If it can be established that growth as a result of clearing-induced trade is more equitably distributed in an economy than growth resulting from other changes, then perhaps a more direct line between clearing and development can be drawn. However, one key feature of the clearing mechanism is cooperation, and if there is cooperation on trade, perhaps other forms of cooperation can be observed--forms which have a direct impact on poverty reduction, the provision of healthcare and schooling, gender equality.

A general conclusion that can be drawn from this discussion of the clearing mechanism in its various forms is that the dichotomy of trade liberalization versus protectionism is limiting in describing the functions and features of international trade. Healthy competition, which is highly valued by the neoliberal approach, requires coordination. A trading environment in which all aspects of the global economy is unhinged from regulation begets instability, market failure, and human suffering. In order to have robust and broad-based growth, we must have robust and broad rules. There must be some surrender of national priorities on the part of the world's most developed economies so that the developing world may shed its dependency and raise its standard of living to a comparable level.

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