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WILL RAPID GROWTH SOON BREAK OUT IN CENTRAL AMERICA?

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Abstract: Recent growth rates of several Central American countries have been strikingly high prompting the observation that the region may be about to spawn East Asian NIEs. This paper examines growth rates and other indicators for East Asia, Latin America and the five countries of the Central American region. The difference in current and projected performance between East Asian NIEs and Latin America remains substantial, while no significant difference is found between Central American performance and that of the rest of Latin America, even where measures of economic volatility are included. Particular attention is paid to the performance of Latin American manufactured exports of technology and skilled-labour intensive goods. The paper concludes that while certain of the larger Latin American countries may begin to perform more like Asian NIEs, there is no evidence that the same will occur in Central America.

I. Introduction

Following the turbulence of the 1980s in which Central America suffered arguably the greatest degree of political and economic dislocation in Latin America and the Caribbean¹, the Central American countries—with the exception of Nicaragua—appear to be catching up. Average growth rates in 1992-94 have been high: Guatemala above 4%; Costa Rica about 5 percent, El Salvador nearly 7% and Honduras achieved 6% in 1993. Sustained growth rates of 6-7% are the stuff of East Asia. Even Nicaragua seems to be on the road to growth at last. Equally important, these countries have reduced their external deficits and foreign borrowing and debt service is now manageable. In the field of trade, the near moribund CACM has been brought back to life, the process of diversification into non-traditional exports has accelerated while in the case of traditional commodity exports, new means have been found to insure more effectively against price fluctuations. On the fiscal front, government spending has been held in check and a majority of the five have strengthened revenue collection by and moved towards domestic based taxation—indeed a majority are in the process of introducing some form of VAT; in consequence, Central America's average government current account is in slight surplus. It might be argued on this basis that Central America is poised on the verge of NIE-style growth. However, when the trends in (and the stability of) key macroeconomic indicators are examined in greater detail, we find no evidence that Central America is doing better than Latin America. Moreover, when similar Latin American indicators are compared to those for East Asia, the view that Central America will soon produce its own newly industrialised countries (NIEs) appears entirely without foundation.

¹ Throughout this paper "Central America" refers to the five republics while "Latin America" is used synonymously with the 26 ECLAC countries of Latin America and the Caribbean.

The paper is divided into four parts and a set of brief concluding remarks in Section VI. Section II looks at the broad evidence of recent and future growth in Latin America compared to the Asian NIEs and sets out detailed macroeconomic indicators for Latin America; Section III asks whether Central America's performance in the first half of the 1990s is significantly better than Latin America's. Section IV considers Latin America's performance in industrial exports relative to the "East Asian miracle" countries (the phrase is IDB's), particularly as these relate to technology-intensive exports. Section V looks at the argument that Latin America's growth is more "volatile" than East Asia's and at how volatility is argued to effect performance; this section concludes with an analysis of Central American volatility relative to that of Latin America.

II. Latin America and the Asian NIEs: updated evidence

Judged on the basis of recent performance and immediate future growth prospects, Latin America as a whole seems unlikely to catch up with the industrial countries, still less to match the record of Asia or even of the developing world as a whole. Although Latin America's average growth rate was marginally higher than that of the industrial countries for the period 1990-94 and for 1993-94 as shown below, its poor performance in 1995 reflected the Mexican crisis. The forecast for 1996-97 suggests that it will grow at about the same rate as the major industrial countries. By contrast, the

Figure 1: Annual Percent Changes in GDP per capita for Selected Country Groups

	1993	1994	1995	1996 ^a	1997 ^a
Industrial Countries	0.9	2.6	2.1	2.4	2.6
Developing Countries	6.0	5.5	5.0	5.2	5.4
Asia	8.3	8.2	7.9	7.1	7.3
Latin America	3.3	3.5	-0.3	2.0	2.6

a/ projected

Source: ADB (1996: 5) and IDB (1995: 262)

forecasts for Asia show GDP growth continuing at above 7 percent annually.² A combination of double digit growth to Asia's major low income countries (eg, China, Viet

² This figure is strongly influenced by China's forecast growth rate of above 10 percent. Since these growth rates are weighted by population, China's rapid growth exerts nearly as important an influence on the figures projected for the developing countries as a whole.

Nam) and a continuing flow of capital and technology to, and increasing trade amongst, Asian NIEs should help sustain growth in this region at around the 7% mark for the coming decade.

The Mexican financial crisis of late 1994 does not appear to have had a lasting effect on the rest of the continent despite the poor aggregate growth performance of the region in 1995. Most countries were able to achieve figures comparable to those of 1994. Chile and Peru continued to perform very well, Brazil and Colombia achieved modest growth while, besides Mexico, low or negative growth was registered in Argentina, Uruguay and Venezuela; hence the aggregate figure is strongly influenced by the modest-to-poor performance of the region's 3-4 largest economies. Significant progress was made in reducing the region's overall inflation rate. Latin America's median inflation rate in 1990 of 30% has now halved. This is in part the result of Brazil's successful Real Plan which in 1995 lowered inflation from over 1000 percent to only 30 percent; it should be noted, though, that inflation fell both in those countries which previously had high rates and those which did not. Equally, the region's external account improved and the GDP share of real investment has risen throughout the 1990s in the region's major countries. By contrast, the savings share seems to have fallen with respect to the 1980s; one suggestion (IDB, 1995: 7) is that as the inflation tax has fallen, "forced" private savings has fallen, a fall uncompensated for by successes in reducing Government current deficits (increased Government savings).

The region's external current account is still negative and is financed in large part by the reflux of flight capital from an earlier period; as the Mexican case suggests, macroeconomic imbalances can still lead to sudden crises with extremely destabilising effects both nationally and regionally. Nor has the employment situation improved; growth in the region has been insufficiently dynamic to prevent the region's unemployment rising from 5.4 percent in the late 1980s to 6.4 percent in 1994. In summary, Latin America has recovered much of the ground lost in the 1980s and, in some countries, very considerable successes have been recorded. Nevertheless, Latin American economies as a group are persistently more volatile than those of the developed or rapidly developing regions and, in consequence, recovery remains fragile and vulnerable to external shocks.³ If this is true of Latin America as a whole, the data

³ See the special section of IDB (1995) entitled "Overcoming volatility".

suggests that Central America has done relatively worse in certain key areas and its apparent recovery may therefore be considered even more vulnerable, the issue to which we turn below.

III. The Central American Economies

Figure 2 shows the evolution of selected economic indicators for the five Central American republics over the period 1990-95 compared to Latin America as a whole: notably, per capita GDP growth, the share of investment, the public sector fiscal balance, the median inflation rate, the current account balance, the real effective Central

Figure 2: Latin America and Central America; selected recent indicators

Year	1990	1991	1992	1993	1994	1990-94
Latin America						
GDP growth rate (%)	0.0	3.4	2.9	3.3	5.1	2.9
Investment/GDP (%)	20.1	20.7	21.2	22.4	22.3	21.4
Govt Savings/GDP (%)	-0.8	0.5	0.3	0.6	0.5	0.2
Median Inflation Rt. (CPI)	31.0	18.0	16.0	13.0	15.0	19.0
Current Acct Bal/GDP (%)	-0.01	-1.6	-3.1	-3.9	-3.9	-2.5
REER* (1990 = 100)	100	109	132	138	142	
Debt-service ratio (%)	24.7	24.8	27.4	28.3	27.2	26.5
Central America						
GDP growth rate (%)	2.3	2.5	5.2	4.7	4.3	3.6
Investment/ GDP (%)	19.5	21.2	23.4	23.5	23.2	22.2
Govt Savings/ GDP (%)	-3.2	1.7	3.5	3.1	1.9	1.4
Median Inflation Rt (CPI)	16.5	24.0	33.2	11.2	11.9	19.4
Current Acct Bal/GDP (%)	-5.5	-2.5	-10.9	-9.2	-8.2	-7.3
REER* (1990 = 100)	100	91	141	146	150	
Debt-service ratio (%)	23.2	32.2	42.5	32.6	28.5	31.8

Source: IDB (1995) statistical appendix and author's calculations.

exchange rate and the debt-service ratio.⁴ In overall terms, the figures do not show America to have performed very differently from Latin America as a whole when considering the averages for 1990-94. GDP growth, the share of investment and the median inflation rate are similar. Central America's average debt-service ratio is somewhat higher than Latin America's, its real exchange rate seems to have appreciated somewhat more⁵ and the external current account deficit represents a larger share of GDP. On the other hand, the government current deficit (government savings) is lower. These observations are compatible with the fact that Central American economies are more open and their exports less diversified than Latin America as a whole making the region more vulnerable to fluctuations in primary commodity prices.⁶ In recent years, fiscal and monetary discipline has improved substantially in the five republics, notable examples being El Salvador and Nicaragua. The debt service ratio figure is strongly influenced by the inclusion of the latter country's figure which remains above 100%; were it removed, the comparison with Latin America would be favourable to Central America. In general, we can see little reason for treating Central America recent economic performance as diverging from that of Latin America and the Caribbean as a whole. In the discussion below, our characterisation of the Latin American growth model can be taken broadly speaking as equally applicable to Central America.⁷

IV. Latin America and the East Asian "Virtuous Circle"

It has become fashionable in Latin America to debate the reasons for the success of the "miracle" countries of East Asia; ie, broadly the High Performance Asian Economies (Japan plus the "dragons") and the Newly Industrialised Economies (Thailand, Malaysia and Indonesia in the World Bank Report but now should include China, Viet Nam and the Philippines). Following the broad argument initially put by

⁴ The debt service ratio here is defined as "interest payments due" relative to exports of goods and non-factor services.

⁵ If 1989 is taken as the base year, the opposite is true; ie, Central America's REER appreciation is less than the Latin American average.

⁶ An encouraging recent development has been the widening and deepening of the futures market for major Central American exports such as coffee enabling the region to export part of the risk associated with price fluctuation.

⁷ This is not to say that there are no differences; we merely assert that abstracting away from them will be legitimate for the purposes of the current discussion.

Agarwala (1983) and subsequently refined in the World Bank (1987) of "outwardly oriented" countries, the popular explanation of Asian achievement and Latin American under-performance is that while Latin America indulged in nearly two decades of protective import substitution, Asia was outward looking and "got its prices right". The strikingly different consequences of these strategies are poignantly summarised in the economic fortunes of Argentina and South Korea. At the end of the Second World War the former enjoyed a standard of living on a par with Australia and New Zealand while the latter was one of the world's poorest countries with a per capita income level lower than India. Today, South Korea enjoys a higher standard of living than Argentina.⁸

A variety of influential publications on South Korea and more generally on East Asia has made it clear that success is about far more than getting prices right; the 'developmental state'⁹ in East Asia has played a considerable role in orchestrating the forces making for rapid growth in areas ranging from land reform and educational policy, strategic interventions in technology transfer and the construction of a diversified industrial export base. The successful promotion of manufacturing exports has been central to the Asian NIE strategy. By 1992, the primary commodity share of merchandise exports had fallen to less than 25% on the "Asian miracle" countries (compared 18% in the OECD countries) but remained over 60 percent in Latin America. (IDB, 1995: 208). Over the decade of the 1980s, Malaysia, Thailand and the Philippines doubled their percentage of manufactures in total exports while Indonesia registered a tenfold increase. Since manufactures are more skill and technology intensive than primary products, this performance in part reflects East Asia's higher literacy rate and skill levels; ie, its greater investment in human capital. According to Dae Won Choi (1993: 22):

[The production pattern] in Japan, Asian NIEs and ASEAN is notable for the rapid growth of electrical and non-electrical machinery, chemical and plastic industries and, in particular, the electronics industry ... [while the pattern] which corresponds to Latin America involves a type of development based on non-ferrous metals, petroleum and petroleum products ... [and other] raw materials.

But East Asia's growing industrial exports reflect more than merely its comparative advantage in skilled workers. Westphal and others have argued industrial

⁸ In 1992 dollars, the per capita incomes of Argentina and South Korea were \$6050 and \$6790 respectively; see WDR (1994:163).

⁹ See for example Amsden (1989); Wade (1991); Fransman (1984), Leipziger (1987), and Choi (1993),

export promotion in its early stage tends to benefit from infant industry protection enabling countries such as South Korea to achieve high levels of productivity growth (Westphal, 1981); the observation is supported by Amsden (1989) who shows how South Korea made protection (largely in the form of import quotas) contingent upon export performance, while an interesting sidelight (Nam, 1981) is that agricultural protection helped sustain higher income levels in the countryside thus broadening the internal market for manufactures. (A corollary of this observation, incidentally, is that such protection helps explain why Asian rural dwellers have not flooded to the urban centres on a scale comparable to Latin America thus avoiding the social costs of "urban giant" conglomerations.)

The central element in the story is the manner in which foreign direct investment (FDI) has acted as a conduit for technology transfer and the growth of intra-regional trade has reinforced this process. The share of intra-trade in the Asia-Pacific region's total exports grew from just over one-third in 1980 to nearly half in 1990; for the "miracle countries", the growth on intra-trade has been even faster. Not only has Japan been the largest investor in Asia—accounting for example for 90 percent of FDI to PR China—so too have the NIEs. By 1990s, Taiwan's FDI in Malaysia was \$2.5 billion and Taiwan was the largest single investor in Viet Nam. The greater part of Thailand's FDI also came from Japan and the NIEs. Moreover, what is important about this FDI-driven growth in manufacturing trade is that technology transfer makes growth self sustaining. As noted by Dae Won Choi (1993) in what is in effect a variant of Vernon's product cycle, as a leading country such as Japan moves on to new products containing more value added and more new technological inputs, it compensates for its loss of competitiveness in traditional product lines by shifting their production to lower-wage countries through DFI. These countries substitute these products for their own imports and go on to become net exporters. The source country for its part becomes a net importer of these products; once again it moves on to create a new product for export. The recipient country in turn finds itself faced with competition in this line and transfers its production via DFI to some lower wage country. Hence, trade and DFI results not only in successive waves of production relocation from centre to periphery, the feedback from the periphery drives the centre to accelerate the innovation process. In short, what is created is a "virtuous circle" of DFI-induced technology transfer, regional trade and growth complemented by human capital in the sense used in World Bank (1993).

Can there be a Latin American "virtuous circle"? Just as Latin American imports from South East Asian NIEs grew enormously during the 1980s, its exports to South East Asia grew 5-fold during the decade of the 1980s (though from a low base and chiefly to Korea and Taiwan). This pattern has been largely one of intra-industry trade (IIT), with Latin America providing unskilled labour and raw-material intensive inputs to South East Asian manufacturing in exchange for final products such as cars and consumer electronics. Has this process helped to foment an upgrading of Latin American exports to more skill and technology-intensive products or accelerated intraregional trade?

In the early 1990s, manufacturing exports for Latin America as a whole were about one-third of total exports, up 10% from a decade ago but still far below the figure achieved by the "Asian miracle" or the industrialised countries. Moreover, circumstances have favoured manufacturing growth; historically, trade in manufactures has grown faster than in primaries—over the past twenty years twice as fast. The world income elasticity for manufactures is about 2.0 versus 0.6 for primaries; ie, more than three

Figure 3: Manufacturing Exports by Country Group

	1970-74	1975-79	1980-84	1985-90
Major Exporters^a				
growth rate (%)	40.2	19.8	16.0	10.9
regional share (%)	64.9	66.9	75.5	80.6
Newly Emerging^b				
growth rate (%)	29.4	21.8	2.8	18.1
regional share (%)	15.0	15.1	13.2	13.0
Other				
growth rate (%)	33.8	9.4	0.9	3.9
regional share (%)	20.0	17.8	11.2	6.3
Latin America & Caribbean				
growth rate (%)	36.7	18.1	12.2	11.0

a/ Argentina, Brazil, Mexico

b/ Chile, Colombia, Peru, Trinidad & Tobago, Uruguay, Venezuela

Source: IDB (1992: 198)

times as high. Moreover, the growth of intra-industry trade has favoured manufactures. Over this century, the average annual price rise of manufacturing exports is 2.5 percent in contrast to 1.9 percent for primaries; ie, there has been a decline in the primary products net barter terms of trade.¹⁰

At present, 75 percent of world trade consists of manufactures in contrast to 60 percent in the mid-1970s. As can be seen in the accompanying Figure, while Latin American manufactures grew by nearly 20% annually in the 1970s, their average rate of growth declined to around 11 percent in the 1980s. Although 11% was higher than the comparable figure for the industrialised countries, it was slower than the "Asian miracle" countries and Latin America's share in total world manufactures remains small. Within Latin America, the second half of the 1980s saw a decline in manufacturing export growth in the "big three" (Argentina, Brazil, Mexico) who among them account for 80 percent of regional manufacturing exports. Although the growth rate of manufacturing exports increased in the "newly emerging" Latin American countries (Figure 3), this has not yet been translated into an increase in their share in total, while the rate of growth and share of "others" (which includes Central America) remains very low.

The main change in the structure of Latin American manufacturing over the past to decade has been the appearance of a "capital goods" sector comprising of machinery and transport equipment (though the latter includes motor vehicles). Machinery and transport equipment now accounts for about one-third of manufactured exports, up from one-fifth a decade ago. Chemicals are also important. But the aggregates conceal major differences between countries. This high growth sector has been led by motor-car manufacture in Brazil and Mexico; iron and steel is dominated by Argentina, Brazil and Mexico.

More generally, one might say that these are signs of an emerging "high tech" sector in Latin America. World manufacturing exports can be classified according to three types of factor intensity: "technology (human capital) intensive", "unskilled labour intensive" and "natural resource intensive". According to IDB (1992), the Latin American region has a revealed comparative advantage in about two-thirds of the 27 product divisions of manufacturing; notably, in those with the highest proportion either of "unskilled labour intensive" goods (eg, leather products, footwear, textiles and clothing)

¹⁰ See Sproas (1988).

or of "natural resource intensive" goods (eg, wood products, fertilisers, non-metallic minerals and paper). However, Latin America only has a comparative advantage in one-third of the "technology intensive" divisions including chemicals, pharmaceuticals, plastics, non-electric and electric machinery, transport equipment and scientific instruments. In 1990, Brazil and Mexico accounted for 90% of exports in these categories (explained in part by Argentina's very poor performance in the late 1980s.) Hence, "high tech" is dominated by the big three. But the big three have not done terribly well. They do not have a revealed comparative advantage in consumer electronics, the fastest-growing high-tech product division. What comparative advantage they have in transport equipment, (eg, vehicle manufacture) has been steadily eroded by more competitive Japanese, Korean and (now) Malaysian products—although this may change as NAFTA promotes new North America DFI and technology into the region. The long term growth rate of world trade in technology intensive manufactures has been 20 percent per annum, and such products now represent about 50% of traded manufactures. Latin America's share in the world market for these products at present is less than 5 percent .

There is a strong relationship between exports of technology intensive products and the share of research and development (R&D) expenditure in GDP. At present, only the big three spend a significant share of GDP on R&D with Mexico and Brazil far ahead of Argentina in terms of the absolute size of spending, but their combined spending is dwarfed by that of the "Asian miracle" countries. Moreover, If one looks at human capital indicators such as the proportion of scientists and engineers, the results are even more striking. The big three have 5-7 scientists and engineers per 10,000 inhabitants while the average for Latin America is less than 2 per 10,000; this contrasts with 50 (Japan), 33 (USA), 27 (Germany), 13 (South Korea and Singapore). For Central America, available evidence on the level of human capital and other social indicators suggest an even bleaker picture; both the evidence from the 1970s in Weeks (1985) and more recent statistics suggest that, with the exception of Costa Rica, Central America does considerably worse in this area than Latin America as a whole¹¹

V. Latin American and Central American Volatility

¹¹ On social indicators for Central America, see UNDP (1995); an early set of estimates is given in Weeks (1985).

Latin America's traditional ills are well known: its dependence on primary exports, its unequal income distribution and its neglected physical and social infrastructure. Above we have focused on the region's poor performance in manufacturing exports. Recently, however, the region's poor performance has been attributed to its macroeconomic volatility and institutional vulnerability to external shocks. Below, we examine indicators of Latin American and Central American volatility and ask whether they are significantly different.

The fact that Latin America's capital markets are shallow, its governments fiscally weak and undisciplined and its export earnings exogenously determined, it is argued, is simply part of the region's general susceptibility to destabilising external shocks. The uncertainty associated with economic volatility reduces domestic investment, further weakening the region's capacity for sustained development: in short, a "vicious circle" exists which constrains development.

Variants of this argument have been advanced by Pindyck and Solimano (1992), Cottani, Cavallo and Khan (1990) and Aizenman and Marion (1993). A recent comprehensive study of the evidence is to be found in IDB (1995) and can be summarised broadly as follows. That Latin America and the Caribbean are more volatile than the developed industrial economies and the "Asian Miracle" countries can be seen from the accompanying Figure. Taking the standard deviation of an indicator as the measure of volatility, the ECLAC region's real GDP growth has varied more and the region has experienced more frequent and deeper recessions, far less stable prices, larger fluctuations in its real exchange rate and more erratic terms of trade. Moreover, Latin American policy responses have been more volatile as measured by fiscal and monetary imbalances and changes in public consumption and investment.

Volatility can have many adverse consequences. Public investment tends to be curtailed in economic downturns reducing the quality and quantity of economic and social infrastructure which are often a decisive "enabling factor" for private investment. It hurts private investment both directly through reduced incentives and indirectly through weakening the financial system and forcing up interest rates or encouraging credit rationing. Investment in human capital is curtailed both on the supply side (schools cannot be built and staff is poorly paid) and on the demand side (in a recession, the poor may be forced to withdraw their children from full-time education who are then unable to

resume education in the subsequent upturn).¹² Equally, the sources of volatility are manifold. The ECLAC region suffers from high external terms of trade volatility because of excessive concentration on primary product exports. Capital flows to the region tend

Figure 4: Volatility Indicators (1970-92)

	Latin America & Caribbean	Industrial Countries	East Asian Miracle
Macroeconomic Outcomes			
Standard deviation of:			
Real GDP Growth	4.7	2.2	3.0
Private consumption growth	5.6	2.1	4.1
Domestic Investment growth	16.1	8.3	16.4
Change in Real Exchange Rate	13.4	4.8	6.2
Annual inflation rate	463.5	3.9	6.2
Policy			
Standard Deviation of:			
Fiscal deficit (% GDP)	4.7	2.4	2.4
Pub consumption (% GDP)	2.5	1.6	1.1
Narrow Money (% GDP)	5.5	2.4	1.9
Monetary Growth	211.1	5.6	13.6
External Shocks			
Standard deviation of:			
terms of trade (growth rate)	15.1	8.9	8.0
International capital flows (% GDP)	2.8	1.7	1.5

NB: standard deviations are computed over the 1970-92 period. All statistics are weighted by 1992 population. The data in this table are based upon an analysis of historical data ... not necessarily indicative of current or future developments.

Source: IDB (1995: 192)

to be more volatile than elsewhere and are exogenously determined; ie, depend on relative interest rate movements in the developed countries. Monetary and fiscal shocks have a substantial destabilising impact because monetary and financial institutions are generally too weak to cushion such shocks effectively. In consequence, policy responses

¹² A particularly striking conclusion of IDB (1995:190) is that "if Latin America's macroeconomic instability had been more like that of the industrial countries, an estimated .. 25 percent of the poor would have been lifted out of poverty".

Figure 5: Measures of Macroeconomic Volatility in Latin America (in percent)

	Standard Deviation of GDP growth	Std deviation of changes in the terms of trade
Argentina	4.83	10.05
Bahamas	9.58	15.67
Barbados	4.49	15.25
Belize	4.84	7.42
Bolivia	3.31	19.31
Brazil	5.43	12.21
Chile	6.34	12.81
Colombia	1.96	16.70
Costa Rica*	3.74	11.52
Dominican Republic	4.31	17.75
Ecuador	6.66	35.10
El Salvador*	4.34	19.30
Guatemala*	3.17	13.79
Guyana	5.23	12.56
Haiti	4.15	11.27
Honduras*	3.58	10.17
Jamaica	4.02	5.71
Mexico	3.77	11.96
Nicaragua*	8.06	14.29
Panama	5.79	7.85
Paraguay	4.46	11.43
Peru	6.16	14.74
Suriname	6.07	9.44
Trinidad & Tobago	7.05	15.83
Uruguay	4.81	12.03
Venezuela	4.65	50.63

* Central American countries

Source: ADB (1995: 194)

have tended to be pro-cyclical and unsustainable with the result that the adjustment process has been all the more difficult. For example, where taxation is excessively trade-based, changes in world prices can produce unsustainable fiscal deficits which, in the absence of adequate monetary institutions to mobilise extra private savings, are monetised and thus become inflationary. If the exchange rate is pegged, inflation leads to real exchange rate appreciation with adverse effects on the external balance. Government may react by changing its exchange rate regime, thus inducing changed expectations in the private sector and further destabilising the system. Overall, the counterfactual argument put by IDB (1995) is that had Latin America enjoyed the low

volatility of the industrialised economies over the period 1960-85, income per capita would have grown approximately twice as fast.

What are the implications of the above argument for Central America; ie, can Central America be said to be any more or less volatile than the rest of Latin America? The accompanying Figure shows the standard deviations in GDP growth and terms of trade by country for the 26 members of ECLAC (the five Central American republics are each denoted by an asterisk); these categories were the "benchmark" volatility indicators used in the IDB study. Two tests were performed. One was to compare the Central American averages for the standard deviations of GDP growth and terms of trade with the remaining 21 countries using a simple two tailed test at 5 percent level. Neither the average of fluctuations in GDP growth nor in terms of trace was found significantly different from the rest of the group.

Since it can be objected that the use of averages hides significant differences in volatility between Central American countries, a further test was performed. This consisted of ranking the groups in ascending order of variability on each criterion and divide them in half, the top half being categorised as "less volatile" and the bottom half as "more volatile". Where the 26 country group was ranked on the basis of GDP growth volatility, four of the five Central American observations tended to cluster in the upper or "less volatile" category (the exception being Nicaragua). Where the group was ranked on the basis of terms of trade volatility, the observations were divided more or less evenly between the less and more volatile categories and no clustering was observed. On balance, therefore, it does not appear to be the case that Central American countries are significantly less volatile than the rest of Latin America.

VI. Conclusions

The current piece started from the premise that, after the turbulence of the 1980s, the recent economic performance of Central America has been sufficiently robust to sustain the hypothesis that the region might move towards a more East Asian style of development. However, looking at Central American performance more closely, the evidence does not support this hypothesis. The region does not differ significantly from Latin America as a whole when judged on the basis of GDP growth, its investment share or its inflation rate. Government savings are fractionally higher than the Latin

American average but the external deficit to GDP ratio is larger, the real exchange rate appears to have appreciated more and the debt service position is worse.

Next, we examined the growth of industrial exports in Latin America. We found that industrial exports have grown as a proportion of total exports, Latin America's share of world industrial exports is still very low and the rate of growth of industrial exports does not begin to compare with that achieved by the East Asian economies. These conclusions are re-reinforced when industrial exports are further decomposed into technology-intensive, and unskilled-labour and raw material intensive categories. East Asian growth has been characterised not merely by rapid export-led growth, but by the growth of "high-tech" exports which embody high skill levels. This process is propagated and reinforced by a FDI-driven technology transfer within the region and buoyant intra-regional trade in manufactures, richer countries relocating production in poorer ones who then successfully incorporate the technology into their own exports. The process is far weaker in Latin America where technology-intensive exports are dominated almost entirely by the big three and there is not—for the moment at least—any comparable dynamic in intraregional trade and technology transfer. Such results are underpinned by the region's relative neglect of its human resources; by comparison to the developed world or the East Asian "miracle countries", Latin America carries out relatively little R&D and has relatively few scientists and engineers. This is what one would expect from a region which scores relatively poorly on human development indicators such as the PQLI. What is true for Latin America as a whole is this respect is even more true for Central America. With the exception of Costa Rica, Central American countries score worse than in human development terms than the rest of Latin America.

The latter part of this paper considered some current evidence on the influence of "volatility" on economic performance. Compared to the industrialised countries and to the countries of East Asia, Latin America is both more volatile in its performance and more vulnerable to external shocks. While volatility alone cannot explain fully Latin America's relatively poor performance, volatility does illuminate certain characteristics of this performance: most important, volatility helps reinforce the vicious circle of weak institutions, pro-cyclical policy responses, persistent inflation, real exchange rate appreciation and loss of competitiveness. Moreover, volatility adds a further explanatory dimension to the persistence of poverty and the growth of inequality. Latin America not only neglects education in human capital, but the efficiency of this investment is reduced

by macroeconomic instability. Finally, we ask whether Central America is any less volatile than the rest of Latin America. The answer is negative.

Our conclusions about Latin America in general and Central America in particular are neither encouraging nor surprising. However, care should be taken not to infer from the above that the fate of the region is somehow sealed. Economics is not about absolute inferences; societal processes are too complex for conclusions to enjoy privileged status. It is always worth recalling that in the post war years, most economists would have agreed that amongst the underdeveloped regions of the world, East Asia was least likely to succeed. It may be that what is currently being observed in Latin America is the "end of populism"¹³ and the beginning of more stable and consistent policy regimes which will foment growth on a new scale, although the evidence is still too scattered and spotty to form a picture. It may be that Latin American polity is at last changing; that an entrepreneurial class of national and regional vision is emerging which will find its long-term interests articulated by new political voices. Such political economy aspects are not addressed above, but political economy is certainly crucial to the agenda of research and discussion to which this paper contributes.

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¹³ "Populism" is used here in the sense suggested amongst others by Dornbusch and Edwards (1990).

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