

Growth and Trade vs. Trade and Growth

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ABSTRACT. In the traditional trade literature, there is a well-developed area analyzing the effect of growth on trade and its reflection on income growth. This literature developed already in the 1950s and 1960s. Generally speaking, an interest in the effects of trade on growth has also existed for many years, where trade has often been viewed as an engine of growth. Cases in point are the “East Asian Tigers” and Japan which have especially benefited from outward-looking policies. In this paper, we analyze the relationship between economic growth and growth in income terms of trade, arguing that income terms of trade is a useful concept in analyses of the link between trade and growth. Our results suggest that fast-growing countries have either specialized in sectors with a relatively favorable development with regard to world market prices, or they have managed to successively improve quality within sectors, thereby avoiding falling terms of trade in spite of large increases in export volumes.

1. Introduction

The effect of growth on international trade is a well-established area of research in international trade, which flourished in the 1950s and 1960s in particular (Hicks, 1953; Johnson, 1955; Bhagwati, 1958; Södersten, 1964). It concentrated on the effects of various types of economic growth (factor accumulation and technical progress) on terms of trade and national income.

The literature on the effect of trade on growth is, analytically speaking, looser. One of its aspects has been to consider trade as an “engine of

growth”. This phrase seems to first have been coined by D. H. Robertson in characterizing the role of international trade during the nineteenth century (Robertson, 1940; Nurkse, 1959). The inter-war years marked a disastrous development for international trade, with a drastic decrease in the earlier strong trends toward globalization. In turn, that development fostered the inward-looking type of policies characterizing certain parts of the world, especially Latin America, India, and the communist bloc, during a large part of the post-war period.¹

The title of this paper may seem puzzling, but it has been chosen with a precise intention in mind. The theory of growth and trade was carefully developed during the 1950s and 1960s. The effects of factor accumulation and technical progress on terms of trade and trade volumes were worked out within the standard two-by-two-by-two trade model. The general findings were that factor accumulation would lead to a deterioration of the terms-of-trade if the accumulating factor was intensively used in the export sector and that technical progress would analogously deteriorate the terms of trade if taking place in the export sector. The extreme case here was that of “immiserizing growth”, where economic growth might lead to a fall in national income (Bhagwati, 1958, 1965; Johnson, 1955, 1958; and Södersten, 1964). There were naturally also cases where economic growth could lead to improved net barter terms of trade.

The literature on trade and growth (or economic development) was, theoretically, less rigorous and more empirically oriented. One very important line of thought here was the Singer-Prebisch case that took a negative view on development through trade, especially for developing countries (Singer, 1949; Prebisch, 1950, 1959). It argued for protectionist, inward-looking policies of the type

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pursued in many developing countries well into the 1980s.

In the 1970s and 1980s, a new literature arguing for “export-push” and returning to the tradition of viewing trade as an “engine of growth” came into fashion (Balassa, 1977, 1978; Findlay, 1995; Krueger et al., 1978, 1981), partly inspired by the “miracle economies” of South East Asia.

More recently, there have been some important developments with regard to the relationship between trade and growth within new growth theory, where the main channel for a positive effect of trade on long-term growth is an increase in the international diffusion of technology or ideas (e.g. Grossman and Helpman, 1991). However, the strength of the empirical evidence in favor of trade-induced technology and knowledge diffusion has been questioned (e.g. Keller, 1997).

An astonishing and at the same time overlooked fact is that the literature on growth and trade and that on trade and growth have hardly ever been combined and it is thus tempting to see if these two approaches can be combined. For instance, we might think in terms of a cumulative process where technical progress, or factor accumulation, leads to increased exports, which gives rise to increased incomes which, in turn, have yet another positive effect on trade.

In this paper, we shall attempt to combine the two approaches by using the time-honored concept of “income terms of trade”. This concept can either be defined as the export volume multiplied by net barter terms of trade or as the value of exports divided by an import price index. Thus, the concept captures both volume and price effects. We argue that income terms of trade is a useful measure for demonstrating the important role of international trade in the growth process from 1970 to 1995 for groups of representative Asian and Western countries. Thereby, it can also be argued that we support the school stressing the importance of export-push development as opposed to inward-looking development (e.g. Krueger, 1978; Krueger et al., 1981).

Arguing that the concept of income terms of trade has not been used in fairly recent literature would be to go too far. For instance, Singer and Lutz (1994), Lutz (1994) and Ghirmay et al. (1999) have studied the volatility in terms of trade

and the possible detrimental effect on export growth of such volatility. However, one of our results is that the net barter terms of trade have been unusually stable during the 25 years studied. Therefore, we stress the importance of the long-run rather than the short-run development of the income terms of trade.

Our hypothesis is that the income terms of trade capture important aspects of the role of international trade in the growth process. First, we will establish that the income terms of trade of the fast-growing countries have shown an especially positive trend. To this end, we use a ten-country sample consisting of five fast-growing Asian economies (Hong Kong, Japan, Korea, Malaysia and Singapore) and five old industrial Western economies (Austria, France, Sweden, United Kingdom and United States).² Our analysis shows that in a cross-country sample, growth in income terms of trade is very strongly correlated with growth in per capita income.

We are primarily interested in long-run relationships and will therefore concentrate on trends in this paper. We will, however, also make some occasional remarks concerning short-run effects. In particular, we make the observation that the cyclical downturn that occurred in the first half of the 1990s, when several major economies were hit by recession and financial crisis, was not followed by any significant reduction in growth in trade. We argue that this is probably an important reason for the downturn not spreading into world-wide recession.

2. Income terms of trade: The NIE's and the rest

Income terms of trade (ITT) can be defined as

$$ITT = \frac{P_X Q_X}{P_M},$$

where P_X and P_M are the export and import price indices, respectively, and Q_X is the exports volume. This measure can be viewed as the product of two factors: export volume and net barter terms of trade.

The concept of income terms of trade takes both price and volume effects into account and gives a measure of a country's import capacity. As is

evident from the definition above, if trade were balanced, ITT would be equal to the import volume. Increases in ITT thus expand the country's capacity to import either consumption or capital goods and therefore, we would expect high growth rates in ITT to be associated with high GDP growth. In this sense, ITT can be viewed as a useful measure of "trade as an engine of growth".

High growth in exports *per se* could be expected to lead to falling net barter terms of trade (NBT), which would imply that a large portion of a country's growth would be "exported away" through falling terms of trade. However, if trade works as an "engine of growth", the development of ITT and growth in GDP will be closely correlated.

ITT has two basic components that determine its development: the development of NBT and the growth of the export volume. If NBT improve and the export volume is constant, ITT will also improve. In both cases, the country's import capacity grows and exports serve as an engine of growth.

An investigation into the empirical material from the last twenty-five years (from 1970 to 1995) reveals some interesting facts. First, there is a very strong connection between the growth of real income per capita and the growth of real income terms of trade. Table I reveals that the five newly industrialized economies (NIEs) in our sample, Hong Kong, Korea, Singapore, Malaysia and Japan, all had an average annual growth in real GDP per capita of 5–8 per cent, while growth in ITT was between 11–17 per cent. In comparison, the five slow-growing mature Western economies in our sample, Austria, France, Sweden, United Kingdom and United States, have had a GDP growth per capita of around 1.5–2 per cent a year and a yearly growth in ITT of between 4 and 6 per cent. Japan falls into a category in between the NIE's and the Western economies with a growth in GDP per capita slightly below 3 per cent and a growth in income terms of trade of 5.6 per cent, which suggests that there is a strong positive relationship between growth in GDP per capita and ITT. In fact, the correlation between these two growth rates is as high as 0.99!³

The strong connection between the development of ITT and GDP per capita is also shown by

Figures 1 and 2. Here, the two time series are expressed in U.S. dollars adjusted for purchasing power parity and shown as averages for the two country groups in our sample: Western and Asian economies.⁴ As appears from the figures, the pattern is very similar for ITT and GDP per capita; the trend-wise increase is substantially larger for the Asian economies compared with the Western economies.⁵ With regard to GDP per capita, the pattern shows clear evidence of convergence. However, it is also evident that while growth in GDP per capita continued to be weak in the Western economies in the early 1990s, income terms of trade grew rather rapidly. In general, there seems to have been a substantially higher growth in ITT for our country sample between 1985 and 1995 compared to the earlier time period. Most likely, this reflects an expansion of world trade encompassing more or less all economies.

If we compare the five Asian countries in our sample with the five old industrial countries, certain similarities and differences stand out clearly. With regard to growth in GDP per capita, the difference is clear and striking: On average, the per capita growth in GDP of the five Asian countries has been three times that of the five industrial Western countries (Table I). Japan has roughly doubled its per capita income from 1970 to 1995 (while experiencing stagnation in the 1990s), while the other Asian countries have trebled theirs (Malaysia and Singapore), or multiplied theirs by four (Hong Kong) or almost by six (Korea).

During the twenty-five years in question, the industrial countries have, on average, increased their per capita incomes with 50 per cent. This is roughly the increase found for the U.S., U.K. and France, while Sweden's performance has been weaker and Austria's has been the strongest, almost doubling its per capita income from 1970 to 1995. The difference between the Asian countries and the old industrial countries is therefore striking.

It is also interesting to study the development of NBT. Here, most of our countries have experienced a similar development (see Figures 3 and 4). After a fall in the early 1970s, basically due to the first oil price hike, NBT have remained fairly stable. The only exceptions in this respect are Japan, which experienced a more prolonged

TABLE I
Average annual growth in real income terms of trade (ITT) and real GDP per capita, percent

	1970-75		1975-80		1980-85		1985-90		1990-95		Whole period (1970-95)	
	ITT	GDP per capita	ITT	GDP per capita	ITT	GDP per capita	ITT	GDP per capita	ITT	GDP per capita	ITT	GDP per capita
Austria	5.74	3.55	6.67	3.36	4.57	1.28	6.44	2.53	3.50	1.17	5.38	2.38
France	0.95	0.67	4.09	2.68	2.72	1.05	6.92	2.65	5.27	0.67	4.97	1.96
Sweden	3.15	2.22	1.10	1.06	4.58	1.66	4.37	1.76	5.09	-0.48	3.66	1.24
U.K.	1.72	1.97	6.29	1.78	3.03	1.84	4.10	3.03	3.99	0.86	3.82	1.90
U.S.	4.13	1.12	2.69	2.08	2.27	1.68	10.19	1.84	8.91	1.29	5.64	1.60
Average Western	3.14	1.91	4.17	2.19	3.43	1.50	6.40	2.36	5.35	0.70	4.69	1.82
Hong Kong	4.49	5.13	16.18	8.85	10.75	3.99	17.00	6.74	13.63	3.78	12.41	5.68
Japan	4.52	3.04	3.56	3.44	7.74	2.68	7.48	4.13	4.96	1.13	5.65	2.88
Korea	22.32	7.77	18.41	7.05	10.65	6.53	15.57	9.09	14.53	6.52	16.30	7.39
Malaysia	3.90	5.38	17.11	7.52	6.49	2.47	13.54	3.94	16.41	6.20	11.49	5.10
Singapore	N.A.	7.63	15.75	6.24	5.61	4.44	16.45	6.24	8.71	6.38	12.15	6.19
Average Asia	8.81	5.79	14.20	6.62	8.25	4.02	14.01	6.01	11.65	4.80	11.60	5.45

Source: World Development Indicators (CD-Rom, World Bank, February 1997) and World Tables 1993 and 1995 (World Bank).

Note: The growth rates are based on figures that are reported in constant (1987) prices in domestic currency. Averages are calculated as simple unweighted average.

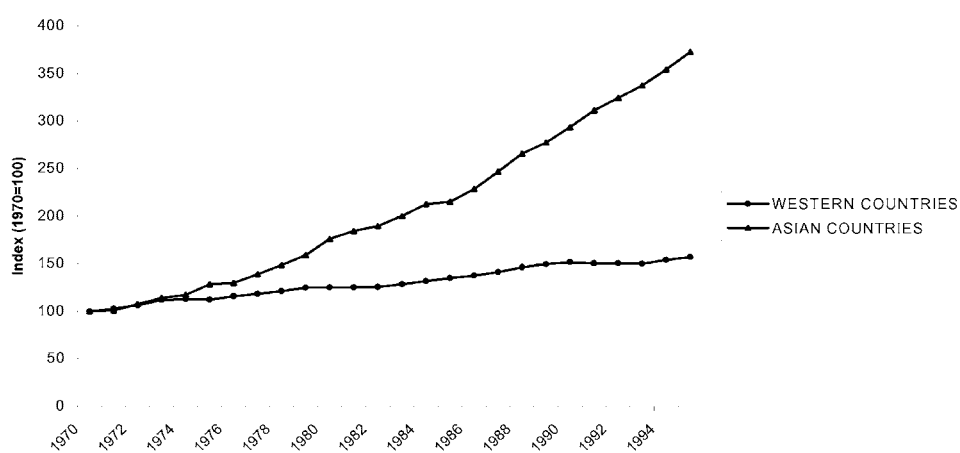


Figure 1. GDP per capita (averages).

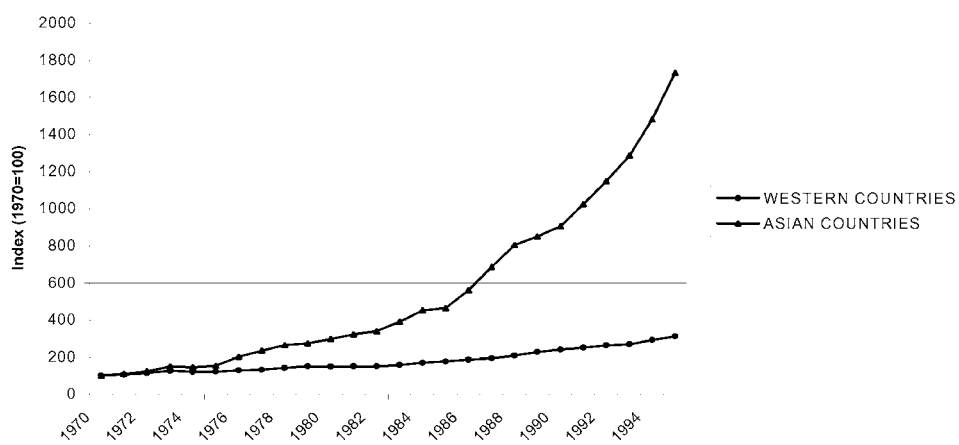


Figure 2. Income terms of trade (averages).

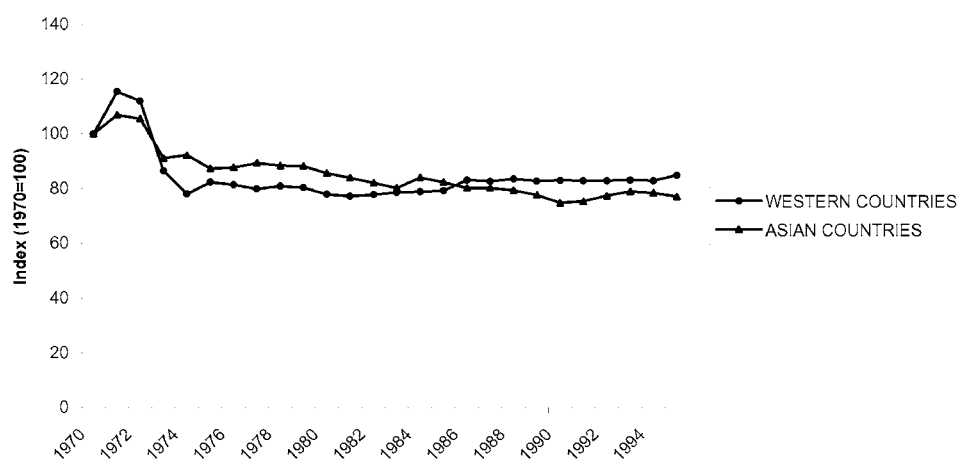


Figure 3. Net barter terms of trade (averages).

deterioration in terms of trade during the whole 1970s, and Hong Kong, which did not experience a fall in terms of trade in the early 1970s. It is thus an interesting picture that emerges: apart from some cyclical fluctuations primarily caused by changes in the oil price, the trend in NBT has been remarkably stable both for the Asian and Western economies.

Some earlier studies of the development of NBT have not been able to come up with clear-cut results for the long-run development (e.g. Cuddington and Urzua, 1989; Basu and McLeod, 1991; Barros and Amazonas, 1993). These results (or the absence of clear results in this respect) may be due to these having primarily been interested in the short-run volatility of NBT and also to the specific econometric techniques used.⁶ An econometric study with results resembling ours is Powell (1991), which finds a cointegrating parameter close to unity implying stationary terms of trade. However, our descriptive evidence reveals a strong downward shift in NBT around the oil crisis in the early 1970s, which holds for all countries included in the sample.

The similarities in the development of NBT for both the Asian and the Western countries in our sample have interesting implications. It suggests that the group of Asian NIE's has been able to expand its export volumes without an offsetting fall in its terms of trade. A possible interpretation is that these economies have tended to specialize in the production of goods with a fairly high income elasticity of demand and thus with a relatively favorable development with regard to world market prices. Another interpretation is that the Asian NIEs have managed to successively improve quality within sectors and thereby have

been able to avoid a deterioration of terms of trade despite large increases in export volumes.

What is striking and interesting, however, is the fact that there have been large changes in the development of income terms of trade. Starting with the industrial countries, these have all had a quite favorable development of their ITT, increasing by some fifty per cent on average from 1970 to the mid-1980s.⁷ Japan, on the other hand, roughly doubled its ITT during the same period. However, the real explosion occurred in the other four Asian countries, which increased their ITT by three to five hundred per cent, with Korea as an outlier with an even greater expansion of its ITT.

The 1970s is viewed as a rather dark period in the economic history since World War II. Growth was poor and inflation rampant. This was the time of stagflation and it was also the time when the debt crisis hit Latin America. We can, however, see that in terms of volume, world trade increased at quite a good pace, especially in the Asian countries studied.

The mid-1980s shows another turning point. In almost all the countries we study, ITT shows a rapid increase (see Figure 4). In the second half of the 1980s, world trade developed briskly and ITT of the Western and Asian countries in our sample grew fast.

In the 1990s, another change took place. The four smaller Asian countries continued to grow fast and they showed strong positive trends in both GDP per capita and their exports. Japan fell into stagnation as its growth in real GDP per capita fell from an average of 4.1 per cent per year in the previous period (1985–1990) to 1.1 per cent per year (Table I). Likewise, growth in ITT fell sharply.

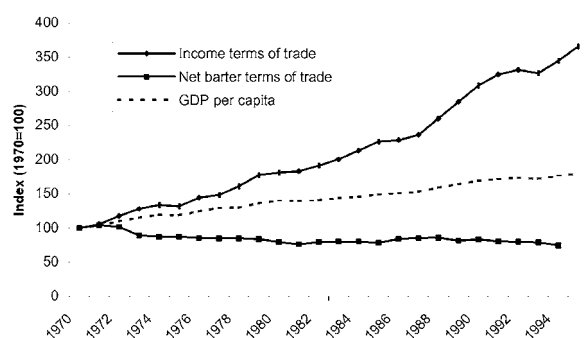


Figure 4a. Austria.

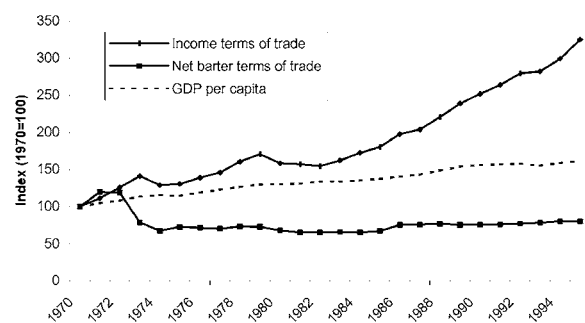


Figure 4b. France.

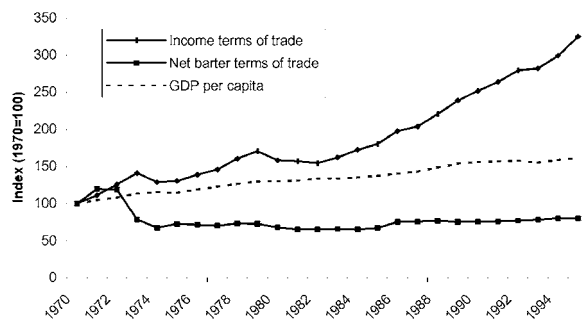


Figure 4c. Sweden.

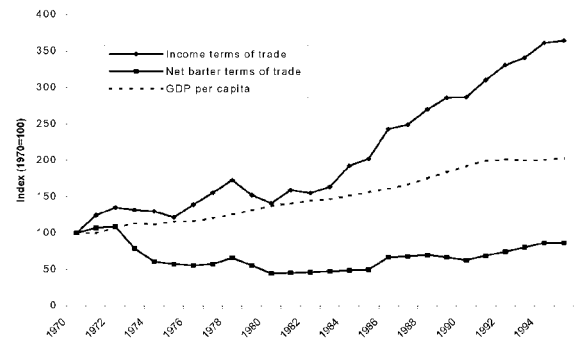


Figure 4g. Japan.

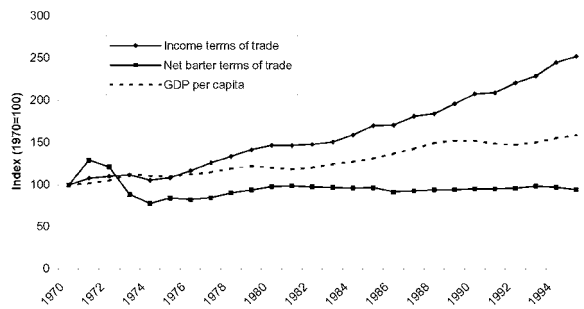


Figure 4d. United Kingdom.

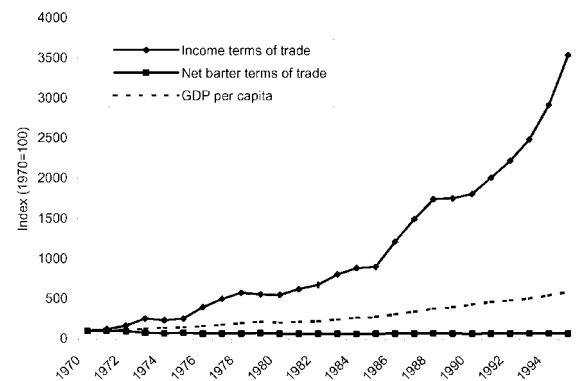


Figure 4h. Korea.

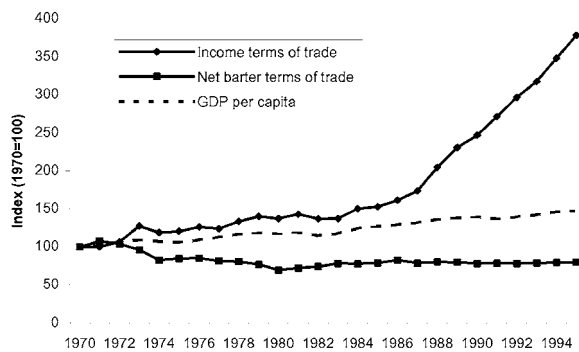


Figure 4e. United States.

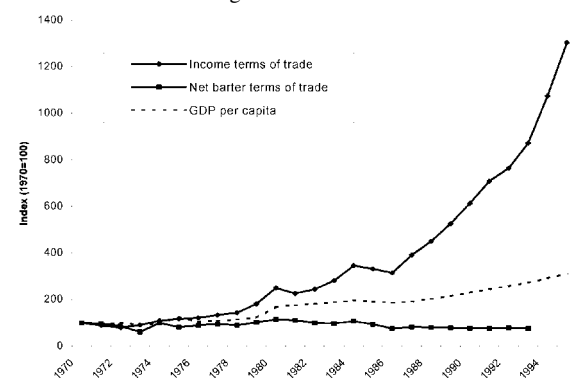


Figure 4i. Malaysia.

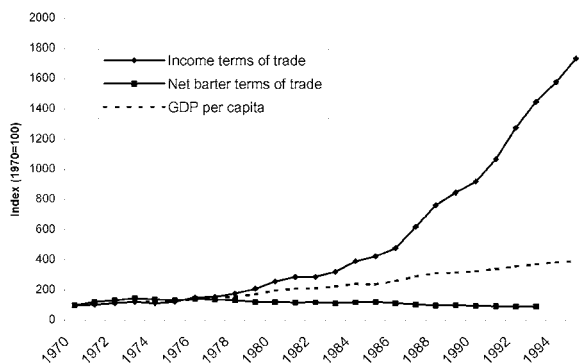


Figure 4f. Hong Kong.

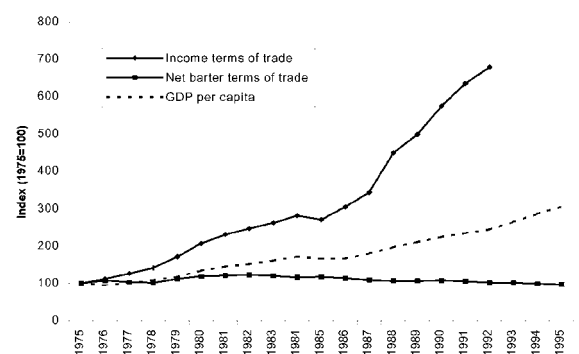


Figure 4j. Singapore.

3. Some Further Benchmarking

It may be useful to start by using some of the old established industrial countries as a benchmark for our comparisons. If taking the U.K. and Sweden as examples, we can see that both countries have had very slow growth both in their GDP per capita and their ITT. In fact, in PPP-adjusted U.S. dollars, GDP per capita even decreased in these two countries between 1970 and 1995. They are typical examples of countries where trade has not increased rapidly, which is demonstrated by the fact that ITT only increased slowly. ITT increased by 3.8 and 3.7 per cent, respectively, for the U.K. and Sweden, while the average growth in GDP per capita was 1.9 and 1.2 per cent; roughly one third to one fourth of the average Asian performance (Table I).

The three "mature" countries, Austria, France and the U.S., also show an interesting trend. Especially in the two latter countries, ITT seem to have increased faster between 1985 and 1995 than during the first fifteen years of our time span (1970–1985). Thus, the evidence suggests that trade acted as an important engine of growth towards the end of the time period.

In the mid-1980s, the change is most pronounced in the U.S., where growth in ITT doubled, without any significant impact on per capita growth of GDP, however. Much of the

increase in ITT can be explained by the development of the exchange rate. The U.S. dollar appreciated strongly against leading currencies such as the D-mark and the yen during the first half of the 1980s. Around 1985, this development was reversed and the dollar underwent a strong depreciation against major currencies, which naturally led to a strong export performance, reflected in the increasing ITT. The positive effects on GDP growth were not as marked as might have been expected, however.

Table II shows the ratio between the growth rates in ITT and GDP per capita. According to this table, income terms of trade have grown about twice as fast as GDP per capita in most of the five-year periods in our sample. However, the last period (1990–1995) shows a very different pattern. In the Western economies, ITT grew 7.6 times faster than GDP per capita on average, which reflects the fact that growth in GDP per capita was very low in the Western economies in this period (and in Japan, which shows a similar pattern in this respect), although ITT continued to grow fast.

Sweden constitutes somewhat of a special and extreme case in this development. In the early 1990s, GDP actually fell in Sweden due to a sharp business cycle downturn. At the same time, the Swedish currency underwent a substantial depreciation against all major currencies, which led to

TABLE II
Ratio between average annual growth in real income terms of trade (ITT) and real GDP per capita

	1970–75	1975–80	1980–85	1985–90	1990–95	Whole period (1970–95)
Austria	1.62	1.98	3.58	2.54	2.98	2.26
France	1.41	1.52	2.60	2.61	7.86	2.54
Sweden	1.42	1.04	2.76	3.58	-10.63	3.25
U.K.	0.87	3.53	1.65	1.36	4.66	2.02
U.S.	3.70	1.29	1.35	5.52	6.93	3.52
Average Western	1.65	1.90	2.29	2.87	7.64	2.63
Hong Kong	0.87	1.83	2.69	2.56	3.61	2.19
Japan	1.49	1.03	2.89	1.81	4.40	1.96
Korea	2.87	2.61	1.63	1.71	2.23	2.20
Malaysia	0.73	2.28	2.63	3.44	2.65	2.25
Singapore	N.A.	2.52	1.26	2.64	1.36	1.96
Average Asian	1.52	2.15	2.05	2.33	2.43	2.13

Source: See Table I.

Note: The ratio for Sweden becomes negative in the last time period because of negative growth in GDP.

a rather strong growth in export volumes and therefore, also in ITT.

Japan and the four tigers show a distinct and very clear pattern of continued growth in GDP per capita throughout the twenty-five years from 1970 to 1995. Growth in international trade and especially ITT has been even higher.

Japan had a steady income growth from 1970 to 1990 when the average annual growth rate in GDP per capita was above 2.5 per cent (Table I). In a way, the Japanese development makes Japan a case in between those of the Western economies, on the one hand, and the Asian NIEs, on the other. The ITT increased even faster, with the exception of the time period 1975–1980, when they grew at about the same rate. It seems quite clear that Japan's exports were growth inducing during this period. However, in the last time period, 1990–1995, basically the same phenomenon occurred as in the Western economies, i.e., growth in GDP per capita became fairly low although growth in ITT remained fairly high.

A similar, but even more pronounced, pattern basically applies for the four NIEs. Their growth rates in GDP per capita have been very high throughout the whole time period. However, average annual growth rates in ITT have been even higher, often between 15–20 per cent. Korea is the country with the highest average annual growth rates in GDP per capita as well as in ITT.⁸ The picture thus seems to be more or less the same in Japan and the four NIEs: economic growth appears to have been export-led and trade seems to have been an engine of growth.

For some of the Asian countries, there was somewhat of a setback in the early 1980s when ITT grew less rapidly. This was probably an effect

of the second oil crisis, which led to a slackening of export volumes in the wake of the economic crisis. From the mid of the 1980s, there was an extremely rapid development of exports, with growth rates in ITT of around 15 per cent per year. The ten years from 1985 to 1995 again emphasized the importance of trade as an engine of growth for the Asian economies. Even during the first half of the 1990s, growth in GDP per capita and ITT continued to be high for the Asian NIEs. Japan, however, underwent a drastic change in these years with a substantial fall in the growth of GDP and ITT.

Hence, an investigation into some simple facts both gives interesting insights into and raises important questions concerning the interrelations between growth and trade on the one hand and trade and growth on the other.

4. Trade expansion without falling terms of trade

A striking fact is the very close connection between growth in per capita incomes and ITT. In Figure 5, the yearly growth rates in GDP per capita and ITT are plotted in the same diagrams. As can be seen from these diagrams, the two growth rates follow each other to a great extent. Historical studies also show a strong correlation between improving ITT and growth in GDP per capita among the early fast-growing European countries (Södersten, 1959, 1991).

There is a natural link between growth in GDP and growth in ITT. *Ceteris paribus*, growth in exports will also lead to growth in GDP. But an assumption of "everything else equal" is far from natural in this context. The standard theory of

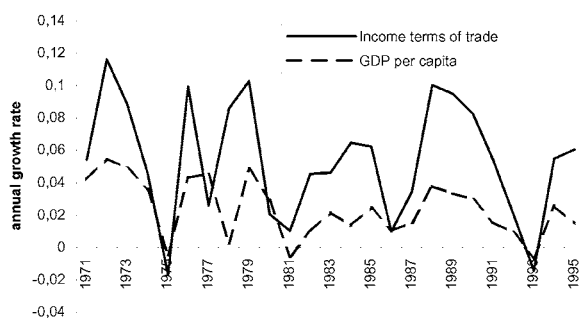


Figure 5a. Austria.

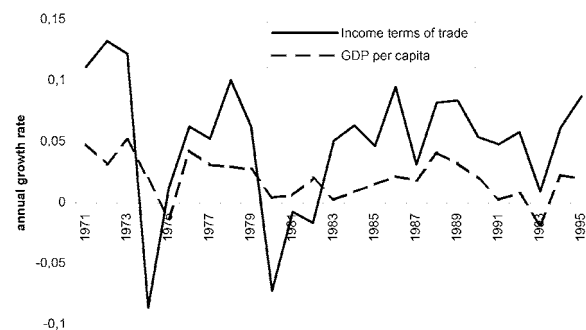


Figure 5b. France.

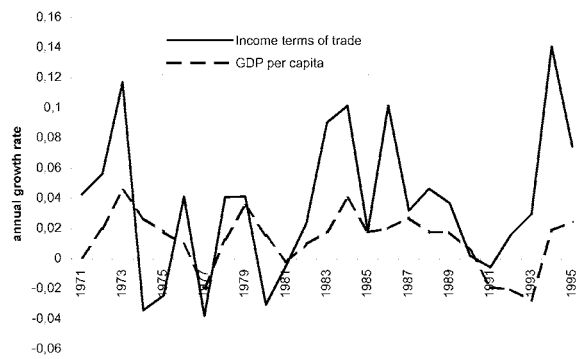


Figure 5c. Sweden.

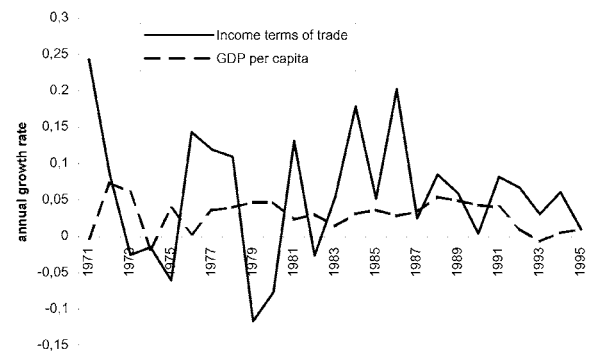


Figure 5g. Japan.

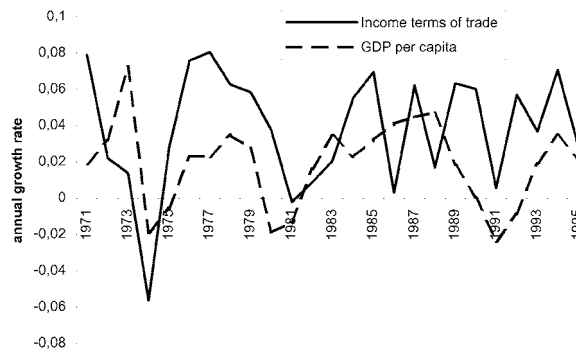


Figure 5d. United Kingdom.

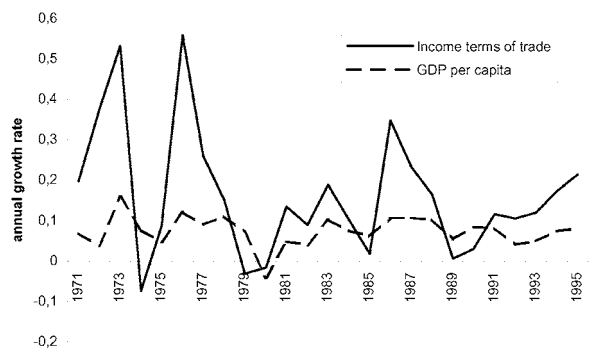


Figure 5h. Korea.

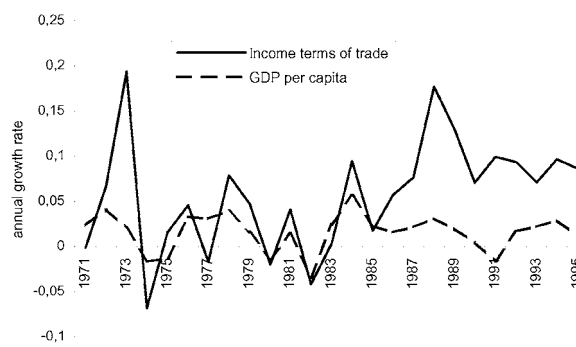


Figure 5e. United States.

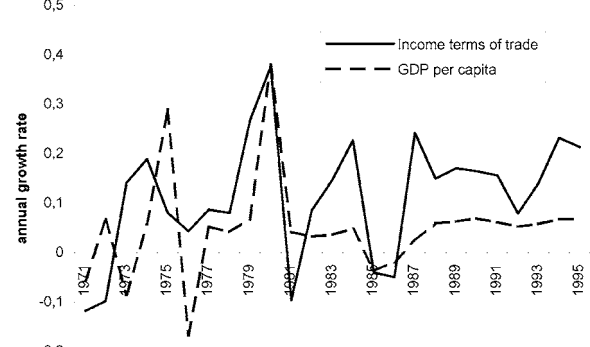


Figure 5i. Malaysia.

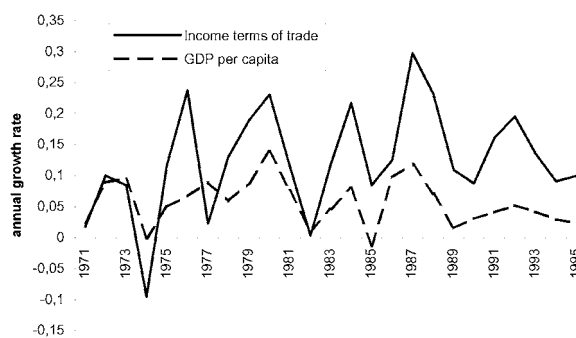


Figure 5f. United Kingdom.

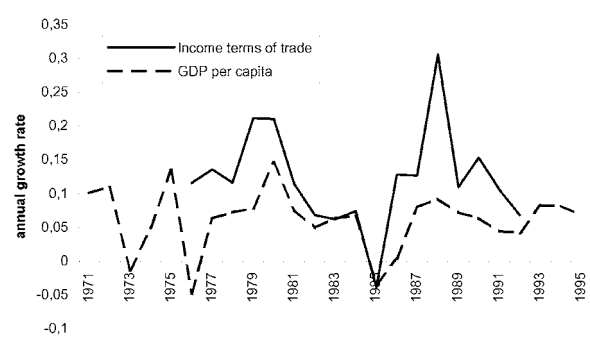


Figure 5j. Singapore.

growth and trade referred to earlier would lead us to expect falling NBT to be an effect of strong export expansion in terms of volume. An important result that we have established is that NBT have – after the oil price hike in the early 1970s that hit both the Western and Asian countries in a similar way – been stable for both groups of countries. Especially for the Asian countries in our sample, with their extremely strong growth in exports, we would have expected an offsetting decline in NBT.

One issue that has been discussed is to what extent growth in the East Asian NIEs can mainly be attributed to technical progress or factor accumulation. In particular, some researchers have argued that the fast growth during twenty-five years leading up to the early 1990s has primarily been driven by factor accumulation (Kim and Lau, 1994; Young, 1994, 1995). These researchers have found that only some 10–20 per cent of overall growth among the four tigers can be attributed to technical progress. The major sources of growth instead consist of an increase in the labor force and the accumulation of physical as well as human capital.

From our point of view, the main source of growth is not of crucial importance. Even with factor accumulation leading to an expansion of trade, we would expect a deterioration of terms of trade and thereby also a stagnating ITT (Rybczynski, 1955; Södersten, 1964). This, has apparently not been the case with the “Asian miracle”, however.

It is sometimes argued that world prices are given for firms in NIEs while innovators in the Western industrialized countries can set prices monopolistically. This may indeed be the case (cf. Van and Wan, 1997). However, on a broader scale, it seems that firms in the NIEs (or at least in the five Asian countries in our sample) have not been suffering by falling prices due to increased output.

What is then the explanation for the fact that trade seems to have been an engine of growth for the Asian countries throughout the whole period 1970–1995, despite the fact that such a course should have led to falling terms of trade in the long run? A both possible and likely explanation for this development is the increased globalization and the increased interdependence of markets that have followed in its wake. Increased integration

of product markets and an increased openness towards foreign direct investment have led to an increase in the extent to which firms located in different parts of the world are connected to each other in production networks of various kinds. This is reflected in a marked increase in world trade in intermediate goods (see, e.g., Hummels, Ishii and Yi, 1999). The increased interdependence is partly driven by international specialization within multinational firms and partly by outsourcing of activities to firms located abroad. In either case, this form of international specialization will have a very different effect on relative prices from that predicted by the traditional two-sector trade model.

One conclusion that can be drawn from studies showing that growth in the East Asian NIEs is mainly attributed to factor accumulation is that the superiority of Western technology seems to remain; i.e. that the distance between the technological frontiers seems to be more or less the same. This means that the OECD countries in general have been the leaders and innovators in producing new goods. The NIEs have instead been the imitators (cf. Van and Wan, 1997). This produces something of a puzzle: How were the Asian countries able to uphold their terms of trade in the face of such an enormous expansion of export volumes without introducing new goods on the market? That productivity growth may be consistent with constant terms of trade when growth results in new goods rather than increased volumes of existing goods is shown by Krugman (1989). This has been put forward as an argument for the apparent lack of changes in terms of trade between developed countries in the face of differences in productivity growth.⁹ However, the high growth rates in the Asian economies have not generally been generated by a fast pace of innovation and the introduction of new products on the market.

Understanding that the NIEs have all the time been producing for the markets of the advanced countries is central to our argument. The traditional import-substituting policies relied on tariffs, quantitative restrictions and similar obstacles to shield and protect domestic markets. The strength of the Asian NIE's is that they never adopted these types of policies but started to produce for the markets in the rich industrialized countries at an early stage. This meant that they had to apply

tough quality controls, efficient marketing strategies etc. and, thereby, they have been able to become integrated in production networks encompassing firms in the Western economies.

5. Implications for small and medium-size enterprises

The role of small and medium-size firms (SMEs) in the development process is a somewhat controversial issue. Can they really reach out to export markets? If so, under what conditions? Can they "do it alone" or do they need specific support programs to succeed? There are several studies supporting the view that the presence of SMEs is beneficial for the rapid export development in Asian countries such as Japan, Hong Kong and Korea, just to mention three countries from our sample (Chen, 1986; Steel and Webster, 1992; Berry, 1997; World Bank, 1997).

An early study is that of Watanabe (1980) who describes the case where American firms first used firms in Hong Kong to assemble digital watches. Hong Kong suppliers thereby learned to work according to new, more exacting standards and how to apply quality controls. This body of knowledge could then be used for further advances into other areas. Supervisors and workers thereby learnt to work under the more competitive conditions that exist in international markets. Then, they started to produce other products, such as radios and hence, the sub-contracting by American firms had important spillover effects into other areas.

Participation in international trade and attempts to penetrate advanced foreign markets also force the SMEs to live up to the high prevailing standards of quality. Such knowledge is not necessarily product specific. On the contrary, it is the handling of new modes and methods of production that is important. Once a SME in an NIE has learned how to use advanced methods of production in one area, it can relatively easily apply these more advanced methods of production in other fields.

It is here that the role of international trade becomes so important. In order to penetrate advanced foreign markets, firms have to live up to the tight tolerances and high quality requirements that consumers in the advanced countries also

have on imported goods. This is also borne out by econometric evidence in studies conducted at the firm level; exporting firms have been found to show higher productivity growth than non-exporting firms (e.g. Sjöholm, 1999).

Since our analysis is conducted at the macro level, it does not reveal detailed information about the performance of the SMEs in the countries of our study. Nevertheless, some important points pertinent to the issue of the role of the SMEs in the growth process appear. One basic point revealed by macro data is that international markets have worked well for the Asian countries in the sense that NBT have been stable in spite of rapid export expansion (except for a fall in connection with the oil crisis of the early 1970s). The presence and active involvement of the SMEs (as some of the earlier cited studies have shown) have contributed to this rapid export expansion and increase in ITT for the Asian countries. The SMEs' contribution to export growth can take several forms; the three most important ones being SMEs acting as subcontractors to larger exporters, SMEs working in clusters or SMEs being direct exporters.

The interesting policy question in this context is whether there is a need for support systems. Should the government or some government agencies create support systems for marketing and financial services? Do SMEs need government-funded support for long periods of time? This is a question addressed in depth in a volume edited by Levy et al. (1999). Our findings seem to point to a certain caution on this issue. For the countries in our sample – and they are not characterized by extensive government involvement in this area – international markets seem to have worked fairly well during the time period studied. Moreover, trade theory teaches us that market interventions almost always create economic rents, which may induce "rent-seeking" behavior. Economies where "rent-seeking" behavior is important are hardly ever successful. (Bhagwati and Srinivasan, 1980; Berry et al., 1999, pp. 221 et seq.; Krueger, 1974). Local politicians may favor some firms before others, but international markets do not. They work according to more objective criteria of consumers' choice. Therefore, we believe that any support schemes should be limited in time and have a clear final point.

6. Trends and cycles

We may pause here for a while to make two observations. The first is that it is important to distinguish between trend and cycle. We often speak about the “Asian miracle”. The rapid growth in these economies from the mid-1960s to the mid-1990s (except for Japan where the fast development stopped already in the early 1990s) is also – by any historical comparison – astounding. This observation concerns trend.

It is the case, however, that capitalist market economies are always prone to cyclical phenomena; busts and booms are essential features in any market economy. In order to understand the long-run development, it is important to focus on trends. However, it is not possible to disregard cycles, even for understanding long-run phenomena.

The first half of the 1970s was a period of rather weak growth for the Western economies, as was the first half of the 1990s. The Western countries showed a poor performance with regard to growth of GDP per capita, even though their export performance appears to have been quite good. The 1990s was the time when both several of the Western economies and Japan went into the “bubble economy”, with sharply falling asset prices (especially real estate), bad loans and crises in the banking systems.

The policy-makers in Japan have certainly made several policy mistakes centered on the inability to clean up and reform the Japanese banking and financial system. This has led to a rather long period of stagnation in the Japanese economy during the 1990s. The Japanese trading relationships have, however, remained fairly intact during these years of recession and exports have expanded, albeit at a slower pace than in the record years. In that sense, it can be argued that globalization has been the saving grace of the Japanese economy during the 1990s. Indeed, what seems to have prevented the world economy from falling into a far-reaching depression during this period is the steadily continued expansion of world trade. Most countries both in the West and the East showed a remarkably good export performance, clearly demonstrated by our data.

When interpreting the significance of this development, a comparison between the early

1930s and the early 1990s comes mind. During the depression in the 1930s, world trade collapsed as a result of increased protectionism. In the early 1990s, when several major economies fell into a slump, world trade instead continued to expand at an undiminished pace. It seems, therefore, as if “globalization” is the factor that has protected the world economy from a far-reaching depression. In this sense, “globalization” may actually have made the economies less vulnerable, contrary to what is most often argued.

7. Concluding remarks

Analyzing our empirical material, some findings stand out as striking. The Asian countries have had a fast growth in GDP per capita; average annual growth in the time period examined amounts to 5.5 per cent. This means that their per capita incomes nearly quadrupled between 1970 and 1995. This growth has, to a large extent, been export biased, as revealed by high growth rates in export volumes. Traditional growth and trade theory would have us think that such growth should lead to deteriorating NBT through saturation of foreign demand. This has, however, not been the case. Our investigation demonstrates that the income terms of trade of the Asian countries have improved in a remarkably steady fashion. Thus, these countries have been able to expand their export volumes without an offsetting fall in their terms of trade. This finding suggests that the Asian countries have either specialized in sectors with a relatively favorable development with regard to world market prices, or that they have managed to successively improve quality within sectors.

There are both similarities and differences between the Asian and the Western countries in our sample. Great changes have occurred in, for instance, the composition of exports in both Asian and Western countries. Still, exports have functioned as an engine of growth and productivity increases have not been “exported away” through falling NBT. This basically holds for all countries in our sample. To that extent, our results thus point in the same direction as those from the pioneering studies in the late 1970s of Balassa (1978), Krueger (1978, 1981) and other studies stressing the role of the “export push”.

Our study brings new light on these issues, however. In the first place, it demonstrates that export-led growth dominates the entire period from 1970 to 1995. There are also some striking differences between Asian and Western economies in our sample, which concern both rates and volumes. As is well known, the Western economies have had growth rates in GDP per capita that are substantially lower than the Asian economies during the time period under study. However, much like the Asian economies, ITT has grown about twice as fast as GDP per capita. To that extent, the similarities between the Asian and Western countries are quite strong. The difference that exists lies in the fact that the Western economies' growth rates with regard to both ITT and GDP per capita have been only about a third of those of the Asian economies. In fact, one conclusion that can be drawn from this paper is that the cross-country differences in growth rates in ITT are strongly correlated with differences in per capita income growth.

If we look specifically at Sweden some observations stand out. During the period studied the Swedish economic performance has not been very impressive. Sweden is in fact the country that has had the weakest performance in our sample both in terms of growth in GDP per capita and ITT. The reasons for this weak performance have been much debated. It is, however, most often attributed to domestic factors, such as a very rapid expansion of the government sector and a continuous increase in the level of taxation.

Foreign trade is very important for a small open economy like the Swedish. In order to foster exports several devaluations took place during the quarter of a century studied. As a consequence, the Swedish krona depreciated by around 40 per cent against major currencies such as the US dollar and the German mark. This series of devaluations did not have a significant effect on Swedish NBT, which remained more or less constant from the mid-1970s and onwards. Nor did it seem to have any substantial effect on Swedish export performance up until the early 1990s. This lack of effect on exports can basically be explained in terms of misdirected domestic macro policies (Södersten, 2000). What seems clear from the data, however, is that there was a significant increase in exports from the early 1990s and onwards. This develop-

ment is mainly explained by the large depreciation of the Swedish krona in the early 1990s in combination with Sweden joining the European Union. During this time, exports increased from 30 per cent to 46 per cent of Swedish GDP.

Underlying the large increase in Swedish exports during the 1990s was the strong performance by a few large Swedish multinational firms within the telecom and the pharmaceutical industries and the fairly strong performance of the traditional Swedish engineering industries. The large Swedish multinationals rely in their turn heavily on small and medium sized firms as subcontractors. The requirements faced by these SMEs are therefore to a large extent dependent on the demand conditions that prevail in the international markets. The Swedish case thus fits in well with the previous discussion about the role of SMEs. Our data show that Swedish ITT improved especially from 1990 to 1995 and data for later years show that exports grew even more markedly during the recovery of the Swedish economy that occurred during the latter half of 1990s.

Some points for further research do seem to come out of this study. One is the following question: What caused the strong development of income terms of trade and export capacities in the Asian economies during the time period examined? A deeper look into the factors that made this development possible seems to be a worthy objective for further research.

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Notes

¹ Many commentators who stress the rise in globalization in recent years simply have a distorted perspective; they do not make their comparisons with the nineteenth century development when international trade truly functioned as an engine of growth, but take the truncated history of the inter-war period as their starting point.

² To some extent, the choice of country sample has been guided by the requirement that data should be available from the same source. This has, for instance, prevented the inclusion of Taiwan.

³ The correlation coefficient between the two growth rates when divided into five-year annual averages is 0.8.

⁴ In principle, it would be preferable to use figures based on PPP-adjusted values in a common currency to make comparisons of GDP per capita growth between countries. However, because data on PPP-adjusted exchange rates are quite unreliable and it is harder to motivate the use of PPP-adjusted values of income terms of trade, our analysis is mainly based on figures expressed in local currencies.

⁵ Due to the lack of data on income terms of trade for Singapore in 1970–1974 and 1993–1995, the averages presented in Figure 2 do not include Singapore in those particular years.

⁶ These studies do not have a development perspective and the significance of the development of net barter terms of trade for ITT and economic growth – which is the central theme in our analysis – is not assessed.

⁷ The data used on ITT and GDP per capita (expressed in local currencies), net barter terms of trade (expressed as indices) and the PPP-adjusted exchange rate *vis-à-vis* the U.S. dollar can be made available by the authors upon request.

⁸ However, it should be noted that in PPP-adjusted U.S. dollars, the Korean growth rates in GDP per capita are much less impressive.

⁹ For an empirical analysis, see Lundbäck, 1998.

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