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An assessment of relative globalization in Asia during the 1980s and 1990s☆

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Abstract

This paper uses factor and discriminant analyses to generate indices of globalization. The first part of the paper describes the technique and we find that the Netherlands is the most globalized and Sierra Leone the least. In the second part of the paper, comparisons are made between South Asian, East Asian and Middle East countries to see if relative globalization process is proceeding at a faster or slower pace. Although the analysis is mostly regional, we introduce evidence for several countries, including Sri Lanka, Pakistan, the Philippines, Thailand, India and Malaysia to compare globalization and openness. Based on our findings, several conclusions are drawn concerning progress made and the economic implications of that progress. Because of the poor showing of Pakistan's globalization efforts, special attention has been focused on that country.

The main finding is that Pakistan appears to have fallen into a vicious cycle of low and declining globalization leading to low productivity causing low rates of return on investment. The result is low investment and technology transfer which only reinforces the drift towards an increasing globalization gap with the country's main international competitors.
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1. Introduction

Until the 1980s, South Asia remained one of the world economy's least integrated regions. In the late 1980s, however, the region's main economies introduced major

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economic reforms that started them to increased integration in the world economy. While the reasons for these reforms vary from country to country, all generally reflect dissatisfaction with the results of their inward oriented development strategies initiated in the 1950s and 1960s. Also each was resigned to the observation by the late Dr. Mahbub ul Haq (1998) to the effect that globalization is no longer an option, but instead it is a fact. His view—that developing countries either to learn to manage globalization more skillfully or simply drown in the global cross currents—was increasingly accepted by many key policy makers in the region.

The purpose of this paper is to examine globalization patterns in South Asia at the turn of the century. Comparisons are made with other regions to determine if the globalization/liberalization process has proceeded at a greater or lesser pace. Based on our findings, several conclusions are drawn concerning progress made and the economic implications of that progress. Because Pakistan's globalization efforts are shown to be the most disappointing to date, special attention is focused on that country.

2. Approaches towards defining globalization

When examining globalization, one of the first issues is to define exactly what one is talking about (Dunn, 2001). Even a casual reading of the literature suggests that globalization means quite different things to different people. To some scholars, globalization per se is not the means to the desired end. As Dutta (2002) has recently mentioned:

> In the absence of economic regionalization, the paradigm of globalization is likely to be operationally dysfunctional. ... Regionalization can help regional economic unions/communities enjoy competitive shares of world output and trade and thus become competitive actors in the inter-regional competitive world market, contributing to the success of globalism.

Other economists see a growing link between globalization and conflict, especially internal conflict such as civil war (Hegre, Gissinger, & Gleditsch, 2002). Whether globalization is the means toward economic growth or the precursor to more conflict, one needs to define what we mean by globalization. Griswold (2000) suggests globalization is the growing liberalization of international trade and investment which result in increases in the integration of national economies. Henderson (1999) has expanded this definition to include five related but distinct parts:

- The increasing tendency for firms to think, plan, operate, and invest for the future with reference to markets and opportunities across the world as a whole.
- The growing ease and cheapness of international communications, with the Internet as the leading aspect.
- The trend towards closer international economic integration, resulting in the diminished importance of political boundaries. This trend is fueled party the first two trends, but even more powerfully by official policies aimed at trade and investment liberalization.
- The apparently growing significance of issues and problems extending beyond national boundaries and the resulting impetus to deal with them through some form of internationally concerted action.

- The tendency towards uniformity (or harmonization) by which norms, standards, rules and practices are defined and enforced with respect to regions or the world as a whole rather than within the bounds of national states.

Mujahid (2002) suggests we view globalization in the manner in which it is perceived by various governments/groups and can be categorized into four main perspectives: economic, technological, development, and societal. The economic perspective focuses primarily on the growth of world trade as a proportion of and the explosion of foreign direct investment whereas the technological perspective of globalization stresses the importance of new technologies in the communication and transport sectors. The development perspective of globalization is the most controversial. Unfortunately economic theory provides no definitive answer with neo-classical advocates (Sachs & Warner, 1995) stressing the convergence of incomes, while exogenous growth theorists acknowledging that divergence might be underway (Lucas, 1988; Romer, 1986). A related debate takes off from the old spread and backwash models of development (Landes, 1998). Lastly, the societal perspective focuses on some key factors that the globalization process impacts, and may include the condition of human rights, women empowerment, gender sensitization, civic education, status of women in the society, political status becoming more democratic, freedom of speech, rule of law, equal access to resources and level of education.

A third and final way of examining globalization is to view it as a historical process. This approach is best summarized by Sen (2001) who has noted that globalization is neither new, nor is it just Westernization: globalization has progressed over thousands of years through travel, trade, migration, spread of cultural influences and dissemination of knowledge and understanding and has enriched the world scientifically and culturally.

Sen suggests that various parts of the world have evolved somewhat differently over the last several decades and, as a result, possess economic environments that have different potentials for growth, technological absorption, responding to external shocks and interacting with the global economy.

Of the approaches to globalization discussed above, Sen's appears to be the most useful for our purposes. To be useful, however, one must first derive an operational classification of these environments and then show how they have evolved over time.

In this regard, Sachs (2000) provides a good starting point for grouping countries in terms of their interaction with the global economy. Although Sachs' paper was written to provide a framework for examining the consequences of globalization for the growth potential of various parts of the world, it develops an initial country classification scheme in which seems appropriate for the study of relative globalization. As a first approximation to the world's different economic environments, Sachs develops five main groupings. First are the endogenous growth countries which are experiencing self-sustaining increases in income generated mainly by technological innovation which in turn raises income even further in a feedback loop (Lucas, 1988; Romer, 1986). As expected this group of countries includes most Western European nations but also some Asian nations such as Singapore, Japan, and South Korea.

The second group are the "catching-up" countries who enjoy growth by absorbing technologies from abroad. Countries such as Indonesia, Mexico, and the Philippines have

been able to earn enough foreign exchange necessary to import technologies and large flows of foreign direct investment from abroad. The third group of countries are the primary producers who have experienced cyclical variations in per capita income as a result of resource booms and busts. As Looney (1990) pointed out, even oil booms may have an adverse effect of oil rich countries mainly through the "Dutch Disease" mechanisms—an overvalued exchange rate, increased domestic inflation and a shift to non-trade activities. The fourth group of countries are characterized as Malthusian—a falling of the per capita income caused by population pressures outstripping the carrying capacity of the local economy. Many of the sub-Saharan countries fall into this group. Finally are the economic isolation countries—mostly Eastern European—where economic stagnation has resulted from the economy's physical or policy induced isolation from world markets.

This five-way classification system is a very general starting point for identifying stages of globalization and the manner in which each of the stages might be modified by historical, resource endowment, geography, human capital development and the like. Clearly, this great diversity of environments makes generalizations concerning globalization very hazardous. On the one hand, the inability to generalize is one of the main reasons the debates over globalization have been so hard to resolve. On the other hand, several distinctive globalization-type environments can be identified, i.e. it is reasonable to expect that most or all countries in a particular group would be affected in a roughly similar manner by international economic forces. The next section provides an operational method for quantifying these country groupings and, where necessary, reclassifying countries to better reflect a common underlying set of global economic forces.

3. Measuring globalization

Despite a vast literature on globalization, there has been very little quantification of the type enabling us to measure the degree or rate of globalization. Along these lines a recent study by Kearney (2001) notes few people have undertaken the task of actually trying to measure those levels of interdependency.

> For instance, how do we determine the extent to which a country has become embedded within the global economy? How do we demonstrate that globalization is racing ahead, rather than just limping along? Clearly the lack of a clear, precise definition underlies much of the current arguments and debates overmuch the extent of globalization and the manner that phenomenon is changing the structure of national economies. Without the means to quantify the extent of globalization, any meaningful evolution of its effects will remain elusive.

The Kearney globalization index quantifies at a country country level the levels of personal contact across national boarders by combining data on international travel, international phone calls, and cross-border remittances and other transfers and also charts the World Wide Web by assessing its growing numbers of users and the number of Internet hosts and secure servers. The index also includes measures on economic integration by tracking the movements of goods and services by examining the changing share of international trade in each country's economy.

As Kearney notes, much of the conventional wisdom cherished by both champions and critics of globalization collapses under the weight of hard data, ranging from the pace and scale of global integration and the characteristics of the digital divide to the impact of globalization on income inequality, democratization and corruption. Rosenau (1996) has also outlined the many of the benefits in and conceptual problems of devising a meaningful operational definition of globalization.

While the Kearney index is a step in the right direction, it still suffers from many of the problems associated with index construction such as (1) what measures should be included in the index; (2) are these measures comparable across countries; and finally (3) what system of weights should be used to combine the various measures into a final summary index. Clearly each possible (arbitrary) weighting system will provide a somewhat different picture as to the extent of globalization in any particular country. The Kearney study does not treat these issues, but they need to be addressed before the index can provide any new meaningful insights to the globalization process. Lockwood (2001) outlines a number of other problems associated with Kearney index.

4. Factor analysis

One away to get around the problems noted above is to compile an extensive data set of the most widely used economic statistics and measures of world trade, capital flows, economic integration and the like. Although many of these measures will overlap and thus be redundant, a factor analysis allows us to identify main dimensions of global diversity.[1] In an attempt to create an alternative to simple measures of openness, Andersen and Herbertsson (2003) completed a factor analysis of 23 OECD countries. Interestingly, their index indicates that globalization is a gradual process and has affected each country differently—primarily due to the initial starting position. An important point of this study was to differentiate between the potential use and actual use (or access) of international markets. Of the 23 countries examined, Ireland was the most globalized. The purpose of this paper is to extend the number of countries examined and to look at other regional globalization results.

Factor analysis is a data reduction process whereby a large number of economic variables—chosen to describe globalization—are "reduced" or "clustered" into a much smaller number of independent variables which we then call factors. Although, the explanatory variables most related are combined into one single factor, the factors themselves are unobserved. One advantage of this technique is that it allows us to examine multiple measures of globalization rather than just one or two. The weighting scheme for each variable is statistically generated rather than determined by some other method. Once we have determined a factor, we can examine and interpret the variables belonging to the factor.[2] The independent variables, which make up the factor score, are weighted according to the proportion of cross-country variance explained by that factor. The weights are called

[1] For extensive discussions on factor analysis see Rummel, R., Understanding Factor Analysis, http://www.hawaii.edu/powerkills/UFA.HTM.

[2] The fuller mathematical model is described in Andersen and Herbertsson in *Measuring Globalization*.

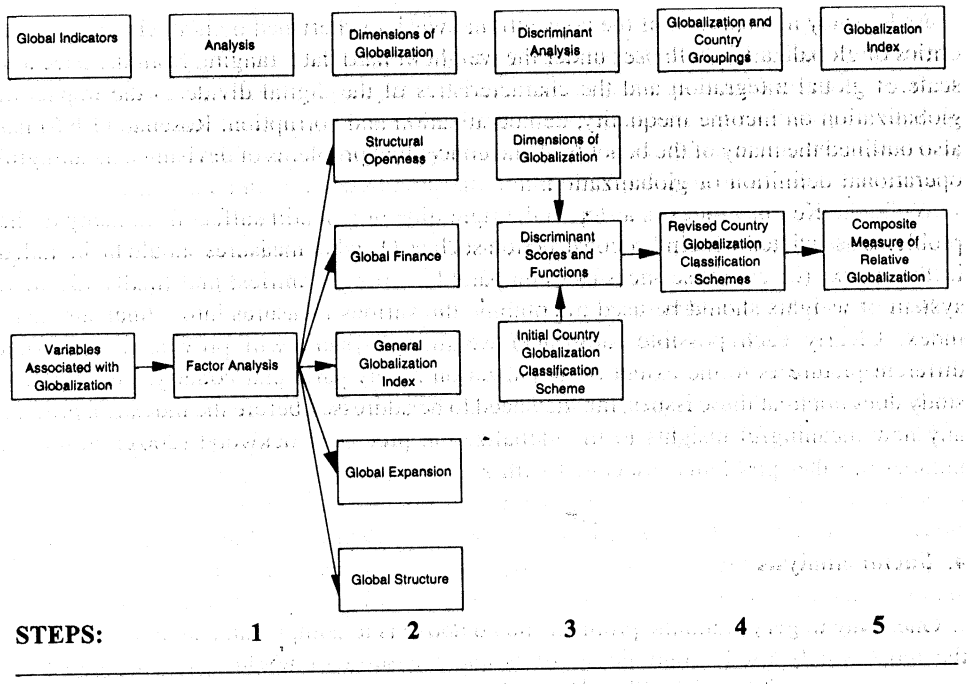

Fig. 1. Globalization: analytical steps undertaken.

"factor loadings," i.e. the coefficient of the factor. It is these factor loadings which we report in this paper and which are used in discriminant analyses.

5. Factor and discriminant analyses

The analysis falls into five distinct steps illustrated in Fig. 1. The choice of variables to include in the analysis (Step 1) was largely driven by the available data. The *World Development Indicators* (World Bank, 2000) was used as it provided a large number of variables for the years covered (1976–1997). In this paper, globalization is thought of as increased trade, financial flows, communication and knowledge flows as well as labor flows. The chosen data source provided multiple measures of these specific dimensions of globalization, especially for a large number of Asian countries. Some variables were omitted due to repeated missing values; in this way we were able to maximize the number of countries examined. Sixteen variables and Sachs' original country grouping were included in the initial factor analysis. In addition, three dummy variables were included to account for the uniqueness of (a) sub-Saharan countries (Bloom & Sachs, 1998), (b) small countries[3] (Looney, 1991), and (c) oil producers (Looney, 1992). The 20 variables are:

[3] Less than 5 million.

- Domestic absorption (% of gross domestic product (GDP))
- Domestic credit provided by banking sector (% of GDP)
- Expenditure, total (% of GDP)
- Trade (% of GDP)
- Trade (% of goods GDP)
- Imports of goods and services (% of GDP)
- Financing from abroad (% of GDP)
- Foreign direct investment, net inflows (% of GDP)
- Exports of goods and services (% of GDP)
- Domestic financing, total (% of GDP)
- Gross private capital flows (% of GDP, PPP)
- Telephone mainlines (per 1000 people)
- Gross foreign direct investment (% of GDP, PPP)
- GDP growth (annual %)
- Import growth (annual %)
- Exports of goods and services growth (annual %)
- Sachs' country classification
- Sub-Saharan dummy
- Small country dummy
- Oil producing dummy

The factor analysis of these variables, Step 2, over the entire period (1976–1997) produced five main factors:

Factor 1 : Structural openness depicting the share of national economic integration into the world economy. Operationally this comprises the share of imports and exports as a % of GDP. The variables comprising this factor do not change much over time and the dimension is usually the first factor to be extracted from the data set.

Factor 2 : General globalization incorporating those variables that load on Sacks' country grouping dimension.

Factor 3 : Finance comprising both domestic and foreign components such as foreign direct investment, financing from abroad and the like.

Factor 4 : Growth/trade expansion comprising both external and internal measures of economic expansion. The main variables comprising this factor are import and export growth and overall GDP growth.

Factor 5 : Global structure comprising several structural variables to take into account several unique country characteristics identified in the literature

6. Revised factor scores and country groupings

Sachs' classification system was intended to examine the growth potential of a large group of countries. Inasmuch there is a high probability that his country groupings do not correspond precisely with an ideal grouping intended to define unique global economic environments. For example, are isolated countries less globalized than Malthusian countries?

Table 1
Factor loadings: revised country classification, 1995

	Factor 1 (structural openness)	Factor 2 (general globalization)	Factor 3 (global expansion)	Factor 4 (global finance)	Factor 5 (global structure)
Trade (% of GDP)	0.974*			0.127	
Expenditure (% of GDP)	0.919*			−0.269	0.118
Trade (% of goods GDP)	0.891*	0.185		0.119	
Imports (% of GDP)	0.882*			0.418	
Small country dummy	0.352	−0.131	−0.106	−0.282	−0.345
Gross PCF (% of GDP PP)		0.885*			
Telephone mainlines (1000 people)		0.884*		−0.130	
Revised country classification		−0.799*	−0.309	0.278	
Exports (% of GDP)	0.283	0.669*		0.363	
Gross FDI (% GDP PP)	0.195	0.635*		0.478	0.263
Domestic credit banking system (% of GDP)		0.508*	0.191	−0.193	−0.168
GDP growth	0.115	−0.111	0.814*		
Import growth			0.774*		
Export growth		0.158	0.728*		0.206
Domestic absorption (% of GDP)	0.230	−0.181	0.108	0.869*	−0.183
Financing from abroad (% of GDP)			−0.335	0.621*	0.312
Oil dummy		−0.221	−0.145	−0.253	0.658*
FDI new inflows (% of GDP)	0.179		0.240		0.620*
Domestic financing (% of GDP)	−0.277	0.289		−0.354	−0.554*
Sub-Saharan dummy		−0.286	−0.299	−0.161	−0.392
Country factor scores (averages)					
Group 1 (endogenous growth)	−0.294	1.618	−0.208	−0.023	−0.083
Group 2 (catching-up)	0.096	−0.117	0.706	−0.294	0.007
Group 3 (primary commodities)	0.293	−0.629	−0.477	−0.308	−0.015
Group 4 (Malthusian)	−0.280	−0.835	0.424	1.162	0.274
Group 5 (isolated)	−0.036	−0.907	−3.458	0.299	−0.548

Note. Factor loadings 0.50 or greater; due to missing values, 54 countries remained.
* Factor loadings of 0.50 or greater.

Are the endogenous growth countries more advanced in all the main dimensions of globalization? Sachs' definition also appears to be static: there is little evidence of movement between groups or a precise indication of what circumstances might prompt movement.

To overcome these limitations the following was completed. In Step 3, 22 annual factor analyses were completed for the period 1976–1997. The resulting factor loadings[4] were used in a discriminant analysis to determine the extent to which Sachs' classification scheme coincided with our ranking of countries based on factor scores. The discriminant analysis also identifies which of the five factors were critical in assigning countries to one of Sachs' five groups. For example, in 1995 Factor 2 (general globalization) and Factor 4 (trade expansion) were statistically significant in placing our sample of countries into the Sachs' groupings. Of Sachs' original country classifications, 72% (39 countries) countries

[4] The resulting table of factor loadings are not reported here as they are merely an input to a later analysis. They can be obtained from the authors on request.

remained in their initial grouping according to Sachs; the remaining 19 were re-assigned to other group usually lower in the scale.[5]

Next, the factor analysis was rerun using the revised country classification (Step 4) to generate a new set of factor loadings for each factor. As an example of the results, we have reported the factor loadings for 1995 in Table 1. The average factor scores for each of Sachs' groups appear at the end of the table.

The new factor scores were used in a second discrepant analysis and we found that general globalization (Factor 2), global expansion (Factor 3), and global finance (Factor 4) were all statistically significant in assigning countries to the Sachs' five group model. On this basis, the probably of correct placement in one of the five groups was 92.6%, with only Argentina (from Group 2 to Group 3), Kenya (Group 2 to Group 4) and Pakistan (Group 4 to Group 3) being incorrectly assigned.

Three discriminate functions were required to obtain the new five group classification. Ordinarily this is not a problem except in cases where one simply wants to obtain a unique ranking scale—our globalization index. To get around this difficulty we assigned countries (Step 5) to one of two groups: Group 1 "highly globalized" (the revised Groups 1 and 2) and Group 0 "less globalized" (the revised Groups 3, 4 or 5). For the 1995 case, three factors (general globalization, global finance, and global expansion) were statistically significant in grouping the countries correctly in the last discriminant analysis. Three countries (Argentina, Indonesia, and Kenya) were grouped incorrectly. The results—the revised grouping, the globalization index, and the probability of correct placement—appear as Table 2 and are reported for the following country classifications (number of countries in parentheses): South Asia (3), Middle East (7), East Asia (6), advanced industrial (9), Western Europe (4), Latin America (10), Africa (7), transition (6) and small islands (2).

As can be seen, for 1995 at least, The Netherlands is the most globalized country (2.883) and Sierra Leone (−3.507) the least. With regards to the South Asian countries, India is by far the most globalized at 0.388, although this is only slightly above the world-wide mean of 0.000. Pakistan is globalized to a much lesser extent, −1.469, or considerably below the world mean, while Sri Lanka lies in between at −0.830 or considerably below the world mean. In the developing world, South Asia is slightly more globalized than the Middle East (−0.637 versus −0.712), but follows East Asia (0.647) and Latin America (−0.374). Africa in 1995 was by far the least globalized of the main groupings at −1.586. As expected, the advanced industrial countries were by far the most globalized (1.962). The following section looks at the entire period examined with the reference to the country groupings appearing in Table 2.

7. Comparative results for different regions: special emphasis of South and East Asia and Middle East, 1977–1997

We completed the Steps 1–5 (Fig. 1) for each annual set of data between 1976 (the first set of complete data) through 1997 (the last year of sufficient data). A major advantage of this approach is that in addition to deriving an aggregate globalization factor or index, (as

[5] The exceptions were Spain and Portugal—originally assigned to Group 2 but re-assigned to Group 1.

Table 2
Globalization index: revised country two group classification, 1995

	Initial group	Globalization index (discriminant score)	Probability of group membership	
			Group 0	Group 1
South Asia				
India	1	0.38807	0.21795	0.78205
Pakistan	0	−1.46776	0.91676	0.08324
Sri Lanka	0	−0.82986	0.75682	0.24318
Average		−0.63652		
Middle East				
Egypt	1	−0.09702	0.42150	0.57850
Iran	0	−1.65974	0.94156	0.05844
Jordan	0	−1.00881	0.81606	0.18394
Morocco	0	−0.70291	0.70761	0.29239
Tunisia	0	−0.56648	0.64874	0.35126
Turkey	1	0.51509	0.17809	0.82191
Yemen, Republic	0	−1.46636	0.91655	0.08345
Average		−0.71232		
East Asia				
China	1	0.25086	0.26780	0.73220
Indonesia[a]	0	−0.08823	0.41726	0.58274
Korea, Republic	1	1.55602	0.02681	0.97319
Malaysia	1	1.53237	0.02806	0.97194
Philippines	1	0.00092	0.37504	0.62496
Thailand	1	0.62949	0.14729	0.85271
Average		0.64690		
Advanced industrial				
Australia	1	1.59115	0.02506	0.97494
Austria	1	1.78594	0.01717	0.98283
Finland	1	2.42754	0.00488	0.99512
France	1	1.71388	0.01976	0.98024
Germany	1	1.53801	0.02776	0.97224
Netherlands	1	2.88322	0.00198	0.99802
Norway	1	1.60390	0.02445	0.97555
United Kingdom	1	2.66399	0.00306	0.99694
United States	1	1.45104	0.03281	0.96719
Average		1.96207		
Western Europe				
Greece	1	0.42058	0.20717	0.79283
Iceland	1	0.64063	0.14454	0.85546
Portugal	1	0.78274	0.11309	0.88691
Spain	1	0.91789	0.08888	0.91112
Average		0.69046		

Table 2 (*Continued*)

	Initial group	Globalization index (discriminant score)	Probability of group membership	
			Group 0	Group 1
Latin America				
Argentina[a]	1	−0.49080	0.61386	0.38614
Bolivia	0	−0.91512	0.78655	0.21345
Colombia	0	−0.82568	0.75529	0.24471
Costa Rica	0	−0.47995	0.60875	0.39125
Dominican Republic	0	−0.34734	0.54471	0.45529
Mexico	0	−0.99901	0.81312	0.18688
Nicaragua	1	0.45598	0.19588	0.80412
Peru	0	−0.58772	0.65826	0.34174
Trinidad and Tobago	1	0.56469	0.16416	0.83584
Venezuela[a]	0	−0.11811	0.43172	0.56828
Average		−0.37431		
Africa				
Botswana	0	−0.60784	0.66718	0.33282
Cameroon	0	−1.60001	0.93469	0.06531
Cote d'Ivoire	0	−1.22916	0.87285	0.12715
Kenya[a]	1	−1.24877	0.87710	0.12290
Lesotho	0	−3.27454	0.99747	0.00253
Sierra Leone	0	−3.50681	0.99840	0.00160
South Africa	1	0.36827	0.22471	0.77529
Average		−1.58555		
Transition				
Albania	0	−0.94384	0.79594	0.20406
Belarus	0	−3.11193	0.99652	0.00348
Bulgaria	1	1.22869	0.05006	0.94994
Estonia	1	−0.05230	0.40006	0.59994
Hungary	1	0.77522	0.11459	0.88541
Poland	1	0.73219	0.12353	0.87647
Average		−0.22866		
Small islands				
Fiji	0	−0.75825	0.72976	0.27024
Mauritius	0	−0.43406	0.58690	0.41310
Average		−0.59616		

Notes. From the second discriminate analysis, Group 0: Groups 3, 4 and 5; Group 1: Groups 1 and 2; globalization index: discriminant function. Statistically significant discriminating variables: Factor 2 (general globalization), Factor 4 (global finance) and Factor 3 (global expansion).

[a] Misclassified countries.

just described), it also produces various dimensions or components of that index—structural openness, and general globalization. In this section, we examine some patterns (graphically) of change over time using the three key measures of globalization: (i) the aggregate index, (ii) structural openness, and (iii) general globalization and compare the

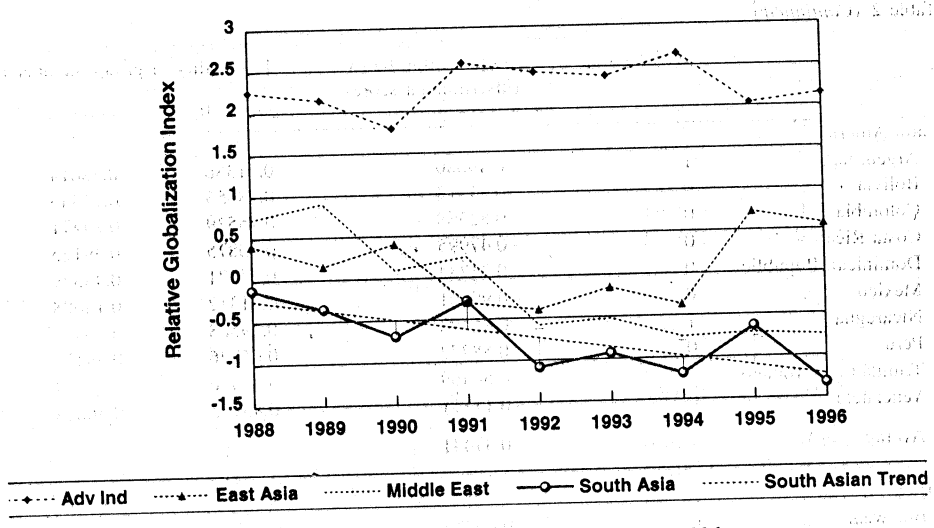

Fig. 2. Globalization index by country group, 1988–1996.

results for various regions and certain countries. These comparisons led to a number of interesting conclusions.

First we plot globalization index (Fig. 2) over the 1988–1996 period of rapid globalization, the advanced industrial countries have clearly managed to maintain their lead over most of the developing world. The globalization surge by a the advanced industrial countries (1990–1994) appears to have come at the expense of these three regions, (East and South Asia, and Middle East) although one can see a slight closing of the gap with East Asia in 1994 and 1995. In general, South Asia and the Middle East were less and less globalized in this time. Even though these countries may have introduced liberalization programs, deregulated of key sectors and opened trade regimes—and thus becoming more globalized in an absolute sense—they fell behind the advanced countries and East Asian countries in a relative sense.

Movements in relative openness[6] (Fig. 3) represent the greatest contrast between the South Asian countries and those of East Asia. Beginning in 1977 there was little difference between the two region in the openness factor. In the space of 20 years, the East Asian countries have increased their factor score dramatically from −0.35 to nearly 1.5: sharply increasing from 1985 to 1991. While still becoming more open, the tendency has leveled off. In contrast, South Asia experienced declines in the openness factor until 1994, but since then the index has gradually increased to just under −0.5. The trend for the entire period was essentially flat.

Fig. 4 examines the openness factor between the Middle East[7] and South Asia and once again present an interesting contrast in the pace of globalization. Throughout the period, the Middle Eastern countries were always more open than their South Asian counterparts.

[6] The relative openness index is the country factor score in all cases.

[7] Middle East 3 = Morocco, Tunisia and Jordan; Middle East 4 includes Egypt. East Asian 3 = Thailand, Malaysia and Philippines; East Asian 4 includes Korea.

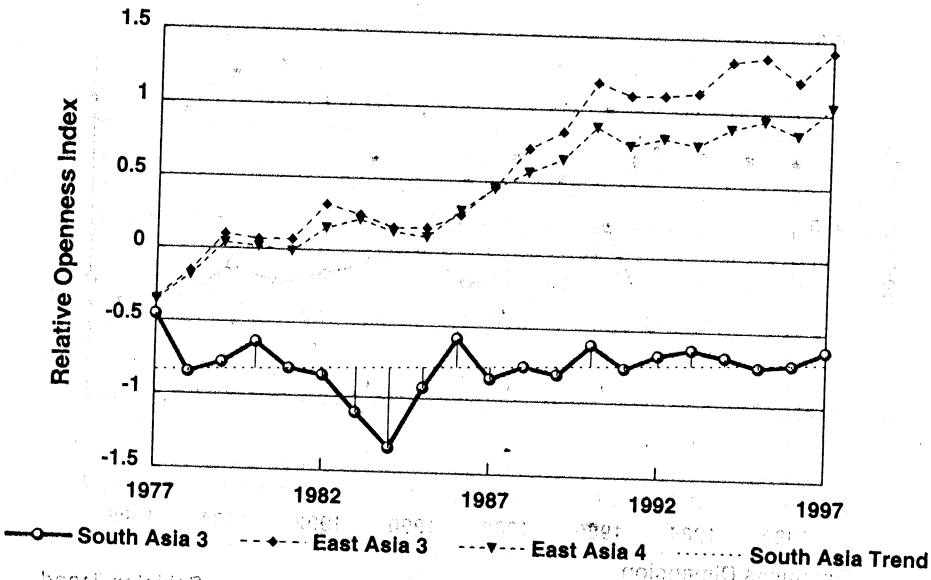

Fig. 3. Openness: South Asia, South Asia Trend, and East Asia, 1977–1997.

Once noticeable difference is the steady pace of openness enjoyed by the South Asian (and East Asian) countries and the annual cyclical variations in the Middle East: rapid globalization for a year or two seems to have been followed by times of decline and then more openness. Looking at the Middle East 3, one can see rapid progress toward more open economies starting around 1987. This jump was much larger than shared by their

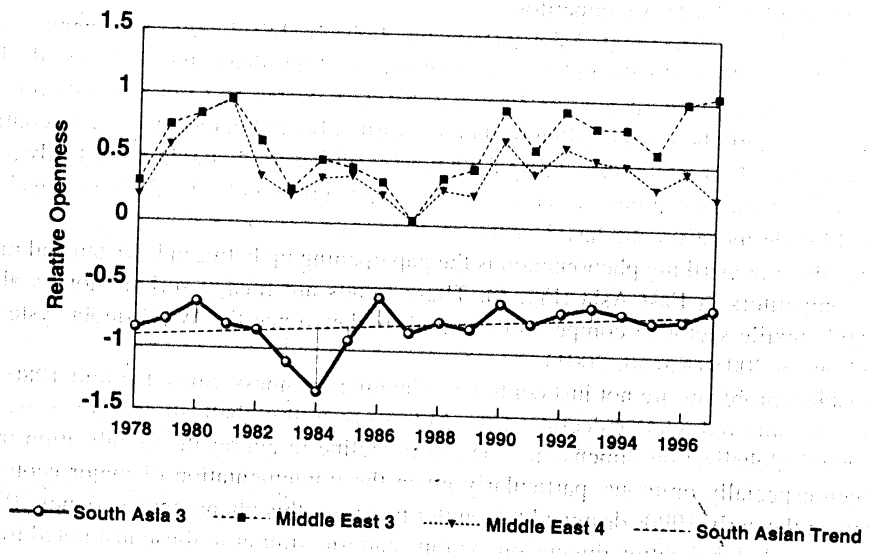

Fig. 4. Openness: South Asia, South Asia Trend, The Middle East, 1978–1997.

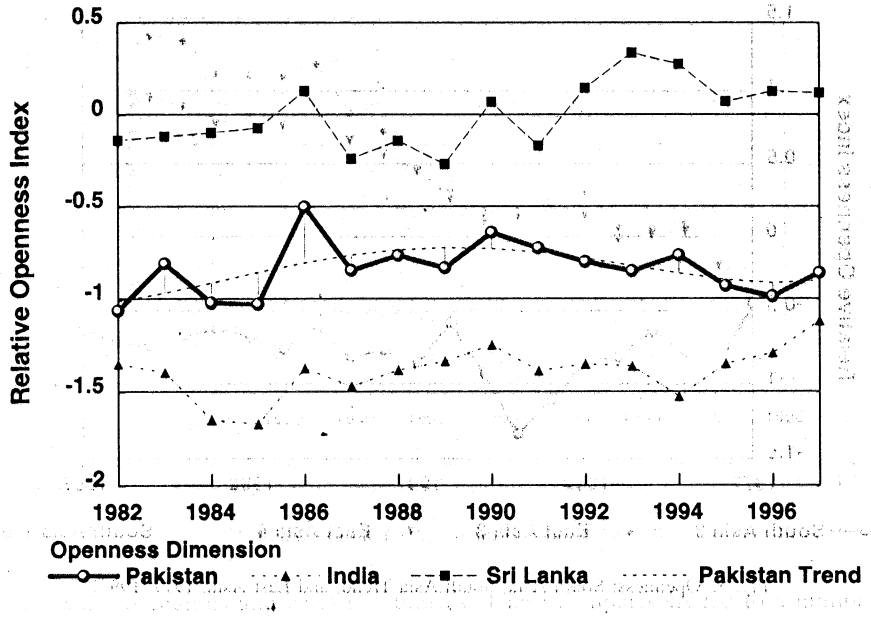

Fig. 5. Openness: Pakistan, India, Sri Lanka, and Pakistan Trend, 1982–1997.

counterpart countries in South Asia. As a result the Middle East economies have been exposed to world market forces longer than those in South Asia. One may presume, without further study, that this differential has led to differential gains in efficiency and competitiveness with the South Asian countries, and especially Pakistan, falling further and further behind the Middle Eastern competitors.

The special case of the South Asian 3 (Pakistan, India, and Sri Lanka) and openness can be seen in Fig. 5. While the South East contribute much of this due to the post-1989 decline in relative openness experienced by Pakistan. While Pakistan had improved its relative openness rank until then, it has fallen further and further behind in recent years. In contrast since the late 1980s, both India and Sri Lanka have made relatively modest but steady gains in opening up their economies. As a result of this steady progress Sri Lanka has been above the world-wide mean for the last 3 years.

To us, the more striking phenomenon is the gap opening up between Pakistan and many of its competitors in East Asia (Fig. 6). These trends are raising serious doubts about Pakistan's textile sector to compete in external markets once the WTO quota system is phased out in 2005 (Kazmi, 2001).

Pakistan's problems are not just confined to lagging openness. Since the mid-1980s the country has suffered relative declines (Fig. 6) in its overall globalization index as well as the general globalization dimension. The sharp decline in aggregate globalization index has been especially ominous, particularly given the implementation of major economic reforms in the early 1990s designed to counter precisely this phenomena (Looney, 1997).

The general globalization dimension exhibits patterns similar to those just noted for the openness dimension. Asia's relatively enjoyable position in general globalization has also

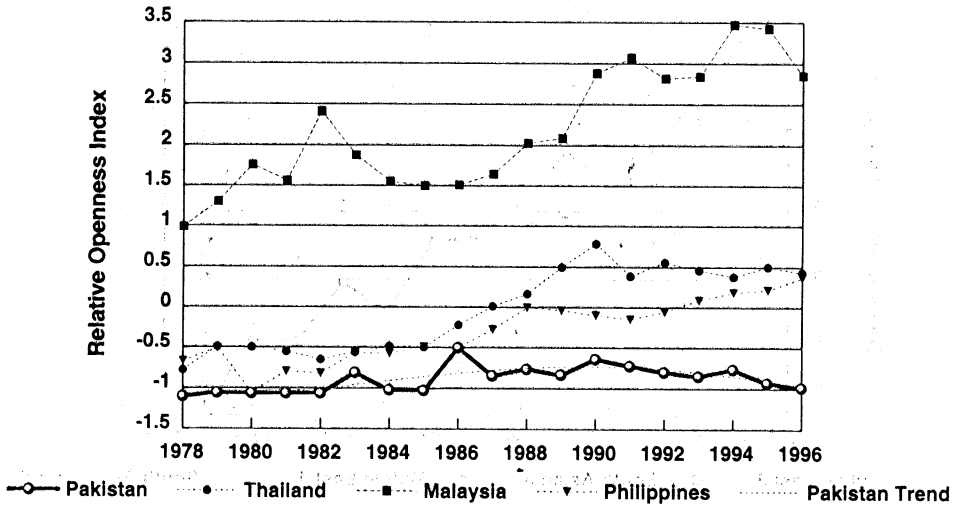

Fig. 6. Openness: Pakistan, Thailand, Malaysia, Philippines, and Pakistan Trend, 1978–1996.

lost considerable ground to both sets of Middle Eastern countries (Fig. 7). While the Middle East countries have also had difficulties in improving their general globalization scores, their declines have been considerably less than those experienced by the South Asian countries.

South Asia's relative decline is seen to be even more dramatic when compared to East Asian countries (Fig. 8). Surprisingly, the two regions started the late 1980s with relatively the same attainment of globalization, which happened to be slightly below the world norm

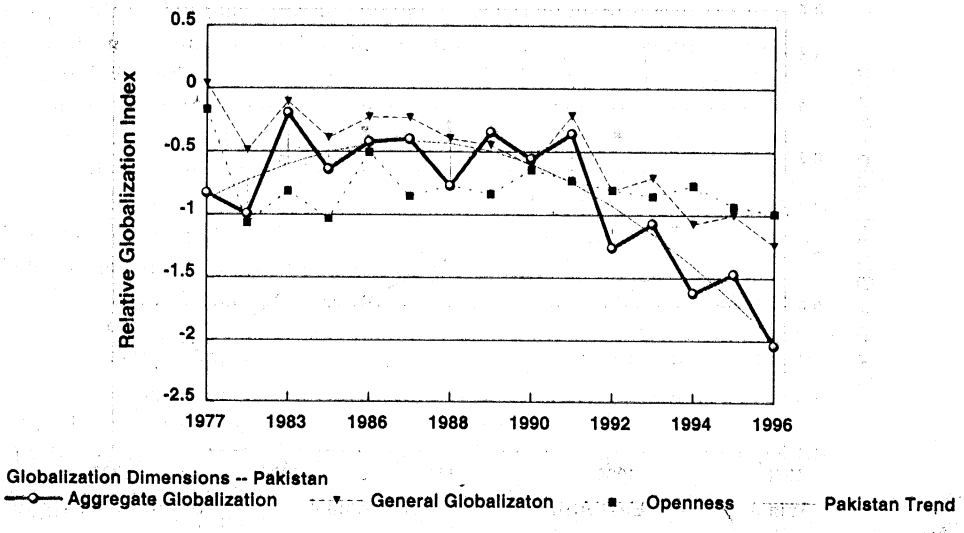

Fig. 7. Globalization in Pakistan, 1977–1996.

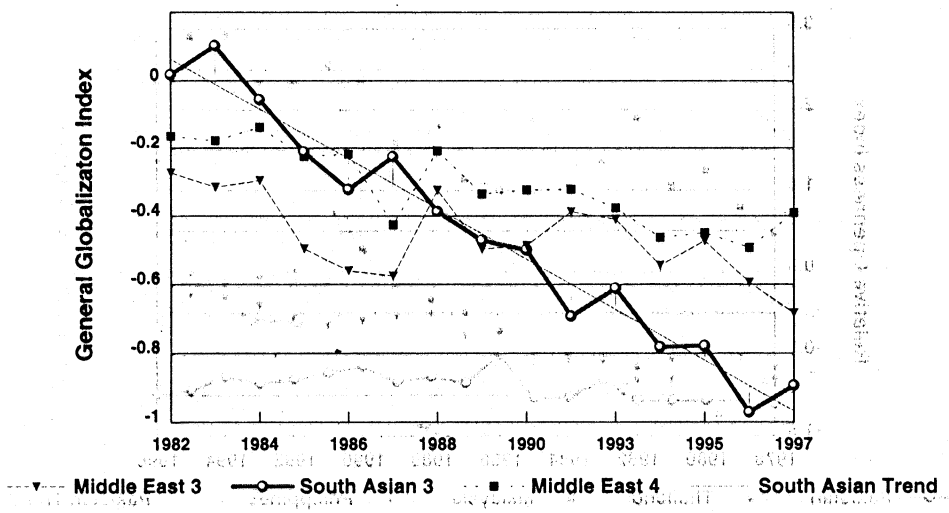

Fig. 8. Globalization in South Asia, Middle East and South Asian Trend, 1982–1997.

at the time. Since then, the two regions have gone their separate ways: the East Asian countries have become more and more globalized and yet the South Asian countries have experienced a concomitant decline. By the late 1990s, the East Asian countries had lifted themselves above the world wide norm, while the South Asian countries had fallen considerably below the world wide norm.

Similar to the patterns of openness in South Asia, Pakistan has led the general decline in the region's relative position in the general globalization index (Fig. 9). The country's

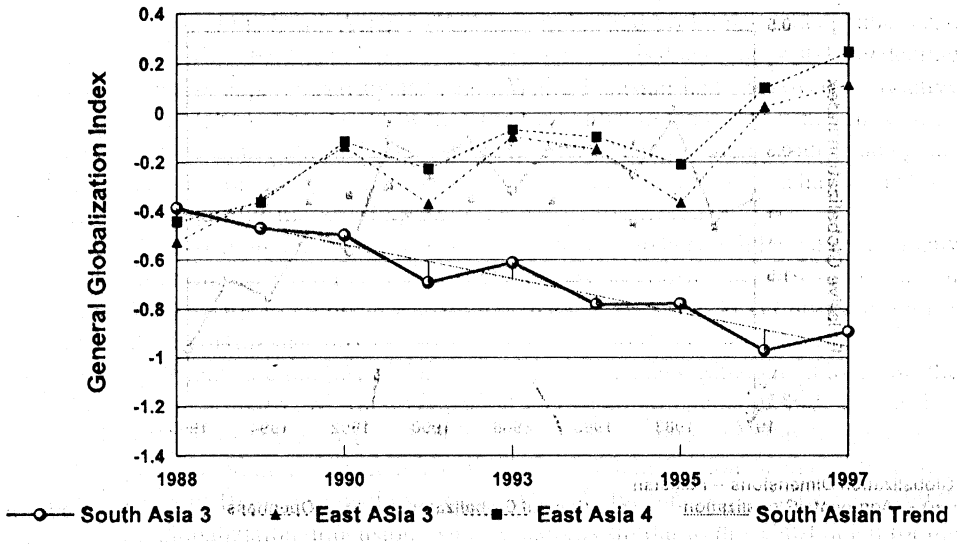

Fig. 9. Globalization in South and East Asia, South Asian Trend, 1988–1997.

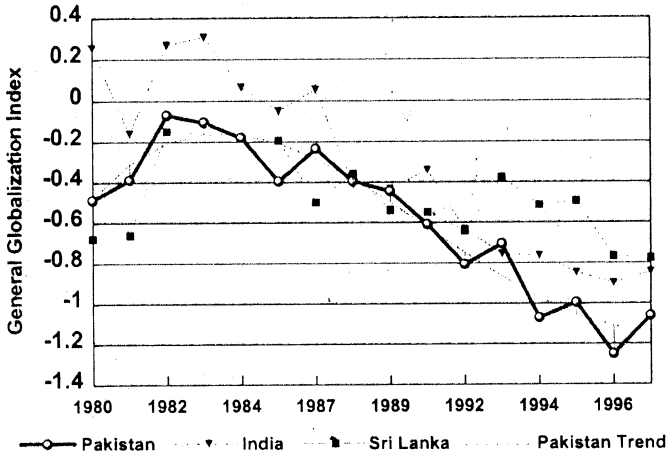

Fig. 10. Globalization in Pakistan, India, Sri Lanka and Pakistan Trend 1980–1997.

decline has been particularly marked since the mid-1980s. While both India and Sri Lanka have also experienced similar declines, the deterioration in both countries' index appears to have leveled off somewhat in the 1990s (Fig. 10).

8. Conclusions

Globalization has come in three major waves. The first from 1870 to 1914 saw global per capita incomes rising fast but not enough to prevent the numbers of poor people from rising. The second from 1950 to 1980, enabled rich countries to become much more integrated, but left many poorer countries dependent on primary commodities. The current wave started around 1980. For the first time, many poor countries succeeded in breaking into global markets for manufactured goods. Manufactures jumped from just 25% of developing country exports in 1980 to more than 80% by 2000 (World Bank, 2001).

The new indices of globalization developed here attempt to quantify these recent trends. The results presented here show, as we would expect, a growing globalization divergence between the South Asian countries and other parts of the developing world, especially the East Asian region. A surprise finding was the extent to which South Asia was also falling behind the Middle Eastern countries.

Of the South Asian countries, Pakistan stands out as the one country that has failed to make significant strides in opening up its economy to both trade and capital flows. The irony is that the country made great efforts to do exactly this with the average import tariff declining to just over 20% in 2001–2002, which is less than half its level in the mid-1990s. Other barriers to trade such as exchange market distortions and non-tariff barriers have also been reduced. However, this action simply falls short of similar but bigger reductions in protection made by the countries such as Thailand, Malaysia, Morocco and the Philippines with which Pakistan competes in world markets for labor intensive products. As Nunnenkamp (2002) shows, increased integration into the world economy would have

reduced poverty and increased growth in what was instead Pakistan's lost decade of the 1990s.

In short, even thought Pakistan has made significant grounds in absolute globalization, it has suffered significant losses in relative globalization and it is relative globalization that is indicative of the country's ability to compete in international markets. The implications for Pakistan are dire. At a time when Pakistan needs to increase its competitiveness to restore growth and expand its main export, textiles, it is coming off a long period of declining relative globalization, no doubt greatly reducing its ability to attract capital to compete in the new world of global markets free of quotas and subsidies. The country seems to have fallen into a vicious cycle of low and declining globalization leading to low productivity causing low rates of return on investment. The result is low investment and technology transfer which only reinforces the drift towards an increasing globalization gap with the country's main international competitors.

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