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Abstract

[Using seven indicators of the economic performance of 187 countries, the paper identifies the top 50 performers during the decades of 1981-90 and 1991-2000. Five of these indicators are the trend rates of growth over a decade in imports, FDI, capital formation, per capita income and forex reserves. Average inflation rate and HDI are the remaining indicators. Comparison of top performers of the 1980s and the 1990s suggest that high performance in inflation and HDI are the precondition for consistency of high overall performance over time. The paper also examines the interrelationship among the indicators over time.]

Key Words: Emerging Economies, Economic Indicators, Cross-Country Regression, International Ranking, and Economic Development.

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Identification of Top Performing Economies

I. Introduction

In the era of greater liberalization and globalisation, top performing economies of the world need to be carefully identified. This is important for the business strategy of existing and potential multinational corporations as well as the policy decisions of governments in different countries. Of late, several organizations have been conducting similar exercises regularly (*The Economist* (periodical); World Economic Forum (WEF), 1999 and 2002; International Finance Corporation (IFC), 1999; World Bank (annual) etc.). Some of these exercises use only the published macroeconomic data available readily from secondary sources (e.g. *The Economist*, IFC, 1999; World Bank, 2003; Global Edge, website), whereas the others combine them with specially conducted surveys in the participating countries (e.g. WEF, 1999 and 2002). Moreover, the precise objectives and focus of these exercises also differ. Some of them focus on the better performers amongst emerging markets only (e.g. *The Economist*, IFC, 1999;and Global Edge, website), while the others identify the most competitive and technologically advanced economies (e.g. WEF, 1999 and 2002).

The emerging economies, or more precisely, the emerging market economies, are generally identified on three criteria, viz. (i) low income or 'developing country' status, (ii) high economic growth, and (iii) government policies leading to greater opening of the economy to domestic and global market forces. (Arnold & Quelch, 1998 and Hoskisson et al., 2000). The Economist currently identifies two distinct sets viz. emerging economies and developed countries where size is also one of the criteria (Jan. 2, 1999 issue p.17). In 1995 it had suggested grouping of countries into 'paralysed' (the poor economies), 'progressing' (the emerging economies), and 'paranoid' (the rich countries terrified by competition from the progressives). However, it soon realized that these groupings would not remain stable over time, given the ever-changing nature of the global forces, and decided to identify two sets based on the economic expansion through sound policies followed by countries with the absolute size of the economy playing an important role. IFC (1999) identified 51 rapidly growing developing countries as emerging economies and Hoskisson et al. (2000) added 13 transition economies in the former USSR to make it a list of 64 emerging market economies. All developed countries were excluded from their list.

There is, however, no serious effort at identifying the top performing economies in the world over a period, say a decade, irrespective of the level of their development. We need to consider the economic performance of different countries on various dimensions relevant for corporate business strategies and government policies. The present paper makes an attempt in this direction by first considering a set of relevant indicators of economic performance over a decade (Section II) and then identifying the top 50 economies with the help of those indicators (Section III). We report the results of this exercise for the decades of the eighties and the nineties and examine their similarities and implications (Section IV). The paper concludes by discussing the possibility of predicting a set of top performers for the next decade.

II. Indicators of Performance over a Decade

Since business interests are linked to the market, we may look for the performance indicators primarily connected with the markets. We may, therefore consider the international trade of a country to get our first indicator of performance. Imports of goods and services into an economy provide the rest of the world with the market opportunities to do business with the country. While the size of imports determines the importance of the economy, its rate of growth over a fairly long period, say a decade, would reflect the performance of the economy. It is not the size but the rate of expansion that provides the business opportunity. We expect a performing economy to have a consistently high growth of imports. If a performing economy shows a low growth of imports, it implies presence of either domestic distortions or restrictive trade policies as in case of Japan (Teramishi. 1992), Malta (Bonnici, 2002), Cyprus, Panama, etc. Both represent negative aspects of the economic performance of a country. On the other hand, if the growth of imports is high on a sustained basis in a country not performing well on other fronts, e.g., Brazil, Ghana, Mexico, Turkey, etc. it may reflect a long-term strategy for growth based on the correction of domestic distortion. A period as long as a decade would hopefully ensure that short term and temporary factors do not unduly influence the results.

The second indicator could be the ability of the economy to attract foreign capital. Trade liberalization is certainly an important dimension of globalisation, but factors flowing across the border are also an integral part of the concept as accepted by the World Trade Organisation and its agreements on investment and

services (Goyal and Mohd, 2001). Since Capital is fungible and relatively more mobile across nations, the net inflows of the foreign direct investment (FDI) during a year would again reflect the level of development of an economy. Growth in these flows over a decade would reveal changing perceptions of the global community and fundamental changes taking place in the structure and policies in the economy. Very low growth of FDI over a decade would indicate either relative stagnation & saturation of the growth prospects of the economy in the foreigners' perception or presence of policies discouraging FDI. Both these are negative aspects of economic performance. High growth of FDI, like high growth of imports gives extra weight to the globally emerging markets.

The third criterion to identify the top performers is to consider the total capital investment or capital formation undertaken in the economy. The gross capital formation (GCF) during a year reflects the level of development of an economy. The growth of real GCF over a decade reveals the rate of acceleration in the productive capacity and thereby indicates the maximum growth the economy is capable of achieving. It is possible to argue that an economy can grow over time mainly through sustained technical progress and may not, therefore, require very high growth of GCF^{*1}. However, most of the technical advances over a long time require fresh doses of capital (Nelson, 1964). A high rate of technical progress on a sustained basis would lead to a high rate of obsolescence and hence a high rate of depreciation. The gross investment would, therefore, show high growth. Thus, a performing economy is not likely to show low growth of GCF.

The next criterion could be the size of the market as measured by the per capita purchasing power generated in the system. Per capita real gross domestic product (GDP pc) is usually taken to reflect the level of development of a country. Its rate of growth sustained over a decade would be an undisputed indicator of economic performance of an economy. All the studies citied earlier have considered an indicator measuring economic expansion. We propose to consider GDP and not GNP because we would like to emphasize the productive capacity

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^{*1} Solow (1957) and Abramovitz (1956) challenged the existing belief that capital accumulation played very important role in the growth of a country. Several empirical studies of the developed countries, e.g. Denison (1967) and Auer (1979) corroborated their finding that technical progress plays overwhelming role in accounting for the growth of per capita income of a country. However, recent evidences from the study of developing countries e.g. World Bank (1991) and Young (1995), show a significant share of capital accumulation in the growth of a country. The issue is far from settled empirically. Easterly and Levine (2001) consider it a stylised fact that total factor productivity growth (TFPG) or the residual is more important than the capital accumulation.

and resource efficiency in a geographical region rather than income accruing to the resources of a country. Secondly, the economic performance should be measured over time after adjusting for population growth.

Another criterion for measuring the economic performance of economies is price stability. Low inflation is one of the long-term policy objectives in almost all countries. The lower the consumer price inflation, the better the investment and business climate in a country (Barro, 1997,p-89). A low average rate of inflation in a country implies that the relative prices of commodities tend to remain more or less stable. The relative demand for commodities would then be determined by the growth of income and change in tastes and preferences. Both these are reasonably predictable and therefore business uncertainties and risks are lower. High inflation, on the contrary, leads to greater business uncertainties and risks. Inflation is a distinct aspect of the economic performance of a country and should be included as a performance criterion to give due consideration to the business climate and sentiments.

Yet another performance indicator is the net result of the balance of payments of the country. The net effect of the current account and capital account is on the total reserves of foreign currency in the economy. There are several countries that have been aggressively pursuing the policy of accumulating foreign exchange reserves in their central monetary authority so that the currency crisis or any such threat to the stability of their financial system can be effectively tackled if need arises (Jalan, 2002; and Kapur and Patel, 2003). In the light of the experience of the currency and financial crises during the last decade, the behaviour of the total reserves of foreign currencies in the country assumes a special significance as an indicator of the performance of the economy. It basically acts like a signal of the market power of the country's central monetary authority in the forex market. Again, it is not the level but the growth of reserves that reflects the economic performance of the country over a decade.

Finally, we consider the performance of an economy in terms of its past developmental efforts, specific points of advantage gained through deliberate development strategy or available through natural endowments, gifts or coincidences. All these factors get converted into the development of human resources in the country. The human development index (HDI) is based on the achievements of the economy on education, health, and income. It is a reasonably comprehensive measure of the level of human development in a country in relation

to other countries (UNDP, 2002). The level of HDI once attained is likely to sustain itself over time. Rapid improvements are possible but drastic reductions are unlikely. Since the level of HDI generally signals the quality of human resource in a country, it may also reflect the ability to generate innovations, absorb technical progress, and adapt to changing business environments. All these factors are likely to determine the potential of the country for economic growth and advancement. We, therefore, take the level of HDI prevailing in a country at the mid-point of the decade as an important indicator of economic performance over the decade.

Based on various aspects of the economic performance of a country relevant from the business angle, we have identified seven different indicators. Except HDI the other six indicators are annual rates of growth over a decade*2. For consumer price inflation, an arithmetic average of the annual rate is taken over the relevant decade. For the remaining five indicators, semi-logarithmic time trend rate is estimated for the two decades. All these seven indicators are calculated for all countries*3 for the decades 1981-90 and 1991-2000 respectively in Appendix Tables 1 and 2.

How distinct are these seven indicators, chosen to reflect the economic performance of countries? They appear to be quite distinct and to represent different dimensions of the economic performance of countries during the 1980s and the 1990s. Tables 1 and 2 report the correlation matrices among these seven indicators for the 1980s and the 1990s respectively*4. It is evident that none of the correlations is very high and substantial where r² exceeds 0.5. In fact, for most of the pairs, r² is less than 0.1, and for several pairs r² is less than 0.01. Thus the chosen seven indicators have captured quite distinct dimensions of the economic performance of countries during the last two decades. Moreover, the two tables

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^{*2} The imports, GCF and GDPpc are measured in constant 1995 US dollars, whereas the net inflow of FDI is in current US dollars. Time series data on these four variables along with the consumer price annual inflation rate are available from the World Development Indicators (2002). Time series on forex reserves is available from IMF (2002), and the HDI is available from the UNDP (2002).

^{*3} Out of 207 countries for which the World Development Indicators (2002) provides data, the non-availability of data does not permit us to construct even one indicator either for the 1980s or the 1990s in the case of 20 countries. We have, therefore, dropped those 20 countries from our analysis. For two countries (Afghanistan and Libya) none of the seven indicators could be constructed for the 1990s whereas there were nine such countries for the 1980s. Moreover, countries are defined as distinct economies rather than political area. Thus, politically Macao and Hong Kong fall under China, but here we have considered them as two economies or countries.

^{*4} The number of observations for each correlation in these tables differs because of the non-reporting of data on different indicators in the basic sources.

also show a general weakening of the correlations during the 1990s when compared with the 1980s for all indicators except inflation. This is an interesting finding because it means that the economic performance of countries, which was already specialised on a few dimensions, is becoming more specialised and focused during the 1990s when compared to the 1980s. It suggests that the development goals, targets, and strategies are becoming sharper and narrowly focused over time.

Table 1: Correlation Matrix among the Seven Indicators - 1980s

	Ggcf	Gimpgs	Gfdi	Gfr	INF	HDI
Gadona	0.68084	0.55525	0.16520	0.40805	0.29126	0.34090
Ggdppc	(n=132)	(n=130)	(n=103)	(n=134)	(n=131)	(n=123)
Ggcf		0.62415	0.20253	0.50281	0.13590	0.04504
Ogci		(n=127)	(n=95)	(n=119)	(n=117)	(n=111)
Gimpgs			0.12082	0.42460	0.10950	0.31355
Giripgs			(n=97)	(n=123)	(n=123)	(n=109)
Ctdi				0.16193	0.00308	0.35334
Gfdi				(n=105)	(n=99)	(n=87)
Gfr					0.10554	0.12514
GII					(n=128)	(n=109)
INF						0.01486
II VI						(n=108)

Basic Source: Appendix Table 1

Table 2: Correlation Matrix among the Seven Indicators - 1990s

	Ggcf	Gimpgs	Gfdi	Gfr	INF	HDI
Ggdppc	0.53666 (n=155)	0.57737 (n=158)			0.34676 (n=159)	
Ggcf		0.61736 (n=153)			0.09696 (n=148)	0.02863 (n=130)
Gimpgs			0.08429 (n=144)		0.28562 (n=151)	0.15748 (n=131)
Gfdi					0.02729 (n=148)	0.02901 (n=132)
Gfr					0.01629 (n=160)	0.08516 (n=133)
INF						0.06286 (n=133)

Basic Source: Appendix Table 2

This has an important implication for the identification of the top performers because the standard methods of "combining" different indicators attaching 'some uniform weights' become invalid and even conceptually challengeable. Thus, different popular methods like using the equal weights to ranking of individual indicators, or statistically derived weights through the principal component method (Gamini, *et al.*, 2002; Biswas and Caliendo,2002 and Güveli, 2000), or equal weights after converting the indicators into indices as in PQLI (Morris, 1979) and

HDI (UNDP, 2002) are all meaningless in the light of our finings. The countries have different perceptions and attach different importance to various dimensions of the economic performance. Any uniform scale of weights cannot do justice to all. We need a different approach.

III. Identifying The Top Performers

If the economic performance of countries is considered along one dimension and with one indicator, the rankings generally are non-controversial. However, when there are several dimensions and multiple indicators, overall rankings would be problematic. But, in order to identify a certain number of top performers, we may not need precise overall rankings of countries. This is because, if our objective is to identify the 50 top overall performers, we can first identify the top 50 countries in each of the seven indicators by awarding one point each. We would then emerge with seven different sets of 50 countries each. The countries that are common to all the seven sets are necessarily among the top 50 overall performers. This would be a sub-set comprising of only a small number of countries if at all. During the nineties, for example, there was no such country and during the eighties, there were only three such countries. We may, then, consider countries present in six out of the seven sets. These countries are among the top 50 performers in six out of the seven dimensions. Again the number of such countries is likely to be small, e.g. only eight such countries in the 1980s and two in the 1990s. We can, then, consider the countries appearing in any five sets, 4 sets and so on. Table 3 provides the distribution of 187 countries considered in this study according to their score that shows the number of sets they appear in during the 1980s and the 1990s.

Table 3: Distribution of Countries According to their Score During the 1980s and the 1990s

Score *	7	6	5	4	3	2	1	0
No. of Countries During the 1980s	3	8	14	14	17	26	52	53
No. of Countries During the 1990s	0	2	10	18	36	30	48	43

^{*}If a country appears in one set during the decade, it gets a score of one. The score of five, for instance, means that the country is in top 50 countries in five out of seven indicators during the decade

Source: Calculated from Appendix Tables 1 and 2

Some interesting patterns of economic performance of countries emerge from Table 3. The number of all-round performers scoring at least five points has sharply reduced to 12 during the 1990s compared to 25 during the 1980s. But at the same time, the number of countries with a score of two or more has increased from 82 in the 1980s to 96 in the 1990s. An average country during the eighties had a score of one or none, whereas during the nineties it has two or more. However, among the top performers, the shift appears to be in the reverse direction – an average top performer having a score of four or more during the 1980s to only three during the 1990s.

We may return to our question of how to select the top 50 overall performers if the distribution of the countries is as given in Table 3. We can readily see that there are 39 countries in the 1980s and 30 countries in the 1990s with a score of four or more, but there are 56 countries in the 1980s and 66 countries in the 1990s with a score three or more. Therefore, we have to select 11 out of 17 countries in the 1980s and 20 out of 36 countries in the 1990s with the score of three to complete the list of 50 top overall performers in each decade. In order to select those countries, the indicators are converted into the corresponding indexes with the best value in the indicator during a decade as 100 and the worst value as zero, from among all 187 countries. This exercise is done only for those indicators where the country ranks in the top 50. Then, the index values for all the three indicators in each of the 17 countries in the 1980s and 36 countries in the 1990s are added to arrive at the rankings of those countries so as to select 11 countries in the 1980s and 20 countries in the 1990s^{*5}. The top 50 overall performers so identified in the 1980s and the 1990s are presented in Tables 4 and 5 respectively along with their rankings in the seven indicators and the total score.

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^{*5} Equal weights to indexes at this stage is justified because all the countries in the group have appeared in the top 50 performers in any three out of the seven indicators. Our suggested method picks up only those indicators for a country where it has performed. Different countries may have performed on different indicators. Index only measures the strength of their relative performance compared to the best and the worst performers. Equal weights to add such relative performance in three different dimensions has nothing objectionable.

	Table 4: Top 50 Countries on Overall Economic Performance During the 1980									
No.		Ggdppc			Gfdi	Gfr	INF	HDI	Score @	
						Rank		Rank		
1	Japan	27	29	25	21	33		4	7	
2	Korea, Rep.	3	4	6	17	20	47	39	7	
3	United Kingdom	36	23	20	11	39	49	18	7	
4	Belize	47	6	51	14	10	27	48	6	
5	Canada	60	34	19	13	25	43	1	6	
6	Denmark	66	35	48	4	31	42	8		
7	Finland	41	55	39	7	23	50	12		
8	Spain	40			29					
9	St. Kitts and Nevis	2		29	12	26			6	
10	St. Vincent and the Grenadines	14	22	46	20	30	32		6	
	Thailand	9							6	
	Antigua and Barbuda	5				35			5	
	Belgium	59		47	37	53				
14	China	1	5		27	49		79		
	Dominica	<u>'</u>	26				34		5	
16	Luxembourg	16		30		.,	31		5	
	Malta	22		16		90	9		5	
	Mauritius	12		3	8		69			
	Portugal	33		17	19					
		17	67	17	49					
	Singapore St. Lucia	8		11	77	19			5	
						_			5	
	Sweden	55		41	23	37	61			
	Switzerland	75				68				
	Turkey	38		10						
	United States	44	54	18		51	35		_	
	Australia	63			39			12		
	Botswana	6			68		-	73		
	Chad	31		8						
	Costa Rica	95		14	51	40	-			
	Cyprus	13			79					
	France	65		45	32	82				
	Grenada	10			24	89			4	
	Hong Kong, China	11	50				66			
	India	29			35					
	Italy	49			67	45				
	Macao, China	25				3			4	
	Mali	137	46		50	18		118		
38	Netherlands	67	52	49	33					
39	Seychelles	21			56	99			4	
	Austria	61	60	42	52	74	22	15		
41	Burkina Faso	91	14	72	93	24	3	121		
	Chile	35	11	61	58	69	108	42	3	
43	Dominican Republic	90	33	4	47	123	114	65	3	
	Germany	53	64	58	34	81	13	14	3	
_	Greece	97	85							
	Ireland	37	89				64		3	
	New Zealand	96		56			82		3	
	Norway	50								
	Panama	152							3	
	Swaziland	24								
						<u> </u>				

@The number of indicators in which the country is in top 50 **Basic Source:** (1) World Development Indicators 2002 (on CD ROM)

⁽²⁾ International Financial Statistics 2003 (online: http://ifs.apdi.net) (3) Human Development Report 2002 (online: http://hdr.undp.org)

Table 5: Top 50 Countries on Overall Economic Performance During the 1990

	Table 5: Top 50 Countries on Overall Economic Performance During the 1990								
No.	Country	Ggdppc	Ggcf	Gimpgs	Gfdi	Gfr	INF	HDI	Score @
		Rank	Rank	Rank	Rank	Rank	Rank	Rank	
1	Ireland	4	14	6	22		30	21	6
2	Poland	8	8	4	26		129		6
3	Australia	38	40	37	124		18		5
4	Croatia	26	29	90	16			41	5
5	India	18	24	27	27	23	87	102	5
6	Korea, Rep.	17	119	30	34		62	28	5
7	Lithuania	159	22	48	9		145		5
8	Slovak Republic	32	18	13	61	26	90		5
9	Trinidad and Tobago	49	6	28	89				5
10	Uganda	24		5	7	15		125	5
11	United States	53	26	26	35		32	4	5
12	Vietnam	5		2	86		45		5
13	Bangladesh	36	23	22	4		63		4
14	Canada	66	55	47	40	84	13	1	4
15	Chile	9	30	23	57	92	94		4
16	Denmark	67	47	73	39		15	16	4
17	Finland	31	77	51	19	124	10		4
18	Hungary	44	12	9	134	80	117	38	4
19	Israel	68	94	44	48		96	22	4
20	Japan	104	124	94	38			7	4
21	Luxembourg	20	45	83		155	16		4
22	Maldives	7	39	32	118		78		4
23	Malta	25	127	119	42	135	34	30	4
24	New Zealand	73	32	49	138		8		4
25	Nicaragua	103		19	23				4
26	Romania	120		38	15		151	48	4
27	Singapore	13			117		7	26	4
28	Slovenia	27	10	53	116		107	28	4
29	Uruguay	56		41	14		139		4
30	Yemen, Rep.	42	19	46		22	132	119	4
31	Armenia	127	42	159	8		160		3
32	Austria	84	103	72	49		21	14	3
33	Bahamas, The	115			5		28		3
34	Belgium	78	93	95	44	148	11	2	3
35	Bosnia and Herzen.	2	3	3					3
36	Cyprus	33	140	135	132	119	47	25	3
37	Czech Republic	86	44	7	54			31	3
38	Equatorial Guinea	1	2	1	74			98	3
39	Georgia	178			6				3
40	Germany	100		85	12		19		3
41	Malaysia	22	90						3
42	Netherlands	62	89				26		
43	Norway	37	54		59		24		3
44	Panama	80							3
45	Seychelles	108			82	140			3
46	Spain	52	86	33	126				3
47	Sudan	6			1	_			3
48	Sweden	72			36				3
49	Switzerland	117	110	91	44		11	11	3
50	United Kingdom	54	65	57	50	144	35	10	3

@The number of indicators in which the country is in top 50
Basic Source: (1) World Development Indicators 2002 (on CD ROM)
(2) International Financial Statistics 2003 (online: http://ifs.apdi.net)
(3) Human Development Report 2002 (online: http://hdr.undp.org)

The advantage of this method over the other methods is that non-availability of data on one, two or three indicators for a country does not disqualify the country from being effectively considered. Actually, Tables 4 and 5 clearly bring out that there are several countries among the top 50 performing economies in the world, where the data on some of the seven indicators are not available or reported. Methodological requirements of comprehensive data availability should not come in the way of recognizing their superior performance on other fronts. The only assumption we have to make about the non-availability of an indicator value in a country is that the country does not rank among the top 50 in that particular indicator during the decade. It is certainly not as restrictive an assumption or a procedure as dropping the country altogether from the analysis, a common practice in other similar exercises.

IV. Top Performers of the 1980s and the 1990s

A comparison of the top 50 performers during the 1980s and the 1990s is interesting. Twenty-six countries are common to both the lists. Twenty-four countries out of the top 50 during the 1980s dropped out of the list to make room for 24 new entrants during the 1990s. Out of the 24 emerging top performers during the 1990s, as many as 13 countries had serious problems about data availability during the 1980s. It is difficult to say whether they would have made it into the top 50 performers in the 1980s had satisfactory data been available on all indicators during the 1980s. Ignoring the problem of data availability, however, it is important to compare the performance of all these 74 countries over two decades. Table 6 provides the comparison in terms of the seven indicators between the two decades for each of the 26 countries common to both the lists.

Table 6: Comparison of Performance of the Common 26 Countries during 1980s and 1990s

	e 6: Comparison of F								
No.	Nations	GDP pc	GCF	Imp GS	FDI	TR	INF	HDI	Score
1	Australia 80s	0.0216	0.0346	0.0576	0.1965	0.1312	8.1277	0.873	4
	90s	0.0300	0.0701	0.0842	0.0675	0.0515	2.2212	0.927	5
2	Austria 80s	0.0221	0.0331	0.0506	0.1265	0.0395	3.5296	0.867	3
	90s	0.0172	0.0207	0.0584	0.2592	0.0532	2.3185	0.909	3
3	Belgium 80s	0.0225	0.0495	0.0482	0.2032	0.0755	3.4088	0.875	5
	90s	0.0187	0.0308	0.0452	0.2734	-0.0069	1.9597	0.927	3
4	Canada 80s	0.0222	0.0560	0.0785	0.3591	0.1681	5.9693	0.906	6
	90s	0.0223	0.0566	0.0778	0.2923	0.1043	1.9968	0.932	4
5	Chile 80s	0.0321	0.0907	0.0357	0.0942	0.0447	20.4466	0.754	3
	90s	0.0477	0.0803	0.0999	0.2398	0.0844	9.5399	0.811	4
6	Cyprus 80s	0.0529	0.0386	0.0442	0.0207	0.0932	4.8960	0.821	4
	90s	0.0316	-0.0321	0.0019	0.0333	0.0501	3.8301	0.866	3
7	Denmark 80s	0.0204	0.0552	0.0479	0.5453	0.1407	5.9457	0.883	6
	90s	0.0221	0.0615	0.0579	0.2942	0.1013	2.1377	0.907	4
8	Finland 80s	0.0295	0.0387	0.0519	0.4559	0.1784	6.7690	0.873	6
	90s	0.0324	0.0414	0.0737	0.3746	0.0414	1.8628	0.908	4
9	Germany 80s	0.0237	0.0284	0.0387	0.2234	0.0245	2.6323	0.868	3
_	90s	0.0118	0.0132	0.0519	0.4441	-0.0153	2.2454	0.907	3
10	India 80s	0.0354	0.0653	0.0599	0.2109	-0.0821	8.8793	0.473	4
10	90s	0.0431	0.0831	0.0959	0.2103	0.2310	9.0508	0.545	5
11		0.0431	-0.0063		-0.1125		7.8471	0.846	3
11	Ireland 80s 90s	0.0313	0.1079	0.0374	0.3568	0.0351	2.5392	0.894	6
12			0.0601			0.0331			7
12		0.0360		0.0654	0.2997		2.0582	0.893	
40	90s	0.0101	-0.0007	0.0453	0.2978	0.1852	0.8345	0.923	4
13	Korea, Rep.80s	0.0761	0.1200	0.1126	0.3467	0.1871	6.3942	0.774	7
4.4	90s	0.0433	0.0041	0.0904	0.3124	0.1990	5.0970	0.852	5
14	Luxembourg 80s	0.0481	0.0733	0.0622		0.000=	4.4578	0.860	5
	90s	0.0396	0.0631	0.0523		-0.0207	2.1842	0.912	4
15	Malta 80s	0.0397	0.0870	0.0816	0.0580	0.0044	2.2998	0.793	5
	90s	0.0381		0.0200	0.2839	0.0275	2.8937	0.850	4
16	Netherlands 80s	0.0203	0.0412	0.0478	0.2324	0.0397	2.4606	0.888	4
	90s	0.0231	0.0324	0.0531	0.2679	-0.0757	2.4517	0.922	3
17	New Zealand 80s	0.0067	0.0148	0.0427	0.2378	0.1869	10.8799	0.866	3
	90s	0.0194	0.0774	0.0749	0.0099	0.0405	1.7520	0.902	4
18	Norway 80s	0.0244	0.0056	0.0268	0.2068	0.0727	7.6645	0.888	3
	90s	0.0302	0.0569	0.0555	0.2343	0.0547	2.3404	0.925	3
19	Panama 80s	-0.0215	-0.0989	-0.0230	0.5903	-0.0159	1.8440	0.745	3
	90s	0.0186	0.0963	0.0401	0.2442	0.0707	1.1682	0.770	3
20	Seychelles 80s	0.0410	0.0980	0.1480	0.1144	-0.0141	3.0784		4
	90s	0.0085	0.0719	0.1239	0.1780	0.0108	2.2870		3
21	Singapore 80s	0.0471	0.0237		0.1437	0.1002	2.2843	0.782	5
	90s	0.0445	0.0714		0.0824	0.0981	1.7296	0.857	4
22	Spain 80s	0.0298	0.0674	0.0949	0.2457	0.1844	9.3628	0.855	6
	90s	0.0251	0.0336	0.0894	0.0645	-0.0265	3.8929	0.895	3
23	Sweden 80s	0.0233	0.0589	0.0512	0.2809	0.1287	7.6141	0.883	5
	90s	0.0195	0.0324	0.0678	0.2996	-0.0467	2.3303	0.925	3
24	Switzerland 80s	0.0162	0.0447	0.0535	0.2032	0.0456	3.4088	0.892	5
F -	90s	0.0043	0.0154	0.0467	0.2734	0.0221	1.9597	0.914	3
25	United Kingdom 80s	0.0318	0.0678	0.0681	0.3807	0.1227	6.5854	0.858	7
	90s	0.0241	0.0501	0.0705	0.2550	-0.0008	3.0520	0.916	3
26	United States 80s	0.0241	0.0399	0.0790	0.2330	0.0797	4.7401	0.898	5
20	90s	0.0273	0.0399	0.0790	0.3080	-0.0009	2.8014	0.898	5
	003	0.0240	0.0010	0.0074	0.0000	0.0009	2.0014	0.020	J

Basic Source: Appendix Table 1 and 2

The table clearly reveals that in only five countries, viz., Australia, Chile, India, Ireland and New Zealand, has the country score increased during the 1990s over the 1980s. In another five countries, it has remained the same and in the remaining 16 countries, it has fallen. Thus, although the 26 countries appear to have maintained their status as belonging to the top 50 performers in the 1980s and the 1990s, in 16 of them the relative performance has actually deteriorated over the years. A closer look at Table 6 reveals that, while the absolute performance in terms of most of the seven indicators has deteriorated for several of these 16 countries, it has actually improved for Denmark, Finland, and the Netherlands in spite of their relative performance going down. The trend rate of growth of per capita real GDP has increased from the 1980s to the 1990s only in nine out of these 26 common top performers during the two decades.

Another distinctive feature of the 26 common countries coming out clearly from Table 6 is that except India, all countries have very high performance on the inflation and / or HDI front. Among this group of consistent performers, India is the only country with poor performance on both these counts. Except India, all countries show improvement in terms of inflation, while on the HDI front, all countries show clear improvement. It appears that high level of human development with good control over consumer inflation is almost a pre-condition for consistently high overall economic performance*6. None of the other five indicators generates such a close association.

Those 24 countries that dropped out of the list of 50 top performers during the 1990s from the list of the 1980s tell a story of all-round deteriorated performance except HDI (Table 7). In HDI, there is a clear improvement in all countries.

^{*6} See Barro (1997), Ch. 3. Using similar measurement and concept of consumer inflation with the cross-country data for the 1960, 1970s and 1980s, he finds a significant negative relation between inflation and growth. He also finds the "causation from higher long-term inflation to reduced growth" (p.117). Barro's (1997) results do provide support to our finding here. It should be noted, however, that our finding considers good relative performance of a country on multiple dimensions and not on a single dimension of growth in income.

Table 7: Comparison of Performance of 24 Countries Not Listed among the Top Performers during 1990s

N	la de	lopp	loor.	l. 00	len.	l T D	livie.	lubi	10
	Nations	GDP pc		Imp GS	FDI	TR	INF	HDI	Score
1	Antigua and Barbuda 80s	0.0657	0.0925	0.0680		0.1332	6.4708		5
	90s	0.0286	0.0207	0.0300		0.0704	2.5180		2
2	Belize 80s	0.0263	0.0988		0.3583	0.2356	4.1761	0.718	
	90s	0.0139	0.0304		0.0739	0.0810	1.7580		2
3	Botswana 80s	0.0637			0.0616	0.2925		0.613	
	90s	0.0234	-0.0046		-0.1791	0.0728	10.5134		0
4	Burkina Faso 80s	0.0092		0.0280		0.1703	1.3416		3
	90s	0.0230	0.0749	0.0182	-0.0250		4.5795		1
5	Chad 80s	0.0341		0.1087		0.2346	2.5345		4
	90s	-0.0089		-0.0368		0.1104	7.0622	0.335	
6	China 80s	0.0823	0.1072		0.2599	0.0829			5
	90s	0.0856	0.1067	0.0530	0.1911	0.2411	7.4735		3
7	Costa Rica 80s	0.0070	0.0707	0.0928	0.1266	0.1180	27.1867		4
	90s	0.0298	0.0468	0.0865	0.1261	0.0478	16.0461	0.805	3
8	Dominica 80s		0.0628	0.0554	0.5195	0.1911	4.6900		5
	90s		0.0162	0.0166	-0.0540	0.0701	2.1072		1
9	Dominican Republic 80s	0.0092	0.0564	0.1230	0.1580	-0.0892	24.2451	0.667	3
	90s	0.0444	0.0639		0.2316	0.0384	11.0107	0.698	2
10	France 80s	0.0205	0.0406	0.0497	0.2343	0.0242	6.3683	0.875	4
	90s	0.0146	0.0191		0.1064	0.0511	1.7242	0.914	2
11	Greece 80s	0.0064	0.0010	0.0504	0.0876	0.1378	19.0408	0.845	3
	90s	0.0192	0.0373	0.0638		0.1350	9.3896		1
12	Grenada 80s	0.0571	0.0512		0.2772	0.0072	5.2858		4
	90s	0.0326	0.0533	0.0652	0.1113	0.1534	2.1959		2
13	Hong Kong, China 80s	0.0549	0.0423	0.1340			8.0906	0.823	4
	90s	0.0159	0.0454	0.0709		0.1552	5.3448	0.877	1
14	Italy 80s	0.0257	0.0287		0.0660	0.0950	9.7217	0.856	4
	90s	0.0146	0.0181	0.0497	0.1239		3.7292	0.897	2
15	Macao, China 80s	0.0372	0.0722	0.0668		0.3159	9.6485		4
	90s	-0.0030		0.0094		0.1461	3.3975		1
16	Mali 80s	-0.0132	0.0453		0.1420	0.1907	0.00.0	0.292	4
	90s	0.0147	-0.0045		0.1758	0.0403	4.0512	0.346	
17	Mauritius 80s	0.0535			0.4555	0.3921	8.3024	0.686	
	90s	0.0399	0.0392	0.0522	0.2164		6.6819		1
18	Portugal 80s	0.0337			0.3240	0.2584			5
	90s	0.0262	0.0549	0.0727	0.0649		4.9396		2
19	St. Kitts and Nevis 80s	0.0765	0.1377		0.3604	0.1600	3.4399	0.000	6
	90s	_	0.0460				3.5251		2
20	St. Lucia 80s	0.0596	0.0742		0.0272	0.1885	4.2976	<u> </u>	5
	90s	0.0076	0.0246		0.0519	0.0500	3.2908	1	1
21	St. Vincent and Gren. 80s	0.0523	0.0688		0.3102	0.1445	4.5265		6
_ '	90s	0.0325	0.0511		0.1640	0.0712	2.4217	<u> </u>	2
22	Swaziland 80s	0.0275	0.0227	0.0469	0.3516	0.0693		0.569	3
	90s	0.0023	0.0227	0.0469	-0.2400	0.0616	9.4532	0.620	
23	Thailand 80s	0.0023	0.0209	0.0200	0.2462	0.2044	4.4398	0.676	
23	90s	0.0594		0.1222	0.2462	0.2044	4.4396	0.676	
24								-	
24	Turkey 80s	0.0300	0.0617	0.0984	0.2769	0.1467		0.654	
L	90s	0.0215	0.0426	0.1124	0.0230	0.1928	76.7014	0.717	_

Basic Source: Appendix Table 1 and 2

Table 7 shows that in 18 out of 24 countries, the trend rate of growth in per capita real GDP has fallen sharply during the 1990s compared to the 1980s. The presence of China among these 24 countries is somewhat surprising because it has experienced absolute improvement in all but two indicators and yet it has lost its place relative to the others. However, drawing from our earlier discussion, we can argue that China is not performing very well relatively on both HDI and inflation and hence may not be able to maintain consistently high overall economic performance. In fact, out of the performers of the eighties there are only two countries, viz., France and Belize that have high performance on HDI and inflation and yet failed to maintain consistently high relative overall economic performance during the 1990s.

The group of the emerging performers of the 1990s is presented in Table 8. Non-availability of data for the 1980s in the case of 11 out of the 24 countries makes it difficult to draw meaningful conclusions. Some of those countries could have been among the top 50 countries had the satisfactory data been available for the 1980s. From whatever data are available, however, we can say that several of these new entrants to this club of 50 are relatively shaky in the sense that they may not be able to hold on to their membership in the coming decade. This is because their performance on HDI and inflation front is relatively not high and far from what is required. Thus Armenia, Bangladesh, Bosnia, Equatorial Guinea, Georgia, Maldives, Nicaragua, Sudan, Uganda, and Yemen will have to be extra cautious and make extra efforts to maintain their relative performance over the next decade.

Table 8: Comparison of Performance of 24 Countries Emerging only in 1990s as Top Performers

	Table 8: Comparison of Perform	ance of 24	Countri	es Eillei	ging only	<i>,</i> III 1990	s as Tup re	31101111	CI 3
No.	Nations	GDP pc	GCF	Imp GS	FDI	TR	INF	HDI	Score
1	Armenia 80s								0
	90s	0.0018	0.0656	-0.1179	0.5094	0.6214	739.9026	0.715	3
2	Bahamas, The 80s	0.0244				0.0153	5.5348	0.817	2
	90s	0.0055			0.6045	0.1086	2.5162	0.816	3
3	Bangladesh 80s	0.0145	0.0192	0.0646	-0.2326	0.1274	7.3649	0.386	2
	90s	0.0304	0.0933	0.1034	0.6091	-0.0122	5.2992	0.445	4
4	Bosnia and Herzegovina 80s								0
	90s	0.1840	0.3047	0.1960					3
5	Croatia 80s						453.8095		0
	90s	0.0376	0.0805	0.0473	0.3964	0.3176	238.2516	0.789	5
6	Czech Republic 80s								0
	90s	0.0164	0.0638	0.1331	0.2409	0.1479	7.5935	0.843	
7	Equatorial Guinea 80s	-0.0087		0.0580		-0.0421		0.533	
	90s	0.1948	0.3841	0.4202	0.1978	0.0727		0.582	3
8	Georgia 80s	-0.0090							0
_	90s	-0.0966	0.4818	0.1059	0.5642	-0.1046	39.3309		3
9	Hungary 80s	0.0158	-0.0059					0.805	1
	90s	0.0284	0.1133	0.1167	0.0234	0.1141	20.2521	0.809	-
10	Israel 80s	0.0174		0.0405		0.0277		0.836	
-	90s	0.0219	0.0307	0.0795		0.2007	9.6304	0.877	
11	Lithuania 80s	0.0629	0.0007	0.07.00	0.202	0.2001	0.0001		1
-	90s	-0.0153	0.0946	0.0752	0.4751	0.3169	70.3021	0.781	1 -
12	Malaysia 80s	0.0229	0.0235	0.0679		0.0738		0.693	
12	90s	0.0223	0.0233	0.0831	-0.1203		3.5538	0.760	
13	Maldives 80s	0.0391	0.0321	0.0031		0.2372	3.3330	0.629	
13	90s	0.0568	0.0704	0.0805		0.2372	7.4807	0.707	
14	Nicaragua 80s	-0.0515		-0.0270	0.0733	0.2230	2438.8706		
14	90s	0.0106	0.1192	0.1053	0.3554	0.2097		0.615	
15	Poland 80s	-0.0736	0.1192	0.1033		0.2022	107.6725		1
13	90s	0.0506	0.1252	0.1450		0.2022		0.808	I -
16	Romania 80s		1	-0.0052	1			0.794	
10	90s	0.0027	-0.0388			0.0479		0.772	
17	Slovak Republic 80s	0.0054	0.0028	0.0360	0.4008	0.1040	121.0137	0.813	
17	90s	0.0134	0.0028	0.0360	0.2333	0.2231	9.2172	0.817	
18	Slovenia 80s	0.0317	0.0999	0.1113	0.2333	0.2231	3.2172		0
10	90s	0.0363	0.1146	0.0724	0.0888	0.2141	12 6422	0.852	
19	Sudan 80s	0.0363 -0.0245	0.1146	0.0734	0.0000	0.3141	13.6422 40.2020	0.395	
19	90s	0.0571	-		1 5106	0.3072		0.462	
20			0.1100	0.0247				0.774	
20	Trinidad and Tobago 80s 90s	-0.0256 0.0264	-0.1122 0.1368		0.4437		11.0800 5.4693	0.787	
24				0.0952 0.0430	0.1602			0.386	
21		0.0037	0.0770		0.5300			0.404	
22	Uruguay 80c	0.0387	0.0958	0.1403		0.2992	12.8222	0.781	
22	Uruguay 80s	0.0054	-0.0495			0.0639	62.4875	0.815	1
00	90s	0.0238	0.0450	0.0820	0.4198	0.1914		0.583	1
23	Vietnam 80s	0.0219	0.4707	0.0000	0.4070	0.0470		0.649	-
0.4	90s	0.0590	0.1737	0.2688		0.2170	3.7115	J.U+3	ļ
24	Yemen, Rep. 80s	0.000=	0.0000	0.0700	-0.5380	0.000=	00.0444	0.439	0
	90s	0.0287	0.0999	0.0783		0.2385	30.6111	0.439	4

Basic Source: Appendix Table 1 and 2

The key to success in these economies appears to be control of inflation because they are lagging far behind in terms of HDI, the other critical indicator. Malaysia, The Bahamas, and Trinidad and Tobago, on the other hand, are very likely to maintain their relative performance during the next decade. All other countries on the list have to tackle the problem of high inflation in their economy to achieve stability and consistency of performance. It is in-deed surprising that all the emerging performers of the 1990s except The Bahamas, Malaysia, and Vietnam have experienced relatively very high average inflation rate during the 1990s. Thus, high inflation during a decade does not deter the solid real economic performance on the other dimensions during the same decade,*7 but may create problems of maintaining the consistency of relative performance over time, if not checked.

V. Predicting Future Performance

Finally, we attempt to predict the economic performance of countries in the next decade. As a first step, we find the correlation for each indicator value during the 1980s and the 1990s. All correlation coefficients are very low except for HDI where it turns out to be +0.9853*8. For the rest, the r² s are less than 0.09. Thus, except HDI, the future values of the other six indicators are not highly correlated with their current values when performance over a decade is considered on a given dimension. As a second step, then, we take the past performance on all the seven dimensions to check whether the future performance on seven individual dimensions can be explained. We, therefore, run regressions with each indicator in the 1990s as the dependent variable and all the seven indicators in the 1980s as the independent variables*9. Here our intension is to examine the explanatory power of the performance indicator we are using rather than statistically mining explanatory variables. Four of our seven indicators are not explained satisfactorily

^{*7} Our finding here appears to be in sharp contrast to Barro (1997) who finds "no sign in any range of a positive relation that would signify that higher inflation had to be tolerated to obtain more growth" (p.98). While growth of income is just one dimension of economic performance, we are considering multiple dimensions and only the emerging performers during the nineties.

^{*8} This is not surprising since HDI is more of a stock variable.

Here the problem of data non-availability becomes a severe constraint. Fitting a multiple regression requires that the data matrix be complete and uniform for all variables. When we consider this constraint, the number of countries falls sharply from 187 to only 80. Since 80 is a large sample, our result may be considered reliable for prediction if found statistically significant.

by the past performance measures. Only three out of the seven regressions turn out to be statistically significant at 3% level of significance in terms of the goodness of fit test. On these three regressions, we applied the step-wise regression procedures to arrive at the most significant and acceptable fit. The results are as under:

$$2.(Gfdi)_{1990s} = -0.0505 - 0.1733 (Gfdi)_{1980s} - 0.3177 (Gfr)_{1980s} + 0.3851(HDI)_{1980}$$
 $t = values: (-0.57) (-1.49) (-1.78) (2.82)$
 $P - values: (0.569) (0.140) (0.079) (0.006)$
 $R^2 = 0.1170; F(3,75) = 3.312, P - value = 0.0245$

$$3.(\text{HDI})_{1995} = 0.0337 + 0.5641(\text{Ggdppc})_{1980s} + 1.86(10)^{-5}(\text{Inf})_{1980s} + 0.9961(\text{HDI})_{1985}$$

t-values: (3.19) (4.72) (1.56) (62.84)
P-values: (0.002) (1.05(10)^{-5}) (0.124) (2.8(10)^{-67})
 $R^2 = 0.9834$; F(3,76) = 1503.96, P-value = 1.5(10)⁻⁶⁷

These findings do spring some surprises:

- Contrary to what Barro (1997) found, inflation in our equation (1) has a
 positive and significant coefficient implying a direct relationship with growth
 of income. Thus, our finding suggests the existence of a trade-off between
 higher inflation and higher growth.
- 2. A negative and significant coefficient of Ggcf in equation (1) seems to contradict the finding of Blomstrom et al. (1996) that investment does not cause future growth. Higher investment is likely to result in higher incremental capital-output ratio by depressing the rate of return ultimately leading to a fall in the future growth of income. Thus, investment may cause output growth, albeit negatively.

- 3. A negative and significant coefficient of Gfr in equation (2) contradicts the arguments of Patel and Kapur (2003) that the foreign investors may see high accumulation of forex reserves by a country as reducing the risk of financial crises. On the contrary, the foreign investors may perceive very rapid growth of forex reserves in a country as a symptom and a potential threat of the government intervention to the market forces.
- 4. In view of the importance of inflation and HDI emerging from the discussion in the previous section, the finding in equation (3) suggest some distant trade-off considering the magnitude and significance of its coefficient.

The rest of the findings of our regressions are in line with the existing literature. Thus, a positive and significant coefficient of Ggdppc in equation (3) and absence of HDI in equation (1) supports the hypothesis that growth causes human capital and not vice-versa (Bils & Klenow, 1996). Similarly, HDI is very important for growth of FDI (equation 2).

Based on these three regressions, it is possible to generate the expected performance of different countries on the three indicators. On the assumption that the extent of relationship given by the estimated parameters in these regressions remain stable over time, we may plug in the values of the independent variables for the 1990s to generate the prediction of the trend rates of growth of per capita real GDP, and net inflow of FDI for the decade of 2001-2010, and the level of HDI in 2005 in different countries. Since the data availability is better in the 1990s, the number of countries covered in our prediction is 156.

Table 9: Predicted Values of 3 Performance Indicators with Ranking for the Decade 2001-10

								,		
No.	Countries		rowth in GI			Growth in I			HDI	
		Observed			Observed				Predicted	
		1990s	2000s		1990s	2000s		1995	2005	2005
	Albania	0.0438	0.0210	64	0.1021		61	0.702	0.759	70
	Algeria	0.0028	0.0094	114	-0.0846	0.1494	67	0.663	0.696	84
3	Antigua and Barbuda	0.0286	0.0241	49						
	Argentina	0.0224	0.0277	31		0.1865	48	0.830	0.874	32
	Armenia	0.0018	-0.0010	135	0.5094	-0.0608	122	0.715		66
6	Australia	0.0300	0.0259	40		0.2785	7	0.927	0.974	2
7	Austria	0.0172	0.0219	59		0.2378	20	0.909	0.949	16
8	Azerbaijan	-0.0583	-0.0129	142	0.6045	0.1245	76	0.816	0.850	39
	Bahrain	0.0090	0.0147	97						
10	Bangladesh	0.0304	0.0258	42	0.6091	0.0192	113	0.445	0.494	110
11	Barbados	0.0233	0.0167	85						
12	Belarus	-0.0060	0.0166	86	0.4670	0.1202	80	0.776	0.815	43
13	Belgium	0.0187	0.0197	74	0.2734	0.2613	11	0.927	0.968	5
14	Belize	0.0139	0.0149	95	0.0739	0.2083	36	0.772	0.811	47
15	Benin	0.0191	0.0140	103	0.2342	0.0406	106	0.388	0.431	122
16	Bhutan	0.0359	0.0158	89					-	
17	Bolivia	0.0155	0.0132	106		0.0658	101	0.630		87
	Botswana	0.0234	0.0226	57		0.1962	40	0.620		89
19	Brazil	0.0159	0.0373	9	0.4325	0.1213	78	0.737	0.787	56
	Bulgaria		0.0153	92		0.1108	87	0.778	0.806	49
21	Burkina Faso	0.0230	0.0130	107	-0.0250	0.0698	98	0.300	0.346	131
22	Burundi	-0.0503	-0.0156	143				0.316	0.320	132
23	Cam bodia	0.0177	0.0146	98	0.1619	0.0128	115	0.531	0.573	100
24	Cameroon	-0.0003	0.0138	104	0.2289	0.2365	21	0.499	0.531	104
25	Canada	0.0223	0.0227	56	0.2923	0.2247	24	0.932	0.975	1
26	Cape Verde	0.0348	0.0399	7	0.3292	0.1976	38	0.678	0.729	78
27	Central African Republic				0.1286	0.0233	112	0.369	0.401	124
28	Chad				0.1503	0.0174	114	0.335	0.363	127
29	Chile	0.0477	0.0360	11	0.2398	0.1935	43	0.811	0.869	33
30	China	0.0856	0.0460	3	0.1911	0.1021	90	0.681	0.761	67
31	Colombia	0.0089	0.0216	61	0.1840	0.1965	39	0.750	0.786	57
32	Comoros				0.3654	0.0443	104			
33	Congo, Dem. Rep.	-0.0763	0.0434	4	-0.0836	0.1873	47	0.511	0.589	99
34	Congo, Rep.	-0.0361	-0.0029	136						
35	Costa Rica	0.0298	0.0292	25	0.1261	0.2225	25	0.805	0.853	38
36	Cote d'Ivoire	0.0078	0.0048	125	0.1263	-0.1217	125	0.416	0.453	119
37	Croatia	0.0376	0.0280	29	0.3964	0.0838	93	0.789	0.845	40
38	Cyprus	0.0316	0.0285	27	0.0333	0.2614	10	0.866	0.914	24
39	Czech Republic	0.0164	0.0262	36	0.2409	0.1855	49	0.843	0.883	31
40	Denmark	0.0221	0.0194	75	0.2942	0.2157	32	0.907	0.950	15
41	Dominican Republic	0.0444	0.0320	18	0.2316	0.1660	56	0.698	0.754	72
42	Ecuador	-0.0058	0.0074	119	0.1587	0.1854	50	0.719	0.747	73
43	Egypt, Arab Rep.	0.0277	0.0166	87	0.1400	0.1318	73	0.605	0.652	93
	El Salvador	0.0237	0.0273	33	0.1864	0.1111	86	0.682	0.727	80
45	Estonia	0.0260	0.0327	16						
	Equatorial Guinea				0.1978	0.1163	82			
	Ethiopia	0.0300	0.0198	70	0.3905	-0.0385	121	0.308	0.358	129
	Fiji	0.0063	0.0144	99		0.2152	33	0.743	0.777	59
	Finland	0.0324	0.0292	24		0.2212	26	0.908	0.957	13
50	France	0.0146	0.0205	65		0.2668	9	0.914	0.952	14
	Gabon	0.0008	0.0048	124						
	Gambia, The	-0.0009	0.0043	129	0.0718	0.0703	97	0.375	0.407	123
	Georgia	-0.0966	-0.0865	145						
	Germany	0.0118	0.0192	76	0.4441	0.2267	23	0.907	0.944	18
	Ghana	0.0187	0.0298	23		0.0964	92	0.525	0.568	101
	Greece	0.0192	0.0218	60		0.2441	18	0.868	0.909	26
	Grenada	0.0326	0.0268	35	· · 		-			
	Guatemala	0.0143	0.0203	66	0.1235	0.1356	71	0.609	0.649	94
J	Gaatomala	0.0170	0.0200	J J J	3.1200	0.1000		3.000	J.U TU	U T

Table 9: Predicted Values of 3 Performance Indicators with Ranking for the Decade 2001-10 (contd.)

No.	Countries		rowth in G			Growth in			HDI	
		Observed			Observed				Predicted	
		1990s	2000s	2000s	1990s	2000s	2000s	1995	2005	2005
	Guinea-Bissau	-0.0147	0.0177	82				0.331	0.356	130
	Guyana	0.0458	0.0365	10	-0.1037	0.2131	34	0.703	0.760	68
	Haiti	-0.0234	0.0101	113	0.2800	-0.0119	118	0.457	0.476	113
	Honduras	0.0025	0.0068	121	0.2264	0.0543	103	0.628	0.661	90
	Hong Kong, China	0.0159	0.0199	68				0.877	0.916	23
	Hungary	0.0284	0.0244	46	0.0234	0.2208	28	0.809	0.856	37
	Iceland	0.0224	0.0212	63	0.0380	0.2953	1	0.918	0.961	10
	India	0.0431	0.0327	15	0.3470	0.0259	111	0.545	0.601	97
	Indonesia	0.0184	0.0257	43	0.2400	0.1210	79	0.664	0.706	83
_	Iran, Islamic Rep.	0.0154	-0.0041	138				0.688	0.728	79
	Ireland	0.0684	0.0478	2	0.3568	0.2208	27	0.894	0.963	9
	Israel	0.0219	0.0261	39	0.2624	0.1780	52	0.877	0.920	22
_	Italy	0.0146	0.0198	73	0.1239	0.2795	6	0.897	0.936	21
72	Jamaica	-0.0082	0.0048	126	0.1791	0.1478	68	0.736	0.763	64
73	Japan	0.0101	0.0192	77	0.2978	0.1945	41	0.923	0.959	12
74	Jordan	0.0107	0.0178	81	0.8473	0.0301	109	0.703	0.740	75
_	Kazakhstan	-0.0226	0.0040	130						
	Kenya	-0.0033	0.0102	111	0.2123	0.0323	108	0.523	0.553	102
	Korea, Rep.	0.0433	0.0417	5	0.3124		60	0.852	0.907	27
	Kuwait	-0.0143	0.0047	127	0.0237	0.2455	17	0.812	0.835	41
79	Kyrgyz Republic	-0.0399	-0.0196	144						
80	Lao PDR							0.445	0.500	108
81	Latvia	-0.0007	0.0151	93	0.3131	0.1767	53	0.763	0.794	53
82	Lebanon				0.6098	0.0692	99			
83	Lesotho	0.0206	0.0187	79	0.4556	0.0406	105	0.572	0.615	95
84	Lithuania	-0.0153	-0.0004	133	0.4751	0.0673	100	0.781	0.804	50
85	Luxembourg	0.0396	0.0275	32				0.912	0.965	8
86	Macao, China	-0.0030	0.0161	88						
87	Macedonia, FYR	-0.0076	0.0149	96						
88	Madagascar	-0.0045	0.0075	117	0.1597	0.0259	110	0.441	0.471	114
89	Malawi	0.0186	0.0283	28	0.2516	0.0025	116	0.403	0.446	120
90	Malaysia	0.0391	0.0351	12	-0.1203	0.2378	19	0.760	0.813	45
91	Maldives	0.0568	0.0405	6	0.0799	0.1350	72	0.707	0.770	62
92	Mali	0.0147	0.0199	69	0.1758	0.0395	107	0.346	0.387	125
93	Malta	0.0381	0.0306	21	0.2839	0.2189	29	0.850	0.902	29
94	Mauritania	0.0128	0.0044	128	-0.1631	0.0713	96	0.418	0.457	117
95	Mauritius	0.0399	0.0306	20	0.2164	0.2021	37	0.746	0.799	51
96	Mexico	0.0147	0.0256	44	0.1298	0.1929	44	0.774	0.813	44
97	Moldova				0.3184	0.1674	55	0.704	0.688	85
	Mongolia				0.2995	0.0741	95	0.636	0.673	86
99	Morocco	0.0061	0.0157	90	-0.6060	0.2565	13	0.569	0.604	96
	Mozambique	0.0441	0.0243	47	0.2851	-0.0325	120	0.313	0.371	126
	Myanmar	0.0473	0.0140	101						
	Namibia	0.0167	0.0156	91				0.629	0.670	88
	Nepal	0.0233	0.0233	52	0.0951	0.0819	94	0.453	0.498	109
	Netherlands	0.0231	0.0229	55	0.2679	0.2822	5	0.922	0.965	7
	New Zealand	0.0194	0.0183	80	0.0099	0.2823	4	0.902	0.943	19
	Nicaragua	0.0106	0.0189	78	0.3554	0.0582	102	0.615	0.659	91
	Niger	-0.0070	-0.0036	137	0.0893	0.1069	88	0.262	0.291	133
	Nigeria	-0.0048	0.0051	123	0.0182	0.1149	83	0.448	0.478	112
	Norway	0.0302	0.0238	50	0.2343	0.2478	15	0.925	0.972	3
	Pakistan	0.0099	0.0230	102	0.0515	0.1055	89	0.473	0.511	106
	Panama	0.0099	0.0140	108	0.2442	0.1813	51	0.473	0.811	46
	Papua New Guinea	0.0038	0.0110	105	0.0465	0.1302	74	0.770	0.553	103
	Paraguay	-0.0050	0.0133	120	0.0403	0.1302	31	0.735	0.763	63
	Peru	0.0295	0.0073	37	0.0427	0.2160	64	0.730	0.763	58
	Philippines	0.0295	0.0202	67	0.1249	0.1614	58	0.733	0.779	61
110	li riiiibbii i <u>c</u> o	0.0130	0.0202	07	U. 1243	U. 1014	JU	0.733	0.112	U

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Table 9: Predicted Values of 3 Performance Indicators with Ranking for the Decade 2001-10 (concl.)

	le 9: Predicted Values							de 2001-10	· · · · · · · · · · · · · · · · · · ·	
No.	Countries		rowth in G			Growth in		01 1	HDI	ln i
		Observed			Observed				Predicted	
440	Delend	1990s	2000s	2000s	1990s	2000s	2000s	1995	2005	2005
_	Poland	0.0506		8	0.3483		84	0.808	0.868	34
	Portugal	0.0262		48	0.0649		3	0.855	0.900	30
	Romania	0.0034	0.0277	30	0.4008		81	0.772	0.807	48
	Russian Federation	-0.0392	0.0101	112	0.1944	0.1683	54	0.779	0.791	55
	Rwanda	-0.0126	-0.0006	134	0.2695		119	0.335	0.360	128
	Samoa				-0.0552	0.2188	30	0.689	0.733	76
	Saudi Arabia	-0.0154	-0.0067	141	0.0400	0.440=	101	0.737	0.759	69
	Senegal	0.0126	0.0106	109	0.2400	-0.1127	124	0.400	0.439	121
	Seychelles	0.0085	0.0198	71						
	Sierra Leone	-0.0656	0.0036	131						
	Singapore				0.0824	0.2341	22	0.857	0.913	25
	Slovak Republic	0.0317	0.0268	34	0.2333	0.1529	65	0.817	0.866	35
	Slovenia	0.0363	0.0224	58	0.0888	0.1625	57	0.852	0.903	28
	South Africa	0.0030	0.0149	94	0.1003	0.1427	69	0.724	0.757	71
	Spain	0.0251	0.0286	26	0.0645	0.2915	2	0.895	0.939	20
	Sri Lanka	0.0387	0.0312	19	0.1068	0.1892	46	0.719	0.772	60
132	St. Kitts and Nevis	0.0467	0.0324	17						
	St. Lucia	0.0076	0.0090	115						
134	St. Vincent and Gren.	0.0275	0.0198	72						
	Sudan				1.5106	-0.2319	126	0.462	0.528	105
	Swaziland	0.0023	0.0102	110	-0.2400	0.2103	35	0.620	0.653	92
	Sweden	0.0195	0.0229	54	0.2996		8	0.925	0.966	6
	Switzerland	0.0043	0.0144	100	0.2734	0.2471	16	0.914	0.947	17
139	Syrian Arab Republic	0.0240	0.0170	84				0.665	0.710	82
140	Tanzania	0.0033	0.0074	118	0.3418	-0.0009	117	0.427	0.461	115
	Thailand	0.0267	0.0335	14	0.1360	0.1942	42	0.749	0.795	52
142	Togo	0.0012	0.0080	116	0.1261	0.1499	66	0.476	0.509	107
143	Trinidad and Tobago	0.0264	0.0173	83	0.1602		63	0.787	0.833	42
144	Tunisia	0.0305	0.0245	45	0.0795	0.1597	62	0.682	0.730	77
145	Turkey	0.0215	0.0300	22	0.0230	0.1604	59	0.717	0.762	65
146	Uganda	0.0387	0.0348	13	0.5299	-0.0818	123	0.404	0.458	116
147	Ukraine	-0.0864	0.0026	132	0.1983	0.1416	70	0.745	0.743	74
148	United Kingdom	0.0241	0.0235	51	0.2550	0.2584	12	0.916	0.960	11
149	United States	0.0243	0.0232	53	0.3080	0.2527	14	0.925	0.969	4
	Uruguay	0.0238	0.0261	38	0.4198	0.1298	75	0.815	0.860	36
	Vanuatu	-0.0143	-0.0063	140						
152	Venezuela, RB	-0.0106	0.0067	122	0.2315	0.1895	45	0.766	0.791	54
	Vietnam	0.0590	0.0525	1	0.1679	0.1014	91	0.649	0.714	81
	Yemen, Rep.	0.0287	0.0213	62				0.439	0.488	111
	Zambia	-0.0196	-0.0044	139	0.2167	0.1217	77	0.432	0.455	118
	Zimbabwe	0.0064	0.0259	41	0.3423		85	0.563	0.599	98
			· · · · · ·		 	1		1	1	1

Source: Appendix Table 2 & Regression Equations 1 to 3.

Table 9 presents the predicted values and the observed values of each of these three indicators for different countries for 2001-10 and 1981-90. The table predicts a more even growth of per capita real GDP during the first decade of the twenty-first century. It also predicts strong growth in the developed countries and considerable swings in the growth of the net inflows of FDI. Based on our prediction of the three performance indicators, 15 economies are likely to be among the top performers of the next decade and would obviously invite the attention of the business community. These countries, in the

alphabetical order, are: Argentina, Australia, Chile, Costa Rica, Cyprus, Czech Republic, Finland, Hungary, Ireland, Malaysia, Malta, Mexico, Norway, Portugal, and Spain. There may be genuine surprises in store as far as the other 35 top performers of the future are concerned. This is because four of our seven indicators of economic performance do not depend on the past performance. They are largely governed by the policies and changes in economic environment. Therefore, while we can identify some of the 50 top performers of the future, we may not be able to identify most of them.

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Appendix 1: Values of the 7 Indicators of Economic Performance by Countries During 1980s										
No.	Countries			xponential Trend	Rates d	uring 1980:				
		GDP pc	GCF	Imports of	FDI	Forex	Average	HDI		
				Goods & Serv.		Reserves	Infl. Rate	(1985)		
1	Afghanistan					-0.0244				
2	Albania	-0.0082	-0.0104					0.691		
3	Algeria	-0.0016	-0.0264	-0.0571	0.6439	-0.1638	9.7403	0.600		
4	Angola	0.0080			-0.1239					
5	Antigua and Barbuda	0.0657	0.0925	0.0680		0.1332	6.4708			
6	Argentina	-0.0190	-0.0439	-0.0418	0.0766	-0.0015	787.0115	0.805		
7	Armenia					0.0407	2.04.00			
8 9	Aruba	0.0040	0.0040	0.0570	0.4005	0.0407	3.6166	0.070		
10	Australia Austria	0.0216 0.0221	0.0346	0.0576 0.0506		0.1312 0.0395	8.1277 3.5296	0.873 0.867		
11	Azerbaijan	-0.0825	0.0331	0.0506	0.1265	0.0395	3.3290	0.007		
12	Bahamas, The	0.0244				0.0153	5.5348	0.817		
13	Bahrain	-0.0106	-0.0409	0.0094		-0.0683	1.9567	0.017		
14	Bangladesh	0.0145	0.0192	0.0646	-0.2326		7.3649	0.386		
15	Barbados	0.0241	-0.0044		0.1684	-0.0244	5.7497	3.300		
16	Belarus	0.0368	0.0448	5.52.10	3.1004	0.02.17	3 107			
17	Belgium	0.0225	0.0495	0.0482	0.2032	0.0755	3.4088	0.875		
18	Belize	0.0263	0.0988	0.0453		0.2356	4.1761	0.718		
19	Benin	-0.0099	-0.0608	-0.0606		-0.0290	3.0037	0.350		
20	Bhutan	0.0517	0.0318	-0.0286		0.1017	9.1954			
21	Bolivia	-0.0198	0.0257	0.0597	-0.1419	-0.0191	1380.1453	0.573		
22	Bosnia and Herz.									
23	Botswana	0.0637	0.1293	0.1100	0.0616	0.2925	10.5841	0.613		
24	Brazil	0.0127	0.0471	0.0202	-0.0803	0.0028	613.8457	0.692		
25	Brunei	-0.0263								
26	Bulgaria	0.0329	0.0194	-0.0495			7.5970	0.784		
27	Burkina Faso	0.0092	0.0800	0.0280	-0.0983		1.3416	0.282		
28	Burundi	0.0134	0.0469	0.0047	-0.1675	0.1004	7.6247	0.338		
29	Cambodia	0.0195								
30	Cameroon	-0.0065	-0.0553			-0.0880	8.2524	0.505		
31	Canada	0.0222		0.0785	0.3591	0.1681	5.9693	0.906		
32 33	Cape Verde Central African Rep.	0.0397	-0.0486	0.0318	0.0542	0.0662	7.2352	0.587		
34	Chad	-0.0107 0.0341		0.1087	0.0543	0.0715	3.2543 2.5345	0.371 0.298		
35	Chile	0.0341	0.0907	0.0357		0.2340	20.4466	0.296		
	China	0.0321	0.1072	0.0928		0.0447	11.8369	0.754		
37	Colombia	0.0169		0.0029		-0.0080	23.7236	0.704		
38	Comoros	-0.0013		-0.0084	0.0000	0.1391	20.7200	0.498		
39	Congo, Dem. Rep.	-0.0171		0.1060		0.0637	60.4205	0.517		
40	Congo, Rep.	-0.0104	-0.1885		-0.1341	-0.2793	1.3448			
41	Costa Rica	0.0070	0.0707	0.0928		0.1180	27.1867	0.770		
42	Cote d'Ivoire	-0.0292	-0.1037	-0.0217	0.0212	-0.0341	5.1972	0.412		
43	Croatia						453.8095			
44	Cyprus	0.0529	0.0386	0.0442	0.0207	0.0932	4.8960	0.821		
45	Czech Republic									
46	Denmark	0.0204	0.0552	0.0479	0.5453	0.1407	5.9457	0.883		
	Djibouti	-0.0767	0.0005	0.0554	0.546-	0.0402	4.0000			
	Dominica	0.000	0.0628	0.0554		0.1911	4.6900	0.00-		
49	Dominican Republic	0.0092	0.0564	0.1230	0.1580	-0.0892	24.2451	0.667		
50 51	Ecuador	-0.0057	-0.0317	-0.0068	0.0922	-0.0125	37.5211	0.694		
51 52	Egypt, Arab Rep. El Salvador	0.0258		-0.0226	0.0920 -0.2099	0.0903	16.9603	0.532		
52 53	Equatorial Guinea	-0.0004 -0.0087	0.0351	0.0186 0.0580	-0.2099	-0.0421	19.1870	0.606 0.533		
	Eritrea	-0.0001		0.0000		-U.U 4 ∠ I		0.000		
55	Estonia	0.0137	-0.0097							
	Ethiopia	-0.0191	0.0205	0.0146		-0.2155	4.6646	0.275		
57	Fiji	-0.0013	-0.1481	-0.0463	-0.0330		6.8230	0.697		
58	Finland	0.0295	0.0387	0.0519		0.1784	6.7690	0.873		
	France	0.0205	0.0406	0.0497		0.0242	6.3683	0.875		
60	French Polynesia	0.0265	1.3.30		2.20.0					
		12.0200	I .	I	1	l .	1	1		

Appendix 1: Values of the 7 Indicators of Economic Performance by Countries During 1980s (contd.)										
No.	Countries		Exponential Trend Rates during 1980s for							
		GDP pc	GCF	Imports of	FDI	Forex	Average	HDI		
		05. pc		Goods & Serv.		Reserves	Infl. Rate	(1985)		
61	Gabon	-0.0232	-0.0833	-0.0462	0.0580	-0.1922	6.0306	(1000)		
	Gambia, The	-0.0024	0.0072	-0.0506	0.0000	0.2624	18.0077			
	Georgia	-0.0090								
	Germany	0.0237	0.0284	0.0387	0.2234	0.0245	2.6323	0.868		
	Ghana	0.0017	0.0496	0.0343	0.0281	0.0273	46.9867	0.481		
	Greece	0.0064	0.0010	0.0504	0.0876	0.1378	19.0408	0.845		
	Grenada	0.0571	0.0512	0.0289	0.2772	0.0072	5.2858			
68	Guatemala	-0.0142	-0.0135	-0.0003	0.0324	0.0367	15.1069			
69	Guinea	0.0161	0.0320	0.0517	0.5113					
70	Guinea-Bissau	0.0107	0.1373	-0.0069	0.3466	-0.0524		0.283		
71	Guyana	-0.0241	-0.0698	-0.0581		0.0485		0.671		
72	Haiti	-0.0190	-0.0089	0.0293	0.0161	-0.0679	6.9648	0.445		
	Honduras	-0.0017	0.0537	0.0274	0.1559	-0.1800	7.9234	0.597		
	Hong Kong, China	0.0549	0.0423	0.1340			8.0906	0.823		
	Hungary	0.0158	-0.0059	0.0192		-0.0966	10.9270	0.805		
	Iceland	0.0200		0.0300		0.0757	34.8599	0.894		
	India	0.0354	0.0653	0.0599	0.2109	-0.0821	8.8793	0.473		
	Indonesia	0.0414	0.0716	0.0003	0.1914	0.0219	8.6074	0.582		
	Iran, Islamic Rep.	-0.0210	-0.0207	-0.0496			18.5211	0.607		
	Ireland	0.0315	-0.0063		-0.1125		7.8471	0.846		
	Israel	0.0174	0.0223	0.0405		0.0277	118.2897	0.836		
	Italy	0.0257	0.0287	0.0645	0.0660	0.0950	9.7217	0.856		
	Jamaica	0.0101	-0.0114			0.0365	15.0669	0.692		
	Japan	0.0360	0.0601	0.0654	0.2997	0.1382	2.0582	0.893		
	Jordan	-0.0171	-0.0208	0.0101	-0.2015	-0.1290	7.5299	0.658		
	Kazakhstan	0.0400	0.0407	0.0445	0.0475	0.0447	11.0111	0.510		
	Kenya	0.0100	0.0187	0.0445	0.0475	-0.0447	11.9111	0.512		
	Kiribati	-0.0171	0.4000	0.4400	0.0407	0.4074	0.0040	0.774		
	Korea, Rep.	0.0761		0.1126	0.3467	0.1871	6.3942	0.774		
	Kuwait	-0.0105	-0.0200	0.0206		-0.1283	3.8790	0.777		
91 92	Kyrgyz Republic Lao PDR	0.0440						0.374		
	Latvia	0.0098 0.0287	0.0206					0.802		
	Lebanon	-0.1790	0.0206		0.0788	-0.1151		0.602		
	Lesotho	0.0266	0.0601	0.0333		-0.0013	13.3925	0.547		
	Liberia	0.0266	0.0601	0.0333	0.1887	-0.0526	13.3923	0.547		
	Libya				0.0197	-0.0326				
	Lithuania	0.0629				0.0720				
	Luxembourg	0.0481	0.0733	0.0622			4.4578	0.860		
	Macao, China	0.0372	0.0733	0.0668		0.3159	9.6485	0.000		
	Macedonia, FYR	0.0072	3.0722	5.5555	-	2.0.00	2.0.00			
	Madagascar	-0.0091	0.0818	-0.0393	0.2355	0.2287	17.9211	0.427		
	Malawi	-0.0040	-0.0155			0.1470	16.3066	0.354		
	Malaysia	0.0229	0.0235	0.0679	0.0102	0.0738	3.2481	0.693		
	Maldives	0.0706	1		0.0063	0.2372	1	0.629		
	Mali	-0.0132	0.0453	0.0668	0.1420	0.1907		0.292		
	Malta	0.0397		0.0816	0.0580	0.0044	2.2998	0.793		
	Mauritania	-0.0056	0.0503	-0.0151	-0.1156		7.2876	0.379		
	Mauritius	0.0535	0.0942	0.1310		0.3921	8.3024	0.686		
	Mexico	-0.0116	-0.0264		0.1195	0.1161	69.0783	0.752		
	Micronesia, Fed. Sts.	0.0094	1							
	Moldova	0.0171						0.741		
	Mongolia	0.0299	1		1		9.0032	0.650		
	Morocco	0.0227	0.0150	0.0353	0.0883	0.1940	7.3253	0.508		
	Mozambique	-0.0084	0.0458	-0.0323	0.2983	0.2483		0.290		
	Myanmar	0.0089		-0.1478		0.0073	11.7881			
-		-0.0210	0.0003	0.0057	†	1	12.9369	1		
117	Namibia	-0.02 TO	0.0003	0.0001						

	Appendix 1: Values of the 7 Indicators of Economic Performance by Countries During 1980s (contd.)									
No.	Countries				Trend Rates during 1980s for					
		GDP pc	GCF	Imports of	FDI	Forex	Average	HDI		
				Goods & Serv.		Reserves	Infl. Rate	(1985)		
	Netherlands	0.0203	0.0412	0.0478		0.0397	2.4606	0.888		
	Netherlands Antilles	0.0470			-0.3380	0.0207	3.8940			
	New Caledonia	0.0470	0.04.40	0.0407	0.0070	0.4000	40.0700	0.000		
	New Zealand Nicaragua	0.0067 -0.0515	0.0148	0.0427	0.2378	0.1869	10.8799 2438.8706	0.866 0.584		
	Niger	-0.0299	-0.0745			0.1555	2.4573	0.364		
	Nigeria	-0.0299	-0.0400		0.0828	-0.0482	22.8090	0.403		
	Norway	0.0024	0.0056	0.0268		0.0727	7.6645	0.403		
	Oman	0.0244	0.0030	0.0200	-0.0202		-1.4051	0.000		
	Pakistan	0.0339	0.0521	0.0318		-0.1497	6.9769	0.404		
	Panama	-0.0215	-0.0989		0.5903	-0.0159	1.8440	0.745		
	Papua New Guinea	-0.0055	-0.0098		0.0682	-0.0427	5.8293	0.462		
	Paraguay	-0.0049		0.0644	0.0185	-0.0955	22.0446	0.705		
132	Peru	-0.0245		-0.0363	0.6091	-0.1004	1223.5745	0.692		
133	Philippines	-0.0139	-0.0180	0.0447	0.3572	-0.0227	13.6717	0.688		
134	Poland	-0.0736			0.0600	0.2022	107.6725			
	Portugal	0.0337	0.0414	0.0800	0.3240	0.2584	17.3141	0.787		
	Puerto Rico	0.0347								
	Qatar			-0.0577		0.0289	3.5179			
	Romania		0.0712	-0.0052		0.0479	22.2534	0.794		
	Russian Federation	0.0156						0.827		
	Rwanda	-0.0104	0.0280	0.0145	-0.0334		4.3928	0.396		
	Samoa	0.0126	0.0070	0.0400		0.3342	11.6723	0.650		
	Sao Tome and Principe	-0.0101	-0.0079			0.4007	0.4220	0.070		
	Saudi Arabia Saudi Arabia	-0.0470	-0.0465 -0.0465			-0.1237	-0.1339	0.670 0.670		
	Senegal	-0.0470 0.0015	0.0509	0.0152		-0.1237 0.0145	-0.1339 6.0680	0.870		
	Seychelles	0.0410	0.0309	0.1480	0.1144	-0.0145	3.0784	0.336		
	Sierra Leone	-0.0089	0.0300	-0.0136			72.7535			
	Singapore	0.0471	0.0237	0.0100		0.1002	2.2843	0.782		
	Slovak Republic	0.0154	0.0028	0.0360	0.1101	0.1002	2.20 10	0.813		
	Slovenia							-		
	Solomon Islands	0.0283			0.4004	-0.0695	12.1204			
151	Somalia					-0.0122				
152	South Africa	-0.0158	-0.0562	-0.0030		-0.0030	14.6664	0.683		
153	Spain	0.0298	0.0674	0.0949	0.2457	0.1844	9.3628	0.855		
	Sri Lanka		0.0076		-0.0397		12.3626	0.676		
	St. Kitts and Nevis		0.1377	0.0626		0.1600	3.4399			
	St. Lucia		0.0742	0.0972		0.1885	4.2976			
	St. Vincent and Gren.	0.0523	0.0688	0.0490	0.3102	0.1445	4.5265	0.05=		
	Sudan	-0.0245	0.0000	0.0004	1	-0.0727	40.2020	0.395		
	Suriname	-0.0287	-0.0926		0.2540	-0.3177	13.6941	0.500		
	Swaziland	0.0385		0.0469		0.0693	14.5265 7.6141	0.569		
	Sweden Switzerland	0.0233 0.0162	0.0589	0.0512 0.0535		0.1287 0.0456	3.4088	0.883		
	Syrian Arab Republic	-0.0208	-0.0663		0.2032	-0.0374	22.6213	0.892		
	Tajikistan	-0.0208	-0.0663	0.0023	0.1000	-0.0374	ZZ.UZ 13	0.614		
	Tanzania	0.0214	0.0700			0.2494	30.6311	0.7 +0		
	Thailand	0.0214	0.0979	0.1222	0.2462	0.2494	4.4398	0.676		
	Togo	-0.0103	0.0426	0.0362	-0.0923		3.9064	0.440		
	Tonga	0.0193	3.0 720	0.0002	-0.0693		10.2489	0.170		
	Trinidad and Tobago	-0.0256	-0.1122	0.0217	0.4437	-0.3699	11.0800	0.774		
	Tunisia Tunisia	0.0230	-0.0247		-0.1763		7.4325	0.613		
	Turkey	0.0300	0.0617	0.0143		0.0277	46.2873	0.654		
	Turkmenistan	-0.0088	3.0017	5.000 T	5.2700	J. 1 TO 1	10.2010	J.JJ-7		
	Uganda	0.0037	0.0770	0.0430		-0.1121	103.4137	0.386		
	Ukraine	-0.0009	5.0770	0.0400		0.1121	100.7101	0.000		
	United Arab Emirates	-0.0686				0.0519		1		
173	Sinted Alab Lilliates	0.0000	L	1	<u> </u>	0.0013	<u> </u>	<u> </u>		

Appendix 1: Values of the 7 Indicators of Economic Performance by Countries During 1980s(concl.)											
No.	Countries	Exponential Trend Rates during 1980s for									
		GDP pc	GCF	Imports of	FDI	Forex	Average	HDI			
				Goods & Serv.		Reserves	Infl. Rate	(1985)			
176	United Kingdom	0.0318	0.0678	0.0681	0.3807	0.1227	6.5854	0.858			
177	United States	0.0275	0.0399	0.0790	0.1786	0.0797	4.7401	0.898			
178	Uruguay	0.0054	-0.0495	0.0131	0.1175	0.0639	62.4875	0.781			
179	Uzbekistan	0.0176									
180	Vanuatu	-0.0005	0.0593	0.0057	0.0942	0.2140	8.3827				
181	Venezuela, RB	-0.0110	-0.0538	-0.0200	0.0360	-0.0826	24.9270	0.738			
182	Vietnam	0.0219						0.583			
183	West Bank and Gaza										
184	Yemen, Rep.				-0.5380						
185	Yugoslavia, Fed. Rep.										
186	Zambia	-0.0202	-0.0301	-0.0031	0.2650	0.0799	76.8615	0.480			
187	Zimbabwe	-0.0036	0.0354	0.0307		-0.0125	14.0014	0.621			

Basic Source: (1) World Development Indicators 2002 (on CD ROM)
(2) International Financial Statistics 2003 (online: http://ifs.apdi.net)
(3) Human Development Report 2002 (online: http://hdr.undp.org)

Appendix 2: Values of the 7 Indicators of Economic Performance by Countries During 1990s										
No.	Countries	Exponential Trend Rates during 1990s for								
		GDP pc	GCF	Imports of	FDI	Forex	Average	HDI		
				Goods & Serv.		Reserves	Infl. Rate	(1995)		
1	Afghanistan									
2	Albania	0.0438	0.1970	0.1057	0.1021	0.1329	45.3730	0.702		
3	Algeria	0.0028	0.0044	0.0023		0.2207	18.7801	0.663		
4	Angola	-0.0080	0.000=	0.0000	0.1922	0.2403	1044.5208			
5	Antigua and Barbuda	0.0286	0.0207	0.0300	0.0040	0.0704	2.5180	0.000		
6	Argentina	0.0224	0.0502	0.1063	0.2042	0.1490	21.4237	0.830		
7	Armenia Aruba	0.0018	0.0656	-0.1179	0.5094	0.6214 0.0579	739.9026 3.8736	0.715		
8 9	Australia	0.0300	0.0701	0.0842	0.0675	0.0579	2.2212	0.927		
	Austria	0.0300	0.0701	0.0584	0.0073	0.0513	2.3185	0.927		
11	Azerbaijan	-0.0583	0.0544	0.0559	0.2392	0.9996	459.2728	0.303		
12	Bahamas, The	0.0055	0.0044	0.0000	0.6045	0.1086	2.5162	0.816		
	Bahrain	0.0090	-0.0232	-0.0049	0.0040	0.0033	1.0329	0.010		
14	Bangladesh	0.0304	0.0933	0.1034	0.6091	-0.0122	5.2992	0.445		
15	Barbados	0.0233	0.0741	0.0450	0.0791	0.1650	2.8245			
	Belarus	-0.0060	-0.0825	-0.0773	0.4670	0.1487	637.6623	0.776		
17	Belgium	0.0187	0.0308	0.0452	0.2734	-0.0069	1.9597	0.927		
18	Belize	0.0139	0.0304	0.0270	0.0739	0.0810	1.7580	0.772		
19	Benin	0.0191	0.0596	0.0260	0.2342	0.0560	9.0075	0.388		
20	Bhutan	0.0359	0.0815	-0.0059		0.1870	9.8459			
21	Bolivia	0.0155	0.0783	0.0513	0.3402	0.2123	9.1674	0.630		
22	Bosnia and Herzegovina	0.1840	0.3047	0.1960						
	Botswana	0.0234	-0.0046	0.0147		0.0728	10.5134	0.620		
	Brazil	0.0159	0.0344	0.1148	0.4325	0.1169	549.2097	0.737		
	Brunei	-0.0064								
	Bulgaria	-0.0104	-0.0190	0.0527	0.3910	0.2224	187.2285	0.778		
27	Burkina Faso	0.0230	0.0749	0.0182	-0.0250	-0.0012	4.5795	0.300		
	Burundi	-0.0503	-0.0069	0.0098	0.4040	-0.1672	15.2368	0.316		
29	Cambodia	0.0177	0.1256	0.0980	0.1619	0.3563	5.3861	0.531		
30	Cameroon	-0.0003	0.0194	0.0633	0.2289	-0.4232 0.1043	5.5965	0.499		
31 32	Canada Cape Verde	0.0223 0.0348	0.0566	0.0778 0.0844	0.2923	-0.1387	1.9968 6.1517	0.932 0.678		
33	Central African Republic	-0.0003	-0.0228	0.0644	0.3292	0.1450	4.3616	0.878		
34	Chad	-0.0089		-0.0368	0.1200	0.1430	7.0622	0.335		
35	Chile	0.0477	0.0803	0.0999	0.2398	0.0844	9.5399	0.811		
	China	0.0856	0.1067	0.0530	0.1911	0.2411	7.4735	0.681		
37	Colombia	0.0089	0.0066	0.0726		0.0315	20.4993	0.750		
	Comoros	-0.0241	-0.0595	-0.0097	0.3654	0.1156	20.1000	0.506		
	Congo, Dem. Rep.	-0.0763	0.0075	-0.1008	-0.0836	-0.0833	4774.2697	0.511		
40	Congo, Rep.	-0.0361	-0.0038	0.0546	0.1700	0.7124	8.2174			
41	Costa Rica	0.0298	0.0468	0.0865	0.1261	0.0478	16.0461	0.805		
42	Cote d'Ivoire	0.0078	0.1113	0.0490	0.1263	0.6597	6.2896	0.416		
	Croatia	0.0376	0.0805	0.0473	0.3964	0.3176	238.2516	0.789		
44	Cyprus	0.0316	-0.0321	0.0019	0.0333	0.0501	3.8301	0.866		
	Czech Republic	0.0164	0.0638	0.1331	0.2409	0.1479	7.5935	0.843		
46	Denmark	0.0221	0.0615	0.0579	0.2942	0.1013	2.1377	0.907		
47	Djibouti	-0.0360	0.0400	0.0400	0.2021	-0.0287	0.4070			
	Dominica Dominica	0.0444	0.0162	0.0166	-0.0540	0.0701	2.1072	0.000		
	Dominican Republic	0.0444	0.0639	0.0677	0.2316	0.0384	11.0107	0.698		
	Ecuador	-0.0058	-0.0204	-0.0063	0.1587	0.0426	43.7924	0.719		
	Egypt, Arab Rep. El Salvador	0.0277 0.0237	0.0821 0.0551	0.0329 0.1050	0.1400 0.1864	0.0833 0.2166	9.1127 8.4358	0.605 0.682		
	Equatorial Guinea	0.0237	0.0551	0.4202	0.1864	0.2166	0.4300	0.682		
	Eritrea	0.1948	0.00+1	0.4202	-0.0167	0.0121		0.302		
	Estonia	0.0111	0.0125	0.0946	0.1729	0.1817	26.9257	0.700		
	Ethiopia	0.0200	0.0123	0.0688	0.1729	0.1226	7.3124	0.308		
57	Fiji	0.0063	-0.0174	0.0084	0.0113	0.0584	3.4559	0.743		
	Finland	0.0003	0.0414	0.0737	0.3746	0.0414	1.8628	0.908		
	France	0.0146	0.0191	0.0563	0.1064	0.0511	1.7242	0.914		
	French Polynesia	0.0017	†	-	1	-				
<u> </u>		<u> </u>	•	1			1			

		e 7 Indicators of Economic Performance by Countries During 1990s(contd.) Exponential Trend Rates during 1990s for							
No.	Countries					I=	14	lubi	
		GDP pc	GCF	Imports of	FDI	Forex	Average	HDI	
0.1		0.000	0.000	Goods & Serv.		Reserves	Infl. Rate	(1995)	
61	Gabon	0.0008	0.0388	0.0093	0.0710	0.2412	4.2472	0.075	
62	Gambia, The	-0.0009	0.0327	0.0060	0.0718	0.0352	4.2936	0.375	
63	Georgia	-0.0966	0.4818	0.1059	0.5642	-0.1046	39.3309	0.007	
64	Germany	0.0118	0.0132	0.0519	0.4441	-0.0153	2.2454	0.907	
65	Ghana	0.0187	0.0226	0.1100	0.0931	0.1232	26.4052	0.525	
66	Greece	0.0192	0.0373	0.0638	-0.0182	0.1350	9.3896	0.868	
67	Grenada	0.0326	0.0533	0.0652	0.1113	0.1534	2.1959		
68	Guatemala	0.0143	0.0488	0.0823	0.1235	0.0853	11.2399	0.609	
69	Guinea	0.0187	0.0292	0.0176	0.2311	0.0975	05.0105	0.004	
70	Guinea-Bissau	-0.0147	-0.1347	0.0016	0.4007	0.1538	35.0105	0.331	
71	Guyana	0.0458	0.0188	0.0543	-0.1037	0.0791	6.8557	0.703	
72	Haiti	-0.0234	-0.0007	0.1046	0.2800	0.2799	20.5579	0.457	
73	Honduras	0.0025	0.0611	0.0369	0.2264	0.3079	15.8897	0.628	
74	Hong Kong, China	0.0159	0.0454	0.0709		0.1552	5.3448	0.877	
75 7 0	Hungary	0.0284	0.1133	0.1167	0.0234	0.1141	20.2521	0.809	
76	Iceland	0.0224	0.0560	0.0656	0.0380	0.0038	3.2203	0.918	
77	India	0.0431	0.0830	0.0959	0.3470	0.2310	9.0508	0.545	
78	Indonesia	0.0184	-0.0215	0.0413	0.2400	0.1342	14.1132	0.664	
79	Iran, Islamic Rep.	0.0154	0.0258	-0.1298	0.3670		24.3942	0.688	
80	Ireland	0.0684	0.1079	0.1358	0.3568	0.0351	2.5392	0.894	
81	Israel	0.0219	0.0307	0.0795	0.2624	0.2007	9.6304	0.877	
82	Italy	0.0146	0.0181	0.0497	0.1239	-0.0188	3.7292	0.897	
83	Jamaica	-0.0082	0.0071	0.0113	0.1791	0.1703	26.4231	0.736	
84	Japan	0.0101	-0.0007	0.0453	0.2978	0.1852	0.8345	0.923	
85	Jordan	0.0107	-0.0111	0.0226	0.8473	0.1365	3.5242	0.703	
86	Kazakhstan	-0.0226	-0.1486	-0.1231	0.3525	0.1595	305.4336		
87	Kenya	-0.0033	0.0490	0.0736	0.2123	0.2575	16.0112	0.523	
88	Kiribati	0.0054							
89	Korea, Rep.	0.0433	0.0041	0.0904	0.3124	0.1990	5.0970	0.852	
90	Kuwait	-0.0143	-0.0381	-0.0041	0.0237	0.0398	2.3286	0.812	
91	Kyrgyz Republic	-0.0399	-0.0356	-0.0886	0.2298	0.2235	24.0860		
92	Lao PDR	0.0393			0.2494		34.0969	0.445	
93	Latvia	-0.0007	0.0426	0.0902	0.3131	0.0391	49.8510	0.763	
94	Lebanon	0.0269	0.0441	-0.0092	0.6098	0.1755		0.730	
95	Lesotho	0.0206	0.0014	0.0011	0.4930	0.1581	11.5672	0.572	
96	Liberia				-0.1111	0.6987			
97	Libya								
98	Lithuania	-0.0153	0.0946	0.0752	0.4751	0.3169	70.3021	0.781	
99	Luxembourg	0.0396	0.0631	0.0523		-0.0207	2.1842	0.912	
100	Macao, China	-0.0030	-0.0692	0.0094		0.1461	3.3975		
101	Macedonia, FYR	-0.0076	0.0220	0.0997	0.3526	0.1980	24.3342		
	Madagascar	-0.0045	0.0541	0.0632	0.1597	0.2070	17.3545	0.441	
	Malawi	0.0186	-0.0939	-0.0099	0.2516	0.1846	32.8005	0.403	
	Malaysia	0.0391	0.0321	0.0831	-0.1203	0.0793	3.5538	0.760	
105	Maldives	0.0568	0.0704	0.0895	0.0799	0.2296	7.4807	0.707	
	Mali	0.0147	-0.0045	0.0287	0.1758	0.0403	4.0512	0.346	
	Malta	0.0381	-0.0032	0.0200	0.2839	0.0275	2.8937	0.850	
	Mauritania	0.0128	0.1076	0.0230	-0.1631	0.2124	6.0479	0.418	
	Mauritius	0.0399	0.0392	0.0522	0.2164	-0.0089	6.6819	0.746	
	Mexico	0.0147	0.0444	0.1160	0.1298	0.1014	18.6899	0.774	
	Micronesia, Fed. Sts.	-0.0156	1			0.0738		1	
	Moldova	-0.0847	-0.1689		0.3184	-0.0059	20.8069	0.704	
	Mongolia	0.0081	1555		0.2995	0.2154	73.6160	0.636	
	Morocco	0.0061	0.0261	0.0596	-0.6060	0.0539	3.9532	0.569	
	Mozambique	0.0441	0.1139	0.0541	0.2851	0.1674	32.6771	0.313	
	Myanmar	0.0473	0.0598	-0.0859	0.0746	-0.0178	25.1062	0.010	
	Namibia	0.0473	0.0336	0.0585	3.07 40	0.3075	10.0611	0.629	
	Nepal	0.0233	0.0593	0.0799	0.0951	0.0806	8.9030	0.453	
1 10	· · · · · · · · · · · · · · · · · · ·	0.0200	0.0030	0.0700	0.0001	0.0000	0.0000	0.700	

	Appendix 2:Values of the 7 Indica	tors of Ed						1.)
No.	Countries			ponential Trend			for	
		GDP pc	GCF	Imports of	FDI	Forex	Average	HDI
440	Nath arter de	0.0231	0.0004	Goods & Serv. 0.0531	0.0070	Reserves		
	Netherlands Netherlands Antilles	0.0231	0.0324	0.0531	0.2679	-0.0757	2.4517 2.6202	0.922
	New Caledonia	-0.0099			-0.3079	0.0294	2.0202	
	New Zealand		0.0774	0.0749	0.0099	0.0405	1.7520	0.902
	Nicaragua			0.1053		0.2097		0.615
	Niger	-0.0070		-0.0086	0.0893	-0.2264	4.6485	0.262
	Nigeria	-0.0048	0.0586	0.0482		0.0127	30.5977	0.448
	Norway	0.0302	0.0569	0.0555	0.2343	0.0547	2.3404	0.925
127	Oman	0.0024		0.0459	-0.1756	0.0536	0.3504	
	Pakistan		0.0134	0.0189		0.0543	9.2472	0.473
	Panama			0.0401		0.0707	1.1682	0.770
	Papua New Guinea			0.0260		0.0350	9.6076	0.519
	Paraguay		-0.0015			0.0225	13.5653	0.735
	Peru			0.0789		0.1586	60.1079	0.730
	Philippines			0.0744		0.1536	8.6004	0.733
	Poland			0.1450		0.2749	28.4287	0.808
	Portugal Puerto Rico		0.0549	0.0727	0.0649	-0.0663	4.9396	0.855
	Qatar	0.0190		0.0666		0.0691	2.4808	
	Romania	0.0034	-0.0388			0.0691	121.0157	0.772
	Russian Federation	-0.0392	-0.0366			0.1640		0.779
	Rwanda		0.0438	0.0247		0.1493	8.5853	0.779
	Samoa	0.0235	0.0430	0.0868	-0.0552		3.3791	0.689
	Sao Tome and Principe		-0.0026			0.2014	0.07 01	0.003
	Saudi Arabia	-0.0154		-0.0489			0.9774	0.737
	Senegal					0.5500		0.400
	Seychelles		0.0719	0.1239		0.0108	2.2870	
146	Sierra Leone	-0.0656		-0.0681	-0.4605		34.7455	
147	Singapore	0.0445	0.0714		0.0824	0.0981	1.7296	0.857
	Slovak Republic	0.0317	0.0999	0.1113		0.2231	9.2172	0.817
	Slovenia		0.1146	0.0734		0.3141	13.6422	0.852
	Solomon Islands	-0.0153			-0.0099	0.1560	10.9252	
	Somalia				-0.3466			
	South Africa			0.0703			8.9899	0.724
	Spain			0.0894		-0.0265	3.8929	0.895
	Sri Lanka							0.719
	St. Kitts and Nevis St. Lucia		0.0460 0.0246	0.0457	0.1800 0.0519	0.1038	3.5251 3.2908	
	St. Vincent and the Grenadines		0.0240	0.0301		0.0300	2.4217	
	Sudan	0.0273	0.0311	0.0301			82.1034	0.462
	Suriname	0.0307		0.1085		0.3345	104.6147	0.402
	Swaziland		0.0209	0.0268	-0.2400		9.4532	0.620
	Sweden			0.0678		-0.0467	2.3303	0.925
	Switzerland			0.0467		0.0221	1.9597	0.914
163	Syrian Arab Republic	0.0240	0.0315	0.0037	-0.0680		6.3505	0.665
164	Tajikistan	-0.1109	-0.1592		0.1233			0.669
	Tanzania	0.0033	-0.0170			0.1751	20.0971	0.427
	Thailand	0.0267	-0.0627			0.0636	4.5367	0.749
	Togo		0.0384	0.0307	0.1261	-0.1225	7.2101	0.476
	Tonga	0.0212			0.1246	-0.0230	4.1118	L
	Trinidad and Tobago			0.0952		0.2096	5.4693	0.787
	Tunisia		0.0364	0.0401		0.1217	4.5092	0.682
	Turkey		0.0426	0.1124		0.1928	76.7014	0.717
	Turkmenistan	-0.0755	0.0050	0.0064	0.0922	0.0000	40.0000	0.404
	Uganda		0.0958	0.1403		0.2992	12.8222	0.404
	Ukraine	-0.0864	-0.1913	-0.0050		0.1904	876.0535	0.745
1/5	United Arab Emirates	-0.0104]	0.0990		

	Appendix 2: Values of the 7 Indicators of Economic Performance by Countries During 1990s(concl.)											
No.	Countries	Exponential Trend Rates during 1990s for										
		GDP pc	GCF	Imports of	FDI	Forex	Average	HDI				
				Goods & Serv.		Reserves	Infl. Rate	(1995)				
176	United Kingdom	0.0241	0.0501	0.0705	0.2550	-0.0008	3.0520	0.916				
177	United States	0.0243	0.0818	0.0974	0.3080	-0.0009	2.8014	0.925				
178	Uruguay	0.0238	0.0450	0.0820	0.4198	0.1914	38.0910	0.815				
179	Uzbekistan	-0.0175		-0.0007	0.1600			0.714				
180	Vanuatu	-0.0143	0.0812	0.0237	-0.0309	-0.0003	3.0683					
181	Venezuela, RB	-0.0106	0.0147	0.0416	0.2315	0.0468	33.4913	0.766				
182	Vietnam	0.0590	0.1737	0.2688	0.1679	0.2170	3.7115	0.649				
183	West Bank and Gaza	-0.0147	0.0370	0.0366								
184	Yemen, Rep.	0.0287	0.0999	0.0783		0.2385	30.6111	0.439				
185	Yugoslavia, Fed. Rep.	0.0039										
186	Zambia	-0.0196	0.0742	0.0402	0.2167	-0.1365	87.0297	0.432				
187	Zimbabwe	0.0064	-0.0476	0.0628	0.3423	-0.0187	29.8177	0.563				

Basic Source: (1) World Development Indicators 2002 (on CD ROM)

(2) International Financial Statistics 2003 (online: http://ifs.apdi.net)

(3) Human Development Report 2002 (online: http://hdr.undp.org)