GLOBALIZATION AND INEFFICIENCY IN LESS DEVELOPED COUNTRIES

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The paper explains theoretically that the present economic problems of less developed countries, particularly in Southeast Asia, are the direct offsprings of the inefficiency of their industries, disabling them to effectively compete in the world market. Globalization simply exposed this inefficiency.

The sharp depreciation of these countries' currencies is merely a consequence of such inefficiency. Thus, these countries' problems are not financial in nature but a real sector phenomenon.

1. Introduction

The world is definitely moving towards freer and greater economic interdependence. Spearheaded largely by highly developed, industrially mature Western economies who have everything to gain and nothing to lose, this socio-political and largely economic trend now called "globalization" made obvious and spurred by the debut of the World Trade Organization (WTO) and enhanced further by such regional trade blocs as the North American Free Trade Area (NAFTA), the Asia-Pacific Economic Cooperation (APEC), and the ASEAN Free Trade Area (AFTA), is not however, proceeding smoothly and as fast as it should be. The drag comes understandably from the legion of less developed countries (LDCs) whose gain, apart from having a larger market for their largely primary goods and, hopefully, increased capital inflows is clouded by related development considerations which are not entirely devoid of any justifica-

tion. For one thing, with respect to trade they bore the brunt—due to colonization—of the prohibitive tariff walls on imports of the 16th to 18th century mercantilism then enjoyed by now developed Western countries whom present-day LDCs now feel to be depriving them of going through the same stage which may help them in their economic development efforts. This protection continued though to a lesser degree up to the 1950s when all Western countries have virtually reached industrial maturity, and with their domestic demand also tapering off, the natural consequence was to seek further expansion of their market for industrial goods. Too, today's LDCs feel that the central rationale for free trade—the Ricardian theory of comparative advantage—allows reversal of the pattern of trade if technological progress were given a chance to take place. Clearly, the gist of the hesitation of today's LDCs to leap into the free trade wagon despite its cathartic effect is this: they should be given not just less than 50 years after the Second World War—to reach even only approximately the level of competitiveness of developed countries especially through an upgraded level of technology and serious institutional and structural reforms before they strip themselves of all protectionist schemes.

With regard to capital flows as another major thrust of globalization along with the developed countries' drive for market expansion, their industrial maturity is inextricably accompanied by the rising cost of all inputs including technology and this is what led to "sourcing" which provided the rationale for the expansion of investments outside their national boundaries. This phenomenon is certainly most welcomed by LDCs but they are cautious about the abrupt negative effect of free trade.

To summarize this section, the main thrusts of globalization are two, (1) trade liberalization and (2) liberalization of capital flows, both of which are the natural outcome of Western economies' having reached the peak of industrialization. It is against this backdrop that the economic woes of some Asian LDCs outwardly manifested by sharp changes in their foreign exchange rates giving the illusion that the problem is financial in nature, are considered and their root

cause or causes explored in this study. It must be emphasized though that despite the historical relationship between developed countries and present-day LDCs, this study remains in favor of globalization, however painful the immediate effects of this maybe on LDCs who have to shape up their economies as fast as they can to compete in the world market.

2. Trade Liberalization and the Foreign Exchange Rate "Problem" of Asian LDCs

When, early in 1997, the Thai Baht fell sharply against the US Dollar, many observers and financial seers attributed the phenomenon, without any clear systematic reasoning, to a purely financial aberration caused by what they claimed to be a "property glut" in Thailand. When the Thai foreign exchange rate shock was followed by Malaysia, and then by the Philippines and Indonesia, and to a lesser extent also by Singapore, the so-called financial crisis of Thailand was seen to be contagious and was called a regional financial crisis, again without any clear, systematic rationale. The blame was pinned on the financial or monetary sector. The picture gradually became clearer when the manufacturing sector of many of these countries began to show a decline in output and unemployment began to swell. It was at this point that the blame was gradually taken off the financial sector and shifted to "globalization" especially to its trade liberalization component.

While trade liberalization, one of the two main objectives of the broad spectrum *globalization,* may take some of the responsibilities for the Southeast Asian foreign exchange rate debacle, it is not however exactly the mother of the problem. Trade liberalization through globalization being only the father, simply exposed and revealed the true mother of the foreign exchange rate woes of LDCs in Southeast Asia namely, the inefficient, ill-prepared import competing industries and even the export industries of most of these countries. Put in proper perspective, what is now called "economic crisis"—if it were indeed a crisis—that grips most Asian countries, in

particular, Southeast Asians, is not financial in nature although its outward manifestation, the sudden and large depreciation of the region's foreign exchange rates, gives the illusion that it is a monetary phenomenon; it is a real sector phenomenon. The root cause of the economic crisis is the inefficiency, and hence, inability of the affected economies' industries, especially their import-competing industries, to compete effectively in the world market for traded goods as uncovered by globalization through trade liberalization and liberalization of capital flows as the major advocacies and thrusts of the NAFTA, the WTO, the APEC, and the AFTA, among others. In this regard, it must be noted that the Mexican Peso's plunge against the US Dollar in 1994 took place right after the setting up and implementation of the NAFTA in 1993 along with the debut of the WTO. Mexico's imports from the United States and Canada must have sharply increased when the country's tariffs and other import restrictions were virtually dismantled. The Southeast Asian countries' foreign exchange rate "problem" is thus nothing more than a replay of the Mexican experience.

What these Southeast Asian LDCs are experiencing today is not, of course, new especially to Western European countries that went through the same experience as a birth pang of the European Union. The only difference is that while the Western European countries are developed industrially mature economies and are thus well-prepared for trade and financial liberalization thus mitigating the impact of the EU's formation, all of the Southeast Asian countries are LDCs which make them ill-prepared for the liberalization of trade and capital flows under the thrust of WTO, APEC, and AFTA. Clearly, it is the inefficiency of these countries' industries, in general, and not such claim as financial problems and foreign exchange rate contagion, that is the root cause of the economic crisis of the LDCs concerned, as will be shown in this study. The intra-regional contagion thesis, capital flows, and speculation on the foreign exchange market will also be shown to have but only a minor role in the recent problems of these Southeast Asian LDCs.

The domestic market for imports

To begin with, consider a typical LDC afflicted by the problem. For concreteness, one may consider the Philippines as such an economy. And, for simplicity, the US Dollar is the composite conversion of all of the other foreign currency holdings of the country. The price in US Dollar of imports is determined competitively in the world market hence the supply of imports M_S^F to the country — or any of the countries cited earlier — is perfectly elastic at the imported goods' prevailing price in US Dollar P_M^O (left upper panel of Fig. A).

Let e_1 be the prevailing RP Peso: US Dollar exchange rate. The imported goods' price in US Dollar P_M becomes RP Peso $P_D = P_M e_1$ without tariff, or $P_D(1+t) = P_M e_1(1 + t)$ with tariff at the rate t, in the domestic market. As the imported goods journey from the point of entry to the end-users, they assume a supply function in the domestic market that is upward sloping. This is due to the cost that the local "producers/suppliers" of imports must incur which includes the initial acquisition cost $P_D = P_M e_1$ or $P_D(1 + t) = P_M e_1(1 + t)$, handling cost, storage cost, marketing cost, and distribution cost, among others, all of which increase as the volume of imports increases. Thus the total domestic supply of import function is written as

(1) $M_S = M_S(P_D, c_i, G)$

where c_i ($i = 1,2,3,...,n$) is the cost of a unit of the i-th input, and G is the number of "producers/suppliers" of imports. It should be noted that handling cost, storage cost, marketing cost, etc. involve the utilization of such inputs as labor, capital, technology, land, etc. $\partial M_S /\partial P_D > 0$, $\partial M_S /\partial c_i < 0$, and $\partial M_S /\partial G > 0$.

Local consumers'/users' total demand for import function takes the usual form

(2) $M_D = M_D(P_D, P_L, Y, N)$

where P_L is the price in RP Peso of locally produced import-competing goods, Y is aggregate income (real GDP or GNP), and N is the number of consumers or users of imports. $\partial M_D/\partial P_D < 0$, $\partial M_D/\partial P_L > 0$ since imports and locally produced goods are competing or substitutes; $\partial M_D/\partial Y > 0$, and $\partial M_D/\partial N > 0$.

The domestic market for locally-produced import-competing goods

Since the objective of this work is to show the effect of trade liberalization's exposure of the inefficiency of local producers/suppliers of import-competing goods and how this, in turn, is related to the behavior of the foreign exchange rate, we separate the local market for domestically produced goods and the local market for imported goods. The latter is already shown by (1) and (2) above. The local market for locally produced import-competing goods is depicted by the following equations:

The aggregate supply function for locally produced import-competing goods is of the usual form

(3) $\quad Q_S = Q_S(P_L, \bar{c}_j, \bar{G})$

where $\bar{c}_j (j = 1,2,3,...,k)$ is the cost of a unit of the j-th input, and $\bar{G}$ is the number of local producers/suppliers in the industry. $\partial Q_S/\partial P_L > 0$, $\partial Q_S/\partial \bar{c}_j < 0$, $\partial Q_S/\partial \bar{G} > 0$.

Local consumers'/users' aggregate demand function for locally produced import-competing goods has the same form as (2),

(4) $\quad Q_D = Q_D(P_D, P_L, Y, \bar{N})$

where $\bar{N}$ is the number of consumers/users of locally produced goods and $\partial Q_D/\partial P_D > 0$ since imports and locally produced goods are substitutes, $\partial Q_D/\partial P_L < 0$, $\partial Q_D/\partial Y > 0$, and $\partial Q_D/\partial \bar{N} > 0$.

The domestic foreign exchange market

The demand for foreign exchange is first considered. Here it is assumed that the foreign exchange market is the market for the US Dollar, which is the country's most important foreign currency holdings owing to its international acceptability and significant role in the world economy. The demand for foreign exchange (US Dollar) function is

(5) $F_d = F_d[e_1, e_2, e_3,..., e_r, M_D(Y)]$

where e_1 = RP Peso:US Dollar exchange rate, e_2 = RP Peso:Malaysian Ringgit, say, exchange rate, and so on; $M_D(Y)$ is import as a function of aggregate income. $\partial F_d /\partial e_1 < 0$, and since all currencies can only be substitutes, $\partial F_d /\partial e_{k-1} > 0$ ($k-1 = 2,3,...,r$); $\partial F_d /\partial Y = (\partial F_d /\partial M_D)(\partial M_D /\partial Y) > 0$ since $\partial F_d /\partial M_D > 0$ and the well known propensity to import $\partial M_D /\partial Y > 0$.

The supply of foreign exchange (US Dollar) function in the Philippine foreign exchange market is

(6) $F_S = F_S(e_1, c^*, w_q)$

where c^* is net capital flows, w_q is the q-th input cost per unit related to handling, brokerage, trading, etc. of foreign exchange. $\partial F_S /\partial e_1 > 0$, $\partial F_S /\partial c^* > 0$, and $\partial F_S /\partial w_q < 0$ ($q = 1, 2, 3,...,s$). Since w_q is already captured by e_1 there is no need to particularly deal with it in the following discussions. It is only for the sake of completeness that it is shown in (6).

The relationship of the three markets

Having completed the equations of the domestic markets for imports, the locally-produced import-competing goods, and the foreign exchange, this part of the study now attempts to examine their relationship with the end in view of explaining the impact of

trade liberalization and liberalization of capital flows as they expose
the root cause of the economic crisis of the LDCs concerned.

Consider Fig. A below which graphically depicts the markets for
imports and for locally-produced import-competing goods. The production
function of domestic producers of import-competing goods,
$Q = Af(K, L)$, where A is the technological progress term, K is capital
and L is labor, is added to complete the real sector and for the
purpose of showing the effect of the various markets especially on
the local producers' output and employment levels. A and K are
assumed fixed for this purpose.

Figure A

The Domestic Market for Imports

The Domestic Market for Locally Produced Import-Competing Goods
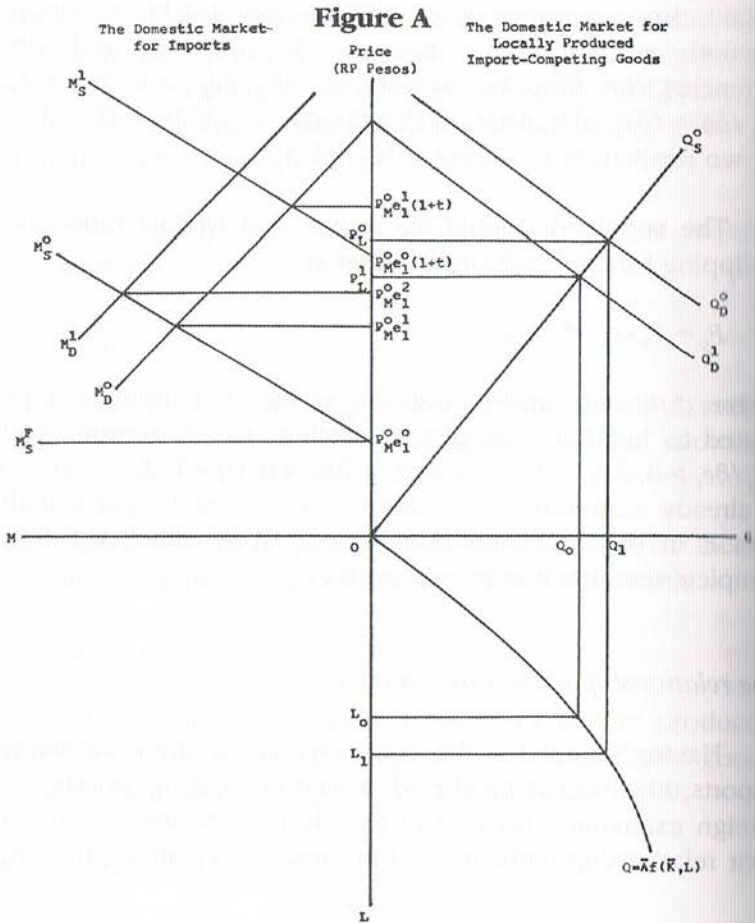
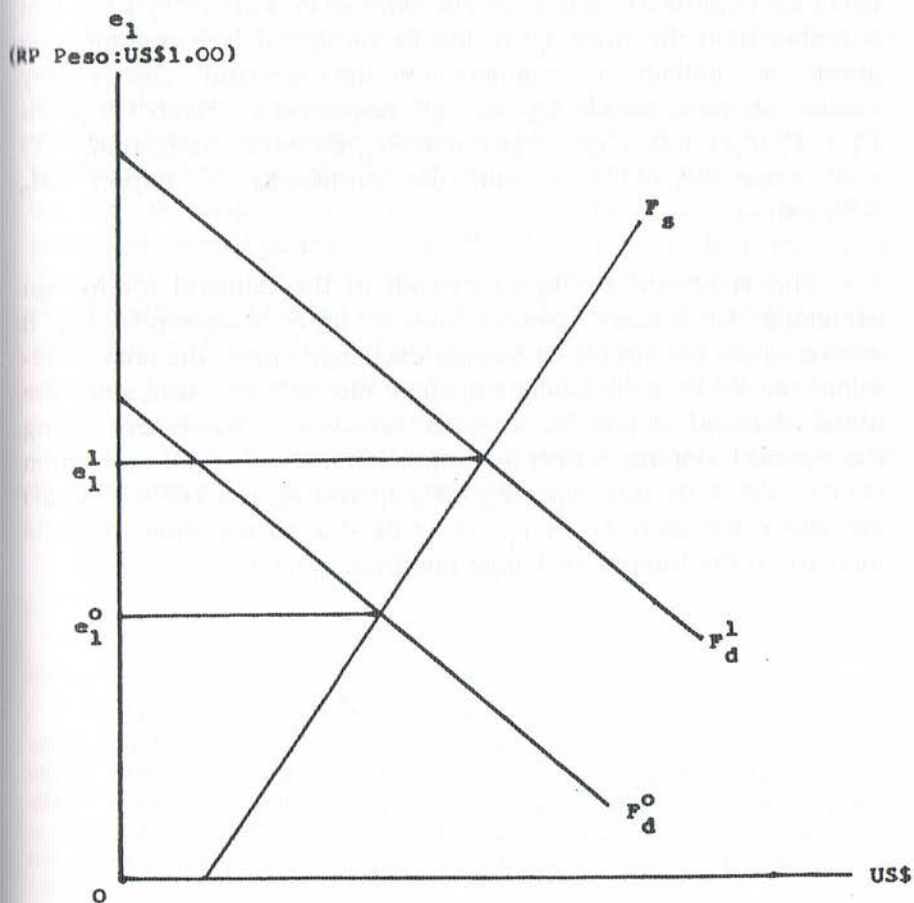Price (RP Pesos)

$Q = \bar{A}f(\bar{K}, L)$

Fig. A shows the positions of the domestic market for imported goods (left upper panel) and the market for locally produced import-competing goods (right upper panel) and its production function (right lower panel) before and after trade liberalization. But before proceeding with the analysis, let us complete the picture by putting in the foreign exchange market depicted by Fig. B where e_1^0 is the RP Peso:US\$1.00 exchange rate before the onslaught of the trade and capital flows liberalization and the consequent depreciation of the RP Peso in terms of the US Dollar.

Figure B

The initial positions of the markets are as follows: In the domestic market for imports $P_M^O e_1^O$, is the price without tariff in RP Pesos of imports at the point of entry where P_M^O, the price of imports in US Dollar, is determined competitively in the world market and is thus a constant, i.e., unless changes in global market forces occur, the supply curve of imports M_S^E to the importing country up to the point of entry is perfectly elastic. As the imported goods acquire various costs in the domestic market from the point of entry to the consumers or end-users, the upward sloping local supply curve of imports without tariff is M_S^O. With tariff at the rate t, the domestic supply curve of imports is M_S^I which, with the domestic demand curve for imports M_D^O determine the price of imports $P_I^O e_I^I(1 + t)$ that is higher than the price P_L^O of locally produced import-competing goods as initially determined by the demand and supply curves of these goods Q_D^O and Q_S^O respectively. From (5) given $P_D^O = P_M^O e_I^O(1 + t)$, $e^I > e^O$ because $\partial F_D/\partial Y = (\partial F_D/\partial M_D)(\partial M_D/\partial Y) > 0$ since $\partial F_D/\partial M_D > 0$ and the propensity to import $\partial M_D / \partial Y > 0$.

This rightward (or upward) shift of the demand for foreign exchange (US Dollar) function from F_D^O to F_d^I is shown in Fig. 1, where, given the supply of foreign exchange curve, the shift determines the RP Peso:US Dollar exchange rate $e_I^I > e_I^O$. Also, since the initial demand curve for imports involves a movement along the upward sloping supply of import curve with tariff (i.e., from (1) $\partial M_S/\partial P_D > 0$), then since $P_D = P_M e_I$ and P_M and t (if with tariff) are given, the increase in P_D must be due to no other than the increase in the foreign exchange rate from e_I^O to e_I^I.[1]

Consider now trade liberalization, the first of the two most important ingredients and thrust of globalization, which reduces the tariff rates to zero so that the domestic supply of import function is now M_S^O (left panel of Fig. A). The price of imports in RP Peso in the local market falls to $P_D^O = P_M^O e_1^I < P_L^O$ the price of locally produced import-competing goods. Since from (4) $\partial Q_D / \partial P_D > 0$, or from (2) $\partial M_D / \partial P_L > 0$, then the demand for locally produced goods must decrease from Q_D^O to Q_D^I as consumers or end-users divert their demand for locally produced goods to imports thus increasing the demand for the latter from M_D^O to M_D^I. Consequently, given the supply function of imports M_S^O, the price of imports must increase from $P_D^O = P_M^O e_1^I$ to $P_D^I = P_M^O e_1^2$ where $e_1^2 > e_1^I$ since the increase in the domestic demand for imports increases the demand for foreign exchange (US Dollar) and involves a movement along the upward sloping domestic import supply curve as in the preceding discussion of the case before trade liberalization. This depreciation of the RP Peso relative to the US Dollar (i.e., an increasing e_1) goes on for as long as the price (in RP Peso) of domestically produced import-competing goods P_L is higher than the price $P_D = P_M e_1^2$ (in RP Peso) of imports. Equilibrium in the two markets occurs when $P_D^* = P_M e_1^* = P_L$ where the foreign exchange rate stabilizes at e_1^*. Of course the demand shifts from locally produced goods to imports may be of such an extent so that $P_D = P_M e_1 > P_L$ in which case the RP Peso appreciates (e_1 falls). In any case, as the equality of P_D and P_L is approached either from below or from above P_L, the foreign exchange rate e_1 stabilizes.

[1, 2] In equilibrium $M_D = M_S$. Let M_D increase (shift) to M_D^I in which the foreign exchange rate e_1 is greater than the previous equilibrium. Using the inverse function of (1) when c_i and G are held fixed, and since $P_D = P_M e_1$, $dP_D / dM_S = P_M (de_1 / dM_S) + e_1 (dP_M / dM_S) > 0$ or, if P_M is a constant, $dP_D / dM_S = P_M (de_1 / dM_S) > 0$, that is, in the upward(downward) movement along the supply of import function when the demand for import function *shifts*, the foreign exchange rate e_1 must increase (decrease).

From the process described, what emerges as an indicator of the eventual stabilization of e_t is the decreasing variance of the difference between P_L and P_D, $Var(P_L - P_D)$. As $Var(P_L - P_D)$ approaches zero, the RP Peso:US Dollar exchange rate e_t tapers off. $Var(P_L - P_D)$ will depend on the variables that *shift* the domestic demand and supply curves of imports, and the demand and supply curves of locally produced import-competing goods, and the demand and supply functions of the foreign exchange market, i.e.,

$$Var(e_t) = f[Var(P_L - P_D)],$$

(7) where $Var(P_L - P_D) = V[M_D, P_L, N), M_S(P_D, G);$

$$Q_D(P_D, \overline{N}), Q_S(\overline{C_p}, \overline{G}) F_d, F_s]$$

The fall in the demand for locally produced import-competing goods is not without serious effect on the economy. As the lower right hand panel of Fig. A shows, the decrease in the demand for locally produced goods entails a decrease in employment and output of affected industries. Although this negative effect may be mitigated by the increase in the demand for labor that will be generated by imports, the effect however cannot be offset by this alone since realistically, the employment generated by imports cannot be greater than the unemployment generated by local producers of import-competing goods due to their known labor-intensive technology. This negative effect on employment and output maybe reinforced by the decrease in the number of local producers of import-competing goods (i.e., $\partial Q_S / \partial \overline{G} > 0$, from (3)) the effect of which is to decrease the supply of locally produced goods (leftward or upward shift of Q_S^O, right upper panel of Fig. A). An inflationary effect is also implicit in the process.

This negative result from the production function of local producers can be attributed to nothing else than the inability due to inefficiency of local producers of import-competing goods to compete effectively with imports. This is clearly unveiled by trade liberalization ushered in by globalization. Under this consideration, trade liberalization cannot be blamed for the foreign exchange rate

and employment problems of LDCs because even if trade liberaliza-
tion took place, if the economy's local producers of import-compet-
ing goods have the capability to compete effectively with imports,
these negative effects would not have happened or at least
mollified to a negligible extent as in the case of Singapore, Taiwan,
and South Korea.

3. Capital Flows, Speculation on the Foreign Exchange Market, and the Regional Contagion

Since this section is largely concerned with the foreign ex-
change market, it is necessary to point out that while it is true that the
demand for foreign exchange derives from the domestic demand for
imports, changes in the foreign exchange rate due solely to changes
in the foreign exchange market independently of changes in the
domestic market for imports may affect the domestic market for
imports and hence the price of imports. This interaction between the
domestic market for imports and the market for foreign exchange is
due to changes—in particular, shifts—in the supply of foreign ex-
change function brought about mainly by (financial) capital
flows. This is clear from (6) where $\partial F_S / \partial c^* > 0$, i.e., (financial)
capital flows shift the supply curve of the foreign exchange market
and, given the demand, results in changes in the foreign exchange
rate e_1. In turn, this shifts the supply curve of imports since $P_M e_1$ is
the import supply function's intercept. Consequently, the price of
imports in the local market $P_D = P_M e_1$ must change, the direction of
which will depend on the direction of the shift in the supply of
foreign exchange function. Net capital outflow shifts the supply of
foreign exchange function upward (leftward) while net capital in-
flow shifts the function downward (rightward).

The important item to note here is not so much the effect of
capital flows on the domestic market for imports but on the behavior
of the foreign exchange rate which capital flows directly affect. In
this regard, it should be noted that unless net capital flows are of
consistently considerable magnitude, its long-run effect on the for-

gn exchange rate may be expected to be insignificant since in the
ng-run, capital inflows and outflows may offset each other.

Turning now to the effects of speculative activity on the foreign
:change rate, the two main types of speculation on the foreign
:change market that are considered are:

Speculation on the trend of the RP Peso:US Dollar exchange rate
alone independently of changes in the exchange rates of the RP
Peso with other currencies, and

General speculative activity on the exchange rates of the RP Peso
with other currencies relative to the RP Peso:US Dollar exchange
rate.

The first type of speculation has effects on both the demand
d the supply sides of the foreign exchange (US Dollar) market
ice it may involve the purchase of foreign currency which in-
eases demand (i.e., shifts the demand curve) and withholding
reign currency which decreases its supply (i.e., shifts the supply
rve) resulting in depreciation (e_t increases) and vice-versa. Or, it
iy involve a shift in both the demand and supply curves for foreign
change in the same direction resulting in little or no change in the
reign exchange rate.

The second type arises due to the interdependence and substi-
ability of currencies $[\partial F_D / \partial e_{k-1} > 0, k-1 = 2,3,4,...r$ from (5)] the
ter providing the rationale for shifting from some currencies to
iers resulting in movements especially of the demand curve—one
ise of the so called "regional contagion." Both types of speculative
ivity however are of a very short-run nature because of the
portunity cost of holding (any) currency, i.e., the foregone interest
rnings on the currency held. This cost of holding the currency
:reases with time and must therefore be offset by the
rnings from the speculative activity plus a large risk premium. In
dition to this, speculative buying and selling activities (at any
en foreign exchange rate) will offset each other thus further

nuating the effect of speculation on the foreign exchange market. us, speculation has very little effect if at all on the long-run trend he foreign exchange rate and the activity dies down as the foreign hange rate stabilizes as indicated by $Var(e_t)$ approaching zero in . The foreign exchange woes of many Asian LDCs cannot there- e be largely the responsibility of speculative activity.

Finally, we turn to the problem of the so-called regional ntagion, or perhaps more appropriately, interdependence of the ious currencies in the region through the interdependence of ir foreign exchange rates. Trade among the various countries not ly in the region under consideration but in the world underlies se interdependence of the various countries' foreign exchange ich has been made closer and more pronounced by globalization. is interdependence of the foreign exchange rates notably in the utheast Asian region—the focus of this study—will obviously have ry significant effects particularly on the RP Peso:US Dollar ex- ange rate, and on the RP Peso exchange rates with the other rrencies.

To begin with, what is least observed in discussions garding the various foreign exchange rates, is the fact that th the demise of the gold standard in the early 1970s, among the jor international currencies, the US Dollar has emerged as its placement. This is an inevitable result of the emergence also the United States as the biggest and hence most dominant onomy in the world. Thus, for instance, if the Japanese Yen preciates/appreciates relative to the US Dollar, all other minor rrencies of less developed countries, and even major rrencies for that matter, depreciates/appreciates in parallel to at ast maintain their currencies' exchanges rates relative to the Dollar or, put simply, a major currency's movement vis-à-vis e US Dollar will induce a realignment of most if not all other rrencies relative to the US Dollar though in varying degrees. With is important observation, we consider the exchange rates of the rious currencies in the region in question to be relative to the US llar. Thus, for example, if the exchange rate of the RP Peso and

the Thai Baht is e_2 = RP Peso: Thai Baht, dividing the numerator and denominator of this by US$1.00 as the unit of the standard currency, we have

(8) $\overline{e}_2$ = (RP Peso:US$1.00) : (Thai Baht:US$1.00)

or,

(9) $\overline{e}_2$ = (RP Peso:US$1.00) (US$1.00:Thai Baht)

Thus, the RP Peso:Thai Baht exchange rate is expressed as a ratio of the RP Peso:US Dollar exchange rate and the Thai Baht:US Dollar exchange rate in (8) or, the product of the RP Peso:US Dollar exchange rate and the US$1.00:Thai Baht exchange rate or, the product of the weighted RP Peso and the weighted Thai Baht, the weight being US$1.00 in (9). The RP Peso exchange rates, with all other currencies particularly in the Southeast Asian region, are similarly expressed thus, the Philippine demand for foreign exchange function in (5) is rewritten as

(10) $\overline{F}_d$ = $\overline{F}_d [\overline{e}_1, \overline{e}_2, \overline{e}_3, ..., \overline{e}_r, M_D(Y)]$

While (10) simply recognizes the US Dollar as the standard currency, the functional relationships in (5) discussed earlier remain unchanged, i.e., $\partial \overline{F}_d / \partial \overline{e}_1 < 0$, $\partial \overline{F}_d / \partial \overline{e}_{k-1} > 0$ ($k-1$ = 2,3,4,...,r). The important result of (8) or (9) is that if for instance, the RP Peso depreciates relative to the US Dollar, it also depreciates relative to (say) the Thai Baht and relative to all other currencies in the region as well because $\overline{e}_k$ = $\overline{e}_1$:($k-1$-th Currency:US$1.00) or $\overline{e}_k$ = $\overline{e}_1$ (US$1.00:$k-1$-th Currency). The demand for foreign exchange functions of countries in the region maybe expressed similarly as in (10).

With the US$1.00 as the standard (like an ounce of gold in the gold standard), or base, or reference currency, the so-called regional contagion may now be looked into more clearly.

To begin with, from (8) or (9) the general relationship among the various exchange rates of the RP Peso and the other currencies in the region is

$$(11) \qquad \bar{e}_1 \overset{>}{\underset{<}{=}} \bar{e}_2 \overset{>}{\underset{<}{=}} \bar{e}_3 \overset{>}{\underset{<}{=}} \ldots \overset{>}{\underset{<}{=}} \bar{e}_r \qquad (k = 1, 2, 3, \ldots, r)$$

The various foreign exchange rates or their respective foreign exchange markets in the region under consideration are in *equilibrium* if the equality in (11) holds. Focusing on the Phililppine foreign exchange market, this equilibrium is maintained even if the RP Peso depreciates or appreciates relative to US$1.00 (i.e., $\bar{e}_1$ increases or decreases), a result that follows from (8) or (9), and (11). However, having taken the US Dollar as the standard and hence the common denominator that links all currencies and their exchange rates and the fact that all currencies are substitutes which makes them inextricably interdependent, the depreciation of the RP Peso against the US Dollar must affect some, if not all, of the other currencies' exchange rates relative to the US Dollar in the region, though to a varying degree and not necessarily at the same time due to *other factors endogenous to each of the countries involved.* Thus, a *disequilibrium* occurs with either the "greater than" and/or the "less than" inequality holding for at least two exchange rates in (11). The disequilibrium continues for as long as the other currencies' exchange rates relative to the US Dollar in the region under consideration have yet to adjust to the initial impact of the depreciation (appreciation) of the RP Peso against the US Dollar. Once the adjustment or realignment of the foreign exchange rates is reached, the various exchange rates are again in *equilibrium* though at different k-th Currency:US$1.00 exchange rates.

Exactly the same analysis applies to, say, the Thai Baht:RP Peso exchange rate when, in the Thai foreign exchange market for the US Dollar, the Thai Baht:US Dollar exchange rate changes. For example, if the Thai Baht:US Dollar exchange rate increases (i.e., the Thai Baht depreciates relative to the US Dollar) the equality (equilibrium) in (11) is disturbed and becomes $\bar{e}_1 > \bar{e}_2 < \bar{e}_3 = \ldots = \bar{e}_r$ inducing

depreciation of the RP Peso:US Dollar and of the other currencies against the US Dollar, say, $\overline{e}_3, \overline{e}_4, \overline{e}_5, \ldots, \overline{e}_r$, until equilibrium is attained. Implicit in this analysis is the realistic conclusion that the equilibrium of the various foreign exchange rates (with the US Dollar as the standard) is *highly unstable* and its attainment a long run process[3] since the realignment of the various foreign exchange rates in the region towards equilibrium may keep on going for as long as the countries' respective import-competing industries have not completely adjusted—the main reason beneath the "regional contagion"—by becoming more competitive with imports, and capital flows are in flux reinforced by some speculative activity however short-live this maybe, and to a very significant extent, the trade or foreign exchange policies of the countries in the region. Thus, even in the so-called regional contagion which, very recently (September 1998) has begun to assume global proportion, it is the inefficiency or uncompetitiveness of the region's LDCs' import-competing or even their export industries that is to be mainly held responsible while the other factors or variables play a less significant reinforcing role in the behavior of the foreign exchange rates.

4. Conclusion

With a partial equilibrium approach, it has been shown that the foreign exchange rate woes of such less developed countries as Mexico, Southeast Asia, and very recently (September 1998) Latin America, are due to than the inefficiency of their import-competing industries and even their export industries to compete in the world market, that has been uncovered and brought into the open by globalization. In this regard, highly developed industrially mature countries are affected because the general depreciation of the foreign exchange rates of LDCs, in particular, becomes a substitute for the protective tariffs of these countries hence developed countries'

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[3] The time involved in the adjustment or realignment process is a matter left to empirical work.

exports to them must also fluctuate inducing fluctuation in the developed countries' foreign exchange rates. Thus what has become a regional contagion, especially in Southeast Asia, is now showing signs of spreading world-wide. In any case, it is the inefficient industries in LDCs which have made them ill-prepared and unable to compete in the global market with the onslaught of globalization that is the root cause of, and that started, the fiasco now assuming global proportions. Keen observation apropos of globalization shows that the Mexican experience in 1994 took place almost immediately after NAFTA reinforced by the WTO. And then the Southeast Asian countries' experience started in mid-1997 right after the WTO, APEC, and AFTA. The role of the WTO, NAFTA (in the case of Mexico), APEC, and AFTA (in the case of the ASEAN) was simply to implement trade liberalization and liberalization of capital flows—the two most important thrusts of globalization which in turn uncovered and starkly revealed the weakness of LDCs, namely, the inability of their industries especially their import-competing industries which are largely in the manufacturing sector, to compete effectively in the world market. In this respect, it is worth noting that among the Southeast Asian economies afflicted by this foreign exchange malaise, Taiwan (not to mention China), and Singapore to some extent, have been able to hold up to the Trojan horse of globalization for one obvious and very important reason — they have been virtually free trade economies long before the advent of globalization so that through the years their industries were honed to effectively compete in the world market.

On the other hand, with the sudden onslaught of globalization in mid-1990, the first casualty in Southeast Asia was Thailand, then Malaysia and the Philippines all of which are much less open than Taiwan or Singapore. The hardest hit is Indonesia, the least open and most ill-prepared for globalization from the consequences of which it continues to suffer.

As has been shown, the perverse movement of the RP Peso and other currencies in the region relative to the US Dollar cannot, of course, go on indefinitely since the limit is provided by

the movement towards *equilibrium* or approximate equality of the prices of domestically produced import-competing goods and of imports, an indication of which that emerges from the theoretical analysis is that over time the variance of the difference of these prices [see (7)] tends to approach zero.

Concerning speculative activity and capital flows, the analysis views the effects of these, especially speculation, on the foreign exchange market as very short-run in nature and as such they can hardly be held to account for a relatively large share in the overall foreign exchange rate woes or more appropriately, economic crisis of Southeast Asian LDCs. Then the so-called "regional contagion" is explained by the interrelationship among the various currencies in the region which becomes clearer when the US Dollar is taken as the standard or base or reference currency along with the fact that all currencies are substitutes. Some results of the theoretical analyses need to be pointed out and these are the following:

1) The possible inflationary effect of globalization as the production of domestically-produced import-competing goods decreases due to the inability of many local producers to compete effectively with imports in spite of the continued depreciation of the currencies. This may however be offset by cheap imports.

2) Concomitantly, unemployment increases. This is the most serious problem of the afflicted LDCs resulting from the exposure through globalization of their inefficient industries, in the absence of alternative industries, e.g., expansion of competitive ones, expansion of export industries, appearance of new industries, etc. that may absorb the unemployed workforce even if, as Baghwati said elsewhere after the Mexican experience following NAFTA, that the unemployed labor has been retrained for alternative jobs.

3) Focusing on the Philippines' predicament, the depreciation of the RP Peso or any currency for that matter does not necessarily mean an increase in the country's exports because of a parallel

depreciation of other currencies. Relatedly, the protective effect of depreciation against imports as depreciation substitutes for tariff may not effectively shield import-competing industries whose output contains a relatively large amount of imported inputs (capital such as machinery and equipment, raw materials, etc.). The same argument applies to exports as well. The export-stimulation effect that is expected from the depreciation of the RP Peso may be attenuated by export industries with relatively large import content. There are still however exports that are globally competitive that mitigates this negative effects.

4) The analysis though not dwelling specifically on it brought to the fore the extremely important factor in the competitiveness of the industries of many present-day LDCs, namely, technology. This major ingredient of competitiveness is what many LDCs miserably lacked and is being exploited to the hilt by highly developed, industrially mature, and highly technologically advanced Western countries that so eagerly worked and pushed for globalization.

Since the economic crisis is evidently brought about by the real sector, not by the monetary or financial sector, it would be wrong to "solve" it by means of financial or monetary measure. Instead of solving the problem, any financial or monetary approach may even worsen it. Perhaps, the best approach would be to simply let competitive market forces to naturally take its course and work out the problem with but limited guidance of the real sector, for instance through provision of incentives for accelerated technological improvement, retraining of displaced workers for existing and emerging competitive industries, institutional reforms particularly in education, warding off dumping (subsidized exports), utilizing better technology for the effective quality control of, and to screen out, sub-standard traded goods especially imports of LDCs, etc., all of which are aimed at enhancing the global competitiveness of these countries' industries and at the same time shielding them from patently *unfair* competition.

In conclusion it is important to emphasize that the perverse behavior of the foreign exchange rates of many LDCs not only in the Southeast Asian Region but throughout the world as recent events indicate is only an outward manifestation of a more serious deep-seated real sector problem—not a financial problem as many claim—namely, the inefficient, globally uncompetitive industries in LDCs exposed by globalization. Hence the stabilization of the foreign exchange rates of these economies is a long-term process since behind it is the long-run structural adjustment or realignment of these LDCs' industries, in particular the manufacturing sector. By "structural adjustment or realignment" of these economies' industries is meant the disappearance of inefficient ones, improvement through a faster rate of technological progress of some, expansion of competitive ones, appearance of new competitive industries, etc., eventually resulting in pronounced changes in the relative commodity composition of the industrial sector's total output in particular, and in general, of the country's total output, which evidently is a long-run process. To the solace of many LDCs afflicted by this real sector malady, it is noted that a similar structural adjustment took place in Western European countries when they were forming the now European Union. LDCs may welcome globalization especially its trade liberalization thrust as a way of "flushing out" inefficient industries—a painful cleansing of "ersatz capitalism."[4]

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[4] Yoshihara, Kunio. The Rise of Ersatz Capitalism in South-East Asia. Singapore: Oxford University Press, 1988.