

Globalisation and the Asia-Pacific Revival

by

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Abstract: This paper reviews evidence on the evolution of international economic integration of Asia-Pacific countries, and discusses the extent to which this explains their recent growth success. It starts with a review of some theoretical arguments in the growth and globalisation debate, which is followed by a presentation of facts about Asia-Pacific international economic integration and growth relative to other regions of the world. Then we discuss the causes of the growth acceleration in the Asia-Pacific region and reflect on the relationships between policy reforms, openness, and per capita income growth. Finally, we draw some tentative conclusions about future growth in the region.

JEL Classification: O1, O5.

Keywords: Asia-Pacific, growth, globalisation.

1. Introduction¹

All men are created equal, or at least there are no significant differences across countries in the innate abilities of their populations. Thus, they are potentially equally productive. This suggests that a reasonable hypothesis about the distribution of world production across countries would be that it is distributed proportionately to population. Since the bulk of world population is found in Asia, one would expect the bulk of production to be located there. Historically that was also the case. Around year 1000 Asia (excluding Japan) produced more than two-thirds of world GDP, while the contribution of Western Europe was about 9 % (see Table 1). As late as 1820 Asia's share was 56 %.

Table 1: Regional percentage shares of world GDP, 1000-1998

	1000	1500	1820	1870	1913	1950	1973	1998
Western Europe	8.7	17.9	23.6	33.6	33.5	26.3	25.7	20.6
Western offshoots	0.7	0.5	1.9	10.2	21.7	30.6	25.3	25.1
Japan	2.7	3.3	3.0	2.3	2.6	3.0	7.7	7.7
Asia (excl. Japan)	67.6	62.1	56.2	36.0	21.9	15.5	16.4	29.5
Latin America	3.9	2.9	2.0	2.5	4.5	7.9	8.7	8.7
Eastern Europe & former USSR	4.6	5.9	8.8	11.7	13.1	13.1	12.9	5.3
Africa	11.8	7.4	4.5	3.7	2.7	3.6	3.3	3.1
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Western offshoots are USA, Canada, Australia, and New Zealand.

Source: Maddison, 2001, p. 127.

Until the 18th century Asia was thus the most important part of the world economy², but then it was left behind as the industrial revolution took off in Europe. While the UK increased industrial production by a factor of seven from 1750 to 1820, China and India only expanded it by 20 %. The 19th century and the first half of the 20th century was a period of increasing dominance by Western Europe and the USA, with a dramatically widening gap between them and Asian countries. In 1950 China's per capita income was 4.6 % of the US level in PPP-adjusted prices, while Japan's was 20.1 %.

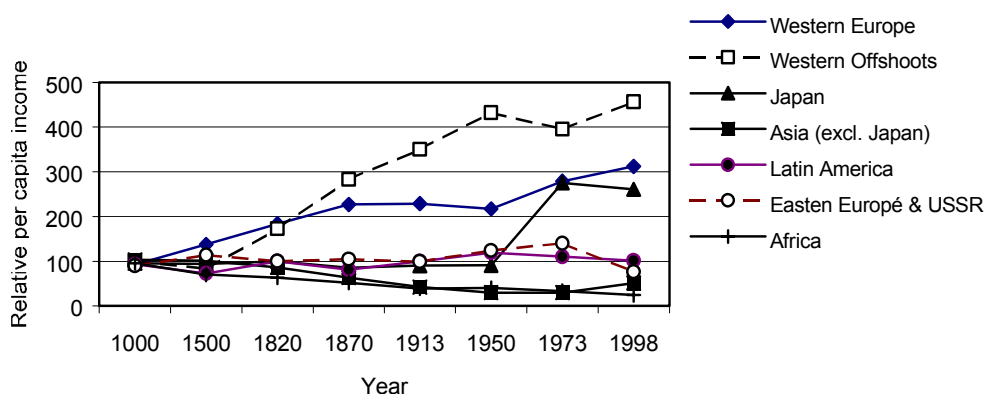
During the second half of the 20th century there was again a dramatic, but this time positive, reversal of fortune for Asia, and in particular for East and South-East Asia. By 1998 the real income levels of China and Japan had increased to 11.4 % and 74.7

¹ I would like to thank Rick Wicks, Christer Ljungvall, Dick Durevall, Justin Yifu Lin, and Naoyuki Yoshino and other participants in seminars at Göteborg University and Keio University for comments and suggestions.

² In 1750 more than 50 % of world industrial output was produced by China and India.

% of the US level respectively (Maddison 2001, p. 185, 215), and the “tiger economies” had seen vast economic improvements. Figure 1 shows how per capita incomes in different regions developed during the last millennium.

**Figure 1: Relative per capita incomes by region 1000-1998
(World average = 100)**



This recent period has been characterised by increasing interdependence of national economies and by the international scope of product markets, distribution systems, capital, labour, and technology. This trend towards globalisation has been manifested in the sustained growth of world trade as well as flows of investment and technology, and in the convergence of national economic and social systems. We will discuss the importance of this process of globalisation for the revival of the Asia-Pacific region during the last half-century.

2. Notes on theory

The history of the Asia-Pacific region is thus one of economic decline followed by revival. There is a range of explanations of the existing international differences in per capita income levels. A straightforward one is that it is due to geography, but then it is hard to explain why income levels were similar earlier on. A more sophisticated version of this explanation is that there was a temperate drift, which means that although climate initially did not lead to income differences, geography became important when it began to interact with certain technologies. Acemoglu, Johnson,

and Robinson (2002) note, however, that the real reversal of fortunes came in the 19th century and was an industry-related phenomenon, and there is no reason to assume that climate is more important for industry than for agriculture. Their explanation of the divergence, backed by a range of econometric tests, is instead that the countries that are rich today are those that had good institutions in place at the time of the industrial revolution, particularly with efficient protection of property rights. Those countries thus became rich because they had an institutional structure that made it possible for them to take advantage of the newly emerging industrialization opportunities.

Acemoglu, Johnson, and Robinson argue that property rights did not matter so much when the major investment opportunities were in agriculture. But when the new technologies required broad-based economic participation for successful implementation, security of property rights and of institutional structures more generally, became crucially important. They argue that early industrialization was such an instance, where investments from a large number of people who were not part of the old ruling elite, and thus the emergence of new entrepreneurs were required.

So why were the conditions for a successful take-off not present in Asia, while they existed or were created in some other regions outside Europe? This is a huge question. The answer by Acemoglu, Johnson, and Robinson is that it was due to the differential impact of European colonisation. They show that the colonised countries that had been relatively rich, urbanised and densely populated around 1500, are now relatively poor, whereas those that were relatively poor and sparsely populated, such as North America and Australia, are now rich. They argue that these reversed fortunes were due to the fact that Europeans were more likely to introduce institutions encouraging investment in regions that were previously poor, while they were prone to pursue extractive strategies in the densely populated and better-off regions. Large populations and relative prosperity made extractive institutions more profitable for the colonizers. They could choose to force the population to work in mines or plantations, or use other systems to tax the population and extract resources.³ Their hypothesis is thus not

³ Entering China, which was not colonised, into the regressions along with countries that were colonized does not change the results.

that some former colonies are poor because of plunder or dependency, but because the colonizers set up institutional systems that were stacked against industrialization.

However, all countries in Asia were not colonised. The spread of European institutional structures was in some cases instead hindered by the isolationism imposed by strong domestic governments. From the end of the 15th century China changed to an inward-oriented policy regime,⁴ and from the 17th century Japan set up systems to isolate the country from the rest of the world. Both China and Japan thus had governments that actively tried to shut out foreign influence. This meant that new institutions were slow to penetrate into these major countries. The growth acceleration in Japan came after the Meiji restoration in 1867, which led to growth supporting institutional changes.

One type of interpretation of the economic miracle of East Asia thus emphasizes the importance of institutions and incentive structures a la North (1990). So if the institutional structure is the key, one would hypothesize that the recent positive reversal in the Asia-Pacific region (beyond Japan) is due to a transformation of the institutional structure in the direction of the one existing in the successful industrializers.

Economic analyses of the miracle have generally been done within the framework of mainstream neoclassical economics or that plus institutional economics. A standard prediction from neoclassical growth theory is that there will be income convergence or at least conditional convergence.⁵ Lucas (2000) believes that per capita income convergence will be one of the major events of the 21st century. He predicts that best

⁴ “By 1500 anyone who built a ship of more than two masts was liable to the death penalty, and in 1525 coastal authorities were enjoined to destroy all ocean-going ships and arrest their owners. Finally in 1551 it became a crime to go to sea on a multimasted ship, even for trade” (Landes, 1998). Similar restrictions were put in place in Japan from the beginning of the Edo period in the 17th century.

⁵ Sala-i-Martin (2002) summarizes the last fifteen years of intensive research on growth determination in six points: “(1) There is no simple determinant of economic growth. (2) The initial level of income is the most important and robust variable (so conditional convergence is the most robust empirical fact in the data). (3) The size of the government does not appear to matter much. What is important is the “quality” of the government (governments that produce hyperinflation, distortions in foreign exchange markets, extreme deficits, inefficient bureaucracies, etc., are governments that are detrimental to the economy). (4) The relation between most measures of human capital and growth is weak. Some measures of health, however, (such as life expectancy) are robustly correlated with growth. (5) Institutions (such as free markets, property rights, and the rule of law) are important for growth. (6) More open economies tend to grow faster.”

practice policies and institutions will be imitated in the lagging countries, and that this will be sufficient to bring about faster growth there. Institutionalists are generally somewhat more pessimistic, since they believe that the character of institutions and incentives is highly path dependent. Their argument is that network-externalities and vested interests hold back change, as do informal constraints in customs and traditions, which are hard to change through policy reforms.

An abundance of econometric studies show that institutions are significantly related to per capita income levels. In regressions researchers use some proxy for property rights, which generally is highly significant in growth or income level regressions. But a range of different institutions is highly correlated with security of property rights, so it is not clear what specific institutions we should focus on if we want to improve growth prospects.⁶

The World Bank's (1993) explanation is that good institutions and policy paved the way for investment and productivity growth and thus for this East-Asian miracle. Development-oriented states managed to create institutions that could lower transaction costs, and they also pursued increasingly outward-oriented policies. That the emergence of a growth-supporting institutional structure is important seems unquestionable. However, we know that there have been many attempts at institutional reform that have not delivered the goods (Easterly, 2001). Why do they work in some instances, and not in others?

Crafts and Venables (2002) argue that the world is not an even playing-field, and that the chances of joining the growth club are unevenly distributed. East and South-East Asia is the most recent major region to make its income level converge towards that of the "rich club". Crafts and Venables argue that most studies so far have underestimated the role of geography. They believe that economic size and distance are important determinants of development, and that agglomeration benefits dominate the process. In their approach the issue of transaction costs across space is crucial. They argue that this is really what should be at the core of globalisation debate.

⁶ Engerman and Sokoloff (2003) agree that institutions matter, but they warn against basing growth theories on exogenous institutional change. They argue that the historical record don't support the notion than any particular institution, narrowly defined, is necessary for growth.

Globalisation is generally about the integration of markets across nations, which is generally assumed to reflect the reduction of international transaction costs. These costs depend on geography, although they may to some extent be altered by technological changes or policy interventions.

The way economists think about international economic interactions used to be governed by Heckscher-Ohlin-type models, while the new theories of trade or new economic geography provide another perspective. According to the classical models, resource-allocation and trade are determined by factor-endowments and technology, whereas the latter type of approaches also lets comparative advantage be determined by the scale of operations and agglomeration factors. The location of firms still depends on factor endowments, but now also on access to final and intermediate goods markets matters.

Crafts and Venables (2002) argue that Lucas' view of the world is too simplistic and too optimistic. They emphasize the need for the new economic geography perspective, where one also allows for changes in the costs of transport and for the importance of economies of scale. The theory developed by Venables and Krugman (1995) incorporates these features and shows how concentration of production varies by trade costs. When these are very high production will tend to be dispersed. When costs are reduced from this high level there is first a tendency towards concentration, while at even lower trade costs there will again be decentralisation.

The theory as set out by Krugman and Venables (1995) aims to explain both agglomeration and dispersion of production. The starting point is that investment in a country is determined by a combination of internal factors and factors characterising the relationship to other countries. The domestic factors are factor endowments, skills, technology and social infrastructure. The international factors are access to world product markets and to suppliers of intermediate goods, factors or production, and knowledge.

Classical trade theory would suggest that globalisation or reduced transaction costs make it possible for countries to exploit their comparative advantages, which depend on factor availability. The new theory assumes increasing returns to scale and

imperfectly competitive markets. Location-decisions are assumed to depend on factor supplies and prices, and distance to demand and supply. The theory implies that size of markets matters, that is, manufacturers want to be close to large markets and in these markets they can then also pay higher wages. If labour is mobile, these high wages attract labour from other regions, which enlarges the market in the growing region even further.

The new theory suggests that the level of transport costs affects the pattern of location. At certain levels transport costs will lead to agglomeration and at others to dispersion. Input-output linkages matter, the thickness of the labour market matters, and technological externalities matter. When wage gaps become large enough and transactions costs fall there will be relocation of production from the centre towards parts of the periphery. The main point in Krugman and Venables (1995) model is that convergence will not be uniform. Even if all poor countries were to get their institutions in order, they would still not all take off at the same time. Economic expansion will occur sequentially in different parts of the periphery. Reduction in transaction costs cannot fully compensate for large institutional or other domestic problems, but they do make convergence more likely.

The interpretation of the Asian resurgence within this framework would be that transaction costs eventually became so low that the low cost East Asian countries with improved institutions could profitably exploit increasing world demand and trade among each other.

3. Globalisation and the Asia-Pacific take-off

During the 19th century Asia became a less and less important economic player on the world market, and by 1913 it supplied only a tenth of world exports (see Table 2). Then the world economy had a dismal spell until about 1950, but from this time onwards the world economy has in the aggregate done exceptionally well. World GDP grew more than sixfold during the second half of the century (Maddison, 2001, p. 125). During this period there was also a large increase in international economic interaction and integration. Exports as a share of world GDP rose from 5.5 % in 1950

to 17.2 % in 1998. During this period Asia came back on the world market in a big way, doubling its share of world exports.

Table 2: Regional percentage shares of world exports, 1870-1998

	1870	1913	1950	1973	1998
Western Europe	64.4	60.2	41.1	45.8	42.8
Western Offshoots	7.5	12.9	21.3	15.0	18.4
Asia	13.9	10.8	14.1	22.0	27.1
Latin America	5.4	5.1	8.5	3.9	4.9
Eastern Europe & former USSR	4.2	4.1	5.0	7.5	4.3
Africa	4.6	6.9	10.0	5.8	2.7
World	100.0	100.0	100.0	100.0	100.0

Source: Maddison, 2001, p. 127.

If we focus more specifically on the Asia-Pacific region (excluding Japan, Singapore and Brunei, which are in the high-income category), we see that it doubled its share of world exports during the last 15 years of the 20th century (Table 3). The Asia-Pacific region is now a major world trader, although there is a considerable spread among the countries in the region (see Table A3 in the Appendix). While particularly China, South Korea, and Taiwan (the latter is not covered in World Bank statistics) have done exceptionally well, such countries as Cambodia, Laos, and Myanmar still do not matter at all for the global economy.

Table 3: Regional percentage shares of world exports, 1975-2000

	1975	1980	1985	1990	1995	2000
High income	74.6	73.3	76.7	80.4	77.7	73.8
East Asia & Pacific			5.1	5.6	8.6	10.5
Europe & Central Asia					4.7	5.0
Latin America & Caribbean		4.9	5.2	4.0	4.3	5.3
Middle East & North Africa		8.0	4.3	3.1	2.3	2.7
South Asia	0.8	0.8	0.9	0.8	0.9	1.1
Sub-Saharan Africa		3.9	2.7	1.9	1.4	1.5
World	100.0	100.0	100.0	100.0	100.0	100.0

Note: Brunei, Japan and Singapore are in the High-income category. The other ten countries listed in Table A3 in the Appendix are in the East Asia & Pacific category.

Source: WDI 2002

One may also reverse the perspective and consider how important exports are to the respective countries by looking at shares of exports in GDP. The Asia-Pacific region is now (along with Eastern Europe) the region that is most dependent on foreign trade as exports make up 42 % of GDP (Table 4). It is noteworthy that China is much more dependent on international markets than is Japan, which only exports about 10 % of its GDP (Table A4 in the Appendix).

Table 4: Regional exports of goods and services as percentage shares of GDP, 1960-2000

	1960	1965	1970	1975	1980	1985	1990	1995	1999	2000
High income	12.3	12.9	14.5	17.9	20.2	20.9	19.8	20.8	21.9	..
East Asia & Pacific	..	..	10.2	16.3	21.7	21.3	26.0	31.4	38.0	42.2
Europe & Central Asia	..	..	..	..	..	..	23.0	31.5	39.8	43.8
Latin America & Caribbean	10.3	9.9	9.5	10.4	12.3	15.6	14.1	15.0	16.5	17.4
Middle East & North Africa	..	..	..	46.6	42.4	25.6	33.1	31.8	30.3	38.0
South Asia	..	..	5.2	7.1	7.8	7.0	9.0	12.8	13.3	15.1
Sub-Saharan Africa	26.0	24.7	22.5	26.0	32.1	28.7	27.2	28.5	28.5	31.9
World	12.6	13.1	14.0	17.5	19.9	20.5	20.0	21.5	23.2	..

Source: WDI 2002

Another aspect of international economic integration is the increase in international capital flows. Tables 5 and 6 show official and private net resource flows. In 1970 private flows to the Asia-Pacific region were rather small and were dominated by official transfers, but since then official transfers have been dwarfed by the rapidly expanding private flows. By 1995 private flows were about 9 times the official flows. The 1997 Asia financial crisis temporarily reduced the flows, but by 2000 they were increasing again. Thus, the Asia-Pacific region is a major arena for foreign investment, which may be an indication that countries in the region provide an economic environment that is sufficiently competitive to attract foreign capital. In South Asia and Sub-Saharan Africa, by contrast, the inflows are tiny. However, the attractiveness of an Asia-Pacific location may also be due to agglomeration effects a la Krugman and Venables. It is likely that Vietnam has better growth prospects than, for example Kenya, due to its location, although Vietnam has worse institutions in many respects.

Table 5: Regional official net resource flows (million US\$), 1970-2000

	1970	1975	1980	1985	1990	1995	2000
East Asia & Pacific	1317	2405	4186	4669	8306	11795	8864
Europe & Central Asia	346	547	3633	2328	4844	10741	8554
Latin America & Caribbean	983	2893	5272	7794	9152	12489	2010
Middle East & North Africa	578	5625	9572	8157	9686	1620	396
South Asia	1272	3674	5149	4861	6968	3157	4011
Sub-Saharan Africa	886	3380	7182	8903	16635	14251	11453
All developing countries	5383	18523	34993	36712	55591	54053	35287

Note: Official net resource flows are the sum of official net flows on long-term debt to official creditors (excluding IMF) plus official grants (excluding technical cooperation). Net flows (or net lending or net disbursements) are disbursements minus principal repayments.

Source: Global Development Finance 2002.

Table 6: Regional private net resource flows (million US\$), 1970-2000

	1970	1975	1980	1985	1990	1995	1999	2000
East Asia & Pacific	830	4693	8912	10915	19402	97448	51481	65693
Europe & Central Asia	262	2316	9878	3110	7692	27214	47703	45446
Latin America & Caribbean	3251	12486	24594	7264	12630	62937	109819	97305
Middle East & North Africa	572	3737	-1035	6813	384	1231	2184	1074
South Asia	95	187	1237	2409	2162	6905	2141	9254
Sub-Saharan Africa	784	2274	4237	1029	1287	10404	11164	7074
All developing countries	5794	25694	47823	31540	43556	206139	224492	225846

Note: Private net resource flows are the sum of net flows on debt to private creditors (PPG and PNG) plus net direct foreign investment and portfolio equity flows. Net flows (or net lending or net disbursements) are disbursements minus principal repayments.

Source: Global Development Finance 2002

We can also look specifically at foreign direct investment (Table 7). The East Asia and Pacific share of world FDI increased from 5 % to 13 % from 1980s to the 1990s. However, FDI only constituted 2.7 % of GDP (Table 8). The economic take-off was thus essentially built on domestic investors.

Table 7: Regional percentage shares of foreign direct investment (%), 1971-2000

	1971-1980	1981-1990	1991-2000
High income	82.1	83.8	70.7
East Asia & Pacific		5.1	13.0
Europe & Central Asia	0.3	0.3	3.6
Latin America & Caribbean	11.9	7.4	10.0
Middle East & North Africa	-2.2	1.6	1.0
South Asia		0.3	0.3
Sub-Saharan Africa		1.5	1.2
World	100.0	100.0	100.0

Source: WDI 2002.

Table 8: Regional foreign direct investment, net inflows as percentage shares of GDP, 1981-2000

	1971-1980	1981-1990	1991-2000
High income	0.5	0.7	1.4
East Asia & Pacific		0.7	2.7
Europe & Central Asia	0.1	0.1	1.6
Latin America & Caribbean	0.8	0.7	2.4
Middle East & North Africa	-0.4	0.3	0.7
South Asia	0.1	0.1	0.5
Sub-Saharan Africa		0.3	1.3
World	0.5	0.7	1.6

Note: When there is not 10 years of information, no estimate is reported.

Source: WDI 2002.

Foreign aid played some role in the initial stage of the Asia-Pacific growth acceleration, but at its high point it was only slightly above 1 % of GDP (Tables 9 and 10). Now it is less than half a percent and it primarily goes to the poorer countries of the region, namely Vietnam, Cambodia, and Laos

Table 9: Regional percentage shares of aid in GNI, 1960-2000

	1960	1965	1970	1975	1980	1985	1990	1995	1999	2000
High income	..	..	..	..	..	..	..	..	..	..
East Asia & Pacific	0.89	1.02	1.23	0.87	0.77	0.61	0.85	0.57	0.53	0.42
Europe & Central Asia	..	..	..	..	..	..	0.28	1.20	1.34	1.17
Latin America & Caribbean	0.27	0.74	0.61	0.37	0.28	0.49	0.47	0.38	0.34	0.26
Middle East & North Africa	4.62	2.29	1.78	2.90	1.85	1.16	2.56	1.14	0.87	0.71
South Asia	2.31	2.39	1.64	2.63	2.25	1.45	1.50	1.10	0.75	0.72
Sub-Saharan Africa	0.97	2.47	1.94	2.60	2.93	4.90	6.41	6.22	4.38	4.44

Source: WDI 2002.

Table 10: Regional aid per capita (current US\$), 1960-2000

	1960	1965	1970	1975	1980	1985	1990	1995	1999	2000
High income	..	..	..	..	..	..	..	..	..	..
East Asia & Pacific	0.8	1.0	1.4	1.8	2.5	2.4	4.8	5.7	5.4	4.6
Europe & Central Asia	1.4	0.9	0.4	0.4	2.4	0.5	7.7	24.6	24.2	22.9
Latin America & Caribbean	1.0	3.4	3.5	4.3	5.9	8.4	11.8	13.3	11.7	9.7
Middle East & North Africa	8.6	5.0	5.4	29.2	40.9	23.8	43.5	21.0	17.8	15.6
South Asia	1.8	2.9	1.9	4.4	5.8	4.2	5.3	4.2	3.2	3.1
Sub-Saharan Africa	1.3	3.8	4.1	10.2	20.0	21.2	35.5	32.6	20.6	20.4

Source: WDI 2002.

Parts of the world have had problems with a heavy international debt burden, and that has also been discussed in connection with the Asian financial crisis. However, in an international perspective this part of the world is not generally heavily indebted relative to its GNI. The largest absolute debtor, Latin America, is deeper in debt than is the Asia-Pacific region (Tables 11 and 12). Still, there is a large debt burden in some Asia-Pacific countries, which makes policy making there more difficult (Tables A11 and A12 in the Appendix.).

Table 11: Regional total international debt stocks (million US\$), 1970-2000

	1970	1975	1980	1985	1990	1995	1999	2000
East Asia & Pacific	11162	29019	94080	175068	273983	547489	673379	632953
Europe & Central Asia	5028	13825	75627	141940	219850	350925	496400	499344
Latin America & Caribbean	32548	82795	257197	408132	474720	649398	796192	774419
Middle East & North Africa	4822	27629	83832	135741	183471	214228	216166	203785
South Asia	12270	22953	37816	67569	129481	157289	167320	164375
Sub-Saharan Africa	6921	19633	60898	107104	176883	235256	216326	215794
All developing countries	72751	195854	609450	1035554	1458389	2154584	2565784	2490670

Note: Total debt stocks (EDT) consist of public and publicly guaranteed long-term debt, private non-guaranteed long-term debt (whether reported or estimated by the staff of the World Bank), the use of IMF credit, and estimated short-term debt.

Source Global Development Finance 2002.

Table 12: Regional total debt as percentage shares of GNI, 1970-2000

	1970	1975	1980	1985	1990	1995	1999	2000
East Asia & Pacific	8.4	11.0	21.1	29.1	29.8	31.0	36.3	31.2
Europe & Central Asia					17.8	36.2	58.1	53.9
Latin America & Caribbean	20.3	22.6	34.5	60.7	44.6	39.7	46.4	40.9
Middle East & North Africa	12.3	18.5	22.0	32.6	45.7	43.9	36.9	31.7
South Asia	14.9	17.0	16.2	23.1	32.4	33.3	28.8	27.0
Sub-Saharan Africa	11.4	15.3	23.5	56.4	63.0	77.7	71.6	71.3
All developing countries	10.9	13.3	21.0	34.0	34.1	38.3	43.7	39.1

Note: Total debt (EDT)/GNI (%).

Source: Global Development Finance 2002

What has happened to per capita incomes in the region during this period of international integration or globalisation? Since the 1970s the region has grown faster than the high-income countries or any other region for that matter (Table 13), although Japan has seen a period of stagnation since the early 1990s (Tables A13 and A14 in the Appendix). Japan is the major exporter from the region in absolute terms, but at the same time it is the most inward-oriented country in terms of exports to GDP. China has opened up very rapidly and has had the reverse growth pattern, with a dramatic acceleration from 1978 onwards.

Table 13: Regional annual percentage growth of GNP per capita, 1961-2000

	1961-1970	1971-1980	1981-1990	1991-2000
High income	4.4	2.6	2.4	1.7
East Asia & Pacific	2.9	4.5	5.9	6.0
Europe & Central Asia	.			-1.6
Latin America & Caribbean	2.6	3.4	-0.8	1.7
Middle East & North Africa			-0.8	1.1
South Asia	1.8	0.7	3.5	3.2
Sub-Saharan Africa	2.6	0.8	-1.1	-0.4
World	3.4	1.8	1.4	1.2

Source: WDI 2002

So what has been the impact of this dramatic Asia-Pacific growth acceleration on income levels? The East-Asia and Pacific region (excluding Japan, Singapore and Brunei) has a per capita income level which is still way below the world average in dollar terms (Table 14). But if we correct for purchasing power the estimate for the region is 58 % of the world average (Table 15), still less than a sixth of the OECD countries. Thus although there has been convergence, the bulk of the Asia-Pacific countries have as yet not caught up with the west or Japan.⁷

⁷ There is also an ongoing but not conclusive debate in the literature on growth clubs. Zhang (2003) has undertaken a convergence study for 10 East and Southeast Asian countries. His conclusion is that there are two convergence clubs. Five of the countries, Hong Kong, Singapore, Malaysia, Taiwan, and the Philippines will converge to a high income and eventually catch up with Japan. Four countries,

Table 14: Regional GDP per capita (1995 US\$), 1980-2000

	1960	1965	1970	1975	1980	1985	1990	1995	1999	2000
High income	10102	12452	15483	17377	20000	21976	25388	26887	29210	30035
East Asia & Pacific	194	208	256	312	396	520	705	1020	1177	1252
Europe & Central Asia	..	..	..	..	..	..	2783	2069	2195	2331
Latin America & Caribbean	1983	2199	2549	3064	3548	3280	3275	3607	3770	3856
Middle East & North Africa	..	..	..	1753	1926	1827	1774	1853	1943	1983
South Asia	186	201	221	222	236	277	332	387	446	456
Sub-Saharan Africa	473	543	609	668	658	600	587	549	561	564
World	2613	3101	3661	3971	4391	4583	5019	5170	5491	5631

Source: WDI 2002

Table 15: Regional percentage shares of world population, output, and relative per capita income, 2000

	Population shares	GDP (current US\$] shares	GDP PPP shares	\$-index	PPP-index
High income	14.91	79.15	55.24	531	371
East Asia & Pacific	30.63	6.54	17.22	21	56
Europe & Central Asia	7.83	2.99	7.17	38	92
Latin America & Caribbean	8.51	6.35	8.35	75	98
Middle East & North Africa	4.87	2.09	3.48	43	71
South Asia	22.37	1.90	6.71	8	30
Sub-Saharan Africa	10.88	1.02	2.47	9	23
World	100.00	100.00	100.00	100	100

Source: WDI 2002

Most of the Asia-Pacific countries have sustained high growth rates for an extended period of time. It seems safe to say that they have achieved take-off and have moved into a phase of self-sustaining growth.

4. Causes of the growth acceleration

What are the factors behind the growth acceleration in Asia-Pacific? Here we discuss how these have changed over time, and how these changes have affected growth prospects. However, within the confines of this paper we can only give some broad indications about the causes of the growth acceleration. We will consider seven aspects.

First, there is a world economy outside Asia that provides trade opportunities, and also provides resources and technology for the East-Asian economies. In terms of economic growth the world economy went through its best spell ever during the

China, Indonesia, Korea and Thailand will converge to a lower level equilibrium. In panel estimates the Philippines are excluded and Korea is included in the high-income club.

second half of the 20th century. This meant that, relative to the previous half-century, there was increased scope for export growth in Asia-Pacific.

Second, East-Asian countries have certain geographical and location characteristics. Basically geographical conditions are given, but the cost of a peripheral location relative to markets for inputs and outputs may be reduced if transport and other transaction costs are reduced. Ocean freight rates fell a lot during the industrial revolution, but during the second half of the 20th century there was only limited change. Air transport rates, however, fell dramatically, and the advances in information technology made communication fast and efficient (Findlay, Williamson, 2001). Since the bulk of world markets have been outside Asia, these changes were especially important for the countries in the region. Table 16 shows that export growth of the region has generally been extremely rapid.

Table 16: Regional annual export growth, 1961-2000

	1961-1970	1971-1980	1981-1990	1991-2000
High income	8.3	6.3	5.0	5.1
East Asia & Pacific	6.7	13.0	9.1	12.3
Europe & Central Asia				1.6
Latin America & Caribbean	5.1	5.8	5.5	8.5
Middle East & North Africa				
South Asia	4.7	6.7	9.6	
Sub-Saharan Africa	5.6	2.6	1.6	4.0
World	7.8	5.1	5.2	

Source: WDI 2002.

Third, each country has specific characteristics of its production factors, labour, capital, and land. In the latter category we include natural resources like ore or oil that can be the basis for extractive industries. Factor accumulation has been very rapid in Asia-Pacific. The countries also entered a process of demographic transition, which meant that a large fraction of the population was of working age, which helped to accelerate growth. Bloom and Williamson (1997) found that the change in age structure offered East Asia a temporary growth bonus of 1.5 to 1.9 percentage points per year. But most importantly in terms of factors of production, is the fact that the rate of capital formation has been very high, often above 30 % (Table 17), unheard of in market economies in other parts of the world.

Table 17: Regional gross capital formation as percentage shares of GDP, 1960-2000

	1960	1965	1970	1975	1980	1985	1990	1995	1999	2000
High income	..	25.0	26.5	23.8	25.0	22.5	23.4	21.6	22.1	..
East Asia & Pacific	22.4	18.8	25.4	28.2	31.8	31.9	34.6	37.9	28.2	30.0
Europe & Central Asia	..	..	..	..	..	..	27.7	24.8	20.3	21.2
Latin America & Caribbean	20.5	20.7	21.6	25.9	24.2	19.0	19.3	21.2	20.2	19.9
Middle East & North Africa	..	..	..	27.7	27.2	24.6	24.3	22.3	21.0	20.4
South Asia	14.4	16.7	16.3	18.8	20.5	22.4	23.6	25.0	23.0	22.9
Sub-Saharan Africa	15.0	18.3	20.4	24.1	21.9	15.3	14.7	18.2	17.4	17.2
World	..	23.8	25.5	24.2	25.3	22.8	23.9	22.7	22.2	..

Source: WDI 2002

Fourth, the factors of production may be allocated among firms and sectors in a more, or less, optimal fashion. In general the East Asian countries have moved in the market-economy direction, with gradually less direct government intervention in resource allocation. In most cases this has helped increase the efficiency of resource allocation, and thus growth.

Fifth, the level of output, given the resource-input, depends on the level of technology or productivity. Technological progress is not unrelated to capital investment. When new machinery is installed, it also embodies newer and more efficient technologies. The levels of productivity actually achieved, of course, also depend a lot on the skills of the labour force.

Sixth, the amount and allocation of factors, as well as their productivity, depends on the transaction environment, institutional structure, and social capital. Here most East-Asian countries have seen large improvements.

Seventh, the policy environment influences points three to six. It is itself determined in a political process. The political economy of policy making is thus of vital importance for policy-formulation.⁸ The quality of the policy environment depends both on what policies are put in place and on how effectively they are implemented and administered. Here there has been an extensive discussion about the role of the “developmental states” of the region. Some East-Asian countries have certainly adopted more interventionist strategies than what the Washington consensus suggests,

⁸ There is a range of different approaches as to how one should model policies, such as lobbying models, voting models, or models of group conflict.

and they have been able to achieve remarkably high growth rates. Even China, since 1978, has managed to create an environment that has generated rapid growth.

There is considerable agreement that the success of South Korea and Taiwan has been helped by the policy choices of the state, although people disagree on the importance of direct state intervention versus the enforcement of property rights and free markets. Still, the result has been a spectacular economic success. Maybe the choice of developmental policies was influenced by the fact that the two countries were under external threat, and continuation of the regime may have depended on the policies pursued. Acemoglu and Robinson (2002) find evidence in cross-country regressions that external threats reduce elite incentives to block reforms. Investments in education and the land reforms may also have been undertaken to galvanize public support for the government. There were also links between the political and economic elites, which meant that there was also economic self-interest in economically good policies.

A political process produces the policy environment, and this is a key factor. Acemoglu, Johnson, Robinson, and Thaicharoen (2002) show that countries that had inherited bad institutional structures from the past also tended to experience economic volatility and crises. However, once they controlled for the effect of institutions, the macroeconomic policies had only a limited effect on economic outcomes. This indicates that the policies pursued are perhaps better regarded as “symptoms” of the more basic, underlying institutional structures. This does not, of course, imply that bad policies are unrelated to poor economic performance, but it suggests that they are just intermediate variables between core institutional factors and outcomes. To understand how these interactions work is one of the major challenges for future research.

In this quick review of growth determinants we have not attempted to weigh the relative importance of the different factors, but there has been an extensive debate on the relative contributions of factor accumulation versus total factor productivity growth in the growth acceleration in East Asia. Crafts (1999) concludes from his review of the debate that the contribution of factor accumulation has been high, while the contribution of TFP growth has been considerable but not as high as it was in Europe during the growth acceleration there during 1950-1973. He also concludes that

there remains a very large gap in productivity even between the successful NICs and the West. Teal and Söderbom (2003) do a fixed-effect regression over 93 countries for the period 1970-2000 and derive time-invariant productivity growth estimates for different regions. They find productivity growth to have been highest in East Asia (about 2 % per year), while it was actually close to zero in South-East Asia.⁹ Productivity growth is thus not the main factor behind the rapid growth in region.

One might ask whether the countries in the region can sustain the high growth rates once they converge towards high-income levels. That would seem unlikely. It seems possible that the Japanese stagnation is due not only to macro-economic mistakes and a liquidity trap but also to the country's policy environment. It may well be the case that an environment that was appropriate for an investment-based strategy is not the best one for an innovations-based strategy (Acemoglu, Aghion, Zilibotti, 2002). The new environment probably requires different institutions and different policies.

5. Has the Asia-Pacific region been open?

Economic policies in East-Asia have certainly differed between countries. Via a relatively interventionist policy, Japan achieved extremely rapid growth between 1950 and 1973, when per capita income grew by 8 % per year. Then growth slowed to a more modest level, until there was virtual stagnation during the last decade of the last century. Institutional reforms are needed and are underway. The policies of South Korea and Taiwan have been similar to those of Japan in many respects, whereas the city-states of Hong Kong and Singapore have been extremely market oriented and open, closer to laissez-faire than are western countries. Even the states that have been most interventionist are by now rather similar to Western Europe in terms of economic freedom.¹⁰ They have a smaller public sector, but on the other hand they have more public intervention in other fields (Paldam, 2003).

Although there are variations in the policies pursued, East Asian countries, more or less across the board, have moved in a liberal and outward-oriented direction. There

⁹ Grier (2003) gets similar results using an augmented Solow model. Only Hong-Kong and Taiwan are characterized as overachievers.

¹⁰ Paldam (2003) draws this conclusion on the basis of the economic freedom index from the Fraser Institute.

have been both macroeconomic stabilisation and structural policies aimed at liberalising the economies. In terms of external policies, this has meant a move towards market determined exchange rates and a less restrictive trade regime, although tariffs are still generally higher in Asia than in other parts of the world, except for Sub-Saharan Africa (Findlay and O'Rourke, 2001).

Short to medium term responses to trade reforms are likely to come in factor allocation and thus in the structure of production, as resources shift from inefficient import substituting industries to export oriented activities. The medium to long-term impact, on the other hand, is more likely to be more towards capital formation and economic growth. The ultimate impact of reforms will depend on their effect on relative prices and the relative responsiveness of different sectors. It will also depend on what other types of reforms are undertaken at the same time.

It has generally been hard to establish a causal link from openness to growth (Greenaway, Morgan and Wright, 1998).¹¹ In their review of the openness and growth literature, Rodriguez and Rodrik (2000) show that the main ingredients that did the trick in indices of openness used in studies from the 1990s are the black-market premium and the presence of state monopoly in exports, while the more traditional and direct measures of trade restrictiveness showed a smaller effect. The variables that work tend to be highly correlated with macroeconomic imbalances, and thus tend, to some extent, to proxy for other types of policy problems than a restrictive trade policy. It may also be that corruption, or bureaucracies and other institutional problems, cause a high black market, so maybe this is what the trade restrictiveness variable picks up in growth regressions. Moreover, the black market premium is very sensitive to macroeconomic and political variables. Still, even if underlying social variables cause the black market, it does not mean that black market premia do not affect growth prospects. Rodriguez and Rodrik (2000, p. 63) do not argue that trade liberalisation on balance is not beneficial for growth, but they argue that integration in

¹¹ Alternative strategies for analyzing openness have been tried, such as the creation of alternative measures of openness (Dollar, 1992, Sachs and Warner, 1995), testing for robustness with a wider range of measures of openness (Edwards, 1998), and the comparison of income convergence experience among groups of liberalizing and non-liberalizing countries (Ben-David, 1993). Rodriguez and Rodrik (2000) did a quality check of those often-quoted papers and noted a range of shortcomings.

the world economy cannot be a substitute for development strategy. Trade reform without accompanying domestic policy changes may not do the trick.

We noted in the previous section that in terms of shares of trade in GDP, the Asia-Pacific region is by now much more open than most other regions. But exports to GDP is not the best indicator of openness: it is rather a result of openness. It is more appropriate to investigate to what extent Asia-Pacific markets are integrated with international commodity markets.¹² When a country is open in this sense, international forces rather than domestic conditions determine prices and resource allocation in the domestic market. Transport costs and tariffs are factors that may isolate the domestic market from the international one, and create a wedge between domestic and foreign prices. When we view openness from this angle, we need to investigate whether the countries have pursued a trade and foreign exchange policy that has integrated the countries with the world economy, making it attractive for them to specialise according to their comparative advantages.¹³

Standard measures of openness to trade are the average tariff rate, or the coverage ratio for non-tariff barriers. Of course there are problems with those measures. For example, the tariff average tends to under-weight the impact of the high tariff rates because the corresponding import levels are low.¹⁴ Still, the level of trade protection gives an indication of the extent to which a wedge between domestic and international prices is due to policy choices. From the 1960s onwards, most countries in the region have gradually reduced both tariff protection and quantitative restrictions on imports. For example, Taiwan liberalised very strongly on both counts in the 1980s and 1990s (Liu, 2002). The Asia-Pacific countries also liberalised their foreign exchange markets and devalued their currencies, which has also helped reduce the anti-export bias.

¹² O'Rourke and Williamson (1999, 2002) argue that globalisation (and by implication openness) should be defined as the integration of international commodity markets.

¹³ When discussing policy issues relating to openness it is obviously the level of protection that should be focused upon. Theoretically it is not obvious that openness increases growth. When there are market failures or endogenous technological change, the reverse might be the case. Free trade might make countries specialise according to their comparative advantage in sectors that produce traditional goods with little learning and technological progress, which might reduce long-run growth. This is the old infant-industry argument, and was also the basis for the old import substitution policy.

¹⁴ In the analysis of the impact of openness on growth the often-used measures of "openness" are highly correlated with other sources of poor economic growth. This makes it hard to isolate the effects of various factors.

When exports grow, whether because of liberalisation of trade or institutional reforms or whatever, there seems to be a beneficial effect on growth. A recent study by Irwin and Terviö (2002) used instrumental variables to deal with endogeneity of trade in a growth regression, and they found a significant effect of trade on growth. Teal and Söderbom (2003) argue that their use of geographical characteristics as instruments is inappropriate and instead estimate the effect of openness on productivity growth using an estimator that combines high and low frequency differences in the data. Still, also they find that openness has a significant and positive effect on productivity growth. Greenaway, Morgan, and Wright (2002) found robust results indicating that liberalization had a positive effect on growth with a lag. There was a J-curve, with an initial negative effect followed by a positive one.

So far we have mainly discussed openness to trade, but we also need to look at openness to capital flows, which may be either in the form of transfers of real capital or of financial capital. The former are in a way a substitute for trade flows, and we could assume that they generally help increase the welfare of the recipient country. There is less agreement about the effects of flows of financial capital. To the extent that they are short-term, they may destabilise economies. In the recent Asia crisis, international investors lost faith in the stability of some of the region's economies and withdrew their money, which had dire short-term consequences for several countries in the region. Borrowers defaulted and banks became insolvent. There was a shortage of credit to finance trade, and there was a recession in the domestic market with severe consequences for large parts of the population. The country worst affected by the 1997-98 financial crisis was Indonesia, which saw its per capita income decline by about a seventh. This experience showed that there are risks associated with international economic integration, but it hardly suggests that countries should turn their backs on the world. It may indicate, though, that a completely open capital account is not the optimal strategy for the countries in the region.

Japan was the first country in the region that joined the growth club, and the fact that Japan is located in East Asia then helped the other East Asian countries. Part of the process was the relocation of production from Japan in the face of high costs there. Costs of regional transactions also fell. Overseas Chinese have been an extra help for China in this respect.

The expansion of manufacturing production in the region has been impressive, and there has been agglomeration of certain types of production and production factors in certain locations. This suggests that there are external agglomeration effects from learning and from labour-market pooling. Remote management has become easier, and production networks have developed. Still, the need to have close access to a pool of skilled labour is getting more and more important, which may suggest that we will not see “the death of distance” as some have suggested. The information-based economy seems to require more person-to-person contacts than some thought. Cities will continue to play a major role in reducing the costs of distance. Agglomeration forces will thus continue to be important, although they will be of another character than earlier.

In East Asia the opening-up has generally been associated with high investment levels, rapid export-growth, and good growth outcomes. The opening-up of the economies has made it possible to exploit scale economies. The region has been an attractive arena for foreign direct investment, with producers able to meet the standards of multinational corporations wanting to outsource production to cheaper locations.

6. Conclusions

Why did regions that originally were rather equal in standards of living diverge? The main explanation seems to be that in certain parts of the world there emerged institutions that were conducive to capitalism and technological progress. On the basis of this technological and organisational superiority, the western powers then colonised and dominated large parts of the world.

In Japan the growth acceleration started after 1867 when market economy reforms were introduced, but for a long time that country was an exception in the region.¹⁵ In the last half-century, however, we have seen East Asia starting to catch up with the West. A major reason for this has been rapid factor accumulation, while the

¹⁵ To explain why preconditions for a take-off were created in Japan much earlier than in other countries in the regions one needs to undertake comparative historical studies.

contribution of productivity growth has been more modest. It thus seems as if the policies and institutional structures were well structured to foster accumulation, which generated rapid growth in the early stages of development.

However, what works in early stages of industrialisation may not work in more sophisticated and more service-intensive economies. The Asia financial crises showed that some institutions, in this case mainly the banking system, were not robust. The system that provided good incentives for investment mobilisation is perhaps not as good at allocating funds effectively in the new international economics environment or to manage more complex risks. Allocative efficiency may take centre stage once countries are on the production frontier. The ability of the institutional system to transform itself and to generate appropriate policies for the new situation then becomes crucial. A more open environment will put pressure on countries to develop their institutions at the same time as openness will make it harder and more costly to pursue counter-productive policies.¹⁶

The interpretation of the Asian resurgence, which has been proposed here, draws on both the new economic geography perspective and institutional explanations. One could argue that international transaction costs eventually became so low that the low cost Asia-Pacific countries with improved institutions could profitably exploit increasing world demand and trade among each other. Their income levels are converging towards those of the Western countries.

Technological and institutional differences between countries have been reduced, which has prepared the ground for convergence. However, according to Krugman and Venables, income levels will not start to converge in all parts of the periphery at the same time. We will instead see regions take off sequentially, and eventually there should also be an African take-off. If this is correct, the distribution of world production will in the long term converge towards the world distribution of population, the dominance of the west being a historical parenthesis. At least the convergence of Asia has already started, and it seems abundantly clear that Asia will again become the centre of gravity in the world economy.

¹⁶ Bigsten and Durevall (2003) discuss this issue for the case of Africa.

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Appendix

Table A3: Percentage shares of Asia-Pacific countries in world exports, 1971-2000

	1975	1980	1985	1990	1995	2000
Cambodia	..				0.02	0.02
China	..		1.25	1.35	2.32	3.57
Indonesia	..		0.86	0.69	0.83	0.90
Japan	..	6.38	8.74	7.61	7.78	6.76
Korea, Rep.	..	0.86	1.35	1.72	2.32	2.63
Lao PDR	..		0.00	0.00	0.01	0.01
Malaysia	0.41	0.61	0.76	0.77	1.31	1.42
Myanmar	0.02	0.02	0.02	0.02	0.02	0.02
Philippines		0.31	0.30	0.27	0.42	0.53
Singapore	0.77	1.05	1.24	1.59	2.33	2.12
Thailand	0.27	0.34	0.40	0.69	1.11	1.05
Vietnam				0.04	0.12	0.22

Note: Japan and Singapore are in the High-income category in Table 3. The other countries listed are in the East Asia & Pacific category.

Source: WDI 2002

Table A4: Asia-Pacific countries' exports of goods and services as percentage shares of GDP, 1960-2000

	1960	1965	1970	1975	1980	1985	1990	1995	1999	2000
Cambodia	13.9	11.5	5.8	..	..	..	6.1	31.3	37.2	40.1
China	..	..	1.8	4.2	7.6	10.0	17.5	24.0	22.0	25.9
Indonesia	15.0	5.5	13.5	24.0	34.2	22.9	25.3	26.3	35.2	38.5
Japan	10.5	10.3	10.6	12.6	13.5	14.2	10.4	9.1	10.0	..
Korea, Rep.	3.2	8.4	13.8	27.2	32.7	32.9	29.1	30.2	42.3	45.0
Lao PDR	..	..	..	..	..	4.0	..	..	..	..
Malaysia	50.6	41.8	41.4	43.0	56.7	54.1	74.5	94.1	121.7	125.5
Myanmar	19.7	14.5	5.2	5.4	9.1	4.6	2.6	1.2	0.4	..
Philippines	10.6	17.2	21.6	21.0	23.6	24.0	27.5	36.4	51.5	56.3
Singapore	..	128.5	105.6	146.0	215.4	168.0	201.8	177.8	166.5	179.9
Thailand	15.7	16.5	15.0	18.4	24.1	23.2	34.1	41.7	58.5	67.0
Vietnam	..	..	..	..	..	..	26.4	36.3	..	..

Source: WDI 2002

Table A5: Asia-Pacific countries' official net resource flows (million US\$), 1970-2000

	1970	1975	1980	1985	1990	1995	2000
Cambodia					5	23	272
China					1234	1975	2230
Indonesia		441	583	915	1116	2666	2053
Korea, Rep.		221	544	658	85	313	660
Lao PDR		33	21	70	51	193	190
Malaysia		27	138	139	74	414	182
Myanmar		9	49	240	311	123	55
Philippines		83	256	426	497	1296	-57
Thailand		27	104	623	676	292	858
Vietnam					45	9	1209

Note: Official net resource flows are the sum of official net flows on long-term debt to official creditors (excluding IMF) plus official grants (excluding technical cooperation). Net flows (or net lending or net disbursements) are disbursements minus principal repayments.

Source: Global Development Finance 2002.

Table A6: Asia-Pacific countries' private net resource flows (million US\$), 1970-2000

	1970	1975	1980	1985	1990	1995	1999	2000	
Cambodia					0	0	164	140	126
China				4526	8107	43669	40632	58295	
Indonesia	245	2225	987	464	3235	11522	-8494	-11210	
Korea, Rep.	190	912	1782	2894	1038	13669	6012	13215	
Lao PDR	0	1	0	0	6	95	79	72	
Malaysia	71	974	1913	785	770	10149	3247	3228	
Myanmar	6	-5	29	-56	153	329	240	188	
Philippines	72	446	840	809	639	4309	5351	2459	
Thailand	111	129	1464	1127	4380	10047	3070	-1383	
Vietnam				0	16	2846	631	581	

Note: Private net resource flows are the sum of net flows on debt to private creditors (PPG and PNG) plus net direct foreign investment and portfolio equity flows. Net flows (or net lending or net disbursements) are disbursements minus principal repayments.

Source: Global Development Finance 2002.

Table A7: Asia-Pacific countries' shares of foreign direct investment (%)

	1971-1980	1981-1990	1991-2000
China			8.4
Indonesia	1.0	0.4	0.7
Japan		0.5	0.6
Korea, Rep.		0.4	0.6
Lao PDR			0.0
Malaysia	1.6	1.5	1.5
Myanmar			
Philippines	0.2	0.2	0.4
Singapore		2.5	2.1
Thailand	0.4	0.6	0.8
Vietnam			0.4

Source: WDI 2002

Table A8: Asia-Pacific countries' foreign direct investment, net inflows, as percentage shares of GDP, 1971-2000

	1971-1980	1981-1990	1991-2000
Cambodia			4.1
China		0.6	4.2
Indonesia	0.8	0.4	0.5
Japan		0.0	0.1
Korea, Rep.		0.3	0.8
Lao PDR			3.9
Malaysia	3.3	3.3	4.4
Myanmar			
Philippines	0.3	0.7	1.7
Singapore		10.5	8.4
Thailand	0.6	1.2	2.4
Vietnam			6.9

Note: When there is not 10 years of information, no estimate is reported.

Source: WDI 2002.

Table A9: Asia-Pacific countries' shares of aid in GNI, 1960-2000

	1960	1965	1970	1975	1980	1985	1990	1995	1999	2000
Brunei	..	..	..	..	..	..	0.07	0.06	..	..
Cambodia	4.21	0.97	2.62	..	..	..	3.73	19.13	9.37	12.56
China	..	..	..	..	0.03	0.31	0.59	0.51	0.24	0.16
Indonesia	..	..	4.80	2.21	1.27	0.73	1.59	0.71	1.69	1.21
Japan	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	6.53	7.32	3.13	1.20	0.23	-0.01	0.02	0.01	-0.01	-0.04
Lao PDR	..	..	..	..	..	1.56	17.31	17.56	20.80	16.83
Malaysia	0.54	0.66	0.64	1.04	0.56	0.78	1.11	0.13	0.19	0.06
Myanmar	..	..	..	..	..	..	..	..	..	..
Philippines	0.74	1.50	0.70	1.20	0.92	1.54	2.89	1.17	0.86	0.73
Singapore	-0.05	0.21	1.51	0.22	0.12	0.13	-0.01	0.02	0.00	0.00
Thailand	1.55	1.05	1.05	0.59	1.30	1.20	0.95	0.52	0.85	0.53
Vietnam	..	..	..	..	..	..	..	4.22	4.98	5.42

Source: WDI 2002

Table A10: Asia-Pacific countries' aid per capita (current US\$), 1960-2000

	1960	1965	1970	1975	1980	1985	1990	1995	1999	2000
Brunei	0.1	0.3	0.1	0.9	0.2	6.3	15.0	14.4	4.3	1.9
Cambodia	4.9	1.4	2.7	11.5	41.3	1.6	4.6	52.0	23.7	33.1
China	..	..	..	..	0.1	0.9	1.8	2.9	1.9	1.4
Indonesia	0.9	0.4	4.0	5.2	6.4	3.7	9.8	7.2	10.7	8.2
Japan	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	10.0	7.6	8.6	7.1	3.6	-0.2	1.2	1.3	-1.2	-4.2
Lao PDR	15.2	27.8	25.5	12.8	12.7	10.2	36.2	65.9	57.3	53.3
Malaysia	1.6	2.1	2.4	8.2	9.8	14.6	25.8	5.3	6.4	1.9
Myanmar	1.6	0.7	0.9	1.9	9.2	9.3	4.0	3.4	1.7	2.2
Philippines	1.9	2.9	1.3	4.3	6.2	8.5	20.9	13.0	9.4	7.6
Singapore	-0.2	1.1	13.9	5.6	5.8	8.7	-1.0	4.7	-0.3	0.3
Thailand	1.6	1.5	2.1	2.1	9.0	9.0	14.3	14.7	16.8	10.6
Vietnam	5.5	8.2	10.2	7.3	4.3	1.9	2.9	11.5	18.4	21.6

Source: WDI 2002

Table A11: Asia-Pacific countries' total external debt stocks (million US\$), 1970-2000

	1970	1975	1980	1985	1990	1995	1999	2000	
Cambodia					7	1854	2035	2262	2357
China					16696	55301	118090	154223	149800
Indonesia	4528	11498	20938	36715	69872	124398	150844	141803	
Korea, Rep.	2580	8411	29480	47133	34968	85810	130316	134417	
Lao PDR	8	44	350	619	1768	2165	2527	2499	
Malaysia	502	2104	6611	20269	15328	34343	41902	41797	
Myanmar	123	328	1500	3098	4695	5771	6004	6046	
Philippines	2196	4171	17417	26637	30580	37829	53019	50063	
Thailand	1001	1865	8297	17509	28095	100039	96769	79675	
Vietnam					61	23270	25427	23260	12787

Note: Total debt stocks (EDT) consist of public and publicly guaranteed long-term debt, private non-guaranteed long-term debt (whether reported, or estimated by the staff of the World Bank), the use of IMF credit, and estimated short-term debt.

Source: Global Development Finance 2002

Table A12: Asia-Pacific countries' total external debt as percentage shares of GNI, 1970-2000

	1970	1975	1980	1985	1990	1995	1999	2000
Cambodia	..	..	..	..	166.4	70.0	75.9	74.3
China	..	..	..	5.5	15.6	17.2	15.8	14.1
Indonesia	46.7	36.7	28.0	44.4	64.0	63.4	114.9	99.4
Korea, Rep.	29.4	40.5	47.8	51.6	13.8	17.6	32.5	29.5
Lao PDR	..	..	..	26.1	204.5	123.2	177.9	149.6
Malaysia	12.0	21.9	27.5	68.6	36.4	40.6	55.8	50.7
Myanmar	..	..	..	..	..	..	..	..
Philippines	33.4	27.9	53.7	89.1	69.4	49.7	65.7	63.1
Thailand	14.1	12.5	25.9	45.8	33.3	60.4	81.5	66.1
Vietnam	..	..	..	..	..	128.3	81.1	40.8

Note: Total debt (EDT)/GNI (%).

Source: Global Development Finance 2002

**Table A13: Asia-Pacific countries' annual per capita percentage growth of GNP, 1961-2000
capita growth (annual %)**

	1961-1970	1971-1980	1981-1990	1991-2000
Cambodia	..	..	..	2.2
China	1.5	3.5	7.7	9.0
Indonesia	1.9	5.4	4.5	2.7
Japan	9.3	3.3	3.5	1.2
Korea, Rep.	5.7	5.6	7.4	5.2
Lao PDR	..	..	..	3.7
Malaysia	3.5	5.3	3.1	4.6
Myanmar	1.0	2.3	-0.4	4.2
Philippines	1.8	3.1	-0.6	0.7
Singapore	7.5	7.4	4.9	4.8
Thailand	4.9	4.1	6.0	3.6
Vietnam	0.0	0.0	1.4	5.6

Source: WDI 2002

Table A14: Asia-Pacific countries' GDP per capita (1995 US\$), 1960-2000

	1960	1965	1970	1975	1980	1985	1990	1995	1999	2000
Brunei	..	..	..	21753	29435	21146	18711	17565	..	..
Cambodia	..	..	..	..	..	..	240	275	289	297
China	112	106	120	138	168	261	349	581	769	824
Indonesia	249	247	298	384	503	602	777	1042	964	994
Japan	8399	12501	20465	23821	28296	32172	39955	42186	43856	44830
Korea, Rep.	1325	1547	2283	3023	3910	5322	7967	10874	12111	13062
Lao PDR	..	..	..	..	..	..	290	313	376	450
Malaysia	975	1165	1371	1712	2297	2587	3104	4310	4538	4797
Myanmar	..	..	..	..	..	..	..	..	..	..
Philippines	725	801	867	999	1173	974	1091	1085	1143	1167
Singapore	2676	3249	5426	7836	11048	13163	17693	23650	26117	28230
Thailand	465	566	752	860	1117	1330	1999	2871	2711	2805
Vietnam	..	..	..	..	..	183	206	277	342	356

Source: WDI 2002

Table A15: Asia-Pacific countries' percentage shares of world population, output, and relative per capita incomes, 2000

	Population shares	GDP (current US\$) shares	GDP PPP shares	\$-index	PPP-index
Brunei	0.01			0	0
Cambodia	0.20	0.01	0.04	5	19
China	20.84	3.43	11.18	16	54
Indonesia	3.47	0.49	1.43	14	41
Japan	2.09	15.37	7.56	734	361
Korea, Rep.	0.78	1.45	1.83	186	234
Lao PDR	0.09	0.01	0.02	6	21
Malaysia	0.38	0.28	0.47	74	122
Myanmar	0.79			0	0
Philippines	1.25	0.24	0.67	19	54
Singapore	0.07	0.29	0.21	442	315
Thailand	1.00	0.39	0.87	39	86
Vietnam	1.30	0.10	0.35	8	27

Source: WDI 2002

Table A16: Asia-Pacific countries' annual export growth, 1961-2000

	1961-1970	1971-1980	1981-1990	1991-2000
China			12.1	12.2
Indonesia	4.3	9.5	1.4	6.7
Japan	16.1	9.7	5.4	3.2
Korea, Rep.	29.0	21.6	11.2	15.9
Lao PDR				
Malaysia	5.9	8.1	10.7	13.3
Myanmar	-6.8	7.7	4.5	10.4
Philippines	5.5	10.3	4.0	6.9
Singapore				
Thailand	10.5	9.9	14.1	10.6
Vietnam				23.3

Source: WDI 2002

Table A17: Asia-Pacific countries' gross capital formation as percentage shares of GDP, 1960-2000

Series Name	1960	1965	1970	1975	1980	1985	1990	1995	1999	2000
Brunei	..	..	..	..	3.0	..	..	..	..	..
Cambodia	20.2	13.5	12.5	..	..	..	8.2	21.8	15.8	15.0
China	35.5	23.2	29.0	30.2	35.2	37.8	34.7	40.8	37.2	37.3
Indonesia	9.2	7.8	15.8	23.7	24.1	27.6	30.7	31.9	12.2	17.9
Japan	33.0	32.0	39.2	32.9	32.4	28.3	32.8	28.2	26.0	..
Korea, Rep.	11.5	15.7	25.4	28.7	31.9	30.0	37.7	37.2	26.7	28.7
Lao PDR	..	..	..	..	..	7.0	..	26.0	22.7	20.4
Malaysia	13.8	17.8	20.2	22.8	27.4	24.8	32.2	43.1	22.1	25.6
Myanmar	12.0	18.7	14.2	10.0	21.5	15.5	13.4	14.3	13.2	..
Philippines	16.0	20.8	21.3	30.9	29.1	15.3	24.2	22.5	18.8	17.8
Singapore	9.7	21.9	38.7	39.9	46.3	42.5	36.6	34.6	32.4	31.3
Thailand	15.4	19.7	25.6	26.7	29.1	28.2	41.4	41.8	19.9	22.7
Vietnam	..	..	..	..	..	..	13.0	27.1	25.4	27.4
World	..	23.8	25.5	24.2	25.3	22.8	23.9	22.7	22.2	..

Source: WDI 2002