Journal of International Economic
Integration 4(2) Autumn 1989, 70−84

U.S.−Latin American Trade Flows: 1967∼1985 ***

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Abstract

This paper studies U.S.-Latin American(L.A.) trade flow trends for the period 1967-1985. To analyze the trade trends, standard trend equations of the form $LnX=a+bt$, where X= value of exports, t= time, were used for the ten categories of the SITC one digit classification. Since the period covered by the data includes the 1980's crisis, it was considered appropriate to estimate trends for the 1967-85 period as a whole and for the 1967-80 subperiod. Another estimation for the whole period, including a dummy variable for the 1981-1985 years was also made. Since the trade flows between some individual countries and the U.S. are of particular importance, and since the policies and performance of these countries varied substantially, the same trend equations were estimated for the U.S., -Mexico, -Argentina, -Brazil, and, -Rest of Latin America(ROLA) trade flows.

It appears that between 1967-1985, the rate of growth of U.S. imports from L.A. outpaced exports with imports growing at a 9.5% annual rate compared to a 6.4% rate of growth for exports. U.S. exports to L.A. declined significantly in the 1980's while imports remained robust. This appears to be the result of, first, the drop of L.A.'s capacity to import as a result of the debt crisis, and second, the impact of an increasingly overvalued dollar on U.S. exports causing a general decline in international competitiveness of U.S. exports. U.S. exports to L.A. appear to have grown mostly in agricultural and natural resource based

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*** Paper presented at the International Atlantic Economic Association Conference in London, England, April 16-22, 1988

products while U.S. imports from L.A. grew faster in manufactured goods. In the 1980's the U.S. was experiencing a general decline in international competitiveness in its traditional export sectors and L.A. was developing comparative advantages in non-traditional sectors. While trade flows in both directions have been cyclical, U.S. exports have been more cyclical than imports - implying that domestic economic factors in L.A. might be more of a factor in this trade relationship than U.S. domestic economic variables. The more disaggregated the trade data, the more volatile are the trade flows in both directions with U. S. exports always more volatile than imports. The data revealed two major inflexion points in the U.S.-L.A. trade flows associated with the years 1973-74 and 1980-81. In addition, another inflexion point emerged for 1969 relating to U.S. imports. U.S. trade with L.A. expanded throughout the 1967-1985 period with the greatest expansion being with ROLA and Mexico, respectively. Remarkably, U.S. imports from ROLA and Mexico have grown at a faster rate than those from Brazil, the acknowledged L.A. export leader. 1976 emerged as a fourth inflexion point in the U.S.-Argentina trade relationship with Argentine domestic factors appearing as the main determinants. 1977 emerged as a fourth inflexion point in the U.S.-Brazil trade relationship with Brazilian domestic fators appearing as the major determinants.

I . Introduction

This paper studies U.S.-Latin American(L.A.) trade flow trends for the period 1967 -1985. These years represent a relatively long and significant period of time in the economic development of the countries under study and also an important period in the trade relationship between the U.S. and Latin America. This period covers several phases of a world business cycle in terms of both output and trade including strong growth years and years of retrenchment and negative growth. It includes the period when severe price shocks in the world oil markets caused tremors not only in other energy markets but on the world economy. During the period covered the OECD went from a Fixed Exchange Rate System to a Managed Floating Exchange Rate System. The U.S. economy and by extension the U.S. dollar which for two decades following WW II reigned supreme in the world economy, slowly had to adjust to being the weakened leader among the industrial countries. In step with these developments the U.S. went from a net surplus nation to a net deficit nation in its trade relationships and now finds itself a net debtor nation to the rest of the world.

The twenty years that ended in 1980 constitute the golden period of Latin American

economic growth.[1] In that era the region experienced varied but steady growth. In terms of trade regimes, there was in general a deemphasizing of import-substitution industrialization and a movement towards more export-oriented regime with varying degrees of trade liberalization.

The eighities have been years of crisis for almost all the countries in the region, which have undergone painful adjustment processes, have curtailed imports and in many cases have attained significant trade surpluses used to serve at least partially their external debt.

Given this general setting the study of the U.S. - L.A. trade trends, and the various factors that impinge on them is interesting as it throws some light on several issues such as the evolution of the respective countries' comparative advantage, the stability of the trade relationships, the impact of the debt crisis, the domestic protectionist and other incentive policies, etc. This analysis is also useful to assess how well the data fit the traditional trade theories regarding U.S. and L.A. exports and imports particularly in regards to basic commodities and manufactures. This essay does not pretend to be comprehensive, but rather a first exploratory step in the overall study of U.S.-LA. trade flows.

Ⅱ. Trend Analysis

To analyze the trade trends, standard trend equations of the form

$$\text{Ln } X = a + bt$$

where X = value of exports

t = time

were used. Total US exports to Latin America and US exports for the ten categories of the SITC one digit classification were used. To study the Latin American exports to the US, the US import data at similar level of disaggregation were used.[2] Since the trade flows between some individual countries and the US are of particular importance, and since the policies and performance of these countries varied substantially, the same

1. See for example a detailed analysis of this period in Inter-American Development Bank, Economic and Social Progress in Latin America : 1982 Report, 1983, Washington, D.C.
2. All the data were deflated by the corresponding exports and imports implicit price deflators used in the US gross national product accounts.

trend equations were estimated for the US-Mexico, US-Argentina, US-Brazil and US-Rest of Latin America(ROLA) trade flows. Furthermore, since the period covered by the data includes the 1980s crisis, it was considered appropriate to estimate trends for the 1967－85 period as a whole and for the 1967－80 subperiod. Another estimation for the whole period, including a dummy variable for the 1981－85 years was also made.

Ⅲ. Empirical Analysis

A. Total US-Latin American Trade Flows:

These trend estimates are summarized in Tables 1 and 2.

Between 1967－1985 the rate of growth of US imports from L.A. outpaced exports with imports growing at a 9.5% annual rate compared to a 6.4% rate of growth for exports. The exceptions to this trend were SITC categories: 0, Food and Live Animals, 2, Inedible Crude Materials except Fuels, and 4, Animal and Vegetable Oils and Fats, i.e., agricultural and primary commodity based products. However, if we exclude the 1981－1985 period from the time series the rate of growth of trade between the US and Latin America was more balanced with US imports growing at an 11.9% annual rate compared to a 10.7% rate for exports. Thus, while L.A. grew, trade in both directions grew at a high and similar rate, increasing the interdependence between the U.S. and the L. A. region. During this shorter period, SITC categories in which the rate of growth of US exports exceeded the rate of imports were the same mentioned above, and also included SITC categories 5, Chemicals, 6, Manufactured Goods by Chief Material, and 9, Other Commodities.

The long term rate of growth of the OECD countries declined after the late 1960's a trend which was reinforced by their conservative reaction to the 1973 oil price increase. During this period L.A. growth continued healthy due in part to very heavy exernal borrowing. Thus, the L.A. markets remained quite dynamic, and U.S. producers could expand exports substantially.

The fastest growth rates of U.S. imports were in SITC 7, Machinery and Transport Equipment and SITC 8, Miscellaneous Manufactures. The compound annual growth rate for the SITC 7 category for the whole period exceeded 22 per cent, and for the shorter 1967～1980 was close to 30 per cent. In spite of a relatively low base, this high rate is remarkable. Similar rates for the SITC 8 category of 17 and 23 per cent, were also very high. These extremely high growth rates reflect a changing comparative advantage as L.A. began to develop some competitiveness in industries which the U.S.

Table 1

Trends of U.S. Imports from Latin America

SITC	Equation(A) 1967−1985		Equation(B) 1967−1980		Equation(C) 1967−1985 plus Dummy		
	Rate of Growth	$\bar{R}^2$	Rate of Growth	$\bar{R}^2$	Rate of Growth	$\bar{R}^2$	Dummy coefficient
Total Trade	9.5[c/]	.90	11.9	.92	11.6	.94	−. 34
0. Food and live animals	3.8[c/]	.63	6.9	.92	6.6	.88	−. 46
1. Beverages and tobacco	13.2[c/]	.92	16.1[c/]	.94	15.3[c/]	.93	−. 35
2. Crude materials, inedible exc. fuels	1.0[c/]	.03[a/]	3.7	.62	3.2	.32	−. 35
3. Mineral fuels, lubricants, etc.	13.6[c/]	.86	17.5	.87	16.7	.88	−. 49
4. Oils & fats, animal & veg. products	.8	-.03[a/]	4.1	.22	4.1	.22	−. 54
5. Chemicals	9.2	.93	8.7	.91	8.9	.93	b
6. Manuf. good classified by chief mat.	8.7	.85	9.3	.75	9.3	.85	b
7. Machinery & transport equipment	22.5[c/]	.87	29.4[c/]	.88	28.8[c/]	.91	−1.03
8. Miscellaneous manuf. articles	17.0[c/]	.85	23.1[c/]	.90	22.5	.92	−. 89
9. Other commodities & goods, N.E.C.	7.8[c/]	.95	8.6	.96	8.2	.96	b

Notes a/ t −statistic insignificant at the .05 probability(all other t's significant at the .001 critical probability).
b/ Dummy variable coefficient insignificant
c/ Durbin−Watson statistic less than critical value at the .05 level of significance, i.e., positive autocorrelation is suspected.

Source : Compiled from official statistics of the U.S. Department of Commerce

Table 2

Trends of U.S. Exports to Latin America

SITC	Equation(A) 1967−1985		Equation(B) 1967−1980		Equation(C) 1967−1985 plus Dummy		
	Rate of Growth	$\bar{R}^2$	Rate of Growth	$\bar{R}^2$	Rate of Growth	$\bar{R}^2$	Dummy coefficient
Total Trade	6.4[c/]	.64	10.7	.92	9.7[c/]	.75	−.53
0. Food and live animals	8.1[c/]	.63	12.3[c/]	.79	11.1	.68	b
1. Beverages and tobacco	1.4[c/]	.04[a/]	4.4[c/]	.68	3.2[c/]	.10[a/]	b
2. Crude materials, inedible exc. fuels	8.1[c/]	.78	11.5	.87	11.0	.85	−.47
3. Mineral fuels, lubricants, etc.	8.3	.85	8.1	.81	8.0	.84	b
4. Oils & fats, animal & veg. products	9.6	.74	13.9	.83	13.2	.81	−.59
5. Chemicals	7.0[c/]	.65	11.9	.91	11.0	.81	−.66
6. Manuf. good classified by chief mat.	5.1[c/]	.42	9.7	.82	8.5[c/]	.55	−.55
7. Machinery & transport equipment	6.0[c/]	.56	10.5[c/]	.94	9.4	.69	−.56
8. Miscellaneous manuf. articles	6.4[c/]	.69	10.2	.97	9.3[c/]	.79	−.47
9. Other commodities & goods, N.E.C.	4.7[c/]	.34	8.8[c/]	.62	8.6	.49	−.62

Notes a/ t −statistic insignificant at the .05 probability(all other t's significant at the .001 critical probability).
b/ Dummy variable coefficient insignificant
c/ Durbin−Watson statistic less than critical value at the .05 level of significance, i.e., positive autocorrelation is suspected.

Source : Compiled from official statistics of the U.S. Department of Commerce

was losing.

Other double digit growth rates were found in SITC 1, Beverages and Tobacco and SITC 3, Fuels.These high rates are expected as they reflect natural resource based comparative advantages as well as the energy price increases.

The dummy variable coefficients are negative as expected except for categories 5, 6 and 9 in which cases they are not significant. The largest coefficient is the one for machinery and equipment, which is an expected result as that sector's demand declines sharply during a recession. However, the second largest coefficient is in miscellaneous manufactured products which includes apparel, footwear, and other products in which L.A. would have a strong comparative advantage. Remarkably, chemicals and manufactured goods classified by material, which includes leather, rubber, cork, wood, paper, textiles, iron and steel and other metals do not show a significant lowering of their growth rate during the recession.

During the 1967～1980 period the growth rates of U.S. exports for all sectors except beverages and tobacco were between 8 and 14 per cent, and the rates of manufactures were comparable to those of natural resource based products. However, the recession of the 1980's has had a substantial impact on U.S. exports to L.A. This has been a widespread phenomenon, which the dummy coefficients show to have been felt similarly across sectors except for foods, beverages and tobacco, and fuels. That is, all U.S. exports of manufactures and raw materials dropped, while only the most essential ones to the Latin American consumption remained robust.

Equation (a) of imports gives a better fit than that for exports with an $\overline{R}^2$ of .90 for US imports from Latin America versus an $\overline{R}^2$ of .64 for US exports to Latin America for the period 1967～1985. The only exception to this being SITC categories 2 and 4 in which US exports have remained strong and competitive through the economic slowdown of the 1980s.

When equation (b) is used(1967～1980) the $\overline{R}^2$ for total imports equal that of total exports with an $\overline{R}^2$ of .92 for each, and there is a stronger fit in the export equation for SITC categories 6, 7, Machinery and Transport Equipment, and 8, Miscellaneous Manufactured Articles, in addition to 2 and 4 of equation (a).

When the dummy variable for the years 1981～1985(equation(c)) is included, the $\overline{R}^2$ for imports once again exceeds that of exports with a value of .94 versus .75 respectively. With SITC categories 2 and 4 once again being the only exceptions. Although the dummy variable has reduced the differentiation between export and im-

port trends, it is clear that the 1980s witnessed a weakening in the trend of US exports to Latin America with no apparent weakening in US imports from Latin America.

The t-statistic for equation (a), (b), and (c) for exports and imports were in general high and significant at the .001 critical probability, with the t−'s for the import equations in general higher than that for exports and in general supporting our observations based on the $\overline{R}^2$s.

The Durbin-Watson statistics in equation (a) for both US imports from and exports to Latin America are low for the period 1967～1985 with a value of .79 for imports and .43 for exports. This is well below the critical value of 1.06 at the .05 level of significance leading us to suspect that positive autocorrelation is present in the time series. The only exception to this was SITC category 4 which had a D-W statistic of 1.29 for imports and 1.23 for exports which is in the indeterminate range. This implies that while trade flows in both directions have been cyclical, US exports have been more cyclical than imports. This result is contrary to the commonly held view that L.A. exports are subject to high cyclical fluctuations due to the OECD countries' business cycle. While that could be the case for individual commodities, it is not so in the aggregate.

In equation (b) when the problem years of 1981～85 are excluded from the time series the Durbin-Watson statistic rises to 1.37 for imports and 1.06 for exports. While exports continue to be more cyclical than imports, the D-W statistic for exports is now indeterminate at the .05 level of significance while no autocorrelation is now suspected for imports. The exception for imports being SITC categories 1, 7, and 8 with a D-W statistics of .71, .45, and .55 respectively. For exports SITC categories 0, 1, 7, and 9 are now also suspected of positive autocorrelation with a D-W statistic of 1.00, .79, .90, and .70 respectively.

When the dummy variable for 1981～85 is used in equation (c) the Durbin-Watson statistic again rises to almost the level of equation (b) with a value of 1.31 for imports and .93 for exports, however both values are now in the indeterminate range yet still maintain the same ranking.

The exceptions to imports again include SITC categories 1 and 7 with positive autocorrelation indicated with D-W statistics of .82 and .74 respectively, while for exports SITC categories 1 and 8 indicate positive autocorrelation with D-W statistics of .62 and .86, all at the .05 level of significance.

It thus appears that cyclical influences on both imports and exports vary with exports being more cyclical than imports yet both tend to increase the more disaggregated the data and analysis gets with SITC categories 1, 7, and 8 being the most volatile in

both directions.

While the differentiation between equations (a), (b), (c) and the resulting significance statistics outlined above verified a clear change in the trade flows between the US and Latin America beginning in 1981, the plot of actual to fitted values and the plot of residuals for US exports to Latin America indicate the presence of two inflection points: One inflection point being 1981 already assumed and verified, the other inflection point being 1973; indicating significant changes and/or adjustments in US exports to Latin America beginning at these two points in time. The year 1973 is associated of course with the onset of the first oil crisis resulting in a quadrupling in world oil prices and the resulting stagflation that characterized the remainder of the decade. The year 1981 is associated with the consequences of the second energy crisis of 1979−80 resulting in a further tripling of world oil prices, the onset of a world recession and the consequent Third World debt crisis of which Latin Amerca is the focus.

Similar analysis for US imports from Latin America indicate that these same economic forces affected US imports approximately at the same time, i.e., 1973 and 1981, with an additional inflexion point around 1969 now also emerging. From 1969 on, U.S. import growth rates accelerated partly due to the generalized commodity price increases that took place in the years before the first oil price shock.

B. U.S. Trade with Argentina, Brazil, Mexico, and the Rest of Latin America:

Given the general problems involved in aggregate analysis and the obvious problems involved in treating the 25 Latin American and Caribbean countries as a single entity, as well as the indications given by the preceding analysis that important economic factors affecting the US Latin American trade relationship appear to have their origins on the L.A. side, it was decided that a more disaggregated approach was in order. In this regard US trade with Latin America was disaggregated into trade with Argentina (AR), Brazil(BR), Mexico(MX), and the Rest of Latin America(ROLA).

The rate of growth of US exports and imports to and from AR, BR, MX, and ROLA are in general consistent with the figures for total US exports and imports, with the rate of growth of imports from AR, BR, MX, and ROLA, greater than that of exports to AR, BR, MX, and ROLA. The rank order of growth rates was consistent for both imports and exports with the fastest growth rate for imports from ROLA followed by MX, BR, and AR, in rank order, i.e, 18.5%, 14.0%, 10.0%, and 7.4% respectively; and 17.0%, 9.4%, 4.1%, and 3.3% respectively for US exports. Thus US trade with Latin America was expanding throughout the 1967～85 period with the greatest expansion

Table 3

US Trade Trends with Argentina, Brazil, Mexico, and the Rest of Latin America

1967 – 1985

SITC	US – ARGENTINA				US – BRAZIL				US – NEXICO				US – REST OF LATIN AMERICA			
	US EXPORTS		US IMPORTS		US EXPORTS		US IMPORTS		US EXPORTS		US IMPORTS		US EXPORTS		US IMPORTS	
	Rate fo Growth	$\bar{R}^2$	Rate of Growth	$\bar{R}^2$	Rate of Growth	$\bar{R}^2$	Rate of Growth	$\bar{R}^2$	Rate of Growth	$\bar{R}^2$	Rate of Growth	$\bar{R}^2$	Rate of Growth	$\bar{R}^2$	Rate of Growth	$\bar{R}^2$
Total Trade	3.3[b]	.13[a]	7.4	.79	4.1[b]	.23	10.0	.96	9.4[b]	.76	14.0[b]	.97	17.0[b]	.93	18.5[b]	.95
0. Food and live animals	.0	-.06[a]	4.2	.59	7.2	.39	4.2	.66	13.6	.67	2.5	.39	18.2	.93	15.9[b]	.96
1. Beverages and tobacco	4.0[b]	.02[a]	15.1	.54	.3[b]	-.01[a]	22.0[b]	.92	-8.0[b]	.25[a]	14.3[b]	.87	13.5[b]	.87	20.2[b]	.98
2. Crude materlals, inedible exc. fuels	2.4[b]	.03[a]	-7.5[b]	.44[a]	5.6[b]	.45	4.6	.43	10.1	.81	3.3	.64	18.2[b]	.96	11.4	.88
3. Mineral fuels, lubricants, etc.	4.9[b]	.28	35.0	.34	6.5[b]	.70	36.0	.39	7.6	.62	32.8[b]	.77	22.4[b]	.91	21.0[b]	.92
4. Oils & fats, animal & veg. products	8.1	.25	6.0	.35	-4.7	-.02[a]	.8	-.04[a]	16.0	.59	-4.2	.34[a]	20.9	.94	11.7	.63
5. Chemicals	4.6[b]	.37	10.9	.78	5.5[b]	.20	16.3[b]	.83	9.1[b]	.81	11.6[b]	.85	18.3[b]	.95	17.3	.97
6. Manuf. good classified by chief mat.	-2.4[b]	-.01[a]	10.7	.69	-1.6[b]	-.03[a]	17.9[b]	.96	10.8[b]	.71	10.1[b]	.83	15.2[b]	.90	16.7	.89
7. Machinery & transport equipment	4.2[b]	.15[a]	7.2	.51	.35[b]	.17	32.1[b]	.87	8.8[b]	.73	21.8[b]	.83	16.2[b]	.88	38.6	.96
8. Miscellaneous manuf. articles	4.5[b]	.11[a]	13.5[b]	.47	2.5[b]	.10[a]	29.8[b]	.80	7.9[b]	.71	13.8[b]	.74	18.0[b]	.95	28.9[b]	.97
9. Other commodities & goods, N.E.C.	8.7[b]	.63	5.4	.30	7.5[b]	.5	11.6[b]	.94	5.8[b]	.33	8.7[b]	.93	15.2	.90	17.1	.97

Notes a/ t – statistic insignificant at the .05 probability (all other t's significant at the .001 critical probability).
b/Durbin – Watson statistic less than critical value at the .05 level of significance, i.e., positive autocorrelation is suspected.

Source : Compiled from official statistics of the U.S. Department of Commerce

being with ROLA and MX respectively.

Rest of Latin America

Although the rate of growth of U.S. imports from ROLA was 18.5% versus 17.0% for exports there was variation at a more disaggregated SITC level with the rate of growth of imports from ROLA exceeding that of exports in SITC categories: 1, 6, 7, 8, and 9. US imports from ROLA exceeded the average rate of growth of 18.5% in SITC categories: 1, 3, 7, and 8. US exports to ROLA exceeded the average rate of growth of 17.0% in SITC categories: 0, 2, 3, 4, 5 and 8. Once again we see indications of a fast growth of U.S. manufacturing imports and slower Natural Resource Based Products' imports, showing a changing comparative advantage. ROLA exports of manufactures were becoming increasingly competitive and were making significant inroads in the US market during this time period. Many of these exports were in products of U.S. sunset industries.

Mexico

Likewise, while the rate of growth of US imports from MX exceeded that of exports by a rate of 14.0% versus 9.4%, variation existed at a more disaggregated level with the rate of growth of imports from MX exceeding that of exports in SITC categories: 1, 3, 5, 7, 8 and 9. US imports from MX exceeded the average rate of growth of 14.0% in SITC categories: 1, 3, and 7. US exports to MX exceeded the average rate of growth of 8.4% in SITC categories: 0, 2, 4, and 6. With the fastest rate of growth of imports being in manufactures while in exports it is in agricultural and natural resource based products. MX during this period demonstrated increased competitiveness in manufactures steadily increasing its exports to the US.

Brazil

The results for US trade with BR were similar with the rate of growth of imports from BR exceeding that of exports, i.e., 10.0% vs 4.1%. The rate of growth of trade with BR was less than that with ROLA and MX, with less variation at the disaggregated level with the rate of growth of imports exceeding that of exports in SITC categories: 1, 3, 5, 6, 7, 8 and 9. US imports from BR exceeded the average rate of growth of 10.0% in SITC categories: 1, 3, 5, 6, 7, 8 and 9. US exports to BR exceeded the

average rate of growth of 4.1% in SITC categories: 0, 2, 3, 5 and 9. Similar comments to those made above for ROLA and MX regarding the strong performance of exports of manufactures apply also to BR. If anything more need be said, it is that BR's expansion of exports to the US is much broader in scope than that of ROLA and MX. Brazil is the largest country in L.A., and the most self-sufficient. It has the most diversified L.A. economy, and it is the one in which protectionist policies benefit more sectors. Thus, the low rate of growth of U.S. exports.[3]

Argentina

In the case of US trade with AR once again the same general pattern emerges with the rate of growth of US imports from AR exceeding that of exports, i.e. 7.4% vs. 3.3 %. At a more disaggregated level the rate of growth of imports exceeds that of exports in SITC categories: 0, 1, 3, 5, 6, 7 and 8. US imports from AR exceeded the average rate of growth of 7.4% in SITC categories: 1, 3, 5, 6 and 8. While US exports to AR exceeded the average rate of growth of 3.3% in SITC categories: 1, 3, 4, 5, 7, 8 and 9.

AR has had a very sluggish growth record during the period covered, and thus, its market has grown very slowly and so have U.S. exports. U.S. imports have also grown at a relatively slow pace as most of AR's exports are in natural resource based products which compete in world markets with the U.S. as AR is the L.A. country with the natural resource endowment more similar to that of the U.S.

Generalizations

Summarizing the results of US trade with AR, BR, MX and ROLA during 1967~1985; the rate of growth of imports exceeded that of exports for SITC categories: 1, 3, 5, 6, 7, 8 and 9 in at least 3 of the 4 country groupings. In terms of the composition of imports from AR, BR, MX and ROLA, the rate of growth of imports exceeded the average within each country grouping for SITC categories: 1, 3, 7 and 8 in at least 3 of the 4 country groupings. In terms of the composition of exports to AR, BR, MX and ROLA, the rate of growth of exports exceeded the average within each country group-

3. The difficulties of exporting to Brazil are not only faced by the U.S., but they are shared by all other Latin American countries. See for example, Inter-American Development Bank, Economic and Social Progress in Latin America, 1984 Report, 1985, Washington, D.C. ch. 2.

ing for SITC categories: 0, 2, 3, 4 and 5 in at least 3 of the 4 country groupings.

All US import equations have better fits than those for US exports. The $\overline{R}^2$ coefficients for US imports from AR, BR, MX and ROLA are high, i.e., .79, .96, .97 and .95 respectively with t-statistics that are significant at the .001 critical probability. The relatively lower $\overline{R}^2$ for AR indicates that domestic factors in Argentina were arresting export growth during this period relative to the rest of Latin America. In contrast, the $\overline{R}^2$ coefficients for US exports to AR, BR, MX and ROLA vary, i.e., .13, .23, .76 and .93 respectively. The $\overline{R}^2$ coefficients for exports are lower than those for imports across the board and in particular for exports to AR and BR with t-statistics significant only at the .10 and .05 critical probability

Likewise the D-W statistics for US imports from AR, BR, MX and ROLA is higher, i.e., 1.52, 1.62, .82 and .69, respectively, than it is for US exports to AR, BR, MX and ROLA, i.e., .49, .29, .66, and .43, respectively. Only the D-W statistic for US imports from AR and BR was above the critical value of 1.06 at the .05 level of significance leading us to suspect that positive autocorrelation is present in the time series for US imports from MX and ROLA and in US exports to AR, BR, MX and ROLA.

US trade with AR has been the most cyclical compared to the other country groupings with US exports to AR being more volatile than imports. In addition to the overall cyclical trends that characterized the aggregate time series for US-Latin American trade with the pivotal years of 1973 and 1980, we now see emerging two additional trends particular to US trade with AR indicating a change in trade regime around the years 1969 and more clearly 1976. US exports to AR expanded sharply in the 1976−80 period only to decline precipitously in the 1981−85 period. The 1976−1980 period is well known in Argentina as this was the time of the neo-liberal experiment under Martinez de Hoz which resulted in a dramatic overvaluation of the Argentinian peso and a large inflow of short term capital.[4]

US exports to BR have also been more volatile than imports indicating again the strong influence of domestic economic factors and trade policies originating within BR on this trade relationship. US exports to BR were clearly on the rise between 1967−74. There was then an adjustment in BR imports caused primarily by the increase in world petroleum prices during the 1974−77 period. Growth again resumed in US exports to

4. See for example Blejer, M. "Liberalization and Stabilization Policies in the Southern Cone Countries : An Introduction", *Journal of Inter-American Studies and World Affairs*, Feb-April 1983.

BR in the 1977－80 period and then declined precipitously in the 1981－84 period.

Although US exports to MX were again more volatile than imports as in the case of AR and BR the fit was much better and appeared to follow the economic cycle of the US to a much greater extent. This of course makes sense given the close proximity of the MX economy to the US and its greater degree of economic integration with the US. Two main trends approximating the overall US-Latin American trends with the demarcation years 1973 and 1981 emerge. By 1977 MX had adjusted to the changed world energy situation and had begun to benefit from higher oil prices as MX oil production began to increase substantially, a trend reversed as oil prices fell and the country fell into a debt crisis.

The fit for US trade with ROLA was even better than that of trade with MX and there was even less divergence in the export and import trends. The same general trends were evident in the data with the pivotal years 1973－74 and 1981－82 most prominent followed by a secondary inflection around 1969.

Ⅳ. Conclusion

It appears then that between 1967－1985

(a) the rate of growth of US imports from LA outpaced exports with imports growing at a 9.5% annual rate compared to a 6.4% rate of growth for exports.

(b) US exports to LA declined significantly in the 1980s while imports remained robust. This appears to be the result of, first, the drop of LA's capacity to import as a result of the debt crisis, and second, the impact of an increasingly overvalued dollar on US exports causing a general decline in international competitiveness of US exports.

(c) US exports to LA appear to have grown mostly in agricultural and natural resource based products while US imports from LA grew faster in manufactured goods.

(d) In the 1980s the US was experiencing a general decline in international competitiveness in its traditional export sectors and LA was developing comparative advantages in non-traditional sectors.

(e) While trade flows in both directions have been cyclical, US exports have been more cyclical than imports - implying that domestic economic factors in LA might be more of a factor in this trade relationship than US domestic economic variables.

(f) The more disaggregated the trade data, is the more volatile are the trade flows in

both directions with US exports always more volatile than imports.

(g) The data revealed two major inflexion points in US-LA trade flows associated with the years 1973−74 and 1980−81. In addition another inflexion point emerged for 1969 relating to US imports.

(h) US trade with LA was expanding throughout the 1967−85 period with the greatest expansion being with ROLA and MX respectively. Remarkably, US imports from ROLA and MX have grown at a faster rate than those form BR, the acknowledged LA export leader.

(i) 1976 emerged as a fourth inflexion point in the US-AR trade relationship with AR domestic factors appearing as the main determinants.

(j) 1977 emerged as a fourth inflexion point in the US-BR trade relationship with BR with domestic factors appearing as the major determinants.