Unclassified **TD/TC(2005)2/ANN3/FINAL**

Organisation de Coopération et de Développement Economiques
Organisation for Economic Co-operation and Development

07-Apr-2005

English - Or. English

TRADE DIRECTORATE
TRADE COMMITTEE

TD/TC(2005)2/ANN3/FINAL
Unclassified

TRADE AND STRUCTURAL ADJUSTMENT

This document is one of three annexes to TD/TC(2005)2/CHAP1/FINAL and TD/TC(2005)2/CHAP2/FINAL, and contains sectoral case studies on motor vehicles, health services and international sourcing of IT and business process services.

Contact: Kenneth Heydon, Trade Directorate; Tel. 33-1-45248940; e-mail: kenneth.heydon@oecd.org; Jun Kazeki; Tel. 33-1-45248937; e-mail: jun.kazeki@oecd.org

JT00181941

Document complet disponible sur OLIS dans son format d'origine
Complete document available on OLIS in its original format

English - Or. English

TABLE OF CONTENTS

6. MOTOR VEHICLES

Key points emerging

1. The case studies examine the experiences of four countries in the motor vehicles sector. These include one developing country (South Africa), one country in transition from Communism to a market economy (Poland), and two industrialized countries (Australia and Japan). Despite the many differences between these countries, they share three common characteristics: (1) the automotive industry is important in all three countries, (2) each of them has recently faced a major adjustment challenge in this sector, and (3) the approaches that they took in meeting these challenges, and the results that they obtained, serve to illustrate the key points described below.

All countries face challenges and must adjust

2. One recurring point in the political economy of automotive trade is that adjustment challenges — sometimes rising to the level of crises — affect countries at all levels of economic development. The challenges examined in the case studies differ widely, depending on the nature of the economic and political systems of the countries: Japan has had to deal with the collapse of a "bubble economy," Poland with the transition from Communism to a market economy, and South Africa with the end of *apartheid* and re-entry into a global trading system from which it had been partially excluded. Australia has undertaken a major transformation from a highly protected, inward-looking industry policy. Two of these cases are somewhat extreme; not every country can be expected to undergo the type of radical changes that Poland and South Africa have seen in the past two decades. The Japanese case, however, serves to underline the point that challenges are recurring in this industry. It is all too easy for a successful firm, or a national industry, to develop a dangerous sense of complacency. The automotive industry is noted for its long lead times in the development of new models, thus allowing problems to arise slowly and requiring that solutions be pursued through sustained efforts over several years. This is what happened in the Japanese case, where Nissan and other firms overbuilt in response to the boom years of the 1980s. The miscalculations became apparent with the bursting of the bubble economy, but recognition of the problem did not lead to immediate, effective resolution.

3. The challenge that Japan faced, as well as the success achieved in Poland and South Africa, raise the question of long-term prospects for the "triad" producers of Western Europe, Japan, and North America. It is often observed that competitive industries will tend to migrate over time from more to less developed counties. While some analysts simply posit that this is a response to shifts in the costs of production (especially labour), others take a more pessimistic view. The social sciences are rife with theories suggesting that large and competitive economies are unlikely to retain their position indefinitely. This is the underlying message of Veblen's "leader handicap" theory,[1] which is presented in reverse form by Gerschenkron's assertions regarding the "advantages of backwardness,"[2] as well as Olson's concerns over the decay of competitiveness in a developed country that is beset by "distributional coalitions."[3] If these theories are universally valid, it would suggest that the automotive industries in "challenger" countries such as Poland and South Africa must ultimately overwhelm the established producers in the triad countries.

4. The Japanese case suggests that this pessimism may be unwarranted. While Nissan and other Japanese firms came under strong competitive challenge, and even verged on bankruptcy, these difficulties did not prove to be insuperable. Consider first the question of labour costs, where Japan has some of the highest rates in the world. High wages do increase the costs of production, but must be counterbalanced against the high productivity of Japanese workers. To assert that a country cannot pay high wages and remain competitive is reminiscent of the oft-heard contention that, according to physics, it is impossible for bumblebees to fly. The demonstrable facts that bumblebees do get aloft suggests that there is something wrong with the contention, and the same can be said for the fact that there are vibrant automotive industries in high-wage countries. Unlike labour-intensive industries, where an industrialized country may find it supremely difficult to remain competitive in all but the most high-end product lines, the prospects are not so bleak for a capital-intensive industry with massive economies of scale.

5. The Australian case, which is outside the “triad - challenger” configuration, nevertheless demonstrates a point common to all motor vehicle industries – one of the major challenges facing the industry is the large scale of investment that is likely to be required to enable automotive producers to meet more stringent environmental standards.

Trade protection is not the answer

6. Trade offers a means for industries to enhance their competitiveness both by access to high-quality, lower-cost inputs, and by taking advantage of greater economies of scale through export sales to large markets. In none of the cases presented here, however, did the country or firm rely upon new protection from imports in order to enhance its competitiveness or preserve the *status quo*. To the contrary, in three of the cases the countries undertook liberalization on an autonomous basis. In two of those cases, new and preferential access to foreign markets served to magnify the available opportunities.

7. The cases here offer a spectrum of experience. At one end is the Nissan case, where trade policy has not been a prime mover. To the contrary, it is ironic that Nissan’s problems became most acute *after* the quantitative restrictions in the U.S. and EU markets had expired. The Nissan Revival Plan called for many changes in the operations of the company itself, but was not predicated on any changes in the trade policies of Japan or its partners.

8. Trade policy was more important in the South African and (to a greater degree) the Polish cases, where preferential access to the markets of Europe and North America offered a further incentive for automotive producers to invest in export-oriented production. For both countries, the improved market access came in three stages: the lifting of sanctions, the extension of preferential access on a non-reciprocal basis, and the negotiation of regional trade arrangements (South Africa’s free trade agreements with the EU and the United States, and Poland’s accession to the EU). Open access to a triad market was especially important for Poland, where anticipated EU membership — and hence permanent, free access to the world’s largest automotive market — affected not only the magnitude but the nature of foreign investment. While some of assemblers began with simple operations at a small scale, primarily in order to “jump” the tariff wall for local sales, they later established much larger, more integrated operations in order to meet EU rules of origin.

Foreign investment brings more than capital

9. Foreign investment is significant not just for the capital or technology that it brings, but for changes in the outlook and practices of the firms or industries involved. This is especially important in an industry where the internal operations of firms, and their relationships with supplier networks, have undergone radical changes in recent decades. A country in which domestic automotive firms are isolated

from these trends may have fewer options to learn best practices in meeting the adjustment challenges that they will inevitably face.

10. This point is best illustrated by the Japanese case, where Nissan proved incapable of making the hard decisions necessary to reverse its decline. It was only in the alliance with Renault, which brought major changes in corporate culture and an innovative management style, that management was able to take the difficult steps necessary to cut costs and restore profitability. These cultural changes were much more significant than the infusion of cash Renault brought to the table.

11. Similar observations can be made in the South African and Polish cases, where the national automotive industries had once been constrained by the countries' semi-isolation from the global trade and investment system. In both cases, the few investments made by automotive producers from the triad economies were restricted. That changed with the collapse of Communism and the end of *apartheid*. The new and substantial investments in these two economies have brought not only new capital and advanced technologies, but also improved managerial practices. In the Australian case, trade policy has been an essential trigger for reform.

12. The gradual dismantling of high levels of protection for the Australian automotive industry has engendered a more competitive environment involving a much greater focus on innovation and customer service allowing the industry to offset the impact of a surge in vehicle imports through strong export growth. Trade liberalisation has, however, been accompanied by a number of key concomitant policies: the introduction of enterprise bargaining, which was instrumental in facilitating the uptake of just-in-time production methods; broad-based regulatory reform, which has led to the more efficient provision of infrastructure services, such as electricity and transport; and transitional budgetary support, which has encouraged new investment and innovation.

The good policy framework is crucial

13. Another key lesson emerging is that success in the automotive industry has developed in a conducive environment across a range of policies. We see this in the labour market and regulatory reforms in Australia. In Poland, the formation for the foreign investment was laid with the restoration of property rights and the abolition of state ownerships. And in South Africa, the automotive industry has benefited from the radical economic reforms that have been undertaken in the post-Apartheid era.

[1] Veblen (1915).
[2] Gerschenkron (1962).
[3] Olson (1982).

6.1 JAPAN

Introduction

14. The main focus of this case is on the restoration of competitiveness in an OECD country, as seen from the perspective of a single firm. That focus is appropriate for this oligopolistic industry in which a relatively small number of firms in the triad countries collectively account for the great majority of passenger car production. These producers are extraordinarily influential players in the global economy. The 2003 revenues of General Motors — the largest automotive firm — were $185.5 billion, an amount greater than the gross domestic products of all but 26 countries. The focus of this case is on Nissan. Although smaller than General Motors, this firm's 2003 revenues of $56.0 billion are larger than the GDP of Bangladesh (the world's 53rd economy).[4]

15. Nissan had flourished during the boom years of the 1980s, but in the next decade it stagnated. Market share and revenues fell, debt rose, and the company was on the verge of bankruptcy. Its own efforts at revival failed. The company's fortunes turned around after it entered into an alliance with Renault in 1999, and — under the leadership of Renault executives and its own managers — Nissan adopted a bold plan based on internal and external reforms. Within a year, Nissan was earning record profits.

16. The steps that Nissan took illustrate a larger trend in the global industry: Firms are simultaneously pursuing horizontal consolidation and vertical disaggregation. Along the horizontal axis, a series of mergers, acquisitions, and alliances are pulling once-separate firms into trans-regional families. Along the vertical axis, the auto assemblers are also reordering their relationships with the producers of parts. Producers that were once owned by assemblers, or operated in very close cooperation with them, are now being put at an arm's length. This latter process is especially dramatic in Japan, where the Nissan case exemplifies the challenges to the once-dominant *keiretsu* model of close inter-corporate relations.

The Economic and policy context

17. Although this case revolves around the experience of a single firm, its foreign partner, and allied suppliers, it cannot be viewed in isolation from larger developments in the Japanese economy and the global automotive industry. The challenges that Nissan faced can be traced in large part to a long-lasting, economy-wide recession, and the solutions that it pursued are not unique to this one firm. The recovery of this firm may also be attributed in some measure to broader economic developments, notably the declining value of the yen. It is nevertheless useful to examine in greater depth the ways that a firm responds to challenges at the micro level, treating the broader environment as exogenous.

The bubble economy

18. The Japanese economy had once appeared to be unstoppable, but the prosperity of the 1980s gave way to years of drift in the 1990s. Fuelled by the success of its export industries and the demands of its partners, Japan agreed in the 1980s to pursue an expansionary monetary and fiscal policy. The resulting growth in domestic demand, accompanied by a rapid rise in prices, could not be sustained indefinitely. By the early 1990s, that bubble had burst. The Japanese economy has since been marked by negative rates of inflation, extremely low interest rates, persistent downward pressure on prices, levels of unemployment that are high by Japanese standards, and uncertainty about the prospects for the future. The suppression of

domestic demand has complicated the efforts by Japanese producers to work their way out of these doldrums.

19. The bubble economy had stimulated excessive expansion in domestic capacity, especially in the automotive industry. Based on the optimistic assumption that Japan would enjoy global dominance for the foreseeable future, Nissan and the other firms increased capacity to a level that did not fit any reasonable projections for domestic demand.[5] The industry was not prepared for some factors that should have been predicted (*e.g.*, reduced purchasing by an aging population) and others that were not as easily foreseen (*e.g.*, a persistently strong yen and an unusually lengthy recession). Producers soon found that their plants could produce millions more units than they could sell at home or abroad. In the meantime, Japan's share of the market declined.[6]

20. The high cost of labour in Japan also complicated the recovery. As shown in Figure 1, the cost of hourly compensation for workers in Japanese manufacturing industries exceeded that of most other OECD countries (and is well above the levels found in developing countries). The data also show that in Japan, as in all other countries, wages are significantly higher in the motor vehicles industry than in other manufacturing sectors. It is nevertheless notable that Japanese labour costs are not the highest of all; wages are higher still in both the United States and Germany. Rigidities in the labour market extend, however, beyond the simple question of wages. The Japanese tradition of lifetime employment, coupled with a strong deference to seniority and a marked aversion to the closing of plants, have made it even more difficult for firms to take strong measures in response to their competitive challenges.

21. The slow economic recovery has nevertheless obliged Japanese firms to take steps that were once thought impossible. These include closing assembly plants, selling of shares and subsidiaries, pushing early retirement packages, and even laying off workers. Companies have also become much more open to partnerships with foreign competitors.

Foreign investment

22. The history of foreign investment in the Japanese automotive industry can be reduced to three periods. One is the pre-war era, when foreign firms established plants in Japan. Both Ford and General Motors did so in the 1920s, but were then eased out. (Nissan rented Ford's facility soon after the firm was established in 1933.). The second notable period was in the 1970s and 1980s, when Japanese producers invested abroad. They began to shift towards overseas production only after they were forced to contend with voluntary export restraints and other barriers. Japanese firms were reluctant investors in the United States, where they "were extremely concerned about higher wages, frequent strikes, the lower standard of workmanship, the lack of an established system of parts suppliers and the different legal system."[7] It was Nissan that took the first step, establishing a plant in Tennessee in 1980. Many of the later investments were joint ventures: Toyota-General Motors (1984), Mazda-Ford (1985), and Mitsubishi-Chrysler (1985). Japanese investments in Europe were similarly inspired by concerns over potential restrictions in the market.

23. The third period began when the bubble burst, and ailing Japanese firms found themselves in need of foreign capital and partnerships. Once this process began, it proceeded rapidly. Out of the original eleven Japanese automobile producers, just two — Toyota and Honda — remain wholly Japanese. The wave of consolidations has ensured that all others are now in either alliances or outright ownership, sometimes with other Japanese firms (Toyota acquired Hino and Daihatsu) but more often with European or American partners. In addition to the Renault-Nissan deal, foreign partners include General Motors (which has 12 percent share of Isuzu and 20 percent shares of Suzuki and Subaru), Ford (which has a controlling share of Mazda), and DaimlerChrysler (which has 25 percent share of Mitsubishi). Moreover, Nissan is not alone in accepting foreign management. In 1996 Mazda became the first major Japanese

corporation to be run by an outsider, when a Ford executive took charge. Mitsubishi was run by a Daimler-Chrysler officer. Most of these changes took place during the period of 1996-2000.[8]

24. The Nissan-Renault alliance of 1999 was thus part of a larger trend. Renault bought a 36.8 percent equity stake in Nissan with a $5.4 billion cash infusion, but the two companies did not formally merge. By teaming with Renault, Nissan joined the fifth-largest of the world's six major alliances. Together with Samsung of Korea and Dacia of Romania, this group accounted in 2002 for 9.0 percent of global production of passenger cars and 5.7 percent of light commercial vehicles.[9] The two firms had complementary needs. Renault needed a foreign partner just as much as Nissan did; after failing to merge with Volvo and concluding that an American partner would be too large, the firm looked to Asia. Renault and Nissan were roughly equal in size — Nissan's worldwide sales in 2000 were 11.1 percent above those of Renault in 2000[10] — and generally not in competition with one another. Whereas Renault's sales in 2000 were concentrated 34.2 percent in France and less than 0.1 percent in Japan, Nissan's sales were 28.6 percent in Japan and 1.4 percent in France.[11]

Development and execution of the Nissan Revival Plan

25. Once a leader both in the Japanese and global markets, Nissan had fallen on hard times. Its share of the domestic market fell from 34 percent in 1974 to less than 19 percent in 1999; between 1991 and 1999, its share of the global market had declined from 6.6 to 4.9 percent.[12] Nissan's procurement and production methods were inefficient; purchasing costs at Nissan were 15-25 percent higher than they were at Renault.[13] The company carried a high load of debt, and was rumoured to be on the verge of bankruptcy. The Nissan Revival Plan (NRP) came just in time to pull the company back from the brink. Developed by Nissan veterans under the guidance of Renault executives, involved radical changes in Nissan's internal and external practices.

Carlos Ghosn's cross-cultural management practices

26. The key person in this story is Carlos Ghosn. Originally appointed Nissan's chief operating officer in 1999, he became president the next year and CEO the year after that. Ghosn has a cosmopolitan background that well suited his cross-cultural approach to business: Lebanese by heritage, Brazilian by birth, educated in France, and with corporate experience in several countries. He had earlier led revival plans at the ailing divisions of Michelin South America, Michelin North America, and Renault itself. In those prior ventures Ghosn developed a management style based upon asking questions directly of employees at all levels, gathering information on the nature of a firm's troubles, and creating teams of diverse personnel to devise detailed proposals. That approach produced the NRP in 1999. Ghosn described the philosophy behind the multidisciplinary teams in the following terms:

> Executives in a company rarely reach across boundaries. Typically, engineers prefer solving problems with other engineers, salespeople like to work with fellow salespeople, and Americans feel more comfortable with other Americans. The trouble is that people working in functional or regional teams tend not to ask themselves as many hard questions as they should. By contrast, working together in cross-functional teams helps managers to think in new ways and challenge existing practices. The teams also provide a mechanism for explaining the necessity for change and for projecting difficult messages across the entire company.[14]

27. Even before they produced the NRP, teams of Nissan and Renault employees had begun working this way. Ghosn established a series of cross-company teams (CCTs) during the time when the two firms were still exploring the possibilities of an alliance. Eleven such CCTs were made up of members from similar functional areas, "charged with finding possible synergies between the companies and exploring specifically how these might work if an alliance was formed."[15] By the time that the two companies

reached their deal in March, 1999 they were already accustomed to dealing with one another at the working level.

28. The CCTs then gave way to cross-functional teams (CFTs) that Ghosn established within Nissan. Consisting primarily of middle managers, the CFTs were told to identify problems and make recommendations to Ghosn and the Nissan executive committee. Each CFT had two leaders who also served on the executive committee, and a “pilot” whose job was to drive the agenda at meetings. Underneath these CFTs were a series of subteams devoted to more specific issues. The guidelines for the CFTs provided that “[n]othing is off limits to discuss and explore,” with teams being encouraged to “come up with ambitious yet realistic ideas,” but also clarified that “[t]eams have no decision-making power … [and] can only make recommendations to the executive committee.”[16]

The NRP’s internal and external changes

29. The input from the CFTs led to the NRP three months later. This unusually aggressive plan was based on an effort to get “lean,” but at a cost. This three-year plan set a series of specific objectives, such as reducing operating costs by 1 trillion yen, cutting the number of parts and materials suppliers in half, reducing the global headcount by 21,000 (including cuts of more than 16,000 in Japan), slashing net debt in half, and so forth. Meeting these objectives would mean changing the way that Nissan conducted business with itself and with its erstwhile *keiretsu* partners.

30. The internal changes came first. Ghosn’s goal was to “allo[w] the company room to develop a new corporate culture that built on the best elements of Japan’s national culture.”[17] He attacked the “culture of blame” at Nissan, where “[i]f the company did poorly, it was always someone else’s fault.”[18] Nissan was saddled by the costs and rigidities associated with lifetime employment, a reward system that prized seniority, and lavish expense accounts for executives. While it had taken some painful steps on its own, including a first-ever closure of a plant in Japan, Nissan’s own revival plans in the 1990s had all failed. These plans “were never followed company wide and often were changed shortly after announcement, when politics and tradition got in the way.”[19] It may indeed have been necessary to bring in an outsider to solve this problem.

31. Under the NRP, Nissan replaced the established decision-making structure with one that encouraged innovative thinking and gave more authority to middle management. The CFTs were emblematic of the changes in Nissan’s corporate culture. According to one Nissan official, “At old Nissan it would have been unthinkable for a small group of middle managers to come up with a plan for the company’s future organization or a drastic re-examination of our human resources practices without spending a lot of time building consensus.”[20] The old approach would have produced conservative proposals. At the same time, the new management was careful to ensure that the partners did not lose face. By adopting English as the working language of the alliance, for example, they ensured that both the Japanese and the French executives had to work in a second language and thus “put both parties on an equal footing.”[21] This reform was complemented by the adoption of an advancement and compensation policy based on performance rather than seniority.

32. Externally, Nissan brought an end to *keiretsu* dominance in procurement. A competitive bidding process was now used for orders that had once been placed with *keiretsu* companies almost automatically. Nearly one-third of parts and supplies became “globally integrated sourcing parts,” allowing central sourcing and — working jointly with Renault — improving the firm’s ability to obtain price discounts for volume purchases. This meant ending some relationships that had been in place for decades. For example, the firm reduced the number of steel providers from five to three, and made a significant reduction in the amount of steel that it purchased from one long-term supplier with which it had a close relationship. Nissan had invested about USD 4 billion in the stock of keiretsu partners, a practice that locked up capital without

ensuring any real control over the partner. Ghosn "directed that Nissan consider selling its stake in all but four critical companies and put the proceeds to more productive use."[22]

33. Another external reform came in cooperative ventures with Renault; the partners reduced costs cooperated in joint purchasing arrangements, shared production at plants in Mexico and Brazil, joint distributorships, development of the Renault-Nissan Information Services to integrate many aspects of management and control, and took some first steps towards joint research and development (starting with fuel cell technologies).[23]

The NRP's results

34. The impact of the NRP was immediate and dramatic. The number of employees was reduced by 9.6 percent in the first year of what was intended to be a three-year programme, and while capacity utilization in Japan made an initial dip from 53.0 to 51.1 percent it had risen to 75.7 percent in the first half of FY2001. Nissan also cut the number of parts suppliers by 29.3 percent that first year, and made a 29.5 percent cut in its net automotive debt. The result was a turnaround from a $5.7 billion net loss to a $2.8 billion net profit, the highest in Nissan's history, in just one year.[24] The NRP was ended after just two years, allowing Nissan to move forward with a new, three-year plan called "Nissan 180." Taking effect in Fiscal Year 2002, the new plan contemplated one million more units sold, an 8 percent operating margin, and zero net automotive debt. It is too early to say whether the new plan will be equally successful, but the very fact that it could be launched speaks volumes about the achievements of the NRP.

Conclusions and lessons

35. This case offers three important lessons. The first concerns what did *not* happen: At no time did trade policy *per se* play any part in these events. Trade was not a part of the problem: Nissan's problems came at a time when it enjoyed very open access to other triad markets, and the voluntary restraint arrangements of past decades were no longer a factor. Japan's own recession limited the demand for all cars, both foreign and domestic, in the local market. Nor were trade instruments part of the solution: Nissan did not request, and did not receive, any relief from import competition. More broadly, it did not seek any other special treatment from government. The reforms were wholly in the operations of the two involved companies.

36. The second observation concerns the nature of the challenges facing a "mature" producer. It is sometimes assumed that there is a natural progression by which countries with dominant industries will inevitably, if gradually, be replaced by challengers. The migration of competitiveness may be attributed to a variety of causes, including lower wages in the challenger countries and rigidities in the "mature" country. If this process were inescapable and universal, the only real objective for companies such as Nissan would be to relocate their production, or even to get out of the business altogether, with the least disruption possible. To the contrary, this case demonstrates that decline is not irreversible. Nissan was indeed subject to difficulties that are common to companies in decline, including high labour costs and overcapacity, but it was able to undertake the needed reforms. Some of those reforms shifted burdens outside of the company — especially the reordering of relationships with *keiretsu* partners — but others required such painful steps as layoffs and plant closings.

37. This leads to the third point, which concerns the importance of both national and corporate culture. In Nissan's case, cultural norms had inhibited the ability of the company to address its problems effectively; serious changes could not be undertaken until the corporate culture was radically changed. This point speaks to a continuing debate over the impact of cultural norms on corporate behaviour. One school of thought stresses the "the enduring influence of national structures within the home states of world's leading corporations," such that these distinctive characteristics "account for the striking diversity in the

character of core operations undertaken by those corporations."[25] Japanese corporate culture has long been seen in a positive light, stressing the fact that networks are "built upon relationships of trust, the reciprocal exchange of information, technology and even management, and expectations of long-term endurance."[26] Those same characteristics can take on a negative character, however, when fundamental challenges are faced and major changes are needed. This is precisely what happened after the bubble burst for the Japanese economy. The same cultural norms of harmony, stability, and respect for hierarchy that had helped to build Nissan and other Japanese multinationals in the good years may have impeded reforms in the bad years. The case offers an example of how foreign partnerships can bring more than just increased capital and new technology. By shaking up a sedentary corporate culture, the Nissan-Renault alliance allowed a company in danger of extinction to revitalize itself.

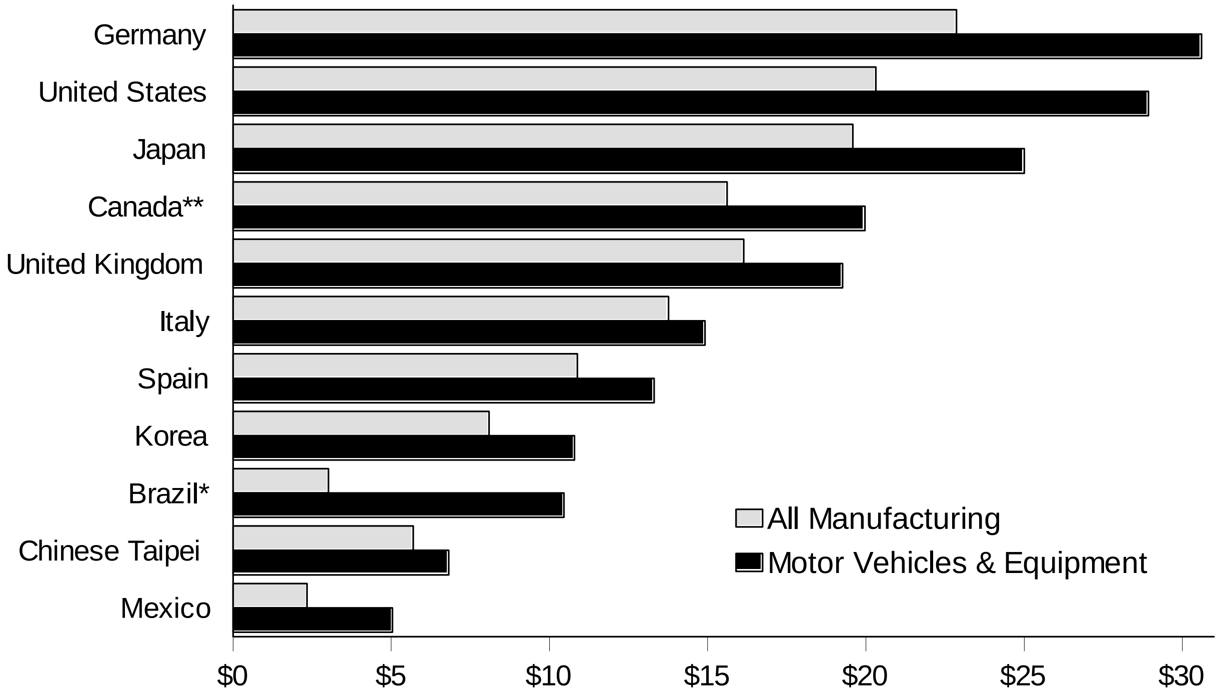
---

[4] Sales data for General Motors and Nissan are from Forbes.com; GDP data are from the World Bank.
[5] Smitka, page 2.
[6] The Japanese share of motor vehicle exports fell from 23.53 percent in 1994 to 16.90 percent in 2002. The country's share of global imports also fell, due to contraction in domestic demand. Japan went from a 3.03 percent share of global imports in 1994 to a 1.58 percent share in 2002. (Calculated from WITS data)
[7] Satake (2000), page 5
[8] See the summary table in Smitka, page 23. Note that Smitka defines "control" to consist of more than one-third, rather than more than one-half, of another firm.
[9] See Tables in Part I of this report.
[10] Calculated from Yoshino and Fagan (2003).
[11] Calculated from *ibid*.
[12] Magee (2003), page 44.
[13] Ghosn (2002), page 4.
[14] Ghosn (2002), page 7.
[15] Magee (2003), page 38.
[16] Magee (2003), page 72.
[17] Ghosn (2002), page 4.
[18] Ghosn (2002), page 6.
[19] Magee (2003), page 100.
[20] Yoshino and Egawa (2003), page 4.
[21] An observer quoted in Yoshino and Fagan (2003), page 15.
[22] Quoted in Yoshino and Egawa (2003), page 6.
[23] See Yoshino and Fagan (2003).
[24] All data in this paragraph summarized and calculated from Ghosn (2002), page 10.
[25] Doremus, Keller, Pauly and Reich (1998), page 3.
[26] *Ibid*., page 45.

STATISTICAL APPENDIX

Figure 1: Wages in Selected Countries' Motor Vehicles Industry

Hourly Compensation for Production Workers in 2001, in U.S. Dollars



Source: Adapted from U.S. Department of Labor data.
* : 2000 data. ** : 1999 data.

6.2 POLAND

Introduction

38. The Polish motor vehicles case offers an illustration of a country making a successful transition from a state-directed to a market-oriented economy. During the transition period between the collapse of Communism and the accession of Poland to the European Union, the country underwent dramatic changes in its economic and political systems. The transition for the automotive sector was not as swift, being pursued in stages, but was no less impressive. A generation ago, Poland was an inefficient producer of vehicles that were not competitive in foreign markets. Following the privatization of state-owned facilities, significant foreign investments in the production of vehicles and parts, the phased liberalization of a previously protected sector, and the adoption of European Union trade and competition rules, the Polish motor vehicles sector has greatly increased the quantity and quality of its output and is effectively competing in the European market.

Challenges and reforms in the Polish environment

39. Poland operated under Communist economic policy from 1947 to 1990. It was not a wholly autarkic economy during that period, nor was its trade confined to the Soviet Union and other members of the Council of Mutual Economic Assistance. Poland had joined the General Agreement on Tariffs and Trade in 1967, and traded with both Western Europe and North America. Together with Yugoslavia, for example, it was one of only two Communist countries that enjoyed most-favoured-nation access to the U.S. market for most of the Cold War period.[27] Trade nevertheless remained a monopoly of the state throughout this period, and industrial production was under state control as well.

40. The country adopted a series of economic and political reforms after the last Communist government was replaced. These internal developments were complemented at the international level. Poland acceded to the OECD in 1996, joined the North Atlantic Treaty Organization in 1999, and — most significant of all — became a full member of the European Union in 2004. In retrospect, that sequence of accomplishments may sound like a rapid transition. The process was quite difficult, however, especially in the early years.

Economic and political reform

41. At the start of the reform period, Poland "suffered from all the typical deficiencies of central planning: it had deeply distorted structures, including prices, pervasive shortages, massive misallocation of resources and state enterprises lacked inventiveness."[28] Added to these problems were price increases that verged on hyperinflation, lack of credibility in previous government reform programmes, and a sense of demoralization among managers and workers. Launched at the start of 1990, the stabilization package became known as "shock therapy." The aim of this programme was to establish a foundation for a market economy while also reducing macroeconomic instability. It entailed the freeing of prices, elimination of rationing for goods and foreign exchange, internal convertibility for the *zloty* (together with an upfront devaluation of 50 percent), termination of many subsidies and tax concessions for state enterprises, and fiscal discipline. The package was also supported by financial assistance from outside in the form of a special stabilization fund. While the initial results were painful and chaotic, including high rates of

unemployment, it later became apparent that “the Polish recession was the mildest among all transition economies.”[29]

42. Among the first steps taken by the reformers was abolition of the state monopoly over the conduct of foreign trade and the introduction of *zloty* convertibility. Once those key steps were taken, trade became an important engine of growth and progress for the economy.

Attractiveness to foreign investors

43. The most important step in the reform of the Polish economy was fundamental: the restoration of private ownership of property. This was achieved through the privatization of state-owned enterprises (SOEs), the abolition of privileges enjoyed by SOEs, tax and trade reforms, and other measures that permitted the establishment and profitable operation of private firms. The automotive industry was among the first to be privatized.

44. Privatising the existing automotive industry was much less ambitious than the attraction of new investment in this sector. In order to bring in new investment, Poland first had to get past the initial question that automotive producers face in each market: Trade or invest? Trading is a low-risk undertaking, in which the producer need only to overcome the trade barriers that the country imposes to foreign providers. In order to have the confidence to invest in production, the prospective foreign investor must have greater confidence that in a country’s business environment. And even if the country should choose to invest, the question still arises as to whether it will do so in a limited attempt to increase share in that market or will make a more commitment to export-oriented production.

45. Poland was ultimately successful in its efforts to attract substantial foreign investment in its automotive industry. It had a few advantages in this campaign. First, Poland is the largest economy in Eastern Europe. That point alone, however, could lead prospective investors to make “tariff-jumping” investments that are aimed at servicing the local market alone. Prospective investors in export-oriented automotive production were attracted by two additional factors. One was the existing stock of industrial workers, offering a pool of trainable workers available at wages well below the Western European average. Another was Poland’s relationship with the European Union, which — as described in a later section — first offered preferential market access, and then moved towards Poland’s accession to the EU. Accession to the EU became a key part of Poland’s trade and investment policy from the start of the reform period, precisely because policymakers knew about the experience of other relatively low-wage countries that had acceded to the EU in earlier waves. Greece and the Iberian countries enjoyed surges of investment from the established EU members. Poland hoped for, and ultimately received, a similar boost.[30]

Characteristics of Poland’s motor vehicles industry

46. Poland is now a notable, though not especially large, player in the global automotive industry. It produced 285,372 passenger cars in 2003. This put the country in 21st place, after South Africa and before Sweden.[31] As of 2002, the chief producers in Poland were Fiat (164,849 passenger cars and 19,624 light commercial vehicles) and Opel (97,669 cars).[32] In addition, in 2002 Poland produced 828 heavy truck (by Man-Star) and 885 buses and coaches (650 by Volvo and 235 by Man-Star).[33] In addition, the country has a large and diverse industry producing automotive parts and accessories. For example, Delphi Automotive Systems (DAS) has been in Poland since 1995, and currently operates six plants as well as a research and development centre. The DAS plants in Poland produce a wide range of products — radiators, ignition coils, shock absorbers, steering rods, etc. — which it supplies to such diverse assemblers as Citroen, DaimlerChrysler, and Toyota.[34] The investments in the parts and vehicles industries have established a virtuous circle of growth, much like chicken-and-egg relationship: The presence of the parts producers

makes auto assemblers more interested in Polish investments, and those new assembly operations, in turn, expand the market for parts and accessories.

47. Both in investment and in trade, the Polish industry is highly internationalized. Foreign firms had invested $3.6 billion in Poland's automotive sector by 1998;[35] six years later, that figure has nearly doubled. As shown in Table 1, these investments include $4.1 billion in automobiles, and $3.0 billion in original equipment. Those investments are less attracted by the prospect of sales in Poland, large as that country's internal market may be, than by the opportunity to export. Poland's market size is somewhat diminished by the comparatively low level of domestic demand. Per capita ownership of passenger cars is at about one-third the level of Western European countries, and Poles tend to hold onto their vehicles for much longer periods.

48. Exports are vital for the Polish industry. Between 1994 and 2002, Poland's share of global motor vehicle exports nearly doubled (from 0.27 to 0.50 percent).[36] During that same period, the country's share of global exports of motor vehicle parts increased even more impressively, from 0.15 to 1.07 percent.[37] Export markets account for nearly all of the growth in production of automotive parts and accessories, as shown in Figure 1. Domestic consumption, which can be measured as local production minus net exports, has been at more or less the same level throughout 1999-2004. By contrast, exports have increased steadily, and the pace of local production has increased in tandem with exports.

Foreign investment in the Polish automotive industry

49. "A common feature in Central Europe," according to one analysis, is that new producers "replace — more precisely restructure and revitalize — formerly state owned firms."[38] That was generally the experience for Poland, but foreign investors in the automotive industry had varying degrees of experience with Polish partners.

50. Poland's oldest and largest relationship with a foreign producer precedes not only the overthrow of Communism, but even the establishment of Communism in the first place. Fiat's presence in Poland dates back to the 1920s, when it established Polski Fiat with the intention of establishing an assembly plant. Those plans were scuttled by the Great Depression and then the Second World War, but the Fiat license was renewed in 1948. Actual production of Fiat-designed vehicles did not begin until 1967, however, in the Fabryka Samochodow Osobowyh (FSO) facility. The relationship deepened with the creation of a research centre in 1972 and the production of new models in 1971 and 1973. Fiat and Poland collaborated in production plans right through the transition from a state-planned to a market economy, with production of the Cinquecento being planned just before the transition began (1987) and producing vehicles just afterwards (1991).[39] Fiat eventually acquired its partner, which it renamed Fiat Auto Poland. After the transition, Fiat found it profitable to locate all of its production of small cars — both the Cinquecento and its successor, the Seicento — in Poland.

51. Other foreign producers operating in Poland have used a variety of investment methods. Daewoo entered the Polish market through the privatization policy, having acquired controlling shares in two SOEs in 1995-1996. General Motors lost out to Daewoo on one of these deals, and opted instead for a green-field investment. For its part, Volkswagen began its Polish operations as a joint venture with FSR Tarpan in 1993. The Opel Polska factory in Gliwice, which was opened in 1998, is especially large. It currently produces 120,000 cars per year and will eventually produce 150,000.[40]

Poland as an integrated peripheral market

52. If foreign investment has always been a factor in the Polish industry, large-scale exports to the European Union are a more recent development. Poland and other Eastern European producers adhere to

what has been called the "integrated peripheral market" (IPM) strategy of automotive development. This is the same approach taken in past decades by Spain (when it was still on the periphery of the European Union) and Mexico (on the periphery of North America), both of which managed to become integral parts of their respective regions.

53. "The IPMs tend to specialize in the production of products for which they have a comparative advantage," according to one cross-national study, but will eventually "be totally integrated into their respective regional production/consumption systems."[41] That has been the experience for Poland, where automotive parts such as radiators and shock absorbers provided the basis for an expanding range of domestically produced goods that are incorporated by assemblers in export-bound vehicles. Poland's automotive industry has thus evolved in a transition from simple assembly to integrated production. Assembly operations based on the importation of completely knocked down (CKD) kits and integrated production are best seen as the end points along a spectrum, rather than diametrically opposed alternatives. It is possible for an assembler to become increasingly ambitious in the extent of its local sourcing, a process that may be affected by the rising capabilities of local labour, the expansion of local suppliers, and government policy. In Poland's case, accession to the European Union is a supremely important catalyst in this process.

54. To cite one example, Volkswagen began operation in Poland by reassembling CKD kits at a plant in Poznan. The reassembly was so simple that it reportedly could be done in less than an hour, but this was sufficient to avoid prohibitive tariffs.[42] That initial investment was of the tariff-jumping variety, aimed principally at serving the local market, but later investors incorporated more local content. This transition was encouraged by the terms of access to Western European markets. Daewoo began exporting duty-free to the European Union in mid-1999, for example, when its Polish-made vehicles reached the requisite 60 percent local-content level.[43]

Trade policy

55. As already noted, Poland's automotive industry is heavily oriented towards exports. The principal factor in this orientation is the relationship between Poland and the European Union. Accession to the European Union was a strategic goal for Poland from the very beginning of the reform period. Achieving this goal required serious adjustment on both sides. Absorbing Poland and the other low-income Eastern European candidates has required that the existing members offer significant transitional assistance. As of 1996, Poland's gross domestic product per capita was equal to just 38 percent of the average European Union country.[44] For its part, Poland was obliged to bring its trade and other economic policies in line with EU standards. Like all other accession candidates. Poland was obliged to adopt the *acquis communautaire* of the European Union.

56. The first major step towards Polish accession was the conclusion of an association agreement in 1991, also known as a "Europe Agreement," that entered into effect in 1993. This agreement provided for trade liberalization on an asymmetrical basis, as well as some financial assistance. It mandated a ten-year phase-out of tariffs on industrial goods, meaning that 2001 was the last year in which cars imported from the European Union were subject to import tariffs. At the Copenhagen Summit in 1993, the European Union invited Poland and other Central and Eastern European countries to apply for membership, and also laid out something of a "roadmap" for accession. Poland made such an application the next year, but the formal accession negotiations did not begin until 1998 (*i.e.*, the year after the European Commission issued a favourable opinion on the application).[45] While accession to the EU reduced tariffs on cars and parts imported from other European countries, it also required that Poland — now subject to the EU's common external tariff — reduce its tariffs on imports from third countries. Prior to its accession, Poland's tariff on parts was 15 percent; as part of the EU, this rate declined to zero.

57. Accession to the EU also required that Poland adopt the EU's rules on competition policy. Previously, automakers had controlled passenger car distribution through a network of exclusive agreements with franchised dealerships. The EU's own rules in this area used to permit some restrictive practices. Under the EU's "Block Exemption," vehicle manufacturers were permitted to employ these types of vertical restraints. That exemption expired for EU member countries on 1 October, 2003, and for Poland upon its accession. Dealers may now sell cars from different makers.[46] In Poland, this also means that authorized service stations can now do something that used to be prohibited: offer spare parts made by different manufacturers.

58. Many of the automotive investments operate out of the sixteen special economic zones (SEZs) in Poland. The SEZ regime offers preferential treatment and tax breaks to foreign investment, including partial or total exemption from income taxes for defined periods. The forms of public assistance available in SEZs include subsidies, tax breaks, and bonuses for creating new plants. Local governments still have the authority to impose real estate taxes, or to grant exemptions. As part of its accession to the European Union, Poland was obliged to bring its SEZs in line with EU regulations on public assistance. As amended in 2000, the rules stipulate that the value of public assistance for an investor may not exceed half of the value of the investment.

59. Under the principle of variable geometry, there are some aspects of EU policy that are not mandatory for all members. This is especially notable in the area of monetary policy. No date has been set for Poland's entry into the *euro* zone, although that currency has been legal for transactions since Poland's entry into the EU.

Conclusions and lessons

60. The success of the Polish automotive industry results from the confluence of two related processes. Poland's own economic reforms, coupled with its accession to the EU, provided the opportunity for the establishment of a viable automotive industry in the country. The reforms and the market access provided incentives for investors to establish facilities in Poland. "[T]he restructuring of the Central European motor industry is not only due to 'push' factors such as fierce competition among automotive companies and the pursuit of cost cutting through production relocation," according to one analysis, "but also arises from 'pull' factors such as the attractions of the region's economic environment."[47] The Polish case supports this contention. Poland's success can be jointly attributed to the broader trends in the industry, as well as the efforts that Poland has undertaken to enhance its attractiveness to foreign firms.

61. Of these two processes, Poland's reforms were the *sine qua non*. No amount of preferential access to the EU market, either on the basis of unilateral programmes or reciprocal agreements, could induce significant foreign investors to put significant capital at risk in a market that did not inspire their confidence. It was only with the establishment of secure rules of the game, starting with the restoration of property rights and the abolition of state monopolies, that the foundation was laid for investment. Once that domestic environment was established, however, the additional inducement of free access to the EU market created new incentives both for deeper Polish reforms and investment by international firms. The trade policies of Poland and the EU complemented and magnified the effects of the Polish reform programme.

---

[27] The United States withdrew MFN treatment from Poland and other Communist countries (except Yugoslavia) in 1951. Poland's MFN status was restored in 1960, however, and remained in place until sanctions were imposed in the 1980s.

[28] Belska (2001), page 13.

[29] Belska (2001), page 15.

[30] Meyer and Jensen (2003).

[31] Calculated from International Organization of Motor Vehicle Manufacturers data.
[32] *Ibid*. Breakdowns for 2003 production data are not yet available.
[33] *Ibid*.
[34] Polish Chamber of Automotive Industry (2004), page 4.
[35] Polish Chamber of Automotive Industry (2004), page 2.
[36] Calculated from WITS data.
[37] Caluculated from WITS data.
[38] Havas (2000), page 240.
[39] This history is summarized from Havas (2000), pages 237-238.
[40] Polish Chamber of Automotive Industry (2004), page 2.
[41] Humphrey, Lecler and Salerno (2000), page 7.
[42] Havas (2000), page 254.
[43] Havas (2000), page 252.
[44] Orłowski, page 282.
[45] See European Commission (1997).
[46] Conybeare (2004), page 111.
[47] Havas (2000), page 259.

STATISTICAL APPENDIX

Table 1: Foreign Investment in the Polish Automotive Market, 2004

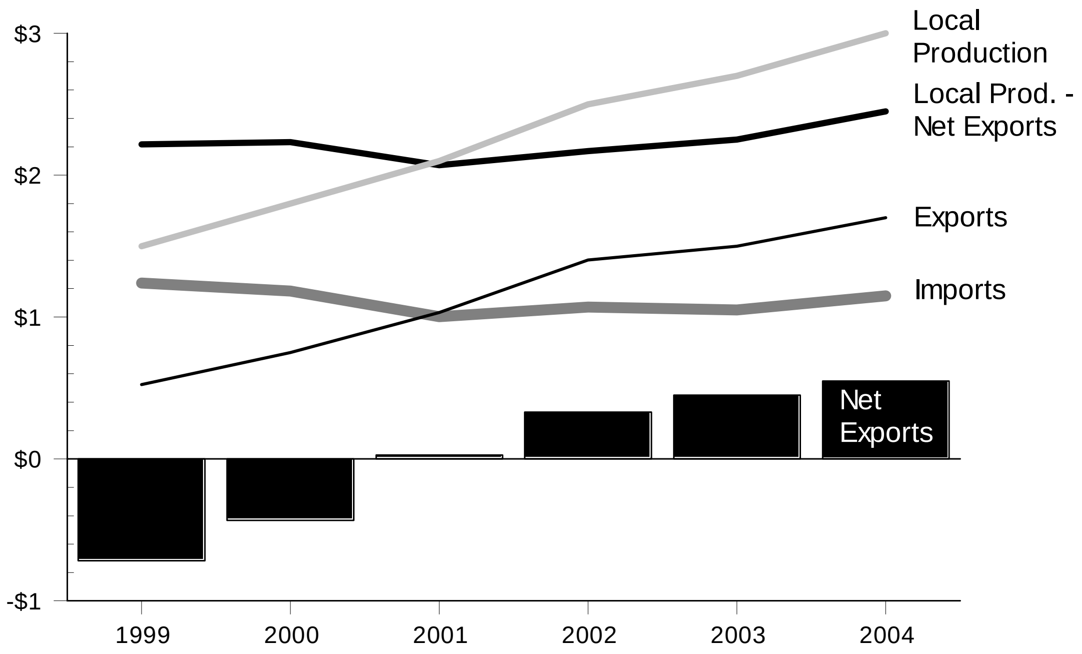
	US$Millions
Automobiles	**4,105.8**
Fiat	1,768.7
General Motors (Opel)	1,010.0
Daewoo	936.4
Volkswagen AG*	390.7
Original Equipment	**2,980.0**
Saint-Gobain	690.0
Fiat-GM Powertrain	432.5
Delphi Automotive Systems	345.0
Pilkington	295.0
Ispol-IMG Holdings	192.7
Goodyear Luxembourg	181.0
Toyota	180.0
Michelin	161.3
Bridgestone Corporation	148.0
Faurecia Investments	140.0
Eaton	125.0
Lear Corporation	89.5
Total	**7,085.8**

** : In addition to the $390.7 million already invested, Volkswagen has plans to invest another $250.0 million in Poland*

Source: Calculated from Polish Chamber of Automotive Industry data.

Figure 1: Polish Production and Trade in Automotive Parts and Accessories, 1999-2004

Billions of U.S. Dollars; 2003 and 2004 Data Estimated



Source: Calculated from U.S. Department of Commerce data, based on Chief Statistical Office of Poland.

6.3 SOUTH AFRICA

Introduction

62. The South African automotive industry offers a positive example of liberalization in a formerly autarchic market. This industry had developed behind barriers that took the form of voluntary, autonomous protectionism as well as involuntary foreign sanctions. Both aspects of this restrictive regime have been cut in tandem since the early 1990s, as South Africa has made the transition from domestic protection and external sanctions to market liberalization and preferential access to foreign markets. The only unique aspect of the South African experience is the revolutionary changes that ensued with the end of *apartheid*, and even here there are parallels that can be drawn to other countries that underwent radical political reforms during the same period. As was the case in Eastern Europe, where in certain respects the fall of Communism might be compared to the overthrow of *apartheid*, these South African political changes were complemented by far-reaching economic reforms. In addition to trade liberalization, these have included sound fiscal and monetary policy. The country's automotive industry has enjoyed improved competitiveness and a surge in exports, but continues to face several challenges.

Challenges and reforms in the South African environment

63. South Africa has undertaken sweeping reforms in its economic and political institutions since the early 1990s. Although not yet complete, these reforms have won praise from multilateral economic institutions. "Extensive trade liberalization undertaken since the mid-1990s and the lifting of trade sanctions, supported by real effective exchange rate depreciation," according to the World Trade Organization, "have rendered the South African economy more competitive and efficient, contributing to a strong trade performance."[48] The IMF has also praised the country for "accomplish[ing] a great deal in recent years in establishing a sound and stable financial environment and in strengthening the economy's resilience to external shocks and contagion."[49] The government's commitment to monetary and fiscal discipline led to reduced inflation and cut the overall budget deficit as a share of GDP, and South Africa has made steady progress in reducing its exposure to external debt.

64. While these reforms have helped the country through a major economic and political transition, they do not solve all problems. South Africa still faces a series of challenges ranging from geographically immutable facts to recent pandemics. Some of the more important issues today are discussed below, together with a review of government responses and the implications for the automotive sector.

A small and remote market

65. Perhaps the most remarkable fact about South African automotive exports is their demonstration that this country, like Australia, can overcome "the tyranny of distance."[50] Reductions in transportation costs have historically been even more important to the global trading system than the liberalization of border barriers; while a government might raise tariffs just as readily as it lowers them, technological progress is irreversible.[51] This point is especially important for South Africa, a country that is equally remote to almost all major markets. The country has nevertheless managed through well-developed logistics to keep its shipping costs within reason. This point can be appreciated from the data illustrated in Figure 1, which show that in 2003 the average cost for shipping a certain class of automobile to the United States from South Africa was $280 per vehicle. While that is 17.6 percent higher than the cost of shipping

a comparable vehicle from Germany ($238), it is a manageable difference that is compensated for by South Africa's duty-free access to the U.S. market. The total landed cost for the South African vehicle at the U.S. border ($25,045) was actually 0.7 percent below the world average ($25,233). The country's remote location has not deterred foreign investment. When asked to rank the importance of ten performance criteria in the automotive components sector, investors assigned last place to "location."[52]

66. In addition to being remote, South African is also — by world standards[53] — a small economy. The small size of its market means that exports are absolutely critical for achieving a favourable economy of scale. South Africa has partially addressed this problem through regional integration, with the other economies of the Southern African Customs Union (SACU) providing a ready outlet for its automotive exports, but the triad countries — especially in North America and Western Europe — present a much larger and more attractive option.

Apartheid, sanctions, and political reform

67. South Africa's trade strategy evolved with *apartheid* and the sanctions regime that it inspired. Even if South African officials had wanted to adopt a more liberal trade policy in the 1980s, the sanctions would have made it very difficult for them to do so. By restricting access to foreign markets and the supply of foreign exchange, these restraints helped to push South African automotive policy from simple protectionism into a strategy of import substitution industrialization (ISI) that mandated levels of domestic content.

68. The connections between *apartheid* and protectionism were especially apparent after the racial policy was overturned in 1994. These domestic political reforms, coupled with the lifting of economic sanctions, encouraged radical shifts for trade policy in general and the automotive industry in particular. The new environment prompted a great increase in productivity: Whereas the average rate of economic growth during the sanctions period of 1980-1993 was just 1.0 percent, in the post-*apartheid* years of 1994-2001 it rose to 2.8 percent.[54] The higher growth rates can be traced to improvements in total factor productivity (TFP), rather than to changes in the factors of production themselves.[55] The TFP advances can, in turn, be attributed largely to increased trade and capital investment, both of which had beneficial effects for the automotive industry. The share of trade in real GDP rose from 34.2 percent during 1980-1993 to 46.6 percent in 1994-2001. In those same periods, the share of equipment and machinery in investment rose from 35.4 to 50.4 percent.[56] These are trends in which the automotive industry took part: Trade not only permitted firms to export their goods, but also subjected them to competition while permitting increased imports of intermediate and capital goods (in which new technology is embodied).

Foreign investment

69. The end of *apartheid* also loosened the capital restrictions that some countries had imposed, allowing a restoration of former relationships with foreign investors. The local affiliates of Nissan and Toyota, for example, had been domestically owned and operated under license during *apartheid*; Japan prevented its firms from investing directly in South Africa. Both firms have since acquired equity stakes in South African operations. Similarly, Ford and General Motors disinvested during the 1980s, but have now reinvested. (The Volkswagen and BMW affiliates have always been owned by their multinational parents.)

70. It is worth noting that the reinvested automotive industry is an exception to the general rule, in which foreign investors have been reluctant to commit major resources. In recent years, foreign direct investment inflows have averaged just 1.5 percent of GDP.[57] The IMF attributes this reluctance to "high rates of crime, inflexible labour market practices, the economic cost of HIV/AIDS, and the potential social and political strains associated with wide income, wealth, and land ownership disparities."[58]

Exchange rate

71. South Africa maintains an exchange system free of restrictions on payments and transfers on international current transactions. The Rand floats freely, with the intervention of the South African Reserve Bank being restricted to the acquisition of foreign exchange, and is subject to volatile swings. The significance of this volatility cannot be overemphasized, because "[t]o a significant extent, growth performance has mirrored movements in the exchange rate."[59] Just as a sharp depreciation in 2001 gave a boost to the economy, an appreciation of the Rand in 2003 put a squeeze on South African exporters and provoked a deficit in the current account. The causes for the Rand's volatility are a matter of considerable investigation but no firm conclusions. One study found, for example, that "financial market developments are the most likely source … but the exact cause remains unclear."[60]

72. South Africa is nevertheless seeking to reduce its vulnerability to external shocks by cutting the net open forward position (NOFP) of monetary authorities. The NOFP had reached nearly US$24 billion in 1999, but since then has been steadily reduced through a combination of retained earnings from official external borrowing and privatization, as well as modest intervention in the foreign exchange market.[61] The NOFP was eliminated altogether in May, 2003; the IMF urges that South Africa pursue "a further build up in international reserves"[62] because this should *inter alia* reduce exchange-rate volatility.

Labour

73. Unemployment is an acute problem in South Africa, where the rate sometimes exceeds 30 percent. Even three percent annual growth is not sufficient to create the needed jobs. Although South Africa made significant amendments to the labour laws in 2002, the IMF points to the need to raise worker productivity and lower its labour costs, urging that "the long-term solution lies in the education and training of the young and unemployed" and that "more could be done to address institutional and legal impediments to labour market flexibility."[63]

74. The South Africa economy is undergoing a transition from dependence on mining and manufacturing to one in which services predominate. Between the periods of 1980-1990 and 1991-2001, the manufacturing sector lost 4 percent of its jobs. This loss was more acute in the motor vehicles, parts, and accessories sector, where 13 percent of the previous jobs disappeared; in the field of "other transport equipment," 45 percent were lost.[64] The reduced employment in this industry did not mean a commensurate reduction in output, however, as productivity increased significantly.

The HIV/AIDS crisis

75. The HIV/AIDS pandemic might be compared to the case of Bangladesh reviewed in this Part III, where floods and tidal waves can wreak havoc on the economy. Natural disasters and health crises are exogenous shocks that do not lend themselves to simple solutions. It is estimated that 5 million South Africans, or 11.5 percent of the population, live with HIV/AIDS.[65] While the consequences of this health crisis are usually conceived at the level of either individuals or a whole economy, one must also take into account the effects on the rational calculations of actual or prospective investors in a specific industry. Disease may raise the cost of doing business through "absenteeism, sick leave and disability pensions, medical care, pensions to surviving dependents, loss of productivity, and funeral cost and attendance."[66] Increased rates of mortality may "also reduce the incentives to companies to invest in training of their employees,"[67] a factor of particular importance in the capital-intensive, high-skill automotive industry. The crisis is being addressed by outside donors, the South African government, and the industry itself. The Automotive Industry Development Centre Pty. Ltd. pursues HIV/AIDS workplace programmes in joint partnerships with automotive producers, while some firms also have extensive testing, counselling, and treatment programmes in place.[68] These programmes may help to contain the damage, but there is no

denying the fact that this crisis will place a major drag on the economy, and on this industry, for the foreseeable future.

Characteristics of South Africa's motor vehicles industry

76. South Africa offers a paradigmatic case of a country that has made a successful transition from a protected autonomous market based on import substitution to an integrated peripheral market based on export-led growth. By the end of the *apartheid* period, the automotive industry was relatively large but inefficient. As is common in a "hothouse" automotive industry, the protected sector was characterized by a high cost structure, a proliferation of models and makes, low volumes, and an inability to achieve an economy of scale in an industry devoted to the servicing of a small, national market. It has subsequently adopted a strategy based on liberalization and export promotion, similar to the approaches undertaken by such countries as Mexico (whose industry developed on the periphery of the United States) and Eastern Europe (on the periphery of the European Union). In this instance, the "periphery" is defined by the terms of the economic relationship rather than by geography: South Africa is not near to the triad markets, and yet it has obtained preferential access to two of them. The transition is not complete, but is aided by facilitative policies in both South Africa and its OECD partners.

77. The automotive industry began in the 1920s and 1930s, when U.S. firms established vehicle-assembly plants, which were then followed in the 1960s by Japanese and European producers. All of the assemblers are now wholly or partly owned by their parent companies, following post-*apartheid* reinvestments and acquisitions.[69] The major assemblers include firms with parent companies in each corner of the triad: Japan (Toyota South Africa), Europe (BMW South Africa, Land Rover South Africa, and Fiat Auto South Africa), the United States (Ford Motor Company of Southern Africa and General Motors South Africa), and a transatlantic alliance (DaimlerChrysler South Africa). Foreign ownership also increased in the components industry. Whereas domestic companies accounted for 58 percent of the major component suppliers in 1998, two years later the multinational firms accounted for 60 percent.[70] Like increased trade, this expansion of investment contributes to productivity through technological spillovers.

78. The centrepiece of the current automotive policy, as described at greater length in the next section, is the Motor Industry Development Programme. This is a trade-centric, transitional regime that stands between the import-substitution policies of the past and a true commitment to open markets. The overall effect of the new programme is to expose the industry to greater competition, and to reward those firms that are sufficiently competitive to export. "To survive in the domestic market" under the new regime, according to one analyst, "automotive component manufacturers need to meet the increasingly onerous demands of domestic buyers, who can now procure their products internationally if they are dissatisfied with the performance of South African suppliers."[71]

79. The new regime has led to a consolidation of the industry, which is now leaner but more efficient. Employment in the automotive industry peaked in 1995 — the year that the current automotive policy took effect — at 38,600 persons. By 1999, it had declined to 32,000 persons.[72] These reductions have come at a time when output is levelling, and "[d]irect labour costs per vehicle have been reduced by some 30 percent over the past 5 years."[73] Employment in the component manufacturing industry currently amounts to 58,500 employees, as well as around 8,500 persons employed in the tyre manufacturing industry. Even after this consolidation, the automotive sector is South Africa's third largest (after mining and agriculture). It accounts for about 29 percent of manufactured output, and the sector comprised 14.6 percent of all trade in 2001.[74]

80. One measure of the programme's success is the reduction in the number of models that are produced in uneconomical runs. "[T]he number of car and light commercial vehicle base models has declined from over 42 at the commencement of the programme to 26 at present,"[75] but South African

producers are still operating at relatively low volumes. While global analysts often cite the 100,000-unit benchmark as the dividing line between competitive and uncompetitive automotive assembly plants, the eight light vehicle plants in South Africa produced an average of just 40,000 units in 1999.[76]

81. While the vehicle assemblers are all based on foreign investment, the parts producers consist of both foreign-owned and local firms. The more successful segments of the components industry are at the two extremes of the spectrum between capital-intensive and labour-intensive production. Among capital-intensive items, South Africa is a very competitive producer of catalytic converters. The country "now supplies over 10% of total world supply and looks set to expand further."[77] At the other extreme, the leather seat cover producers now fill most of BMW's global requirements, and supply other assemblers as well. Taken together, these two segments account for more than 40 percent of South African component exports.[78] Significantly, both of these products are based on the elaboration of raw materials that are produced domestically. Catalytic converters are based on platinum group metals, which South Africa has in abundance, and leather can also be sourced locally. Surveys of buyers indicate that South African component manufacturers have done relatively well in meeting quality requirements and conformance to standards, but need to improve the reliability of their deliveries. The latter issue "is clearly a major problem that impacts negatively on international customer perceptions of South African performance levels."[79]

Trade policy

82. Trade policy for the automotive industry has developed in four stages: It was based on simple protectionism from the 1920s through the 1950s, evolved into ISI with mandatory levels of domestic content in the 1960s through the 1980s, gave way to early reform efforts during the period of transition from *apartheid* and sanctions, and is now moving towards a more mature reform period. This pattern follows the general drift of overall South African trade policy, which has been liberalized over the past decade. The current average (un-weighted) tariff rate is, at 11 percent, precisely half what it had been in 1988.[80] Tariffs on automobiles and components are much higher than that average, but — as shown in Figure 2 — are declining steadily.

83. South African automotive trade policy has long been based as much on domestic-content requirements as it is on tariffs. In 1961 South Africa introduced the first in a series of programmes intended to increase the level of local content. This programme had the intended effect of increasing both the production of components and the domestic content of vehicles, as well as conserving scarce foreign exchange; the latter objective, rather than efficiency or the generation of jobs, was "the main motivating factor" behind the government's action.[81] The required level of local content in automobiles was increased to 66 percent in 1971, and this same level was required for light vehicles as of 1980.

84. The local-content programme changed direction in 1989, when the government made export-promotion an equally important objective. It did so by adopting a policy of *import-export complementation* that is designed to encourage specialisation by component and vehicle producers. The policy allowed an assembler to count exports as domestic content for purposes of achieving the required minimum. The revised programme permitted the actual level of domestic content to be as low as 50 percent, provided that the assembler achieved a sufficiently high level of exports.

85. The government made further steps towards the market in 1995. Styled as the Motor Industry Development Programme (MIDP), the new policy combined elements of export complementation with a greater commitment to trade liberalization. The underlying philosophy of the programme is to promote a more competitive and export-oriented industry by reducing the anti-export bias that is inherent in a protectionist regime. The MIDP provided for even greater reductions in tariffs than were required by South African commitments in the Uruguay Round; as shown in Figure 2, applied rates on parts and vehicles are now below the WTO bound rates. The MIDP also changed the approach taken toward local content. The

policy did away with mandated minimums, seeking instead to encourage local sourcing through a different form of export complementation. Manufacturers of light vehicles are now entitled to a duty-free allowance of 27 percent of the wholesale value of the vehicle, and can earn rebate credits on import duties by exporting components and vehicles. They can also earn credits based on the value of the capital investment to increase production of exported vehicles. The import/export complementation scheme allows for reductions of import duties on cars and light commercial vehicles according to values exported. The earned Import Rebate Credit Certificates are a specialised type of negotiable instruments for which a secondary market now exists.

86. The MIDP falls short of a full commitment to free trade. The policy instead seeks to strike a balance between further opening to global competition and maintaining a certain measure of protection. It requires that vehicle production in South Africa be from completely disassembled components; operations such as assembly and painting must be performed locally.

87. The MIDP was to be terminated in 2000 for medium and heavy commercial vehicles, and in 2002 for motor cars and light commercial vehicles. The government instead decided that the MIDP is to be extended from 2007 until 2012, and that import duties will continue to phase down but at a slower rate. The MIDP is being reviewed in 2005 and a major review of motor industry policy is provisionally planned for 2006-2007, and will investigate the long-term future of the MIDP.

88. The clearest sign of success is in the direction and volume of trade. As shown in Figure 3, both imports and exports rose from low levels in 1995 to substantial shares of the market in 2002. The growth of imports initially overwhelmed the exports, both for parts and vehicles (see Figure 4), but by 2001 South Africa had reached a balance in parts and a surplus in vehicles. While the overall size of the domestic market remained essentially flat during 1999-2002, total production rose. Exports as percentage of domestic production increased from 4.0 percent in 1995 to 31.0 percent in 2002. During that same period, the import share of the South African market rose from 5.5 to 23.1 percent. These imports have come at the expense of the less efficient producers that are not able to compete in export markets, and they are the ones that have seen the greatest subsequent reductions in output and employment. “[T]he bulk of export expansion has not been by ‘traditional’ component suppliers,” according to one analysis, “but by a rapidly emerging new group of mainly foreign owned firms frequently with links to vehicle manufacturers.”[82]

89. The country’s move towards a more liberal automotive trade policy has been complemented by preferential access to the U.S. and EU markets. Both of these triad partners have extended duty-free access first under one-way, preferential programmes, and are shifting to two-way, reciprocal free trade agreements (FTAs).

90. South African vehicle exports to the United States have risen rapidly since enactment of the African Growth and Opportunity Act of 2000, under which the remaining tariffs on almost all South African goods are eliminated. As shown in Table 1, these exports had already grown one hundred times between 1993 and 1999, and then grew ten times more between 1999 and 2002. This thousand-fold growth may have been aided by the extension of preferential access to the U.S. market, but the relatively low U.S. tariff rate on cars (2.5 percent) does not extend a large margin of preference. Much more significant is the fact that South Africa can assemble quality vehicles at a competitive price. The terms of this preferential access will be transformed by the free trade agreement (FTA) that the United States is now negotiating with SACU. That agreement will not lead to a change in South African access to the U.S. automotive market, which is already free, but will presumably reduce the barriers to imports from the United States.

91. South Africa is already an FTA partner with the European Union. The Trade, Development and Cooperation Agreement (TDCA) came into force in 2000. The agreement provides for asymmetrical trade liberalization between the two parties, with a view towards forming a free-trade area by 2012. During that

twelve-year transitional period, South Africa will liberalize around 86 percent of its imports from the EU; the EU commitments cover 95 percent of imports, and will be phased in over ten years. Certain products are subject to only partial liberalization, such that tariffs are merely reduced or are subject to preferential tariff quotas. Some automotive parts are included among the 2.9 percent of South African imports that are only partially liberalized; the end rate will be in the range of 6-11 percent. Similarly, the end rate for tyres will be in the 10-15 percent range. These partial liberalizations will be reviewed at a later date.

Conclusions and lessons

92. The essence of this case is about the opportunities that arise in a time of radical reform. The major political and social changes that South Africa underwent in the 1990s, coupled with the shifts that they provoked in other countries' relations, provided a chance to conduct similarly sweeping reforms of economic policy. It was by no means inevitable that the government would take advantage of this opportunity, nor that its policy choices would prove correct. As it happens, however, South African officials adopted a set of economic reforms that have well served the wider economy and the automotive industry: the liberalization of trade, combined with sound fiscal and monetary policy, have produced increases in both trade and foreign investment. These developments have promoted a rise in total factor productivity, exposed South African producers to healthy competition, and transferred new technologies. The South African automotive industry is among the beneficiaries, having become a leaner but more efficient producer that competes effectively in global markets.

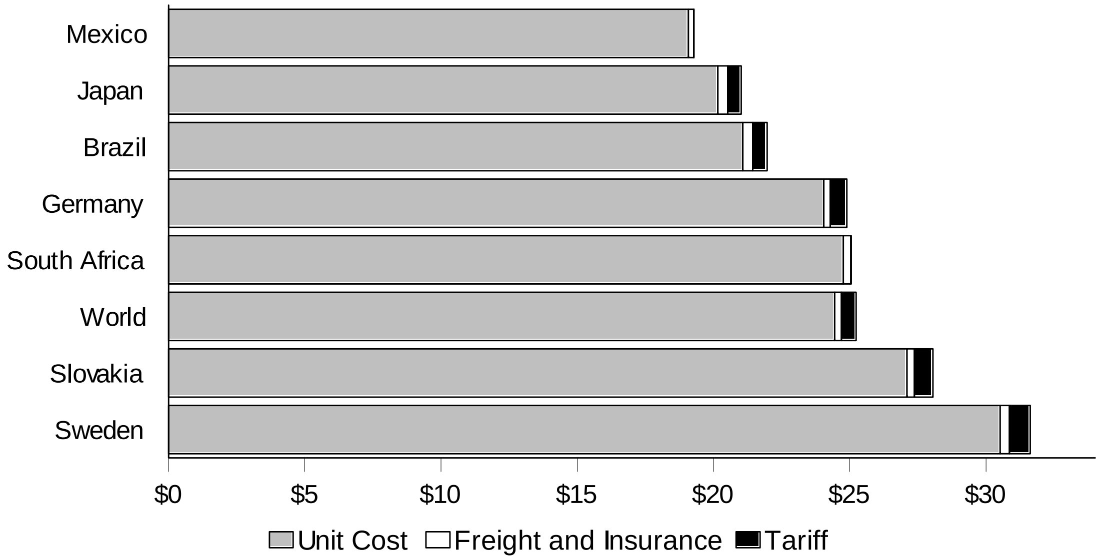
93. The lessons here are not unique to South Africa. While *apartheid* was a uniquely South African institution, one can easily find parallels for this policy, the sanctions that it inspired, and the reforms that followed its overthrow. South Africa is not the only country that has undertaken major political and economic reforms since the early 1990s, and experienced a reintegration into the world economy. The same can be said for former military dictatorships in Latin America, as well as European and Asian countries in transition from Communism.

94. South Africa's economic reforms are still a work in progress, and the last vestiges of the ISI strategy have yet to be eliminated. Further steps may also be needed to reform labour markets, and the HIV/AIDS pandemic is expected to cast a shadow over African development prospects for the foreseeable future. Despite these challenges, the South African automotive industry has survived the transition, and appears to be in a good position to make further advances.

STATISTICAL APPENDIX

Figure 1: Landed Cost of Certain Automobiles Imported into the United States from Selected Partners, 2003

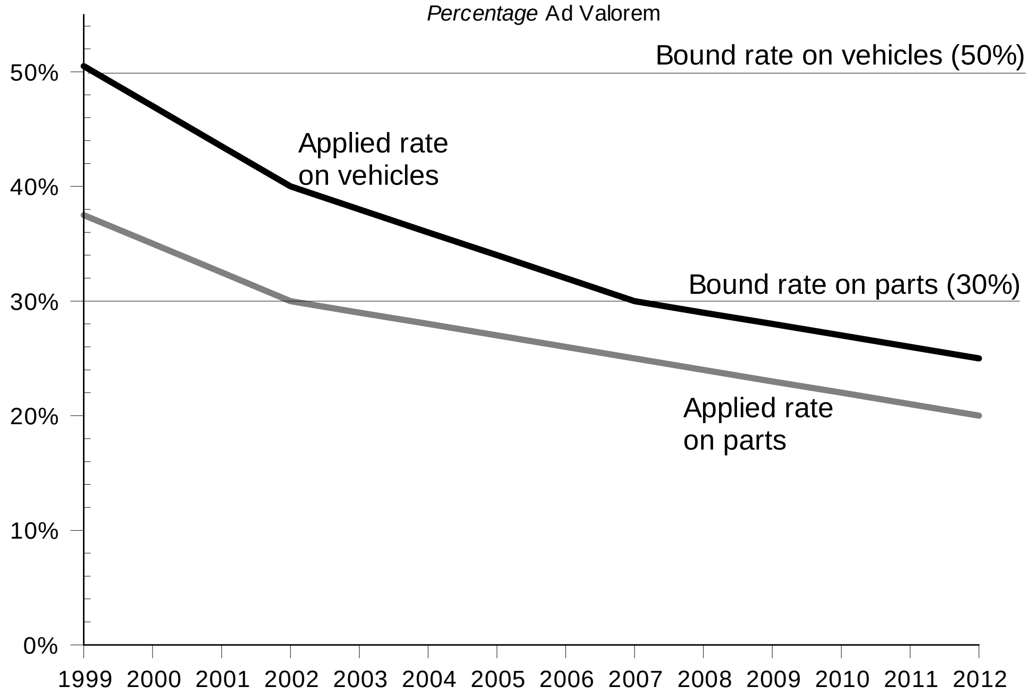
Thousands of Dollars, Based on Customs Value,
Imports for Consumption, of HTS item 8703.23.00.62



Source: Calculated from U.S. International Trade Commission data.

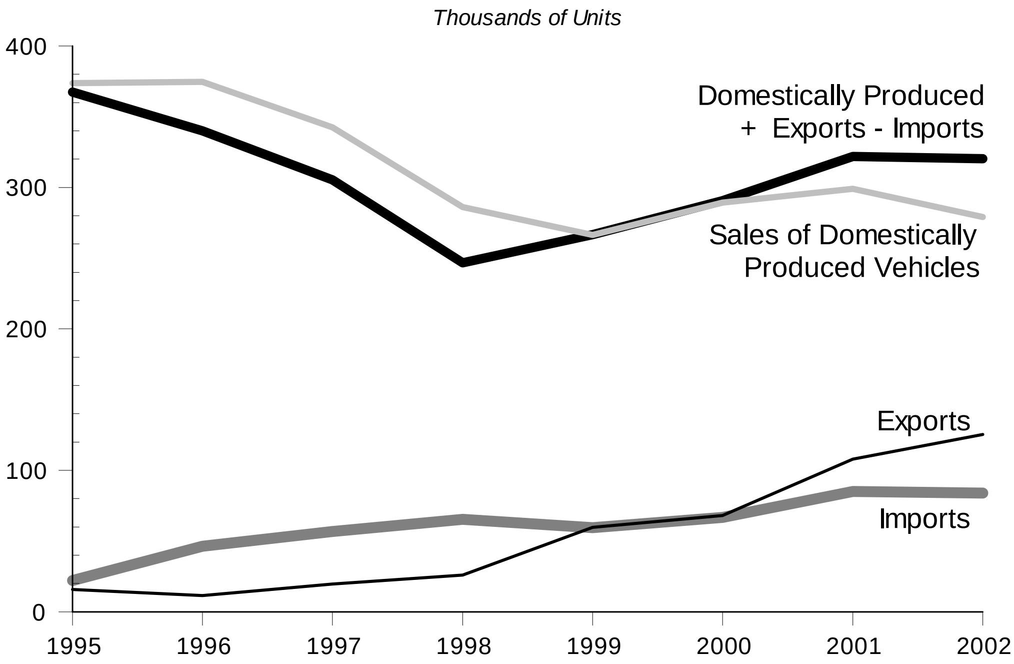
Figure 2: South African Motor Vehicle Tariffs, 1999-2012

Percentage Ad Valorem



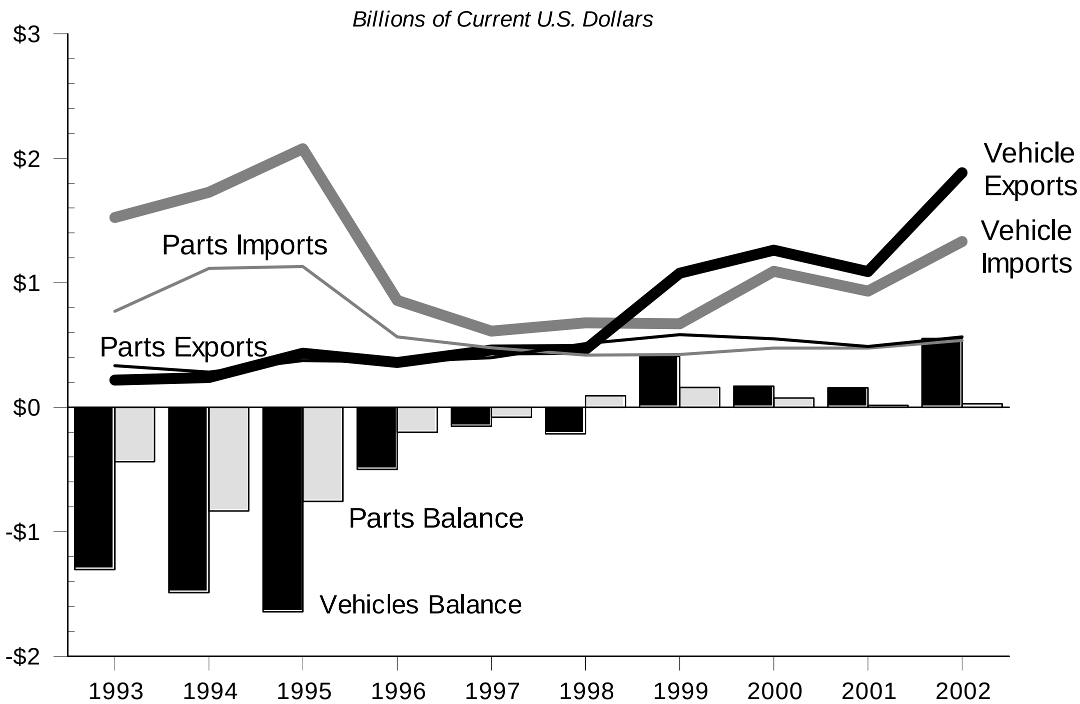
Source: WTO and Goverment of South Africa.

Figure 3: South African Motor Vehicle Production and Trade, 1995-2002



Source: Calculated from NAAMSA data.

Figure 4: South African Motor Vehicles Trade, 1993-2002



Source: Calculated from WITS data.

Table 1: South African Trade in Motor Vehicles and Parts, by Value ($000s), 1993-2002

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Parts Exports	**333,776**	**281,280**	**374,280**	**365,172**	**397,876**	**511,537**	**582,876**	**550,104**	**489,366**	**564,939**
Germany	154,421	119,179	114,551	80,475	93,640	164,418	207,916	156,150	141,492	159,726
United States	25,702	22,401	34,631	41,396	49,322	57,641	64,338	76,226	71,998	85,921
United Kingdom	14,291	14,478	25,303	29,724	37,420	45,586	57,575	46,437	44,560	40,218
Japan	554	645	728	554	896	3,370	2,866	6,426	10,763	14,571
Italy	2,900	3,409	9,270	6,832	6,391	19,141	16,986	23,823	7,700	5,789
Rest of World	135,908	121,167	189,796	206,190	210,207	221,380	233,195	241,042	212,854	258,713
Parts Imports	**772,020**	**1,114,653**	**1,130,620**	**565,929**	**477,049**	**419,660**	**422,720**	**476,035**	**474,646**	**536,961**
Germany	446,889	734,745	598,920	148,272	122,376	103,201	128,657	145,190	177,771	202,286
Japan	137,656	143,620	167,433	104,941	105,944	95,678	95,314	92,138	75,061	89,450
United States	45,848	61,117	91,842	87,620	56,158	35,620	33,652	37,650	35,401	37,770
United Kingdom	27,301	38,376	74,374	43,184	33,095	29,859	23,023	21,714	19,100	21,708
Italy	20,258	21,601	33,360	27,940	22,098	21,785	22,304	21,816	21,022	20,863
Rest of World	94,068	115,194	164,691	153,972	137,377	133,517	119,771	157,527	146,291	164,884
Parts Balance	**-438,245**	**-833,373**	**-756,340**	**-200,758**	**-79,172**	**91,876**	**160,157**	**74,069**	**14,721**	**27,977**
Vehicle Exports	**219,400**	**238,382**	**434,401**	**359,907**	**459,910**	**465,978**	**1,077,929**	**1,261,763**	**1,090,196**	**1,882,735**
United States	382	1,231	7,531	9,053	21,128	19,746	38,963	126,369	29,076	379,455
United Kingdom	4,130	4,502	2,782	4,662	8,745	51,673	118,398	122,859	266,615	363,477
Germany	839	339	1,171	828	16,013	89,757	540,058	397,156	24,054	284,024
Japan	4,259	4,420	7,048	2,850	2,707	1,238	343	129,627	211,331	277,517
Italy	177	454	27	105	105	110	929	1,780	1,270	167
Rest of World	209,613	227,438	415,842	342,410	411,212	303,455	379,239	483,972	557,850	578,096
Vehicle Imports	**1,523,390**	**1,726,116**	**2,077,070**	**859,287**	**611,512**	**679,129**	**669,863**	**1,092,988**	**932,211**	**1,331,248**
Germany	252,662	333,986	509,686	181,604	146,973	173,796	197,104	339,594	189,248	529,143
United States	36,408	49,005	80,588	96,142	93,318	104,703	104,731	105,701	146,453	192,745
Japan	1,124,918	1,065,863	1,163,844	56,258	80,222	124,775	104,963	156,757	101,517	145,531
United Kingdom	47,143	94,037	86,543	114,292	71,193	68,911	74,812	102,155	77,846	89,241
Italy	17,590	54,579	61,029	67,633	40,429	29,723	36,265	45,993	42,644	49,282
Rest of World	44,669	128,645	175,380	343,357	179,377	177,221	151,988	342,787	374,503	325,307
Vehicle Balance	**-1,303,990**	**-1,487,734**	**-1,642,668**	**-499,379**	**-151,602**	**-213,150**	**408,067**	**168,775**	**157,985**	**551,487**

Source: Calculated from WITS data.

[48] WTO (2003d), page A4-219.
[49] IMF (2003e), page 11.
[50] The term was originally coined to describe the economic geography of Australia and the influence of its remote location on development. See Blainey (1966).
[51] O'Rourke and Williamson (1999), for example, found that in the latter half of the 19th century "*all* of the commodity market integration in the Atlantic economy … was due to the fall in transport costs between markets, and *none* was due to more liberal trade policy", page 29.
[52] Both sets of respondents gave first place to "quality," an area where the South African producers are relatively competitive (but still face some challenges). Barnes (2000), page 33.
[53] Size is always relative, of course, so South Africa is quite large by comparison to other African countries.
[54] Arora and Bhundia (2003), page 3.
[55] Arora and Bhundia (2003).
[56] Arora and Bhundia (2003), page 14.
[57] IMF (2003e), page 13.
[58] IMF (2003e), page 13.
[59] IMF (2003e), page 7.
[60] Bhundia and Gottschalk (2003), page 12.
[61] IMF (2003e), pages 10-11.
[62] IMF (2003e), page 17.
[63] IMF (2003e), page 13.
[64] Hlekiso (2004), page 4.
[65] IMF (2003e), page 57.
[66] Haacker (2002), page 20.
[67] Haacker (2002), page 22.
[68] See for example Galbraith (2004).
[69] Barnes (2000a), page 12.
[70] Barnes (2000a). page 20.
[71] Barnes (2000b), page 5.
[72] Barnes (2000a), page 10.
[73] *National Association of Automobile Manufacturers of South Africa (NAAMSA) Annual Report*, in Galbraith (2004).
[74] All data cited in this paragraph, and all other statistical data in this case study for which a source is not otherwise identified, are from materials included on Galbraith (2004).
[75] *National Association of Automobile Manufacturers of South Africa (NAAMSA) Annual Report*, in Galbraith (2004).
[76] Black (2001), page 17.
[77] Black (2001), page 13.
[78] Barnes (2000b), page 7.
[79] Barnes (2000b), page 17.
[80] IMF (2003e), page 27.
[81] Black (2001), page 6.
[82] Black (2001), page 12.

6.4 AUSTRALIA[83]

95. The Australian automotive industry has undergone a major transformation in recent years — from a highly protected inward looking industry relying almost exclusively on the domestic market, to one increasingly looking to exports to secure its future. While many factors have contributed to this transformation, reductions in the previously very high levels of government support for the industry, and changes to the nature of that support, have clearly played a key role.

96. Twenty years ago, the industry was protected by nominal tariffs of up to 57.5 per cent; quantitative import restrictions on passenger vehicle imports with a tariff equivalent of over 100 per cent; and local content rules providing similarly high levels of support to local component production. Within this cocoon, five vehicle assemblers, purchasing from a plethora of component suppliers, produced 13 models at low volumes, almost solely for the small domestic market. The industry's productivity and quality performance was poor and industrial disputation rife. However, the 'made-to-measure' nature of the assistance provided by quotas and local content protection greatly diminished the incentives for the industry to address its progressively worsening competitiveness.

97. The unwinding of this regime began in the mid 1980s, as part of a general push to 'internationalise' and improve the performance of the Australian economy. By the end of the 1980s, quantitative restrictions and local content rules had been removed and the phasing down of tariffs was well underway. While tariffs on passenger vehicles were paused at 15 per cent in 2000, they will be cut to 10 per cent in 2005, with a further cut to 5 per cent in 2010. This latter reduction will align automotive tariffs with the general manufacturing tariff.

98. Not surprisingly, these reductions in protection have provided significant benefits to consumers in lower prices and greater choice. For example, there are now 250 vehicle models available in Australia, compared to just 70 before the removal of quotas.

99. The reforms have also contributed to considerable rationalisation in the industry. The number of locally produced passenger vehicle models has fallen from 13 to 5, and the number of significant 'original equipment' and raw material suppliers has more than halved.

100. This rationalisation has contributed to a large increase in the industry's productivity. For example, the number of vehicles assembled per employee has increased by 50 per cent since 1990. Product quality has also improved markedly. In combination with a much greater focus on innovation and customer service engendered by the more competitive environment, these performance improvements have allowed the industry to offset the impacts of a surge in vehicle imports through strong export growth. Exports now account for more than 30 per cent of production compared to less than 10 per cent a decade ago.

101. Moreover, while an inevitable consequence of strong productivity growth and stable total output has been a marked decline in employment — down 38 per cent in the 1990s — these reductions have occurred in a reasonably orderly fashion.

102. The industry's largely successful adjustment to much lower levels of protection has been helped by other elements of the reform programme. For instance, the fall in the value of the Australian dollar in the mid-1980s following the floating of the currency, cushioned the effects on the industry of the removal

of import restrictions and local content protection. Labour market reforms in the 1990s — especially the introduction of enterprise bargaining — have been instrumental in facilitating the uptake of just-in-time production methods, an essential part of modern automotive manufacture. And, the industry's competitiveness has been improved by reforms that have led to more efficient provision of infrastructure services, such as electricity and transport.

103. Aspects of the industry's assistance package have also been designed to facilitate orderly transition. Apart from reducing protection gradually to give the industry "breathing space" to increase its competitiveness, many firms have had access to transitional budgetary support. This support, which is oriented towards encouraging new investment and innovation, will continue until 2015, with more generous levels of funding than were recommended in the Productivity Commission's review (PC, 2002).

104. In 2002, Australia's Productivity Commission reported that the industry faces some significant challenges. It noted industrial disputation remained a problem, with the CEO of one major vehicle assembler labelling Australia as "strikeland". The report found that production volumes remained low by international standards. As in other countries, large investments would likely be required to enable automotive producers to meet more stringent environmental standards and to incorporate new technologies into their vehicles. Also, fluctuations in the value of the Australian dollar would impact on the industry's competitiveness in both domestic and export markets.

105. Nonetheless, and notwithstanding future reductions in tariffs and the eventual cessation of budgetary support, much of the industry is optimistic about the future. The strong performance of the Australian economy has seen the domestic vehicle market grow strongly, a trend expected to continue. And growing recognition internationally of the industry's capabilities, together with new trade agreements with countries such as the USA and Thailand (that came into force on January 2005), are seen as providing a platform for further export growth.

106. Such optimism in the face of the prospective removal of the industry's special treatment would have been inconceivable when the reform programme began. Moreover, the transformation in the industry has been achieved without the disruption seen in some other highly assisted sectors (such as textiles, clothing and footwear). The measured nature of the reform programme — giving the industry both time to adjust and incentives to improve its performance — has clearly contributed to the successful outcome achieved. But wider economic reforms have also been important in enhancing the industry's capacity to compete successfully with lower levels of assistance.

---

[83] This case study was provided by the Australian Productivity Commission as input to the OECD project on Trade and Structural Adjustment.

7. HEALTH SERVICES

Key points emerging:

107. As noted in Part I, the relatively minor scale of trade in the health sector to date underlines the fact that trade is not the source of structural adjustment in the health sector. However, given the need to address demographic changes in developed economies - changes which hold open the possibility for growth in health services trade and the need to ensure that this trade is beneficial for both importing and exporting countries via adequate planning, consideration can be usefully directed towards how trade and healthcare policy may be mutually supportive. It is stressed that this study presents initial observations from selected cases, and appropriate solutions must address the full range of economic and social factors present within each country. The observations made are thus without prejudice to each country's determination of the most appropriate way to ensure provision of health services.

108. Trade in health services can both help to ease structural adjustment pressures and potentially exacerbate them. There are both opportunities (increased efficiency, variety and supply available to both importers and exporters) and risks (exacerbation of shortages in the domestic system) with this trade. The case studies underline the potential for mutually beneficial trade in healthcare over the long-run, particularly between developed and developing economies. However, coordinating the development of trade and health policy will be pivotal to achieving such an outcome.

109. Structural adjustment in the healthcare sector is driven primarily by changing demographics and economic development, not trade. Structural adjustment has, however, stimulated trade in health services and movement of nurses which have in some instances led to increased demands on scarce healthcare resources in sending developing countries. When movement of nurses to developed countries is long term or permanent rather than temporary, it is no longer within the definition of trade in services.

110. Increasing exports of healthcare services may generate difficult structural adjustments in exporting economies particularly in cases where trade is large and unanticipated as in Thailand, or where trade has exacerbated a shortage of health workers and supported a two tier system of healthcare provision consisting of a less well resourced public sector and a better resourced private sector. In other cases, such trade may prove to be a key source of repatriated foreign exchange earnings as for the Philippines. For importing countries, trade can be a way of increasing the access of previously un-served or under-served groups to a wider range of health services, or can help to meet the rising demand from ageing populations.

111. The key will be an approach integrating both health and trade policy to support structural adjustment and expand the domestic provision of healthcare in exporting and importing economies beyond what would be possible in the absence of trade.

112. This potential is clear in the case of movement of nurses. The emergence of programmes such as those described in the Mexico-US case study, and those being contemplated in the Japan-Philippines/Thailand case study, reveals a departure from an initial approach of merely recruiting nurses and towards systematic training of nurses for foreign healthcare systems. These trends suggest several observations. First, coherent design and implementation of trade and health policies makes increasing the number of nurses trained for employment in the healthcare systems of both trade partners possible and likely. Second, short-term movement via trade is increasingly being explored as a preferable alternative to

long term migration by health workers. Third, even temporary movement can entail costs and complementary measures (such as training of additional nurses) to address potentially harmful effects on exporting countries.

113. Adjustment of the Thai healthcare system to unanticipated demand by foreign patients travelling to Thailand for healthcare services holds the potential for trade to assist the development and expansion of capacity within the Thai healthcare system over the long-run. To date, this trade has primarily taken place in the ancillary treatments not covered by the national health insurance of the foreign patients, and has reduced healthcare resources available to the domestic population. Yet, the vast price differential between the cost of medical treatment in the developed versus developing economies can allow for the treatment of foreign patients in Thailand at costs well below what would be possible in the home economy, but still high enough for a portion of such revenue to be reallocated to expanding domestic healthcare capacity: beyond what would be possible in the absence of trade.

114. In a converse situation, low income populations living near the border between Mexico and the US purchase health insurance from US certified insurers based in Mexico. Such insurers provide routine medical services at healthcare facilities based on the Mexican side of the border and, in cases of emergency, medical services on the US side. As a result, US based populations unable to afford purely US based healthcare schemes have access to healthcare through more affordable Mexican based plans, and can further benefit where their native language is Spanish. Healthcare facilities in Mexico benefit from an increased clientele and source of revenue for expansion of services beyond what would be possible based purely on domestic revenue. In some cases, the increased customer base has allowed for Mexican healthcare facilities to provide specialised services which would otherwise be economically unsustainable, thus increasing access to such services by the domestic population.

115. In the other direction, telemedicine enables patients in Mexico to receive sophisticated medical services from the US without leaving their home facilities. Benefits of such trade to Mexico include an increase in the selection of specialised medical services available, quantity of services available and access by a wider proportion of the population due to reduced cost—particularly for foreign travel. Benefits to US healthcare facilities include increased utilisation of specialised medical services, and potentially improved capacity for delivering such services made possible by an increased revenue base.

7.1 MEXICO AND THE UNITED STATES

Introduction

116. Trade in health services between Mexico and the US is complex. Although the pace of trade related to health soon after the signing of the North American Free Trade Agreement (NAFTA) was slow, the last five years have seen significant growth.[84] This increase has resulted from demand for health services relating to economic activities generated by NAFTA, as well as non-trade related domestic healthcare challenges facing both economies. Trade in health services between Mexico and the US is focused in three areas: consumption abroad by patients; telemedicine; and the movement of nurses. This trade demonstrates both the potential for, and challenges of, leveraging trade to enhance healthcare in both economies.

Trade and non-trade related structural adjustment facing healthcare

117. The evolution of the Mexican and US healthcare systems has been indirectly affected by NAFTA due to significant migrations to border regions between the two economies as a result of increased trade and investment. But the most important factors behind structural adjustment in the health systems of both economies remain unrelated to trade in healthcare services itself.

Trade related factors

118. Increasing trade and investment resulting from NAFTA has supported rapid population growth along the Mexico-US border, and stimulated an increase of trade in health services. Approximately 12 million people now reside in the 42 US counties and 39 Mexican municipalities located along the Mexico-US border, and this is expected to double by 2020. Communities along the border are economically and socially interdependent and residents from both sides routinely cross the border to work, shop, visit friends and relatives and purchase health services. There are about 1.1 million legal northbound crossings a day.

Non-trade related factors

119. In both economies, however, overall shortages in health provision primarily result from factors unrelated to trade in healthcare services. Economic development in Mexico has resulted in increased demand for access to health services, including in remote areas, and for expansion of the range of specialised services available. Presently, 50 per cent of the population is covered by government healthcare and 4 per cent relies on private coverage. In the US, the ageing population will increase demand for health services, particularly those provided by nurses. One study (American Nurses Association *et al.*) estimates the current deficit of nurses at 126 000 and projects that this will increase to 400 000 by 2020.

120. A significant proportion of US citizens lack healthcare coverage, particularly among the US Border States.[85] Immigrants from Latin America make up a disproportionate percentage of the total population without access to healthcare – they are more likely to be uninsured and suffer from language barriers (Davis cited in Sullivan 2002). Trade in health services (mode 2 consumption in Mexico by these US patients) is an intuitive approach for addressing this challenge.

An overview of healthcare capacity on the two sides of the border

121. Despite having better healthcare coverage than Mexico as a whole, the availability of healthcare resources is low in the six Mexican Border States[86] when compared to the US Border States. In terms of human resources, the total number of doctors in the Mexican Border States is less than that for the state of Texas alone. There are 837 inhabitants per doctor in the Mexican Border States while the corresponding figure for Texas is 644. Differences are wider in the case of nurses. The Mexican Border States have one professional nurse per 958 inhabitants compared to one nurse per 98 inhabitants in the case of Texas. In terms of physical healthcare resources, the state of Texas alone has double the number of hospital beds available in the six Mexican Border States combined. While one bed is available per 363 inhabitants in Texas, the Mexican Border States average one bed per 688 inhabitants.

The complexity of bilateral trade in health services

122. Both Mexico and the US experience shortcomings in healthcare provision, albeit for different reasons. Increased trade in health services can both ameliorate and exacerbate these shortcomings. Ameliorative effects may result from patients from US Border States consuming cheaper healthcare services in Mexico, and Mexican patients accessing specialized care from the US via telemedicine. The movement of nurses from Mexico to the US addresses a shortage in one economy but increases one in the other. However, innovative cross-border programmes may increase the number of nurses available to both economies over the long-run.

Cross-border consumption of health services

123. Private hospitals and Health Maintenance Organisations (HMOs) on the Mexican side of the border are exploring a range of ways to provide healthcare to underserved populations in the US. One of the most interesting, SIMNSA (Sistemas Médicos Nacionales SA de CV), [87] has established a comprehensive healthcare plan in response to the growing needs of US workers with dependents in Mexico. SIMNSA offers its members the option of receiving care at a state of the art medical clinic located within walking distance of the border crossing. Provisions are also made for emergency care in the United States.

124. SIMNSA offers two healthcare programmes, both at rates significantly below US counterparts thus making care accessible to previously unserved low income populations. The HMO-type plan provides coverage for a fixed monthly fee-per-person and reasonable co-payments for medical visits and prescription drugs. The PPO plan is a discounted fee-for-service for care received in Mexico. SIMNSA requires a minimum participation of 30 individuals for a collective policy, with the employer paying 50 per cent of the fee. As SIMNSA premiums are remarkably less expensive than US equivalents, most employers pay closer to 80 per cent of the premium, and some pay 100 per cent. Recently, SIMNSA created the Small Business Group Plan to tap into the substantial market of companies in California employing fewer that 50 people. In order to qualify, companies must maintain a business license in California and enrolees must live within 50 miles of the SIMNSA service area.

125. SIMNSA has seen a rise in emergency service claims over the last year and a half. This may be partially due clients that purchase a SIMNSA plan with no intention of receiving care in Mexico, but rather, to rely on emergency services in the US for care. As of December 2003, the plan has not dis-enroled members. However, to reduce out-of-area use, SIMNSA is considering premium incentives to encourage members to receive care in Mexico.

Telemedicine

126. Telemedicine can eliminate the difficulties posed by transportation from Mexico to see medical specialists in the US, and brings the cost of diagnosis down to a level that greatly increases the accessibility

of such care. VistaLink, a private company based in Houston Texas targets Latin America, where affluent patients are accustomed to travelling to the US for medical care. VistaLink has 80 offices around the world with sophisticated digitalization equipment to send pictures, x-rays and other computerized medical material through the Internet. For a $500 fee, doctors in Mexico and throughout Latin America are able to access medical specialists from the US via Internet. VistaLink selects appropriate specialists for individual cases from a roster of physicians affiliated with leading US medical centres. The first appropriate physician available for consultation among the 4 000 US specialists in the VistaLink network is then assigned to the case and responds with a second opinion within 24 to 72 hours, depending on the level of emergency. The increasing availability of telemedicine enhances the accessibility of medical specialists in the US to Mexican patients in terms of quantity and variety of service available, as well as affordability—particularly in terms of reduced travel expenses.

Movement of nurses

127. The migration of nurses from Mexico to developed countries started about ten years ago, but the number migrating to the US has significantly increased in recent years. 10 per cent of newly graduated nurses and of those working at three major institutions[88] look for opportunities abroad. According to the Employment Promotion Centers in Mexico City, more than 4 000 nurses from these same three institutions left the country to work in foreign hospitals during the first four months of 2004. Of these nurses, 1 000 immigrated to the US, 200 to Spain and 50 to the UK.[89]

128. Mexico and the US have agreements permitting the US to obtain employees with urgently needed skills. US institutions have established several agreements to attract nurses, particularly from Mexico. A variety of recent programmes employ strategies not so much to recruit trained nurses from Mexico, but to facilitate or subsidise the training of Mexican nurses for employment in the US. For example, in 2003 a group of hospitals in southern Texas decided to provide scholarships to Mexican nurses for study in the US in order pass US licensing exams.[90] Under this agreement, the students cross the border for coursework in the United States, but continue to reside in Mexico, were they receive most of their professional training. Each of the four participating hospitals provides scholarships for five students to work in a hospital for three years, after which the hospitals will assist students to obtain visas for work in the US.

129. The Employment Support Plan coordinated by the Mexican Labour Ministry has a pilot plan in Zacatecas and ten other states to train nurses in English so that they can work in the US. The first English course started at the end of March 2004 with twenty eight professionals. Interest by applicants is expected to grow. Nevertheless, some states have declined PAE due to unclear conditions in the agreements relating to how personnel are to be contracted (*e.g.* nurses are expected to commit to completing contracts despite potentially difficult working conditions).

Conclusion

130. Structural adjustment in the Mexican and US healthcare systems is largely unrelated to trade. Increasing ambitions for enhancing the capacity, coverage and sophistication of the Mexican healthcare system contrasts with the expanding deficit of nurses in the US and the demands of an ageing population. Over the past five years, trade in health services between Mexico and the US has increased substantially. The growing trade in health services between Mexican and US Border States in the form of US based patients travelling to Mexico for affordable Spanish language healthcare is an example of potential gains from increased trade. The ability of telemedicine to bring highly specialised healthcare services from the US to Mexico without the physical and economic encumbrance of international travel improves both the variety of services available and broadens access to such care to such care in Mexico. While migration of nurses remains a structural challenge to the healthcare systems of both economies, innovative programmes hold out the possibility of increasing the number of nursing graduates in both.

[84] Overall, total US exports of healthcare services through establishment of US affiliates abroad measured nearly USD 1 billion in 2001 alone. Sales by foreign-owned affiliates located in the US totalled USD 5 6 billion in the same year.

[85] Arizona, California, New Mexico and Texas.

[86] Baja California, Coahuila, Chihuahua, Nuevo Leon, Sonora and Tamaulipas.

[87] SIMNSA is one of the leading HMOs in Northern Mexico with over 200 physicians along the US Mexican border. In March 2004, SIMNSA became the first Mexican HMO authorized to market products in the State of California.

[88] Including the: Social Security Mexican Institute [Instituto Mexicano del Seguro Social. (IMSS)], the Security and Social Services of the State Workers Institute [Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado (ISSSTE)] and of the Ministry of Health [Secretaría de Salud (SSA)].

[89] While permanent migration of health workers is not trade, the temporary movement of health workers to supply services can fall under mode 4 of the GATS. There is, however, disagreement over whether foreign employees of domestic firms fall under mode 4. Government procurement is currently also excluded from market opening commitments under GATS.

[90] NAFTA does not allow Mexican doctors or nurses to practice in the US without meeting individual state licensing requirements. The trained nurses wanting to work in the US must comply to the following requisites:

1. To be a certified nurse in his or her own country.
2. To complete the Commission on Graduates of Foreign Nursing Schools (CGFN) nurses must fulfil three requirements: pass the Test of English as a Foreign Language (TOEFL), which certifies competence in oral and written English; pass an education credentials revision; and pass the CGFNS Qualifying Exam. Successful completion of these three requirements by foreign nurses leads to a CGFNS. The CGFNS confirms that the education, licensing and training received by a nurse in a foreign country are equivalent to those of the United States.
3. Once the above requisites have been fulfilled, foreign nurses must present the NCLEX-RN which is the state exam. After passing this exam they may obtain a license to work in the United States.
4. Finally, to obtain the H1-C visa they need a hospital, clinic or equivalent to serve as a sponsor or to complete a petition (I-129) to employ the foreign nurse with the United States Citizenship and Immigration Services USCIS. This visa grants permission to work only for the employer that applies for it. When there is more than one potential employer, each must make a separate petition if the nurse is to work at two or more places simultaneously. This visa is not transferable among employers and also implies H-4 visas for a nurse’s husband or wife and children under 21. The H-4 visa does not provide the right to work. Those who obtain the H1-C visa as a first step, may later begin the process to obtain residence based on employment and change their status as long as they are working in the United States.

7.2 JAPAN-PHILIPPINES/THAILAND

Introduction

131. Rapid ageing in the Japanese population will place increasing demands on the healthcare system over the next decade and beyond. The ratio of working age adults (20 to 64) supporting senior citizens (65 or older) will be roughly halved by 2020.[91] Ageing within the population will decrease tax revenues as the pool of working age adults decline relative to total population. Structural adjustment to accommodate increasing demands on the national healthcare system will take place against a backdrop of shrinking public resources. This case study explores how the adjustment challenge of Japan's ageing population has been addressed domestically within recent regulatory reforms and internationally through regional trading arrangements. It also examines how trade in health services may become a source of structural adjustment in exporting developing countries (Philippines and Thailand).

132. Demographic changes over the previous two decades have already placed significant strains on Japan's healthcare system. Between 1980 and 2002, senior citizens as a percentage of the total Japanese population more than doubled from 9.1 to 18.4 per cent while the proportion of working aged adults grew slightly from 60.3 to 61.7 per cent (see Chart 1). A sub-category of senior citizens, the elderly (70 and older) are known to spend five times more per capita on healthcare than the non-elderly,[92] and average life expectancy in Japan was 81.9 as of 2002.[93] From 1980 to 2002, the number of elderly as a percentage of total population more than doubled from 5.7 to 12.6 per cent. And the rate of increase has steepened noticeably over the last two decades (see Chart 2). The strain ageing has placed on the healthcare system has left the regulated health insurance industry in circumstances characterised by an OECD study completed in 2002, as one in which it "cannot meet payment obligations if the current financing arrangements remain unchanged."[94]

133. Unlike the previous two decades, structural adjustment within the healthcare system over the next two will be characterised by increasing demand for services *and* shrinking resources in the public sector. The same demographic trajectories propelling decline in the proportion of working age adults relative to senior citizens will see population peak in 2007 and shrink thereafter.[95] By 2020, the tax base of working age adults relative to senior citizens (largely retired) will drop from the current 4:1 towards 2:1 (see Chart 3). As a result, the Japanese healthcare system will face mounting pressure to reduce costs at the same time that demand for healthcare services by a growing population of senior citizens increases.

134. Further structural adjustment in the healthcare system will be difficult not only because Japan is ageing more rapidly than other OECD economies, but because the Japanese healthcare system already reveals some evidence of efficiency.[96] Despite lower spending on healthcare based on gross domestic product (GDP) and fewer doctors as a proportion of the total population, Japan consistently ranks among the healthiest of the G7 group of leading industrialized economies.[97] Evidence supporting the efficiency of the Japanese healthcare system suggests that reliance on traditional approaches to increasing efficiency will not satisfactorily me*et al*l the demands that an ageing population and shrinking public resources will bring.

135. The footprint that ageing leaves on the healthcare system will be acutely felt in demand for health services provided by nurses. Illnesses prevalent in ageing populations such as dementia and the higher proportion of bedridden individuals are disproportionately intensive in nursing services. In addition, the traditional role of women as surrogate healthcare provides for senior citizens in extended families is

declining as women increasingly take up full-time employment and fewer Japanese live in extended families. In fact, the Japanese Ministry of Health, Labour and Welfare estimates that although the supply of nurses in Japan is expected to increase by a dramatic 13 per cent between 2001 and 2005. This increase will nevertheless result in a shortage of 5 000 nurses relative to demand at the end of this period.[98]

On-going domestic reforms

136. The ongoing programme of reforms being carried out across the Japanese economy will define the regulatory environment in various sectors including healthcare.[99] Two elements of the general reform programme are particularly relevant. The first is an element contained in *The Second Report Regarding Promotion of Regulatory Reform: Priority Regulatory Reform Measures to Promote Economic Vitalization* prepared by the Council on Regualtory Reform titled “Reforming Government-Made Markets through Increased Private Sector Participation” This ambitious work-stream supports efforts to “aggresively expand private sector particiaption in public services” including healthcare, which have hitherto been provided by the government.

137. Recent progress under this element can be found in the March 2004 decision to relax the previous ban on private investment in healthcare facilities. Significantly, this liberalisation is, in principle, open to domestic and foreign investors alike. However, the systemic effect of this liberalisation is limited as health services provided by facilitites established through private investment are not reimbursable under the public healthcare scheme.

138. The second element of the general regulatory programme relevant to structural adjustment in the healthcare sector is the Special Zones for Structural Adjustment programme. The Special Zones programme is a policy framework for regulatory experimentation in support of structural adjustment. Under this programme, local governments in areas designated as “Special Zones” may (subject to approval by the central government) relax regulatory obstacles to economic growth based on recommendations from the private sector. Regulatory reforms that have been successful at the local level are then considered for application on a national basis.

139. A decision made on 27 February 2003 under the Special Zones programme will support efforts to facilitate structural adjustment in healthcare services by backing nationwide measures enabling Japan to accept more foreign medical practitioners. Importantly this decision supports relaxation of the requirement for reciprocal recognition of Japanese medical credentials by a sending economy as a pre-condition for foreign doctors to provide medical services in Japan. It also establishes a precedent allowing for the Japanese medical examination to be taken in English. However, a restriction that foreign medical practitioners may only provide services to nationals of their home economies remains a limiting feature of this decision. An increase in the number of foreign medical practitioners allowed to practice in Japan is nonetheless foreseen.

Regional trading arrangements

140. The Japan Singaprore Free Trade Agreement (JSEPA) provides a foretaste of how RTAs can facilitate structural adjustment in the Japanese healthcare system. The JSEPA allows for a limited number of medical and dental practitioners to provide services in a member economy based on a quota determined under separate arrangements. As a forerunner to the programme under the Special Zones programme described above, the JSEPA sets a groundbreaking regulatory precedent by allowing foreign (Singaporean) trained doctors to pass the Japanese medical examination in English, but similarly curtails actual liberalisation by limiting potential clients to Singaporean nationals. The JSEPA nonetheless establishes a framework for future RTAs such as those under discussion with the Philippines and Thailand.

141. Current negotiations for economic partnership agreements (EPAs) with the Philippines and Thailand foresee liberalisations of trade in healthcare services. These negotiations have focused on mode 4 liberalisation of trade in nursing services[100] as opposed to medical services performed by doctors in the case of JSEPA. The nursing shortages expected by 2005 (see above) have prompted initiatives for liberalising trade in nursing services. Presently, it appears that attaining nursing licensing or qualifications under a Japanese language system will be a prerequisite for supporting the effective provision of nursing services in Japan. Meanwhile, a concrete proposal has been floated by a business group that a future system should account for the types of occupations and skills encompassed, the length of tenure and number of workers needed; and include a structure for sending/accepting non-Japanese workers to/from public institutions governed by bilateral agreements.[101] This proposal also supports the provision of Japanese nursing education including Japanese language through capacity building initiatives.

142. Also under consideration in these talks for EPAs is the mode 2 liberalisation of trade in healthcare services including the movement of Japanese citizens into retirement home/health-recreation facilities located in the Philippines and Thailand. In these talks, the portability of Japanese healthcare insurance coverage into a foreign country has been under review. While the healthcare insurance system supports not only patients but also sustainable domestic healthcare institutions, the reality of globalisation concerning movement of natural persons overseas in various forms prompted debate regarding the possibility of expanding or clarifying insurance coverage.[102]

Structural adjustment in the healthcare systems of exporting economies

143. The cases of the Philippines and Thailand provide a contrast in how trade in healthcare services may become a source of structural adjustment within exporting economies. Increasing exports of healthcare services may generate difficult structural adjustments in exporting economies particularly in cases where trade is large and unanticipated as in Thailand. In other cases, such trade may prove to be a key source of repatriated foreign exchange earnings as for the Philippines. And in yet others, an approach integrating the development of both health and trade policy could support structural adjustment to expand the domestic provision of healthcare in exporting economies beyond what would be possible in the absence of trade.

Thailand

144. With just over a quarter of the proportion of *practicing doctors per 1000 population* compared to that of Japan in 1996, it is not immediately obvious that a developing economy such as Thailand reflecting under-provision of healthcare services domestically would become an exporter of healthcare services. In fact, although the ratio of *practicing doctors per 1000 population* has nearly doubled between 1982 and 1996 from 0.16 to 0.29,[103] Thailand is still far below the OECD average of 2.9 recorded for 1998.[104] While not historically an exporter of health services via mode 4 (mainly due to lack of English skills), Thailand has developed private healthcare facilities providing short-term nursing care/resort packages to foreign patients via mode 2 as well as lucrative medical services for specialized and elective treatments not covered under their respective national healthcare schemes.

145. The fact that the Thai public healthcare scheme does not reimburse treatment received in private facilities has created a two-tier system of domestic healthcare where varying qualities of care are available depending on ability to pay. Better funding in private hospitals has resulted in "skimming" whereby highly qualified doctors are brought into the private sector from the public sector. Private investment in healthcare facilities has also contributed to a "brain drain" of medical practitioners from rural to better remunerated private practices in metropolitan areas. Most evident between the mid-1960s and -70s, this problem led to the implementation of a three year compulsory public service under which more than two-thirds of new graduates are assigned to rural areas.

146. While undertaking domestic reform, Thailand has sought to leverage its comparative advantage in healthcare services by pursuing liberalisation of trade in healthcare services *via* modes 2 and 4 under current negotiations for an EPA with Japan.[105] Integrating trade and health policies may facilitate structural adjustment if not growth in the capacity and quality of healthcare system in exporting economies. This is potentially much more significant where the cost differential of traded health services is large – as is generally the case when such trade occurs between developed and developing economies. For instance, a portion of the revenue generated from exports of health services via mode 2 in Thailand could be directed towards financing the expansion of the domestic education system for medicine, thus expanding the number of graduating doctors to compensate for mode 2 trade.[106]

Philippines

147. The USD 4.9 billion in foreign exchange earnings repatriated by the 7.1 million overseas workers from the Philippines in 2001[107] represented over 37 per cent of total foreign exchange reserves as of May 2004.[108] Although the Americas account for only two per cent of overseas Philippine workers, these workers were responsible for 56 per cent of repatriated foreign exchange earnings in 2003 (see Charts 4 and 5).[109] The corresponding figures of 42 and 15 percent for Asia suggest that substantial gains may be possible by elevating the quality of the labour outflows from the Philippines into the Asian region. In terms of destination economies for Philippine workers in Asia, Japan ranks high as a receiving economy and highest in level of remittances per overseas Philippine worker (see Charts 6 and 7).

148. With an active and longstanding programme of promoting work abroad for Philippine workers, current negotiations with Japan for an EPA may result in a broadening of occupations for which Philippine nationals may seek work in Japan to include qualified nurses.[110] A well established history of sending nurses to the Americas and the Middle East suggests an institutional infrastructure for training nurses and ameliorating the impact that their outflows may have on the domestic healthcare system. The high levels of remittances anticipated from potential outflows of nurses to Japan may facilitate structural adjustment within the Philippine healthcare system to meet demand from both economies.

Concluding remarks

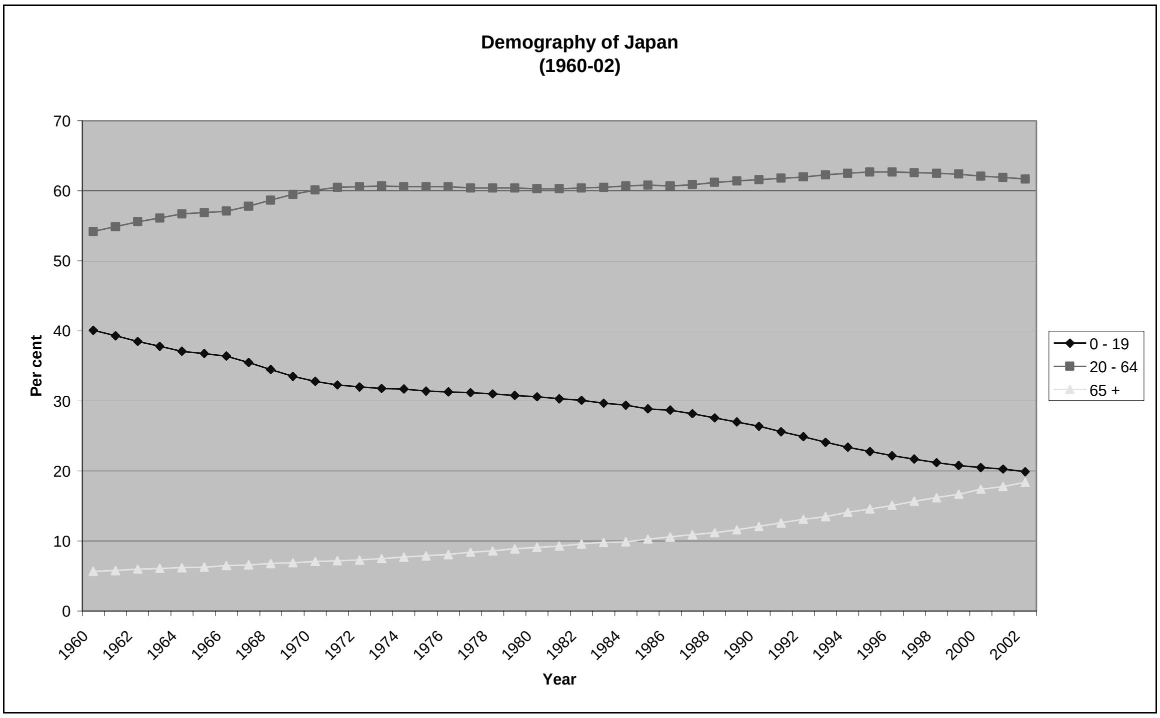
149. Structural adjustment prompted by demographic transition in Japan presents both a challenge and an opportunity. Domestic reforms and liberalisations of trade in healthcare services within Japan could provide opportunities for positive linkages between structural adjustment in the Japanese healthcare system and that of its trade partners. But, coherent and integrated policy frameworks must be carefully thought out. On the developing country side, assessing the varying levels of coordination between trade and health policies provides a framework for understanding the difficulties experienced by Thailand and the performance of the Philippines, which actively pursues general exports of services via mode 4. These experiences demonstrate that in the absence of careful management, complementary policies and coordination between health and trade policy, trade in healthcare services may bring further difficulties to under-resourced healthcare systems in exporting developing countries. Yet, they similarly illustrate that a strong potential for positive interaction between domestic development needs and trade policies exists in the financial resources that trade can bring, especially to exporting developing countries. By maintaining an integrated whole of government approach, trade in healthcare services holds substantial possibilities for promoting mutually beneficial structural adjustment in the healthcare systems of both developed and developing economies.[111]

---

[91] Carey (2002), p. 8.
[92] Imai (2002), p. 9.
[93] WHO (2002).
[94] Imai (2002), p. 9.

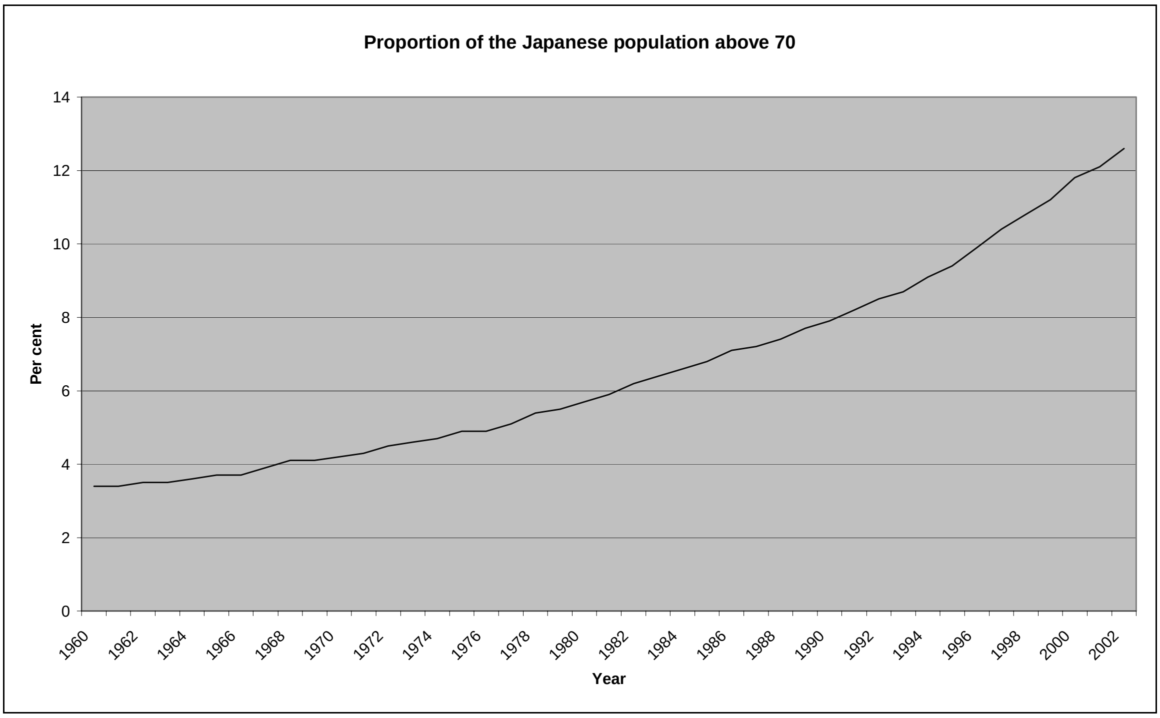
[95] Ogawa (1997).
[96] For a detailed discussion weighing evidence both supporting and detracting from the efficiency of the Japanese healthcare system see: Jeong (2002).
[97] OECD (2004e,f). G7 members include: United States, Japan, Germany, France, Britain, Italy and Canada.
[98] METI (2003), pp. 233-4.
[99] This annex focuses on recent reforms in the context of trade related issue and does not discuss other relevant initiatives on ageing such as introduction of long-term care insurance system in 2000 or pension reforms.
[100] In terms of its limited scope, this annex focuses on professional nurses in the medical services while "healthcare workers" may include care givers in the home with certain national qualification.
[101] Nippon Keidanren (2004)
[102] Ito (2004)
[103] Janjaroen (2002), p. 99.
[104] Jeong (2001), p. 32.
[105] Japan-Thailand (2003), p. 25: "Both sides held expert group meetings on medical and public health sector and discussed the possibility of liberalisation of the movement of nationally qualified specialists by accepting country including nurses, massage therapists, and care givers for the elderly and the Japanese side expressed that the scope of these specialists discussed further would be limited to those who had national qualifications of accepting country. Also both sides shared the view that the influence on domestic labour market should be duly considered regarding these specialists."
[106] The example of the UK demonstrates how integrating healthcare services exports within a domestic healthcare strategy has already supported better domestic healthcare provision to its citizens. The UK established the National Health System Overseas Enterprise (NHSOE) to facilitate healthcare services exports from public enterprises to foreign markets. The programme seeks to "strengthen the financial capacity of public health institutions to maintain and increase standards, by exporting medical services thus counterbalancing the trend towards decreasing contributions from the government." And, "The impact of the this strategy has been very positive. Through the NHSOE, public health institutions have been able to sell services overseas by pooling their surpluses of highly skilled human resources, medical technological advances, and idle transformation to provide full health care coverage to citizens." (Benavides, 2002).
[107] Note that all figures provided in this paper are based on *landbased* Philippine overseas workers. POEA (2004).
[108] IMF (2004d).
[109] Note, however, that attribution of remittances to the US could be the result of their routing via US banks, as commonly occurs for remittances from the Middle East, for example.
[110] Japan-Philippines (2003), p 17. "The Joint Coordinating Team shared a common understanding that the Movement of Natural Persons is one of the most important issues of the JPEPA. The Philippine side expressed its keen interests in opening the Japanese labour market to Filipino workers, especially in the field of healthcare services, because additional health care workers may be required as a result of Japanese population's age profile… The Japanese side responded that capability of communication in Japanese language as well as medical knowledge and skills is essential for health care professionals in Japan and therefore obtaining national qualification of Japan is a minimum requirement for not only Japanese but also foreigners to work in Japan as health care professionals. The Japanese side also stressed that the influence on domestic labour market should be duly considered regarding health care professionals.
[111] For further discussions on other OECD members as well as non-OECD members, see Benavides (2002) - Economies such as Australia and the UK have gone a step further by incorporating exports of health services (particularly via mode 2) as a source of supplemental financing for their respective universal healthcare systems, thus taking advantage of potential synergies from coordinating trade and health policy strategies. Also see OECD (2003) regarding policy lessons based on the case of South Africa (focusing on English speaking market). It elaborates a need for greater international cooperation and policy coherence with regard to the international mobility of health professionals.

Chart 1



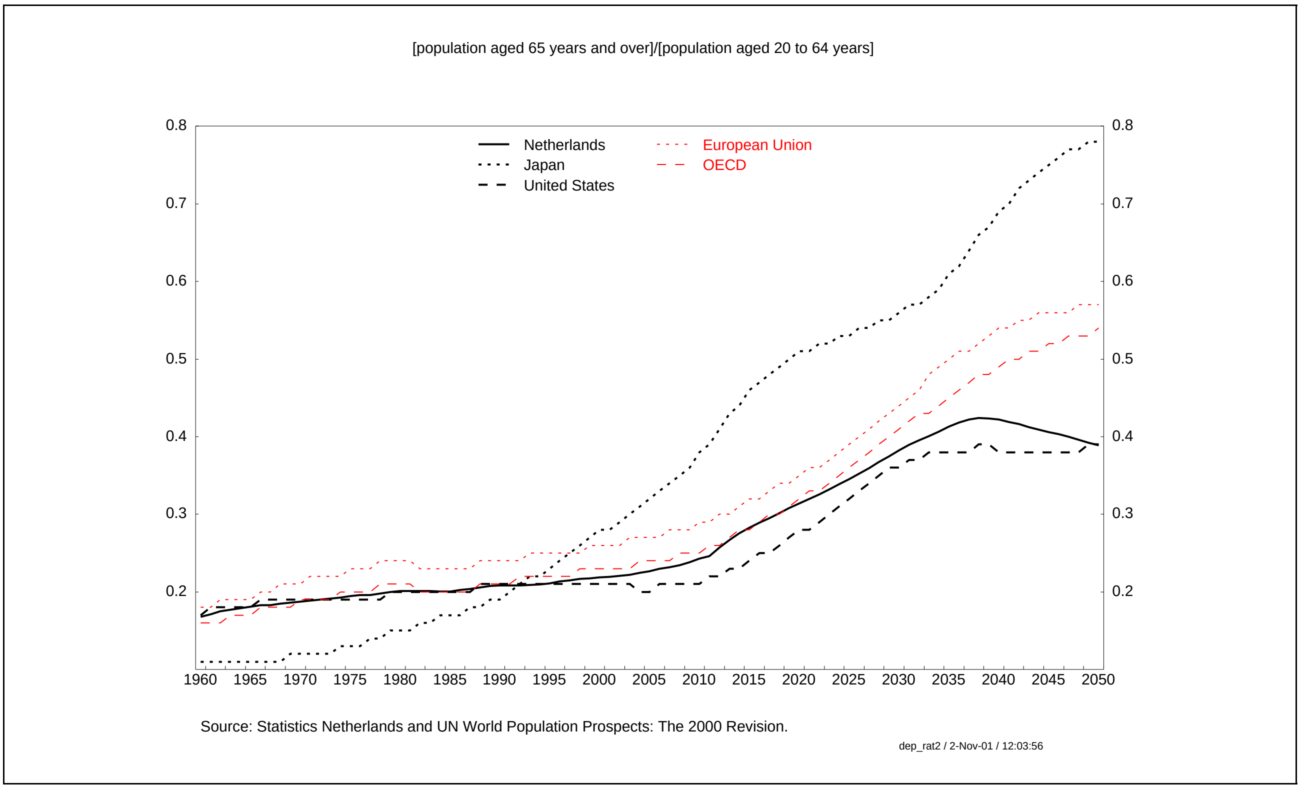
Source: OECD (2004).

Chart 2



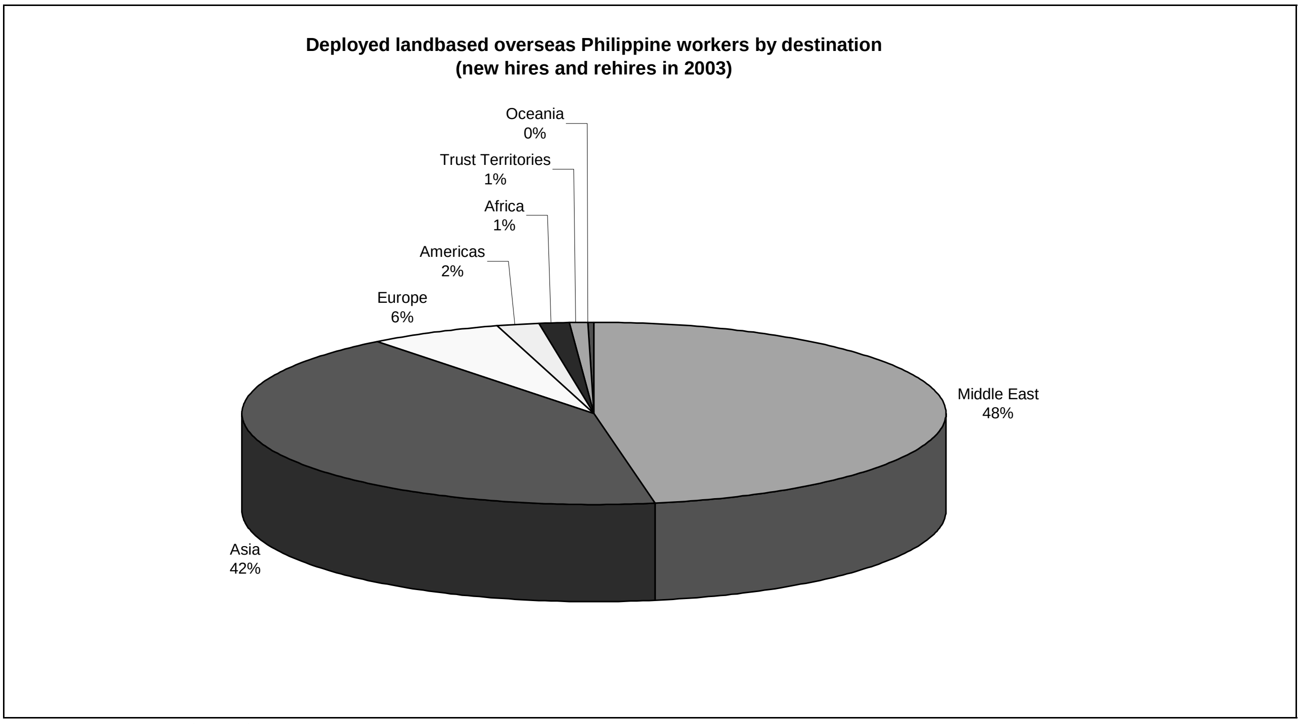
Source: OECD (2004).

Chart 3



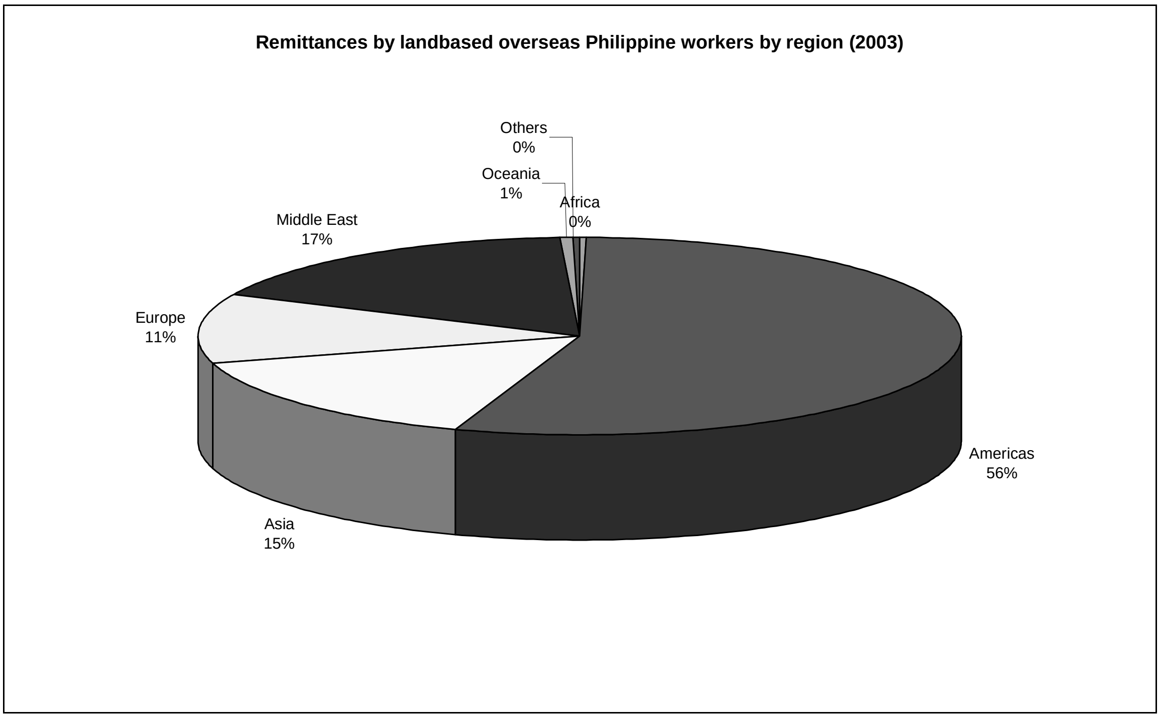
Source: Carey (2003).

Chart 4



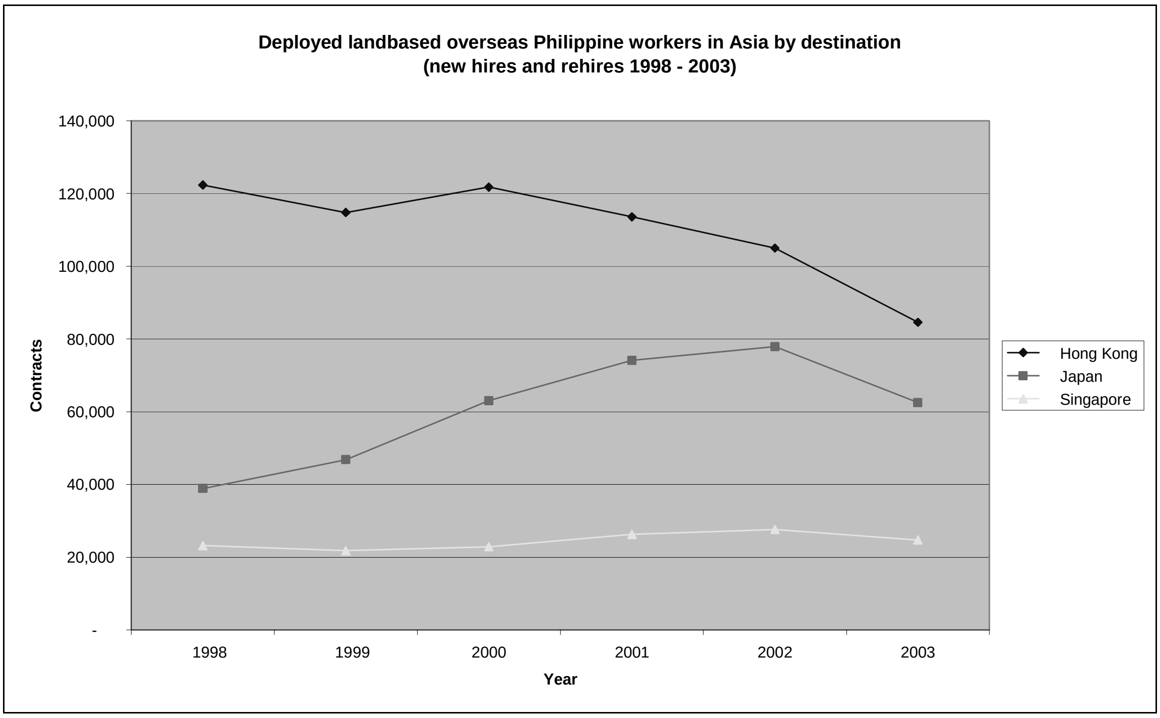
Source: POEA (2004).

Chart 5



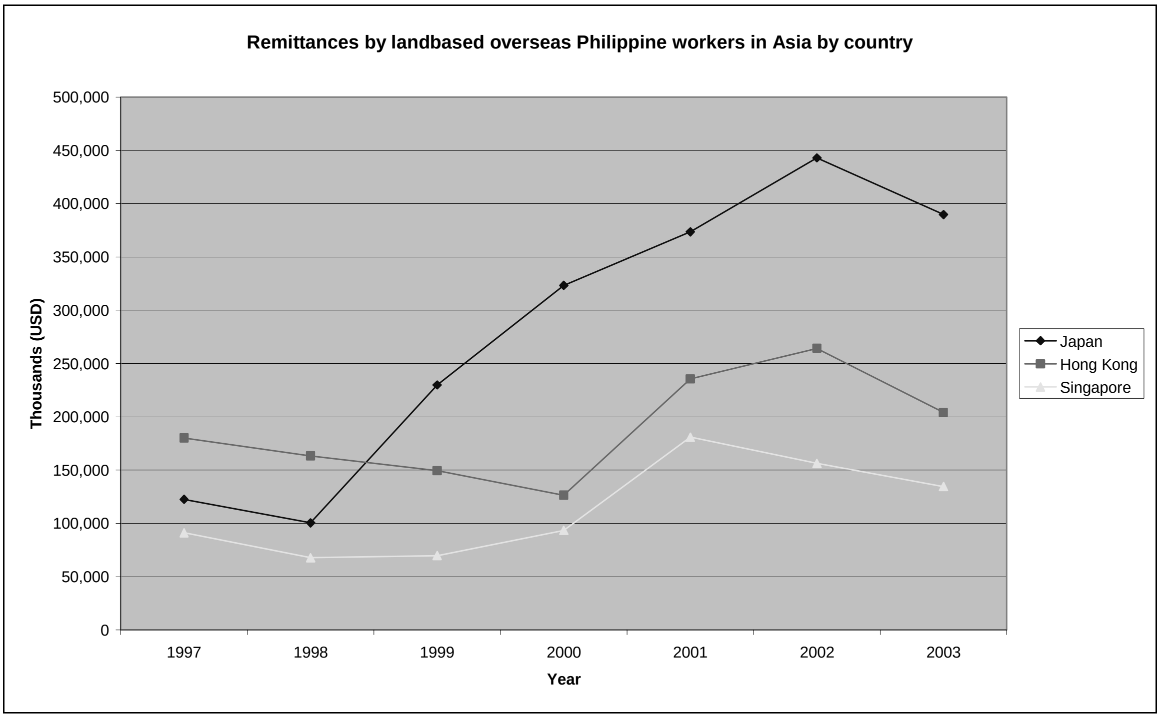
Source: POEA (2004).

Chart 6



Source: POEA (2004).

Chart 7



Source: POEA (2004).

8. INTERNATIONAL SOURCING OF IT AND BUSINESS PROCESS SERVICES

Key points emerging

150. Based on the experiences of the United States and India, trade in IT and business process services has the potential to be beneficial for both OECD and non-OECD countries – but, for both, open markets are essential to reap the gains and manage adjustment. U.S. companies have increased their productivity by outsourcing services to companies, or insourcing to foreign subsidiaries, that perform them most efficiently and these gains plus accompanying links to non-OECD markets have created new business opportunities at home and abroad. Indian economic reform and trade liberalisation in the 1990s attracted foreign investment which contributed to the establishment of the Indian IT and business process services industry. Economic growth in India has increased the demand for U.S. goods and services despite the continuing existence of significant trade barriers and there are signs that Indian services companies are starting to invest in the United States and many other OECD Member countries.

151. International outsourcing will become a more common and efficient business practise over time but there is a natural limit to what can be outsourced. Adjustment is likely to affect certain occupation categories in the U.S. labour market. However, it is important to note that there is no fixed number of "good" jobs for which countries compete. Increased specialisation in dynamic economies leads to a more efficient use of labour and capital. Estimates of the number of jobs that may migrate are small in relation to the U.S. labour market and the estimated number of jobs likely to be created. Further, there is evidence that around two thirds of workers who lose their jobs in the service sector find new employment with average earnings close to previous earnings. International sourcing of IT and business process services is expected to affect fewer workers in the E.U. than in the U.S. but the European worker is generally more likely to find difficulties in finding a new job because of higher unemployment rates and lower re-employment rates.

152. The challenge for any government is to secure the benefits of international specialisation while facilitating reemployment of affected workers. International sourcing is technically difficult to prohibit and U.S. companies would lose out in terms of competitiveness and existing and future business opportunities. Worker assistance, not trade restrictions, is the right response to labour market adjustment. The challenge is to establish the conditions which promote job creation and endow workers with the skills to take up new jobs. That is, governments should promote overall competitiveness by ensuring the provision of high-quality education; maintaining a business-conducive environment; and focusing on policies that increase productivity and promote innovation. Specifically, dislocated workers will require assistance through e.g. insurance programmes during the time of job search; and re-education possibilities for those who may opt for a change of profession.

153. In India, the IT services (ITS) and IT-enabled services (ITeS) sectors are developing fast. India may have the long-term potential to be for services what China is to manufacturing: a premier emerging market choice for foreign direct investment and home to increasingly globally competitive companies. But further reform is needed and competition is increasing as other countries copy India's business model. To enable long-term growth in the ITS and ITeS sectors, the Indian government could consider the following:

- **Remove administrative and regulatory inefficiencies:** reducing corruption, and improving the efficiency of administrative procedures related to business would increase the competitiveness of Indian companies, increase its attractiveness as a destination for FDI and benefit the entire Indian economy.

- **Invest in education:** demand will grow in the ITeS sector for specialist competence in a number of areas as India offers increasingly sophisticated services. The ITS sector will need more IT scientists and researchers who can help develop domain expertise. Improving quality and access in primary and secondary education will also be critical in avoiding bottlenecks in the future.

- **Consider services liberalisation:** this would help improve the quality of infrastructure (with benefits for the domestic economy), increase trade in services and goods, and strengthen India's bargaining position in combating trade restrictions against its exports.

- **Ensure international access:** the global delivery model employed by Indian IT and business process services companies includes a central element of overseas work. The Indian industry has much to gain from a reduction in barriers to international movement of people under Mode 4 in the GATS.

154. India is a developing country with all the challenges this implies for institutions, infrastructure, budgets etc. However, the Indian government and several states have taken the initiative to provide enabling environments for the IT and business process services sector. The dialogue between companies and the public administration has in general been constructive. The accomplishment of the IT and business process service industry has offered well-paid career opportunities to hundreds of thousands of young workers. A rise in income inequality may create social tensions but the overall society will gain from the growing number of taxpayers and well-run and transparent private companies. This and other development–related perspectives will be examined in more detail in the following section.

8.1 THE UNITED STATES

155. The United States and India have been at the centre of the international sourcing debate, and both are facing adjustment challenges (described in section one). For the United States as well as for Europe, these focus on the potential impact on certain occupation categories within the labour market, while in India the adjustment needs are broader and related to growth barriers. How each country might best respond to these challenges is the subject of this and the following study.

Scale of the adjustment

156. In order to provide policy recommendations, it is essential to define the potential scope of adjustment: what is the extent of international sourcing (see Annex 8.1 for definitions) and who is likely to be affected? Some have tried to answer this by first identifying the type and number of services that could be sourced internationally and then projecting future job migration based on a set of static assumptions. For example, Forrester Research (2002) estimates that 3.3 million American jobs could migrate by 2015, with customer service representatives (343 000), 'bookkeeping, accounting, and auditing clerks' (300 000) and 'office clerks, general' (214 000) being most affected in absolute terms.

157. Others have tried to estimate the *outer limit* of jobs that could face international competition in the future. These occupations are identified using a set of attributes necessary for international sourcing – excluding e.g. services requiring face-to-face interaction and those which cannot be transferred over ICT networks. On this basis, occupation categories representing roughly 11 percent of total US employment are estimated as likely to face some form of foreign competition, with more than three out of five being office support occupations (Bardhan and Kroll 2003). But estimates vary from 12-16 percent of service sector jobs having "disaggregation potential" (World Bank, 1995) to only 5 percent being contestable by low-income countries (ILO, 2001).

158. These are all more or less qualified guesses. What is certain is that international sourcing will expand and global delivery models will improve with growing experience, falling communication costs and technological progress. Companies from countries like India, the Philippines and Mexico will increasingly offer their services to clients in the United States and U.S. companies will produce more parts of the value chain in subsidiaries in these countries – similar to what has occurred in the manufacturing industry.

159. The number of good jobs is not fixed and "lost or won" as a result of international trade. Increased specialisation in dynamic economies leads to a more efficient use of labour and capital. However, structural adjustment – be it as a result of technological change, shifting consumer preferences or new sources of competition – may cause strains because even if companies, investors and consumers are better off, some individuals, professions or regions might be worse off. The challenge for any government is to secure the benefits of international specialisation while facilitating mobility of resources within the economy, including reemployment for those affected.

160. International sourcing is likely to affect certain occupation categories rather than entire industries and three factors are key in analysing how it will affect workers: reemployment rates, salary levels of reemployed workers and salary growth rates for those who keep their jobs but face competition. While there are no data available on the specific impact of international sourcing, there is some evidence on adjustment in services in general in the United States. During 1979-1999, 69 percent of U.S. workers who lost their jobs as a result of cheap imports in non-manufacturing sectors were reemployed within a year with a mean salary equal to 96 percent of previous salaries (notably the United States has the highest

reemployment rate among OECD countries) (Kletzer in McKinsey Quarterly, 2003). More recently, of US workers who lost their jobs in 2001-2003, 67 percent of 'private non-agricultural wage and salary workers' were reemployed by January 2004, but 20 percent remained unemployed. High-skilled occupation categories such as 'management, business, and financial operations occupations' and 'professional and related occupations' had reemployment rates around 70 percent, while the figure was 65 percent for 'sales and office occupations'. Of the reemployed workers who lost full-time wage and salary jobs, 43 percent were earning as much or more in their new jobs; of the remaining 57 percent, about one-third experienced earnings losses of 20 percent or more (BLS, 2004c). To date, there are no available data on the effect that international sourcing of IT and business process services may have on wages.

161. Analysis of labour market effects of international sourcing is at an early stage but several factors should be borne in mind. First, there is scant evidence of a direct link between international sourcing and job losses. The job losses in the U.S. IT services sector during the first years of this decade - there was a 7.8 percent decrease in employment in the IT services sector between 2000 and 2002 (BLS, 2004c) - was mainly due to the fall in IT investment and industry depression following the share market crash. Second, job losses from international sourcing should be seen in the context of overall job creation – for example, the 252 000 computer programming and computer software engineering jobs predicted to migrate by 2015 (Forrester Research, 2002) should be seen in the light of the additional 1.15 million IT jobs forecasted to be created by 2012 (PPi, 2004). Third, guesstimates have focused only on the potential losses: far fewer are available on how many jobs international sourcing has created within the United States and how much time and resources companies and consumers have saved from specialisation. Some studies to date have suggested that international sourcing in the IT sector could create more jobs than it destroys (modelled by Global Insight 2004) and that there are important benefits for importers at the national level (McKinsey Quarterly, 2003).

Policy responses and their effects

162. Initial reaction to the growth of international sourcing, particularly outsourcing, has been defensive, with more than 100 bills pending in 38 U.S. states to prohibit the use of foreign contractors by state and local governments; legislation has been passed in five states and vetoed in two.[112] Such responses are unlikely to be an effective means of addressing the adjustment challenges from international sourcing, however. First, international sourcing would be very difficult to stop since the potential range of sectors and activities likely to be affected, and the causal relationship between international sourcing and actual job losses, are unclear. Second, the scope for trade restrictions is limited because government procurement, which is the focus of most proposed legislation, accounts for a small share of imports from low-income countries. Third, trade restrictions increase costs that are passed on directly to consumers, or taxpayers in the case of government procurement, and which can undermine the competitiveness of U.S. companies. State level discrimination against international sourcing is also likely to make companies more discreet about their sourcing activities.

163. Fourth, trade restrictive reactions may actually hurt U.S. employment overall via the negative repercussions for U.S. exporters. A trade restrictive response from trading partners could have serious consequences for American companies which would lose out not only in terms of international competitiveness but also on export opportunities in emerging markets. Indian imports of U.S. goods have grown by 8 percent per year since 1994 and trade restrictive responses could hurt U.S. exports of large items such as electrical machinery, chemicals and high-tech goods. The value of the Indian internal software market is also expected to reach USD 27 billion in 2008 (NASSCOM, 2002) and U.S. companies are expected to capture a considerable share of this market. Lastly, the United States is the world's largest exporter of commercial services, with more than a sixth of world exports. In 2002, the United States recorded a USD 67 billion surplus in commercial services and the trade surpluses for 'other business

services' and 'computer and information services' were USD 19.1 billion and USD 2.7 billion respectively (see Table 1).

Table 1: US trade in services 2002, selected categories
USD billion

	Export value	Import value
Commercial services*	272.6	205.6
Other commercial services*	141.2	86.2
Other business services**	60.8	41.6
Computer and information services**	6.9	4.2

Source: * WTO Trade Statistics 2003; ** OECD (2004)

164. For all these reasons, a more effective response to growing imports of IT and business process services is likely to lie in the implementation of labour market and other domestic policies. The United States already has extensive experience in trade-related adjustment: it has been underway in the manufacturing industry for some years on a larger scale than the projected adjustment challenges for IT and business process services. However, it should be stressed that the impact is still largely unknown and policy makers will need to take this into account.

165. The main challenges from a government policy perspective are to create the underlying conditions in which jobs can be created and to ensure that workers have the necessary skills to take advantage of new opportunities. Ensuring the provision of high-quality education, from primary school to postgraduate level, maintaining a favourable business environment, and focusing on policies that improve competitiveness – e.g. by encouraging activities that raise productivity and foster innovation - are all equally important.

166. Workers facing adjustment require support – such as unemployment insurance during the time of job search and re-training possibilities for those who may opt for a change of occupation. The Trade Adjustment Assistance programme established under the Trade Act in 1974 and last amended in 2002 is only offered to workers affected by international competition in goods markets. An extension to include service workers could be considered; the cost of extending the scheme would only take up a small proportion of the gains from trade (see e.g. Brainard and Litan 2004). Equally, however, workers could be supported by general social insurance and assistance schemes along the same lines but applied to all workers who lose their jobs; indeed, it is arguable whether assistance policies should differentiate between workers who lose their jobs from trade and those who lose their jobs due, for example, to technological change (for further discussions, see Part II and Part III).

[112] The National Foundation for American Policy, cited in *The New York Times*, 17 July 2004. Proposed restrictions include 'call centre restrictions', 'state contract bans', 'bans on assistance to companies that outsource overseas and have 100-person job loss', 'data restrictions', 'in-state preference', 'development restrictions for companies that outsource overseas', 'in-state resident requirement for state contractors', 'personal data and health care restrictions', 'outsourcing notification requirements' (Klinger and Sykes, 2004).

8.2 CASE STUDY: IBM CORPORATION

167. IBM was incorporated in 1911 and is today the world's largest information technology company. Its 330,000 employees conduct business in some 165 countries and in 2003 generated revenue of USD 89 billion, or ten times the value of Indian exports of IT products and services[113].

168. Two trends stand out in IBM's operations. First, IBM has transformed itself from being mainly a supplier of IT products to becoming the world's largest IT and business services provider. Second, approximately 60 percent of its revenue has been generated by non-U.S. operations for the last 15 years, and in recent times revenue growth has been mainly generated by non-US markets. Between 1998 and 2003, the share of revenue from U.S. operations decreased from 43.2 percent to 37.9 percent.

Global sourcing activities

169. The decision whether to produce in-house or to contract to external parties (insource vs. outsource) is separate from the location decision (domestic vs. foreign/international). Much of IBM's activity to date has consisted of international insourcing; that is, creation of a truly global value chain in which service activities are produced all over the world within IBM's own subsidiaries. IBM has regularly moved work from one location to another to support clients and its own operations more effectively, and to improve efficiency by consolidating functions, matching local skills with customer needs and participating in new opportunities in emerging economies. Activities located in different countries are integrated in a global business and delivery model.

170. Location decisions depend primarily on the availability of skills, and on quality and cost factors, which in turn vary with the activity in question, e.g. commoditised activities are generally more price-sensitive. Although for some of these activities labour cost differentials between high-income countries and emerging market countries can be significant, operational risks tend to be higher and any cost-benefit analysis must consider the total costs of processes beyond just labour expenses.

171. Additionally, IBM has also undertaken some international outsourcing, with some service activities contracted to external parties. Contracting of commoditised activities to specialised companies allows IBM not only to cut costs but also to focus on its core activities.

172. IBM provides services worldwide at all stages in the value chain, including back-office functions, business process outsourcing such as human resources and procurement, software development, regional management activities and R&D. Highly competitive markets force companies to search for high-quality, cost-competitive services all over the world in order to stay in business. Lower costs result in price cuts, dividends or reinvestment in research and product development; and the outcome depends on market characteristics such as market maturity and price competition.

173. More than half of IBM's employees work outside the United States and the company considers each country operation to be a long-term investment, tapping into local pools of skills. It has 22 global service delivery centres and 30 software labs around the world. IBM Research has three labs in the United States, and another five elsewhere, situated in Beijing, Haifa, New Delhi, Tokyo and Zurich. These globally dispersed labs have contributed to placing IBM at the top of the world's patent ranking lists for more than a decade. Investment in R&D exceeded $5 billion in 2003.

Managing change and adjustment

174. IBM's workforce is expanding throughout the world, but growth is particularly strong in emerging markets. For the third quarter of 2004, combined growth in the emerging markets of Brazil, China, India and Russia exceeded 30 percent – a figure far higher than predicted only a few years ago.

175. Although some activities for which cost and productivity constitute a key to competitiveness are located in emerging markets, much of this growth stems from new business opportunities. For example, growth in the Indian operations has benefited from large contracts with new clients - in early 2004, IBM won a 10-year contract with Indian firm Bharti Televentures worth USD 700-750 million to provide the company with hardware and software, including consolidating its data centres and servicing its IT help desks and disaster recovery capabilities. Acquisitions also play a role: IBM has acquired Daksh e-Services, India's third largest call centre company, in the largest deal of its kind in India's BPO industry. The new entity is now being fully integrated into IBM's global business model.

176. IBM estimates that around 1-2% (or 3,300-6,600) of full-time positions worldwide will be affected by a relocation of jobs in 2004 – a figure which is below the company's average attrition rate. The company also estimates that it will create 18,800 new jobs over the same period.

177. The number of redundancies is lowered by IBM's continuing investment in upgrading the skills of its employees. Internal replacement is a priority: the focus is to retrain people rather than hire external professionals. In 2004, IBM will invest USD 800 million to upgrade the skills of its employees and an additional USD 25 million for joint training and job placement programs for its employees and its network of business partners around the world.

178. IBM is, and will remain, a large employer of highly skilled service workers. The company aims to create an environment that fosters innovation in order to remain an attractive provider of business and IT service. It advises governments to do the same and create a broader policy environment that fosters innovation: investment in skills, research, entrepreneurial activity and other policy measures that foster innovation is the sustainable way to ensure that new, high value-added jobs will be created in the future.

---

[113] http://www.nasscom.org/artdisplay.asp?Art_id=2707

8.3 THE EUROPEAN EXPERIENCE

International sourcing practises within the European Union

179. International sourcing practises in the European Union vary widely among Member States, depending among other things on differences in language, cultural heritage, labour market regulations and local business practises. While trade in IT and business process services is predominantly conducted between high-income countries - either between E.U. Member States or with trading partners in other OECD countries – E.U. companies are starting to realise the benefits of importing services from non-OECD countries.

180. Language proficiency and cultural ties play an essential role in the choice of business process service provider, and to a certain extent for IT service providers too. Thus Indian companies have been highly successful in attracting business in the United Kingdom while facing greater challenges in continental Europe. Morocco has quickly captured a 70 percent market share of the small but rapidly growing share (2-3 percent) of foreign call centre and support services imported by France, amid competition from Tunisia and Senegal (Le Nouvel Observateur, 2004; L’Expansion, 2004). German companies have strong ties to Eastern Europe where 59 percent of “planned offshoring investment” will flow according to a survey cited by Farrell (2004); and a number of Spanish companies are looking to South America for delivery of IT and business process services (FT, 2004).

181. Differences in the demand and supply of labour and wage levels within the recently enlarged E.U. have also spurred intra-E.U. trade in IT and business process services. Western European companies are increasingly importing services from Eastern Europe, where salaries are modest and skilled labour abundant. Trade is further boosted by inflows of foreign direct investment from non-E.U. companies which locate regional headquarters and service centres in countries like Hungary and the Czech Republic to service customers in the European single market. However, two remarkable success stories are represented by high-income countries as providers of IT and business process services: Ireland, which has become a European centre for the provision of IT and business process services (McKinsey Global Institute, 2004), and the United Kingdom, which together with the United States introduced and cultivated the outsourcing practise. The British trade surplus in commercial services, excluding transportation and travel services, provides a hint: in 2003, it reached USD 58bn, up from USD 49bn in 2002 and US$ 42bn in 2001 (WTO, 2002, 2003e, 2004b).

182. The use of international sourcing also varies among European countries: e.g. in the United Kingdom, the proportion of companies that source services from India is similar to the relatively high proportion in the United States, while Italian companies source few IT and business process services internationally. Approximately one fourth (USD 2.3bn in the year ending March 2003) of India’s rapidly growing exports of IT and business process services are destined for the European market, and around 60 percent of these services are imported by the United Kingdom, with Germany as the second most important market (Nasscom, 2003, 2004). Companies in e.g. Germany and France are hindered from engaging IT service providers from low-income countries because of regulatory barriers such as prohibitively long waiting times for issuing work permits (international sourcing of IT services usually requires some service providers to be located at the client site). Anecdotal evidence also suggests that companies in these countries hesitate to source services internationally because of hostility among workers and unions.

Scale of the adjustment

183. European companies have been more reluctant to source IT and business process services internationally than their North American competitors but there are signs that international sourcing is on the rise in large companies across Europe. One influential study concluded that a cumulative number of 1.2 million European jobs might migrate by 2015 with clerical workers (342,000), computing professionals (119,000), ‘architects, engineers and related professionals’ (82,000), and ‘production and operations managers’ (76,000) expected to be most affected in absolute terms.

Table 1: European Jobs Moving Abroad*

	2005-2010	2005-2015
UK	264,900	702,400
Germany	53,000	131,900
France	37,300	92,600
Netherlands	14,100	34,000
Italy	10,100	26,400
Sweden	7,800	18,800
Belgium	6,700	16,700
Switzerland	5,800	14,300
Denmark	5,000	12,200
Austria	4,600	11,300
Finland	4,100	10,100
Spain	3,600	9,400
Ireland	1,400	3,600
Portugal	900	2,300
Greece	800	2,100
Luxembourg	350	850
Sum	*420,400*	*1,089,000*

* Cumulative numbers
Source: Forrester Research (2004).

Two thirds of these job losses would occur in the United Kingdom, representing approximately 6 percent of jobs terminated each year (see Table 1). Germany and France are predicted to sustain fewer job losses but they are also likely to lose out in competitiveness to American and British companies because of the anticipated weak productivity performance. Another study found that German companies stand to gain from international sourcing, but the broader German economy may lose because of its less flexible labour market and its relatively low reemployment rate. That is, the flow of gains would not materialise: while the United States would gain 12-14 percent from international sourcing (with similar gains in the U.K.), Germany would lose up to 20 percent of the resources used to buy services abroad (McKinsey Global Institute, 2004).

184. In sum, the current state of international sourcing practises in Europe is multifaceted: United Kingdom is the most affected economy in terms of jobs moving abroad but the British government has been cautiously optimistic and pragmatic in meeting this phenomenon as its services sector has thrived and acted as an engine for job creation (DTI, 2004). Ireland has established itself as a leading centre for the delivery of IT and business process services while large economies such as Germany, France and the Netherlands have been more hesitant to import services from low-income countries. Most Mediterranean countries are expected to be little affected by service job migration in the foreseeable future and international sourcing is more likely to be of regional nature (European Foundation, 2004).

185. International sourcing of IT and business process services is expected to affect fewer workers in the E.U. than in the U.S. but the European worker is generally more likely to find difficulties in finding a new job because of higher unemployment rates and lower re-employment rates.

8.4 INDIA

186. Trade in IT and business process services is growing rapidly and the growth potential is significant. Indian exporters have done well: during the 1990s India recorded the highest growth rate (17.3 percent per year) of services exports among the world's top 15 exporters (World Bank, 2004b) (see Box 2). The software and services industry represented 2.7 percent of GDP in 2003 and 13 percent of total exports, or roughly 40 percent of commercial services exports, in 2002 (NASSCOM, 2004a; WTO, 2003e; World Bank, 2004c)[114]. India ranked 37 in business competitiveness (out of 95 countries) in the World Economic Forum's Global Competitiveness Report 2003-2004 – ahead of China (46) and most other low-income countries. However, the continuing rapid growth of India's IT and business process service industry cannot be taken for granted. Other low-income countries are trying to catch up and growth might be limited by the introduction of regulatory trade barriers in client countries. This section explores how government policy at the national and state level in India may contribute to sustaining the competitiveness of the industry.

Institutions and domestic policies

187. Indian IT and business process service providers operate in a relatively favourable business environment, with states competing to attract investment. High-tech parks offering reliable (and subsidised) public services and ICT infrastructure have been established across the country. Duty free imports and corporate income tax exemptions are available for exporters in many instances. Competition amongst states has also prompted regulatory reform: some states with significant ITeS sectors have e.g. changed their local labour regulations to allow female employees to work at night and relaxed regulations on overtime work. Even a communist run state such as West Bengal, with a reputation for labour unrest, has declared its IT sector an 'essential service' in order to reduce the number of strikes and attract investment.

188. However, there are several areas in which the Indian government could improve the conditions for entrepreneurs. Overall, the regulatory environment for businesses and small scale entrepreneurs remains poor. It takes almost three months to establish a company in India, or four times the number of days as in neighbouring Pakistan; and costs 50 percent of GNI per capita, almost four times the cost in China. The time frame for enforcing a contract - approximately one year – is twice that in China. Moreover, India is ranked 83rd (out of 133 countries) in Transparency International's Corruption Perceptions Index 2003 and its corruption index (2.8 out of 10, with a lower index indicating higher corruption) has not changed since the survey was first conducted in 1995. 61 percent of Indian businesses also report that more than ten percent of senior management time is occupied by government regulations – the highest number in 145 countries (World Bank, 2004d).

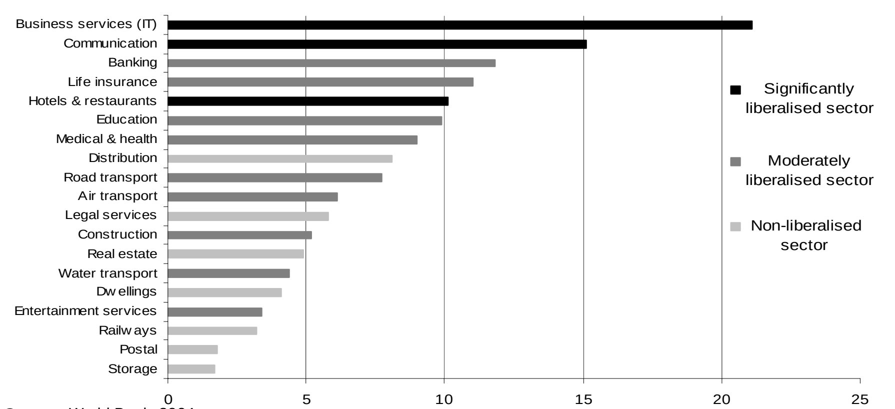
189. Education is a potential bottleneck in the medium-term. The ITS sector has benefited from the large and growing number of IT graduates that India produces every year. Almost 100 000 IT graduates are expected to join the labour market in 2004 (NASSCOM, 2002). Jobs in the ITS sector are well paid and coveted, and the number of new IT graduates has grown on an annual average of 13 percent since 1997. The ITeS sector has also benefited from India's young, well-educated, and English-speaking talent pool. However, despite the large population, continued expansion of the service sector could place pressure on the availability of skilled labour in the medium- and long-term (BBC, 2004).

190. Indeed, India's large population is not necessarily a useful reference point for discussing labour capacity in the services export sector. Weaknesses in India's primary and secondary schools are limiting the number of potential recruits for the industry and much of the Indian workforce speaks little or insufficient English. The educational challenge lies in producing both the number of graduates needed for a rapidly growing export industry in basic services and the kinds of specialist skills needed for high-end support services. Labour demand predictions indicate that in the future ITeS companies may need e.g. accountants, radiographers and tax specialists to provide more specialist support functions. Equally, India will need to produce more research specialists in ICT itself to foster product innovation and develop domain expertise.

Growth and trade liberalisation

191. While Indian productivity lags behind high-income countries in the manufacturing and services sectors, the gap is less pronounced in the software, telecommunications, and software services and products sectors (McKinsey, 2001). This relatively smaller gap could be viewed in light of Chart 1, which indicates a positive correlation between sector-specific liberalisation and growth. IT services and telecommunications are two of three "significantly liberalised sectors" and these were the two sectors that experienced the highest growth rates among examined industries in the 1990s. Indeed, the Indian IT sector more generally was greatly assisted by the wave of reform and liberalisation undertaken by the Indian government in the early 1990s (see the Infosys case study below).

Chart 1: Growth and gains from liberalisation, selected sectors



Source: World Bank, 2004

192. Despite the tangible gains (e.g. the price for a phone call between India and the US and the UK fell by 84 percent between 2000 and 2003 (HSBC, 2003)) problems remain. NASSCOM (2004b) recently reported that users find India's bandwidth capacity inadequate, "extremely high-priced" and uncompetitive in comparison to other Asian countries offering IT and business process services. While Indian high-tech parks provide enabling infrastructure in major IT centres, daily life in these centres is becoming increasingly difficult as fast and unplanned growth has led to heavy traffic congestion, pollution and housing and power shortages. There is also a growing demand for improved international transport links to IT centres like Bangalore and Hyderabad. In addition, the rapidly expanding IT industry is considering new locations in India from which to deliver services because some existing IT centres suffer from rapid salary growth and high attrition rates. These future, second generation IT centres are facing the same infrastructure challenges that today's IT centres did 3-5 years ago.

193. Services liberalisation could play an important role in improving the quality of Indian infrastructure and generate future export opportunities and growth in both services and goods. India itself has benefited from the openness of other markets – including developing country markets which are increasingly important FDI locations for the Indian software industry. The Infosys case study illustrates how Indian companies increasingly establish foreign subsidiaries to supply customised services to their clients. Greater openness of the Indian economy may also improve India's bargaining position when combating trade restrictions in trading partners.

194. In addition to the threatened legislative prohibitions on government procurement, Indian exporters of IT and business process services currently confront barriers to movement of service providers. A serious concern is quantitative restrictions which prohibit the movement of Indian professionals to provide services at client sites. Economic needs tests and wage parity requirements are just some of the regulations that make IT consultants' work more difficult. Other constraints include inadequate recognition of qualifications, training and experience, and differential treatment of foreign service providers. As approximately 60 percent of India's software exports may be generated from work at client sites (Mattoo, 2003), restrictions on Mode 4 trade could pose a serious threat to the industry's long-term growth potential.

[114] Indian trade data for IT services are collected from industry surveys conducted by India's National Association of Software and Service Companies (NASSCOM). See OECD's *Information Technology Outlook 2004* for a discussion of the inadequacy of existing data.

8.5 CASE STUDY: INFOSYS TECHNOLOGIES LTD

195. The Indian government initiated a reform agenda in 1991 following a severe balance-of-payments and fiscal crisis. The reforms aimed at gradually restructuring India's highly protected planned economy and policies were implemented to reduce government control of market entry, trim tariffs and quotas on goods, and ease strict limits on FDI. These moves pushed India toward a more market-oriented and open economy and they prompted pioneering companies such as British Airways, General Electric, and Citigroup to enter the country to set up IT-services and back office operations for their English speaking markets. These new establishments initiated knowledge transfers and some employees soon chose to establish their own service companies. The Indian IT services sector subsequently took off when companies like Infosys began to target foreign MNCs (see Box 2), aided by the best practises and risk capital brought back or provided by Indian professionals working in the U.S. IT industry.

196. Infosys made itself a name in the late 1990s as one of the most admired and fast growing Indian IT services companies. In March 1999 it became the first Indian company to list its shares on NASDAQ and countless companies have tried to copy its global delivery model which manages projects and supplies services from multiple locations around the world. Infosys was also one of the first Indian IT companies to compete on quality rather than cost and much of its success has been attributed to its proven track record on timely delivery of high quality services. The company has grown by almost 800 percent over the last five years; scalability is a comparative advantage of Indian companies such as Infosys which can take on big projects engaging hundreds of professionals at short notice. Infosys' North American and European markets generated 71 and 19 percent of revenue respectively (Table 2) and services are provided to a range of industry segments. Infosys' software professionals spend around one third of their time at client sites and the rest at domestic software development centres. Due to wage parity requirements and expenses related to offshore work, around half (53 percent in 2004) of total revenues were generated from the billing of professionals working at client sites.

Foreign expansion and future challenges

197. Over the past two years, Infosys has adopted a diversification strategy to become a full business services provider, including both a more sophisticated package of business services and expansion into business process outsourcing. This has included investment in developed country markets: in 2003 Infosys acquired an Australian company with 330 employees to add to its 73 employees at Infosys Australia and this year it established a consulting branch in the United States. The US branch will hire 75 local consultants to work with five senior managers recruited from US competitors. By early 2007, Infosys Consulting aims to employ some 500 consultants in its American offices. Infosys is also targeting developing countries with a software banking solution for low-income countries and it recently established a development centre in Shanghai to serve the East Asian market.

BOX 2: The global delivery model for services has gone from strength to strength since the mid 1990s: Indian exports of IT services and IT-enabled services reached USD 12.5 billion in the year ending March 2004. Several factors contributed to the early success of the Indian IT services sector:

- **Independent growth path**: the young industry was relatively unaffected by domestic inefficiencies resulting from the Indian legacy of protectionism and industrial state planning.
- **Foreign competition**: most IT-companies developed without a domestic client base and faced international competition from the beginning. In order to win contracts, Indian service companies had to be not just as good as their foreign competitors, but better.
- **Innovative delivery model**: the modes of service delivery – including cable, satellite and temporary movement of professionals to client sites – circumvented a number of trade and regulatory barriers.
- **Investment in tertiary education**: the industry is highly labour and skills intensive and less dependent on capital and infrastructure. India's large and well-educated labour force matched the requirements for a thriving ITS and BPS industry and it rewarded previous investment in tertiary education.

198. While its previous business model was based around efficient marketing and sales organisations in client countries with headquarters, administration and operations situated in India, Infosys is now leading the way for the Indian IT services sector by establishing small but not insignificant front offices in client countries. Infosys' future plan is to deploy around 30 percent of its workforce in client countries, of which around half would be local hires (the other half would continue to be rotated in and out of India and client country offices). This is a big step: front offices alter the cost equation by adding local professionals with local salaries and overhead costs and pose many new challenges related to e.g. management and corporate culture. It also demonstrates an interesting convergence: companies such as Infosys are adopting a business model similar to OECD MNCs, in global, higher value-added activities, just as OECD IT services companies are transforming their operations to include a larger offshore component.

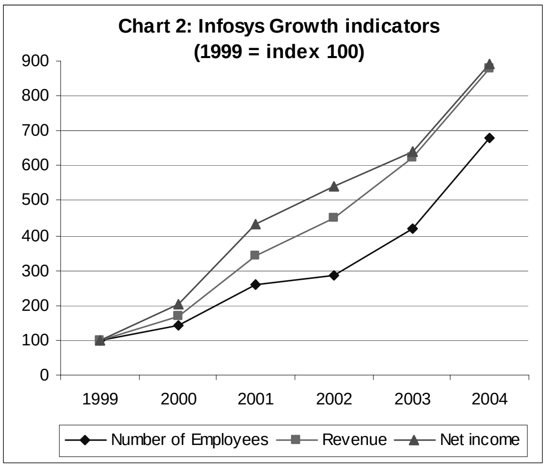


Table 2: Infosys key data, end of March 2004

Revenue [USD million]	1.063
Net income [USD million]	270
Employees [number]	25.634
Revenue by geographic segment	
North America	71.3%
Europe	19.2%
India	1.4%
Rest of the world	8.1%
Revenue by industry segment	
Financial services	36.6%
Manufacturing	14.8%
Telecom	16.6%
Retail	11.7%
Others	20.4%

199. Rapid growth creates stress on hiring and service quality. Remuneration grew by 17 percent in 2004 and salaries have grown by approximately 13 percent annually over the last five years. Infosys last year recruited 10 000 people from nearly one million job applications (see Chart 2). This year it expects to add another 10 000 people to its payroll. The scale of the expansion is difficult to manage and Infosys invests heavily in in-house training and retraining.

200. Restrictions on temporary movement of natural persons remain a serious concern. Quotas for temporary work visas in key client markets are not only low but tend to fluctuate with political climates and business cycles. In Europe, bureaucracy and regulatory barriers add to the problems - recent changes in France have slowed down the issuance of work permits. This has concrete consequences: a large Western

European bank recently approached Infosys to help it integrate four Asian partners using its banking software solution. The project had a three month deadline and the deal was brought down when visa processing times for key staff proved too long. However, Infosys recognises that it has limited ability to influence foreign country visa policies and has taken a pragmatic approach, investing in a global automatic visa application system to facilitate the often cumbersome application process.

201. The threat of trade restrictive measures in some of Infosys' main markets are yet to create any commercial problems, including because public sector contracts make up less than two percent of Infosys' exports to the United States. However, the company is keeping a close watch on the debate and is contributing to improving data. The company remains sensitive to the issue and to the need for corporate social responsibility in markets where it operates.

202. While acknowledging that the IT industry has already enjoyed strong support from the Indian government, for example through the removal of burdensome regulations, the company identified four priority areas for government policy in the future. First, investment in basic and higher education will be essential for the size of the talent pool to match the growth of the industry. Second, the government could do more to advise and support small and medium sized enterprises in becoming more competitive. Third, investment in affordable and easy to use technology will help more people be able to tap into their talents. Finally, investment in infrastructure needs to be increased to keep pace with the rapid expansion of the IT industry.

BIBLIOGRAPHY

Agosin, Manuel (2002), “Export Performance in Chile: Lessons for Africa”, in Helleiner 2002, pp. 72-106.

Agrawal, V., D. Farrell and J.K. Remes (2003), “Offshoring and Beyond”, *The McKinsey Quarterly*, Issue No. 4, Global Directions.

Agroecónomico (2004a), Certificarse: Más que un Desafío, una Obligación, revista nº 78, http://www.agroeconomico.cl/, January.

Agroecónomico (2004b), El Balance de 2003 y Cómo Viene 2004, revista nº 79, http://www.agroeconomico.cl/, March.

Ahmed, Nasiruddin (2001), *Trade Liberalization in Bangladesh: An Investigation into Trends*, Dhaka: The University Press.

Alexandraki, Katerina (2005), "Preference Erosion : Cause for Alarm?", Finance and Development , IMF.

Arora, Vivek and Ashok Bhundia (2003), “Potential Output and Total Factor Productivity Growth in Post-Apartheid South Africa” *IMF Working Paper* WP/03/178, IMF, Washington, D.C.

Ancharaz, V.D. (2003), “FDI and Export Performance of the Mauritian Manufacturing Sector”, Department of Economics and Statistics, Faculty of Social Studies and Humanities, University of Mauritius, Réduit, (http://r0.unctad.org/p166/reduit2004/module6/FDI%20and%20Export%20Performance.pdf)

Anderson, K. and Y. Hayami (1986), *The Political Economy of Agricultural Protection,* Allen and Unwin, Sydney.

Anderson, J. L. (2003), *The international seafood trade*, Woodhead Publishing Limited, Cambridge, England.

Anker, Richard and Rajendra Paratian (1998), *Studies on the social dimensions of globalization Mauritius,* International Labour Organisation.

Appleyard, Dennis R. and Alfred J. Field, Jr. (2001), *International Economics*, Fourth Edition, pp. 289, McGraw-Hill, NY.

Arancibia, C. P. (1995), “Structural Adjustment and Agricultural Performance: The Chilean Case”, in *Weeks*.

Asociación de la Industria del Salmón (2004a), Producción mundial de salmón y trucha cultivado 1992 – 2003, 1 April.

Asociación de la Industria del Salmón (2004b), Exportaciones chilenas de salmón y trucha 1992 - 2003 por mercados, 19 April.

Bacchetta, Marc and Marion Jansen (2003), *Adjusting To Trade Liberalization: The Role of Policy, Institutions and WTO Disciplines*, Special Studies 7, WTO, Geneva, Switzerland.

Ballard, Charles L., John B. Shoven and John Whalley (1985), "General Equilibrium Computations of the Marginal Welfare Costs of Taxes in the United States", *The American Economic Review*, Vol. 75, No 1, 128-138.

Baltzan, B. and A. Tate (1995), *Harley-Davidson and Adjusting to the Costs of Free Trade*, Institute for the Study of Diplomacy, Georgetown University.

Bardhan, A.B. and C. Kroll (2003), "The New Wave of Outsourcing", *Fisher Center Research Reports*, Paper 1103, http://repositories.cdlib.org/iber/ fcreue/reports/1103

Barker, J., N. Lewis and W. Moran (2001), "Reregulation and the Development of the New Zealand Wine Industry", *Journal of Wine Research*, Vol. 12, No 3, Carfax Publishing, pp. 199-221.

Barnes, Justin (2000a), *Domestic Market Pressures Facing the South African Automotive Components Industry*, Research Report No.33, Natal: School of Development Studies.

Barnes, Justin (2000b), *International Customer Perceptions of South African Automotive Component Manufacturer Performance Levels*, Research Report No.32, Natal: School of Development Studies.

Bartelsman, Eric, John Haltwanger and Stefano Scarpetta (2004), "Microeconomic Evidence of Creative Destruction in Industrial and Developing Countries", *IZA Discussion Paper* N° 1374, October.

Belska, Marek (2001), "Lessons from the Polish Transition," in George Blayca and Ryszard Rapacki, eds., *Poland Into the New Millennium*, Cheltenham, United Kingdom: Edward Elgar.

Belfor, Portilla R. (2000), *La política agrícola en Chile: lecciones de tres décadas*, Serie Desarrollo Productivo 68, División de Desarrollo Productivo y Empresarial, ECLAC, February.

Benavides, Díaz (2002), "Trade in health services: global, regional and country perspectives", *Trade in health services*, in Cesar Vieira ed., Pan American Health Organisation, Program on Public Policy and Health, Division of Health and Human Development, Washington DC, www.paho.org/English/HDP/HDD/trade.htm.

Bhattacharya, Debapriya and Mustafizur Rahman (2000), "Bangladesh's Apparel Sector: Growth Trends and Post-MFA Challenges," in Paul-Majumder, Pratima and Binayak Sen (eds.) (2000).

Bhundia, Ashok and Jan Gottschalk (2003), "Sources of Nominal Exchange Rate Fluctuations in South Africa*" IMF Working Paper* WP/03/252, IMF, Washington, D.C.

Bjørndal, Trond (2002), The Competitiveness of the Salmon Aquaculture Industry, *Aquaculture Economics and Management*, 6 (1/2), pp. 97-116.

Black, Anthony (2001), *Globalisation and Restructuring in the South African Automotive Industry*, Cape Town: processed.

Blainey, Geoffrey (1966), *The Tyranny of Distance: How Distance Shaped Australia's History*, Melbourne: MacMillan.

Bolaky, Binesuaree and Caroline Freund (2004), "Trade, Regulations and Growth", World Bank Policy Research Working Paper, World Bank, Washington D.C.

Bonaglia, F., and K. Fukasaku (2002), *Trading Competitively: Trade Capacity Building in Sub-Saharan Africa*, Development Centre Studies, OECD, Paris.

Bonaglia, F. and K. Fukasaku (2003), “Export Diversification in Low-Income Countries: An International Challenge After Doha”, *OECD Development Centre Working Papers*, No. 209, June, OECD, Paris.

Bost F. (2001), *Les Zones Franches en Afrique Subsaharienne*, Centre Français du Commerce Extérieur.

Brainard, L. and R.E. Litan (2004), *Services Offshoring: Bane or Boon and What To Do?*, CESifo Forum 2/2004.

Brenton, Paul, and Ikezuki, Takako (2005), "The Impact of Agricultural Tarde Preferences, With Particular Attention to the Least-Developed Countries", in Global Agricultural Trade and Developing Countries, M. Ataman Aksoy and John C. Beghin (eds.), World Bank, Washington, D.C.

British Broadcasting Corporation (BBC) (2004), *Indian Tech Firms Face Skills Gap*, http://news.bbc.co.uk/2/hi/business/3652382.stm

Brooks, Jonathan, and Sabrina Lucatelli (2004), *International Competitiveness of the ABC Agro-Food Sector*, OECD, Paris.

Bureau of Labour Statistics (BLS) (2004a), *Occupation Outlook Handbook*, www.bls.gov/news.release/ecopro.nr0.htm

BLS (2004b), *Business Employment Dynamics: Second Quarter 2003*, www.bls.gov/news.release/pdf/cewbd.pdf

BLS (2004c), *Displaced Workers Summary*, News: United States Department of Labour, Washington, DC., www.bls.gov/news/release/disp.nr0.htm

Canevali, A., *The restructuring of the EU steel industry*.

Capra-TFOC Consortium (2003), *Evaluation of the Revamped Integrated Framework For Trade-Related Technical Assistance to the Least-Developed Countries*, Final Report, World Trade Organization, Integrated Framework Steering Committee, WT/IFSC/6/Rev.2 November.

Carey, David (2002), “Coping with Population Ageing in the Netherlands”, *Economics Working Papers* No. 325, OECD, Paris.

Carrillo, J., Y. Lung and R. van Tulder (eds.) (2004), *Cars, Carriers of Regionalism?*, Palgrave MacMillan, Great Britain.

CBS (2004), *The Economic Survey 2004*, Kenyan Central Bureau of Statistics.

Chanda, Rupa (2002), “Trade in health services: global, regional and country perspectives”, *Trade in health services*, in Cesar Vieira ed., Pan American Health Organisation, Program on Public Policy and Health, Division of Health and Human Development, Washington DC, www.paho.org/English/HDP/HDD/trade.htm

Chernoff, Brian and Andrew Warner (2002), *Sources of Fast Growth in Mauritius: 1960 – 2000*, Center for International Development at Harvard University.

Christoffersen, Susan, Davinder K. Malhotra, Anusua Datta (2003), *Optimal Investment Strategies for Enhanced Productivity in the Textile Industry*, NTC Project: S01-PH13 available on-line at http://www.ntcresearch.org/pdf-rpts/Bref0603/S01-PH13-03e.pdf

Collinson, Chris (2001), "The Business Costs of Ethical Supply Chain Management: Kenya Flower Industry Case Study", *NRI Report* No. 2607, Natural Resources Institute.

Conapo (2003), La situación demográfica de México en 2002. México: Consejo Nacional de Población.

Conybeare, John (2004), *Merging Traffic: The Consolidation of the International Automobile Industry*, Lanham, Maryland: Rowman & Littlefield.

Costello M. (2003), "Program taps foreign-trained nurses in U.S. 24-03-2003", consulted: www.hospitalconnect.com/ahanews/jsp/display.jsp%3Fdcrpath%3DAHA/NewsStory_Article/data/AHA_News_032403_Program_taps%26domain%3DAHANEWS+Mexican+nurses+in+U.S&hl=es

Council for Regulatory Reform (2002), *Second Report Regarding Promotion of Regulatory Reform: Priority Regulatory Reform Measures to Promote Economic Vitalization*, Council for Regulatory Reform, Tokyo, www8.cao.go.jp/kisei/en/021212report/

Central Statistics Office of Mauritius (CSO) (2002), *2001/02 Household Budget Survey*, CSO.

CSO (2004a), *Export Processing Zone*, 4th Quarter 2003, CSO.

CSO (2004b), *External trade data*, 4th Quarter 2003, CSO.

Dabee, Rajeen and David Greenaway (2001), *The Mauritian economy*, Palgrave.

Danish Directorate of Fisheries, *Yearbook of Fishery Statistics,* several editions.

Danish Research Institute of Food Economics, *Account Statistics for Fisheries*, several editions.

DTI (2004), *Services and Offshoring: The Impact of Increasing International Competition in Services*, www.dti.gov.uk/ewt/offshoring.pdf

DeVoretz D. and K. G. Salvanes (1993), Market Structure for Farmed Salmon, *American Journal of Agricultural Economics*, 75 (February), 227-233.

Diario La Raza (2004), *Cambio de requisitos para enfermeras extranjeras*, Publicado el 17-07-2004.

Dijkstra, Tjalling (2001), "Export Diversification in Uganda: Developments in Non-Traditional Agricultural Exports", *African Study Centre Working Papers*, No. 47, Leiden University.

Dirección General de información y evaluación del desempeño de la Secretaría de Salud. Información básica sobre recursos y servicios del Sistema Nacional de Salud (2001), Sal, Pub, Mex. Vol.43, No. 6, pp. 614-623. México.

Dirven, Martine (2002), *Los encadenamientos de la agricultura chilena -acercamiento a una medición*, División de Desarrollo Productivo y Empresarial, ECLAC, March.

Dixon, Chris (1999), *The Thai Economy: Uneven development and internationalisation*, Routledge, London and New York.

Docteur, Elisabeth and Howard Oxley (2003), "Health-Care Systems: Lessons from the Reform Experience", *OECD Health Working Papers*, OECD, Paris.

Doremus, Paul N., William W. Keller, Louis W. Pauly and Simon Reich (1998), *The Myth of the Global Corporation*, Princeton, New Jersey: Princeton University Press.

Dowlah, CAF (1998), *The Consequences of GATT Uruguay Round for the Textile and Garments Sector in Bangladesh*, Dhaka: GTZ/DCCI Business Advisory Services.

Drezner, D. (2004), "The Outsourcing Bogeyman", in *Foreign Affairs*, May/June issue, www.foreignaffairs.org/20040501faessay83301/daniel-w-drezner/the-outsourcing-bogeyman.html

Duncan, R. and D. Quang (2002), *Trade Liberalisation, Economic Growth and Poverty Reduction Strategies*, Australian National University and Government of Australia – AusAID, download available at http://www.ausaid.gov.au/research

Durbarry, Ramesh (2001), "The Export Processing Zone", in Dabee and Greenaway (2001).

Ebony Consulting International (2001), *The Kenyan Green Bean Subsector*, A Report for DFID Kenya.

Edwards, Sebastian and Alejandra Cox Edwards (1991), *Monetarism and Liberalization: The Chilean Experiment*, The University of Chicago Press.

Edwards, Sebastian and Alejandra Cox Edwards (2000), "Economic Reforms and Labour Markets: Policy Issues and Lessons from Chile", *Economic Policy* 30, pp. 183-229.

European Central Bank (ECB) (2003), "Structural Factors in the EU Housing Markets", European Central Bank, March.

European Commission (1986), *Final, Report from the Commission to the Council*, COM (86)235.

European Commission (1997), *Agenda 2000: Commission Opinion on Poland's Application for Membership of the European Union* (avis), European Commission, Brussels.

European Foundation for the Improvement of Living and Working Conditions (2004), O*utsourcing of ICT and Related Services in the EU*"

Evans-Klock, Christine, Peggy Kelly, Peter Richards, and Corinne Vargha (1998), "Worker Displacement: Public Policy and Labour-Management Initiatives in Selected OECD Counties", *ILO Employment and Training Papers*, Geneva.

Fernandes, Ana M. (2003), *Trade Policy, Trade Volumes and Plant-Level Productivity in Colombian Manufacturing Industries*", World Bank, Washington, D.C.

Farrell, D. (2004), "How Germany Can Win From Offshoring", *The McKinsey Quarterly*, Number 4.

Faruqee, Hamid and Martin Mühleisen (2003), "Population ageing in Japan: demographic shock and fiscal sustainability", *Japan and the World Economy*, Vol. 15, Issue 2, pp. 185-210.

Ffrench-Davis, Ricardo (2002), *Economic Reforms in Chile: From Dictatorship to Democracy*, The University of Michigan Press.

Financial Times (2004), “When Push Comes to Shove”, Special Report: Including News from the FT/Nasscom Conference, 1 December.

Fischer, R. (2001), *Trade Liberalization, Development and Government Policy in Chile*, University of Chile, August.

FKAB Feldt Consulting (2001), *Sector Study of the Horticultural Export Sector in Kenya*, A Study made on behalf of USAID, Kenya.

Food and Agriculture Organization (FAO) (2000), Fishery Country Profile, FAO, May.

Forrester Research (2002), *3.3 Million US Services Jobs To Go Offshore*.

Forrester Research (2004), *Two-Speed Europe: Why 1 Million Jobs Will Move Offshore*.

Frost, H., R. Lanters, J. Smit and P. Sparre (1995), *An Appraisal of the effects of the Decommissioning Scheme in the case of Denmark and the Neth*erlands, Report to the European Commission no. 16 from the Danish Institute of Fisheries Research, South Jutland University Centre, Denmark.

Galbraith (2004), “BMW’s Drive Against AIDS,” in the compact disk Lynn Galbraith, ed., South African Automotive Industry Yearbook & Industry Database 2004, KwaZulu Natal, South Africa: Balgair Publications.

Gartner Dataquest Guide (2003), *Worldwide IT Services Market Definitions Guide, 2Q03*, www4.gartner.com/resources/116300/116318/116318.pdf

Gelston S (1999), “Prescriptions for private health care in developing countries”, consulted: http:/www2.ifc.org/publications/pubs/impact/impsp99/s9doctor/s9doctor.html

General Accounting Office (GAO) (2001a), *Trade Adjustment Assistance: Improvements Necessary, but Programmes Cannot Solve Communities' Long-Term Problems* GAO-01-988T, Washington, D.C.

GAO (2001b), *Trade Adjustment Assistance: Experiences of Six Trade-Impacted Communities* GAO-01-838, Washington, D.C.

Gereffi, Gary and Olga Memedovic (2003), *The Global Apparel Value Chain: What Prospects for Upgrading by Developing Countries*, Vienna: United Nations Industrial Development Organization.

Gereffi, G., D. Spener and J. Bair (eds.) (2002), *Free Trade and Uneven Development, The North American Apparel Industry after NAFTA*, Temple University Press, Philadelphia.

Gerschenkron, Alexander (1962), *Economic Backwardness in Historical Perspective*, Cambridge, Massachusetts: Harvard University Press.

Ghosn, Carlos (2002), “Saving the Business Without Losing the Company,” *Harvard Business Review*, Vol. 80 Number 1 (January, 2002).

Gibbon, Peter (2000), “‘Back to the Basics’ through Delocalisation: The Mauritian Garment Industry at the End of the Twentieth Century”, *CDR Working Paper* 00.7, Centre for Development Research (CDR), Copenhagen.

Gibbon, Peter (2002), “South Africa and the Global Commodity Chain for Clothing: Export Performance and Constraints”, *CDR Working Paper* 02.7, CDR, Copenhagen.

Gibbon, Peter (2003), “AGOA, Lesotho’s ‘Clothing Miracle’ and the Politics of Sweatshops”, *Review of African Political Economy*, No 96: 315-350.

Gibbs, Andrew and Tim Gibbs (2002), *A Water Supply and Pollution Crisis in Lesotho’s Textile Factories: the Problems of Footloose Investment*, University of Natal, Durban.

Global Insight (2004), *The Impact of Offshore IT Software and Services Outsourcing on the US Economy and the IT Industry,* Sponsored by Information Technology Association of America.

Gobierno de Chile (2001), Una Política de Estado para la Agricultura Chilena Período 2000 – 2010, Ministerio de Agricultura.

Gordon D.V. and R. Hannesson (1996), On Prices of Fresh and Frozen Cod Fish in European and U.S. Markets, *Marine Resource Economics*, 11, 223-238.

Goss, Jasper *et al*. (2000), “Agri-Food Restructuring and Third World Transnationals: Thailand, the CP Group and the Global Shrimp Industry”, *World Development*, Vol. 28, No. 3, pp. 513-530.

Goss, Jasper (2002), “Shrimp farms or shrimp harms?”, *Samudra*, International Collective in Support of Fishworkers (ICSF), August.

Government of the People’s Republic of Bangladesh, Ministry of Textiles (1995), *Textile Policy — 1995*, Dhaka.

Grandes, Martin (2003), “Macroeconomic Convergence in Southern Africa: The Rand Zone Experience”, *OECD Development Centre Working Papers*, No. 231 (www.oecd.org/dev/wp).

Gray, David (2003), “Growing around the world: Floriculture in East Africa”, *Floraculture International*, http://www.floracultureintl.com/archive/articles/705.asp

Gulhati, Ravi, and Raj Nallari (1990), “Successful Stabilization and Recovery in Mauritius”, *EDI Development Policy Case Series*, Analytical Case Studies, Number 5, Economic Development Institute of the World Bank.

Haacker, Marcus (2002) “The Economic Consequences of HIV/AIDS in Southern Africa,” *IMF Working Paper*, WP/02/38, Washington, D.C.

Haar, Jerry and Sylvia Reyes (2000), *Economic Reform, Trade Liberalization, and Global Competitiveness: The Case of Colombia’s Apparel Industry,* North-South Agenda Papers #43 Coral Gables, Florida: North-South Center.

Hatch, J. (1984), “Harley-Davidson Case: Escaping the Escape Clause”, *Law and Policy in International Business*, Vol. 16, pp. 325-349.

Hatcher, A. C. (1997), *The European Community’s tariff regime for fish imports 1988-94*, Report to the European Commission no. 46 from the Centre for the Economics and Management of Aquatic Resources, University of Portsmouth.

Havas, Attila (2000) “Changing Patterns of Inter- and Intra-Regional Division of Labour: Central Europe’s Long and Winding Road,” in Humphrey, Lecler, and Salerno (2000).

Helleiner, G. K., ed, (2002), *Non-traditional Export Promotion in Africa: Experience and Issues*, United Nations University, Palgrave.

Hildegunn, Kyvik Nordås (2004), “The Global Textile and Clothing Industry post the Agreement on Textiles and Clothing”, *WTO Discussion Paper* 5, Geneva, Switzerland.

Hlekiso, Thami (2004), “Employment Gains and Losses by Sector and Subsector Between 1980 and 2001,” *Labour Market Frontiers*, Number 5, June.

Hoekman, B., C. Michalopolos and A. Winters (2003), “More Favorable and Differential Treatment of Developing Countries: Towards a New Approach in the WTO”, *World Bank Policy Research Working Paper* 3107.

Hoekman, B. and B.S. Javorcik (2004), “Policies Facilitating Firm Adjustment to Globalization”, *Discussion Paper Series*, No. 4692, Centre for Economic Policy Research, London.

Homedes, N., A. W. Nichols, P. A. LaBrec and A. E. Geller (1994), *The use of Arizona physician services by residents of Mexico*, Salud Pública México 1994; 36: 129-139.

Homedes, N. and A. Ugalde (2003), “Globalization and health at the United States – Mexico border”, *American Journal of public Health*, Vol. 93, No. 12. December 2003. pp 2016-2022.

Hong Kong Shanghai Banking Corporation (HSBS) (2003), *World Economic Watch*, November.

Hossain, Ismail (2002), “Export Processing Zones in Bangladesh and Industrial Relations,” in Muqtada, Singh, and Rashid (2002).

Hufbauer, G. C., D. T. Berliner and K. A. Elliott (1986), *Trade Protection in the United States: 31 Case Studies*, Institute for International Economics, Washington, D.C.

Huitric, Miriam, Carl Folke, and Nils Kautsky (2002), “Development and government policies of the shrimp farming industry in Thailand in relation to mangrove ecosystems”, *Ecological Economics*, Vol. 40, No. 3, pp. 441-455.

Humphrey, J., Lecler, Y., and Salerno, M. (2000), *Global Strategies and Local Realities: The Auto Industry in Emerging Markets*, MacMillan Press, London.

Huws, H. and S. O’Regan (2001), *eWork in Europe: The EMERGENCE 18-Country Employer Survey*, Report - Institute for Employment Studies, IES Report 380, Brighton.

Iizuka, Michiko (2004), “Organizational Capability and Export Performance: The Salmon Industry in Chile”, *mimeo*, SPRU University of Sussex, Paper presented at the DRUID Winter Conference 22-24 January 2004 (http://www.druid.dk/conferences/winter2004).

Iizuka, Michiko (2004), “Organizational capability and export performance: the salmon industry in Chile”, *mimeo*, SPRU, Science and Technology Policy Research University of Sussex.

Imai, Yutaka (2002), “Health Care Reform in Japan”, *Economics Working Papers*, No. 321, OECD, Paris International Council for Exploration of the Sea (2003), *Report from the Advisory Committee on Fishery Management*, Available at: www.ices.dk

International Labour Office (ILO) (2001), *World Employment Report 2001: Life at Work in the Information Economy*.

ILO (2004), *A Fair Globalization: Creating Opportunities for All*, World Commission on the Social Dimension of Globalization, ILO, Geneva, Switzerland.

International Monetary Fund (IMF) (2000), *Thailand: Selected Issues*, IMF Country Report No. 00/21, February.

IMF (2002), Kenya: Selected Issues and Statistical Annex, IMF Country Report No. 02/84.

IMF (2003a), *Chile: Selected Issues*, IMF Country Report No. 03/312, October.

IMF (2003b), *Thailand: Statistical Appendix*, IMF Country Report No. 03/388, December.

IMF (2003c), *Bangladesh: Letter of Intent, Memorandum of Economic and Financial Policies*, IMF, 18 December, at http://www.imf.org/external/np/loi/2003/bgd/02/index.htm

IMF (2003d), *Mauritius: 2003 Article IV Consultation*, IMF Country Report No. 03/319.

IMF (2003e), *South Africa: Staff Report for the 2003 Article IV Consultation*, IMF, Washington, D.C.

IMF (2004a), "IMF Concludes 2003 Article IV Consultation with Lesotho", *Public Information Notice* No. 04/6, Washington, D.C., February 5.

IMF (2004b), *Colombia: Third Review Under the Stand-By Arrangement and Request for Waiver of Nonobservance of Performance Criterion*, IMF Staff Report, Washington, D.C.

IMF (2004c), *Lesotho: Selected Issues and Statistical Appendix*, IMF Country Report No. 04/23, January.

IMF (2004d), *Philippines: International Reserves and Foreign Currency Liquidity*, IMF, Washington D.C., www.imf.org/external/np/sta/ir/phl/eng/curphl.htm

IMF and World Bank (WB) (2002), *Market Access for Developing Country Exports -- Selected Issues*, report prepared by the staffs of the International Monetary Fund and the World Bank, September 26, http://www.imf.org/external/np/pdr/ma/2002/eng/092602.htm

INE (2004), *Estadísticas de Ocupación y Desocupación*, Series Estadísticas Trimestre Febrero- Abril del 2004, Chile Instituto Nacional de Estadísticas.

Instituto Nacional de Estadística, Geografía, Informática (INEGI) (2000), "XII Censo General de Población y vivienda 2000", Consultado: www.inegi.gob.mx/est/contenidos/espanoñ/tematicos

INEGI (2004), "Estadísticas a propósito del día de la enfermera. Datos Nacionales", México, D.F.

Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado (ISSSTE) (1999), Telesalud del ISSSTE tecnologia de alto nivel aplicada a la ciencia medica. Boletín B-012 México, D.F., febrero 4 de 1999. Consultado en: http://www.google.com.mx/search?q=cache:e8diBO5_0TUJ:informatica.issste.gob.mx/website/comunicados/boletines/99/boletin12.html+inversion+en+telesalud+y+telemedicina%2Bmexico&hl=es

ISSSTE (2002), Raliza el ISSSTE la primera telecirugia laparoscopica astida por brazo robótico. Boletín B.035-2002 México, D.F., a 11 de abril de 2002. Consultado en: http://www.google.com.mx/search?q=cache:8ITH4cQDFawJ:www.issste.gob.mx/website/comunicados/boletines/2002/abril/b35_2002.html+boletines%2BISSSTE%2BMexico%2Btelemedicina&hl=es

ISSSTE (2003), Médicos de Inglaterra se interesan en los avances del programa de telemedicina del ISSSTE. Boletín B.203-2003. México, D.F., a 16 de julio de 2003. Consultado en: http://www.google.com.mx/search?q=cache:y4-ZFjbcF7MJ:www.issste.gob.mx/website/comunicados/boletines/2003/julio/b203_2003.html+boletines%2BISSSTE%2BMexico%2Btelemedicina&hl=es

ISSSTE (2004), "Plan Nacional de Telesalud", Presentación Power Point, México, 2004.

Integrated Framework (2003), *Lesotho: Integration into the World Trading Environment*, Diagnostic Trade Integration Study, Volume 1, November.

IRIN (2003), *Lesotho: Growth of garment industry fuels AIDS concerns*, Integrated Regional Information Networks, UN Office for the Coordination of Humanitarian Affairs, 16 June www.irinnews.org

International Trade Centre (ITC) (2001), *Subregional Trade Expansion in Southern Africa: Lesotho Supply Survey on Textiles and Clothing*, ITC, December.

Ito, Motoshige (2004), *Keizai Kyoshitsu: EPA and health insurance system*, Nikkei Shinbun, 2 August, 2004.

Jaramillo J.Alberto, Carlos Montoya Corrales, and Mauricio Ramirez Gomez (1996), *Apertura e Industria en el Valle de Aburra*, N.P.

Janjaroen, Wattana S., and Siripen Supakankunti (2002), "International trade in health services in the millennium: the case of Thailand", in Cesar Vieira ed., *Trade in health services: global, regional and country perspectives*, Pan American Health Organisation, Program on Public Policy and Health, Division of Health and Human Development, Washington, D.C., www.paho.org/English/HDP/HDD/trade.htm

Japan-Philippines (2003), *Japan-Philippines Economic Partnership Agreement Joint Coordinating Team Report*, December.

Japan-Thailand (2003), *Japan-Thailand Economic Partnership Agreement Task Force Report*, December.

Jarvis, Lovell and Esperanza Vera-Toscano (2004), "The Impact of Chilean Fruit Sector Development on Female Employment and Household Income", *World Bank Policy Research Working Paper* 3263, April.

Jensen, H.T., S. Robinson and F. Tarp (2002), "General Equilibrium Measures of Agricultural Policy Bias in Fifteen Developing Countries", *TMD Discussion Paper* No. 105, International Food Policy Research Institute, Washington, D.C.

Jeong, Hyoung-Sun and Jeremy Hurst (2001), "An Assessment of the Performance of the Japanese Health Care System, Labour Market and Social Policy", *Occasional Papers*, No. 56, OECD, Paris.

Johnson D. G. (2000), “Population, Food and Knowledge”, *American Economic Review*, Vol. 90, No. 1, pp. 1-14.

Jomo, K.S. and Michael Rock (1998), “Economic diversification and primary commodity processing in the second-tier South-East Asian newly industrializing countries”, *UNCTAD, Discussion Papers* No. 136, June.

Josupeit, Helga and Camillo Catarci (2004), *The world tuna industry - an analysis of imports, prices, and of their combined impact on tuna catches their and fishing capacity*, FAO, March.

Karlsson, H. (2002), "Redovisning Av Uppdraget Att Överlägga med Ericsson Och Övriga Parter I Samband Med Företagsnedläggning", N2001/4891/A.

Kathuria, S. and A. Bhardwaj (1998), “Export Quotas and Policy Constraints in the Indian Textile and Garment Industries”, *Policy Research Working Paper*, no. WPS 2012, The World Bank, New Delhi Office.

Kaufmann *et al* (2002), “Governance Matters II: Updated Indicators for 2000/01”, *World Bank Policy Research Department Working Paper* No. 2772, January.

Kinunda-Rutashobya, L. (2003), “Exploring the potential of EPZs for Africa: Lessons from Mauritius”, *Management Decision*, Vol 41 No 3, pp 22.

Kletzer, L. (2001), *Job Losses from Imports: Measuring the Costs*, Washington, D.C.: Institute for International Economics.

Kletzer, L. and H. Rosen (2004), *Honoring the Commitment: Assisting US Workers Hurt by Globalization*, paper presented at the conference: Job Loss, Causes, Consequences, and Policy Responses, Chicago Reserve Bank, Chicago, 18-19 November. Available at: www.chicagofed.org/news_and_conferences/conferences_and_events/files/job_loss_paper_kletzer.pdf

Klinger, S. and M.L. Sykes (2004), *“Exporting the Law: A Legal Analysis of State and Federal Outsourcing Legislation”*, The National Foundation for American Policy, April.

Koning, Jozef (2004), *Wage cots and industry (re)location in the Enlarged European Union*. Paper prepared for Economic Council of Sweden, October 2004 (Preliminary Draft).

Kuhn, Peter J. (2002), *Losing Work Moving On*, W. E. Upjohn Institute for Employment Research, Kalamazoo.

Lall, Sajaya (2002), “Selective policies for export promotion: Lessons from the Asian tigers”, in Helleiner (2002).

Lamusse, Roland (2001), “Macroeconomic Policy and Performance”, in Dabee and Greenaway (2001).

Länsstyrelsen Östergötland (2004), "Erfarenheter från Omställningsprogram i Östergötland, Regionalekonomiska Enheten", Rapport juni 2004.

Lavelle, Daniel (2003), *Women at Work in Chile’s Fields: A Change in the Labour Dynamic*, http://ist-socrates.berkeley.edu:7001/Events/fall2003/09-29-03-goldfrank/

Laver R. (2000), *Private health care in Latin America: emerging opportunities,* Publication of the Institute of the Americas.

Lee M. (2004a), "Recruiters Head South of the Border for Nurses" in the June 27, 2004 edition of *The Los Angeles Times*.

Lee M. (2004b), “Facing shortage of nurses, U.S. hospitals recruit in Mexico”, in the June 27, 2004 edition of *The San Diego Union-Tribune*.

Leigh, Duane (1990), *Does Training Work for Displaced Workers? A Survey of Existing Evidence*, W.E. Upjohn Institute for Employment Research, Kalamazoo.

Le Nouvel Observateur (2004), *Délocalisation Après Les Usines, Les Services?*, 5-11 February.

Levinsohn, James and Wendy Petropoulos (2001), “Creative Destruction or Just Plain Destruction?: The U.S. Textile and Apparel Industries Since 1972” *Working Paper* 8348, Cambridge, Massachusetts: National Bureau of Economic Research.

L’Expansion (2004), *L’Afrique, Terre de Téléopérateurs*, November edition.

Lindebo, E. (2004), *Vessel Decommissioning in Danish Fisheries*, paper presented at the International Workshop on Fishing Vessel and Licence Buy-back Programs, Weaver Centre, Institute of the Americas, University of California, 22-24 March.

Lopez-Ortega M, G. Nigenda, and E. Troncoso (2004), “Free Trade Agreements and the Health Sector in Mexico”, Funsalud, Working paper. México D.F.

Lundahl, Mats, *et al*, 2003, *In the Shadow of South Africa – Lesotho’s Economic Future*, The Making of Modern Africa Series, Ashgate, Aldershot.

Macroscan (n.d.), *Outsourcing for Development*, www.macroscan.com/fet/dec03/fet031203UNCTAD_1.htm accessed 22 January 2004.

Magee, David (2003), *Turnaround: How Carlos Ghosn Rescued Nissan*, New York: HarperCollins.

Maggi, Claudio (2002), *Cadenas Productivas: lecciones de la experiencia internacional y regional: el cluster del cultivo y procesamiento del salmon en la region sur-austral del Chile*, Paper based on the Proyecto Cooperacion Tecnica: BID-FOMIN Trust Fund Italiano.

Maguire R. SIMNSA and Salud con Health Net (2004), “In:Cross-Border Health Insurance: Options for Texas”, Chapter 4, edited by David C. Warner & Pablo G. Schneider. In press 2004 by The University of Texas at Austin.

Mann, L.M. (2003), “Globalization of IT Services and White Collar Jobs: The Next Wave of Productivity Growth”, *International Economics Policy Briefs* No. PB03-11, www.iie.com/publications/pb/pb03-11.pdf

Martin, W. and D. Mitra (2001), “Productivity Growth in Agriculture and Manufacturing”, *Economic Development and Cultural Change*, 49(2), pp. 403-23.

Matlosa, Khabele (1999), “Aid, Development and Democracy in Lesotho, 1966-1996”, paper presented to a workshop organised by the Centre for Southern African Studies on “Aid, Development and

Democracy in Southern Africa", University of the Western Cape, Cape Town, South Africa, 21-22 November 1999 (www.eldis.org).

Mattoo, A. (2003), "Introduction and Overview" in Mattoo, A. and A. Carzaniga (eds.) (2003) *Moving People to Deliver Services*, World Bank and Oxford University Press.

Mattoo, A. and S. Wunsch (2004), *Securing Openness of Cross-Border Trade in Services: A Possible Approach*, Center for International Development at Harvard University, www.cid.harvard.edu/cidtrade/Papers/mattoo-wunsch.pdf

Matusz, S. J. and D. Tarr (1999), "Adjusting to Trade Policy Reform", *World Bank Working Paper* #2142, World Bank, Washington, D.C., July, http://econ.worldbank.org/view.php?type=5&id=427

McCulloch, Neil and Masako Ota (2002), "Export horticulture and poverty in Kenya", *IDS Working Paper* 174.

McKinsey & Co (2001), *India – The Growth Imperative: Understanding the Barriers to Rapid Growth and Employment Creation*.

McKinsey Quarterly (2003), *Who Wins in Offshoring?*

McKinsey Global Institute (2003), *Offshoring: Is It a Win-Win Game?*

McKinsey Global Institute (2004), *Can Germany Win from Offshoring?*

McMillan, Margaret, Selina Pandolfi, and B. Lynn Salinger (1999), "Promoting Foreign Direct Investment in Labor-Intensive, Manufacturing Exports in Developing Countries" *CAER II Discussion Paper* No. 42, Cambridge, Massachusetts.

Mendoza G, Ruiz A, Flores E (2002), Frontera México-Estados Unidos. Diagnóstico sobre servicios de salud. Volumen II Estados Unidos. Organización Panamericana de la Salud.

Meyer, Klaus E. and Camilla Jensen (2003), "Foreign Investor Strategies in View of EU Enlargement," in Heinz-Jürgen Stüting, Wolfgang Durow, Frank Claassen, and Susanne Blazejewski (eds.), *Change Management in Transition Economies: Integrating Corporate Strategy, Structure and Culture*, New York: Palgrave.

Milner, Chris (2001), "International Trade and Trade Policy", in Dabee and Greenaway (2001).

Ministry of Agriculture and Forestry (MAF) (2004), *Agriculture and Forestry in New Zealand – An Overview*, www.maf.govt.nz/mafnet/rural-nz/overview/httoc.htm, accessed December 2004.

Ministry of Economy Trade and Industry (METI) (2003), *White Paper on International Economy and Trade 2003*, METI, Tokyo, www.meti.go.jp/english/report/index.html

Minot, Nicholas and Margaret Ngigi (2003), *Are horticultural exports a replicable success story? Evidence from Kenya and Côte d'Ivoire*, Conference Paper No.7, paper presented at the InWEnt, IFPRI, NEPAD, CTA conference "Successes in African Agriculture", Pretoria, December 1-3.

Mlachila, M. and Y. Yang (2004), "The End of Textile Quotas: A Case Study of the Impact on Bangladesh", *IMF Working Paper*, WP/04/108, IMF, Washington, D.C.

Moffat, G. (1991), *Restructuring of the Community Steel Industry*, p. 3ff.

Moore, Alicia Hills (2001), "U.S. Textiles Hang In With High Tech" *Fortune* April 16, 2001, available on-line at http://www.fortune.com/fortune/subs/article/0,15114,370518,00.html

Morawetz, David (1981), *Why the Emperor's New Clothes Are Not Made in Colombia: A Case Study in Latin American and East Asian Manufactured Exports*, Oxford University Press, Washington, D.C.

Morgan Stanley (2003), "Outsourcing, Protectionism, and the Global Labour Arbitrage", session paper for the 2003 Boao Forum Annual Conference, Hainan, PR China, 2-3 November 2003, www.adb.org/Documents/Events/2003/Boao_Forum_Asia/Paper_Roach.pdf

Muqtada, Muhammed, Andrea Singh, and Mohammed Ali Rashid, "Economic and Social Challenges of Globalisation in Bangladesh: Policy Perspectives," in Muqtada, Singh, and Rashid (eds.) (2002), *Bangladesh: Economic and Social Challenges of Globalisation*, Dhaka: The University Press.

Murray, Lauren A. (1995), "Unraveling Trends in Textiles and Apparel," *Monthly Labor Review* Volume 118 Number 8, August.

Na Thalang, Jeerawat and Benjaprut Akkarasriprapai (2004), Farmed-shrimp export: Move to delay US ban, *The Nation*, May 13, www.nationmultimedia.com

National Association of Automobile Manufacturers of South Africa (NAAMSA), *Annual Report*, in Galbraith.

Narro, I. (2000), *México busca en la telemedicina un medio de paliar desigualdades*, En: IBLNEWS.com, el diario online en español. Año VI - Nº 2388. Consultar en: http://iblnews.com/news/noticia.php3?id=32309

National Association of Software and Service Companies (NASSCOM) (2002a), *Knowledge Professionals*, www.NASSCOM.org/articleprint.asp?art_id=

NASSCOM (2002b), *NASSCOM-McKinsey Report 2002.*

NASSCOM (2003), "Indian Software and Services Exports Clock Revenue of Rs. 46,000 Crores, (US$ 9.5 billion) Registering 26.3% Growth in FY 2002-2003", www.nasscom.org/articleprint.asp?art_id=1836

NASSCOM (2003), *Indian IT Software and Service Industry*, http://www.nasscom.org/artdisplay.asp?Art_id=1959

NASSCOM (2004a), *Indian Software and Services Exports* www.NASSCOM.org/artdisplay.asp?Art_id=2707

NASSCOM (2004b), *Policy*, BPO Newsline, www.NASSCOM.org/bponewsline/policy.asp

New York Times (2004), *India Sees Backlash Fading Over Boom in Outsourcing*, 14 July 2004.

Nielson, J. and D. Taglioni (2004), "Service Trade Liberalisation: Identifying Opportunities and Gains", *OECD Trade Policy Working Paper* No. 1, OECD, Paris.

Nielsen, M. (forthcoming), "Price formation and market integration on the European first-hand market for whitefish", *Marine Resource Economics*.

Nikomborirak, Deunden and Somkiat Tangkitvanich (2003), *Thailand Case Study*, Background Paper for the OECD Regional Workshop on Trade Capacity Building and Private Sector Development in Asia, Thailand Development Research Institute, November.

Nippon Keidanren (2004), *Recommendations on Accepting Non-Japanese Workers*, Nippon Keidanren (Japan Business Federation), April 14, 2004, www.keidanren.or.jp

Notimex (2004). "Destacan Beneficios de Telemedicina en Comunidades Rurales. México D.F.", Consultado en: http://www.google.com.mx/search?q=cache:UiMYgdlRAgUJ:www.e-mexico.gob.mx/wb2/eMex/eMex_Telemedicina+telemedicina%2Bmexico&hl=es

ODEPA (2003a), Panorama *de la Agricultura Chilena 2002 - Chilean Agriculture Overview*, Oficina de Estudios y Políticas Agrarias de Chile.

ODEPA (2003b), "Inserción de la agricultura chilena en los mercados internacionales", Documento de trabajo Serie comercio exterior nº 4, December, Oficina de Estudios y Políticas Agrarias de Chile

Ogawa, Naohiro (1997), "Demographic Trends and Their Implications for Japan's Future," transcript of a speech delivered on March 7, 1997 at the Japan Information Center in San Francisco, www.mofa.go.jp/j_info/japan/socsec/ogawa.html

Olson, Mancur (1982), *The Rise and Decline of Nations: Economic Growth, Stagflation and Social Rigidities*, New Haven, Connecticut: Yale University Press.

Opondo, M.M. (2002), *Trade Policy in the Cut Flower Industry in Kenya*, Department of Geography, University of Nairobi

Organisation for Economic Co-operation and Development (OECD) (1978), *Policies for Adjustment: Some General Orientations* (Council Communiqué pf 15 June 1978), OECD, Paris.

OECD (1997), *Market Access Issues in the Automobile Sector*, OECD, Paris.

OECD (2000a), *Transition to Responsible Fisheries: Economic and Policy Implications*, OECD, Paris.

OECD (2000b), *International Trade and Core Labour Standards*, OECD, Paris.

OECD (2001a), *Financing the restructuring of British Steel*, SG/ STEEL/RD(2001)9, OECD, Paris.

OECD (2001b), *The Development Dimensions of Trade*, OECD, Paris.

OECD (2002a), *The DAC Guidelines Strengthening Trade Capacity for Development*, Development Assistance Committee, OECD, Paris

OECD (2002b), *African Economic Outlook*, OECD, Paris

OECD (2003a), *Farm Household Income: Issues and Policy Responses*, OECD, Paris.

OECD (2003b), *The Doha Development Agenda: Welfare Gains from Further Multilateral Trade Liberalisation with respect to Tariffs*, TD/TC/WP(2003)10/FINAL, OECD, Paris.

OECD (2003c), *Economic Surveys: Chile*, Volume 2003, Issue 17, OECD, Paris.

OECD (2003d), *Liberalising Fisheries Markets – Scope and effects*, OECD, Paris.

OECD (2003e), *The International Mobility of Health Professionals: An Evaluation and Analysis based on the Case of South Africa*, DELSA/ELSA/WP2(2003)4, OECD, Paris.

OECD (2004a), *Economy-Wide Effects of Barriers to Trade in Services in Selected Developing Countries*, forthcoming, OECD, Paris.

OECD (2004b), *A New World Map in Textiles and Clothing: Adjusting to Change*, OECD, Paris.

OECD (2004c), *Trade Preference Erosion: Potential Economic Impacts*, forthcoming, OECD, Paris.

OECD (2004d), *Market and Welfare Impacts of Agriculture and Non Agriculture Reform*, forthcoming, OECD, Paris

OECD (2004e), *OECD Health Data*, OECD, Paris.

OECD (2004f), *Towards High-Performing Health Systems*, OECD Health Project, OECD, Paris.

OECD (2004g), *Information Technology Outlook* 2004, OECD, Paris.

OECD (2004h), *OECD Statistics on International Trade in Services: Detailed Tables by Service Category 1993-2002*, Vol. 1, 2004 Edition, OECD, Paris.

OECD (2005), *OECD Employment Outlook*, forthcoming.

Orłowski, Witold M "Poland-European Union: The Economics of Accession," in Blayca and Rapacki.

O'Rourke, Kevin H. and Jeffrey G. Williamson (1999), *Globalization and History: The Evolution of a Nineteenth-Century Atlantic Economy*, Cambridge, Massachusetts: The MIT Press.

Paul-Majumderr, Pratima (2002), "Organising Women Garment Workers: A Means to Address the Challenges of Integration of the Bangladesh Garment Industry in the Global Market," in Muqtada, Singh, and Rashid (2002).

Paul-Majumder, Pratima and Binayak Sen (eds.) (2000), *Growth of Garment Industry in Bangladesh: Economic and Social Dimensions*, Dhaka: Bangladesh Institute of Development Studies and Oxfam GB Bangladesh.

Philippine Overseas Employment Administration (POEA) (2003), *Annual report 2003*, POEA, Mandaluyong City, www.poea.gov.ph

POEA (2004), *Overseas Employment Statistics*, POEA, Mandaluyong City, www.poea.gov.ph/html/statistics.html

Polish Chamber of Automotive Industry (2004), *The Polish Automotive Sector*, N.P.: PIM, 2004.

Pongvutitham, Achara (2004), US anti-dumping ruling: Shrimp exports tipped to drop 20-30%, *The Nation*, February 19, www.nationmultimedia.com

Progressive Policy Institute (PPI) (2004), *Understanding the Offshoring Challenge*, Policy Report, May 2004.

Presente. Diario del Sureste (2004), "Exporta México enfermeras a EU y Europa". México, 14/06/2004. Consultado en: http://www.presente.com.mx/Portal/ArticleView.php?article_id=2565

Quddus, Munir (1996), “Apparel Exports from Bangladesh: Brilliant Entrepreneurship or Spurious Success,” in Ashraf Ali, *et al.* (eds.) (1996), *Development Issues of Bangladesh*, Dhaka: University Press Limited.

Quddus, Munir and Salim Rashid (2000), *Entrepreneurs and Economic Development: The Remarkable Story of Garment Exports from Bangladesh*, Dhaka: The University Press.

Rahman, Rushidan Islam (2000) “Industrialization in a Labour Surplus Economy: The Apparel Sector in Bangladesh,” in Paul-Majumder and Sen (2000).

Rahman, Rushidan Islam (2002), “Skills Development in Bangladesh: Responses to Globalisation,” in Muqtada, Singh, and Rashid (2002).

Reinikka, Ritva (1996), “The Credibility Problem in Trade Liberalisation: Empirical Evidence form Kenya”, *Journal of African Economies*, vol. 5, issue 3, pages 444-68.

Report of the Economic Committee (1986), *The Singapore Economy: New Directions*, Ministry of Trade and Industry, Republic of Singapore, February.

Rios, J. and A. Valdez (2000), “The relationship between infrastructure, utilities and the incidence of illness in the border colonias”, *Journal of Border Health*, Vol. V, No. II. July-December.

Riungu, Catherine and John Mbaria (2004), Kenya: New EU threats over flowers, *East African*, Feb 16

Rodrik, D. (2004), “Industrial policy for the Twenty-First Century”, *Faculty Research Working Paper Series*, Harvard University.

Rodrik, D. (2003), “Growth strategies”, *NBER Working Paper Series*, National Bureau of Economic Research.

Rosas A. (2004), Enfermeras de Exportación. Un curso de inglés y un examen de certificación abren las puertas de uno de los mercados laborales más difíciles. Expansión. Sección reportajes. Edición 893. México, 23-06-2004.

Rosen, Ellen I. (2002), *Making Sweatshops: The Globalization of the U.S. Apparel Industry*, Berkeley, California: University of California Press.

Salerno, S. (2001), *Current Mainstream Directions of Structural Change in the Steel Industry of OECD Member Countries*, DSTI/SU/SC/RD(2001)1, OECD, Paris.

Satake, Masao (2000), “Trade Conflicts Between Japan and the United States over Market Access: The Case of Automobiles and Automotive Parts,” *Technical Report Pacific Economic Papers*, No.310, The Australian National University.

Savio F. (2004), Executive Summary. In:Cross-Border Health Insurance: Options for Texas. Edited by David C. Warner & Pablo G. Schneider. In press 2004 by The University of Texas at Austin.

Sidorenko, Alexandra (2003), “Liberalisation of Trade in Health Services is on the APEC Economies Agenda”, *APEC Economies Newsletter*, Vol. 7, No. 9, Asia Pacific School of Economics and Government, The Australian National University, http://apseg.anu.edu.au/pdf/newsl/APEC7_9.pdf

Sikdar, M Firoze Shah and B.N. Banerjee (1990), *Jute Cultivation in India and Bangladesh: A Comparative Study*, New Delhi: Mittal Publications.

SIMSA (2002), *Changes to the provider network in Tijuana*, California 1/3/2002. Consulted: http:/www.simsa.com/press_release_important.htm

Smitka, Michael, *Adjustment in the Japanese Automotive Industry: A Microcosm of Japanese Cyclical and Structural Change?* Lexington, Virginia: processed, N.D.

Smith, Willie & Hayden Montgomery (2003), "Revolution of evolution? New Zealand agriculture since 1984", *Geo Journal*, Vol. 59, Kluwer Academic Publishers, Netherlands, pp. 107-118.

Stark, Jeffrey (1999), "From Neoliberalism to Second Generation Reforms in Latin America: Views from the International Financial Institutions," paper presented at the 40th Annual International Studies Association Convention.

Station WJLA-TV (2004), *Nursing Shortage Averted in Canada, Mexico*, 19-07-2004, consulted http://www.wjla.com/headlines/0704/160311.html

Subramanian, A. and D. Roy (2001), *Who Can Explain the Mauritian Miracle: Meade, Romer, Sachs, or Rodrik?*

Sullivan L. (2004), "Latinos in California and Texas and Access to Health Care", in: Cross-*Border Health Insurance: Options for Texas*, Chapter 1, Edited by David C. Warner & Pablo G. Schneider. In press 2004 by The University of Texas at Austin.

Taylor, J.E. and P. E. Martin (2001), "Human Capital: Migration and Rural Population Change" in B. Gardner and G. Rausser, eds., *Handbook of Agricultural Economics*, Vol. I. Amsterdam: Elsevier, pp. 457-511.

The Asia Program (2003), *The Demographic Dilemma: Japan's Ageing Society*, Asia Program Special Report, No. 107, The Asia Program, The Woodrow Wilson International Center for Scholars, http://wwics.si.edu/events/docs/ACFE9.pdf

The Nation (2004a), CPF's new strategy: Foreign plants to help minimise risks, *The Nation*, April 22, www.nationmultimedia.com

The Nation (2004b), Anti-dumping tariff: US slaps 6.4% duty on shrimp, *The Nation*, July 31, www.nationmultimedia.com

The National Foundation for American Policy (2004), cited in The New York Times, 17 July.

The Times of India (2004), *Infosys to create BPO jobs in the US*, 26 May.

Thoen *et al*. (2000), *Equatorial Rose: The Kenyan - European Cut Flower Supply Chain.*

Torrealba, Francisca Silva (1999), *La inversión en el sector agroindustrial chileno*, Serie Reformas Económicas 46, ECLAC, November.

Tullao, Tetsuo S., Jr. and Michael Angelo A. Cortez (2003), *Movement of Natural Persons Between the Philippines and Japan: Issues and Prospects* (PowerPoint presentation), Center for Business and Economics Research and Development (CBERD), De La Salle University, Manila, http://pascn.pids.gov.ph/jpepa/docs/tullao-revised_sept%209.PDF

UK Trade & Investment (2003), *Healthcare & Medical Market in Japan*, www.uktradeinvest.gov.uk/healthcare/japan/profile/overview.shtml

UNCTAD (2001), *Mauritius Investment Policy Review*.

UNCTAD (2003a), *Back to Basics: Market Access Issues in the Doha Agenda*, United Nations, New York and Geneva.

UNCTAD (2003b), *Trade Preferences for LDCs: An Early Assessment of Benefits and Possible Improvements*, http://www.unctad.org/Templates/WebFlyer.asp?intItemID=3074&lang=1, United Nations, Geneva.

UNDP (2003), *Human Development Indicators* 2003, http://hdr.undp.org/

UNECA (2003), *Economic Report on Africa* 2003, Addis Ababa.

UNESCAP (1999), "Implications of the Asian Economic Crisis for Sustained Industrial and Technological Development in the Region", 55th session of the United Nations Economic and Social Commission for Asia and the Pacific, Bangkok, 22-28 April 1999, ref.E/ESCAP/1123 http://www.unescap.org/55/

UNESCAP (2002a), *Development of the Automotive Sector in Selected Countries of the ESCAP Region*, UNESCAP Reference No: ST/ESCAP/2223.

UNESCAP (2002b), *Promotion of Trade and Economic Cooperation in the Automotive Sector*, UNESCAP Reference No: ST/ESCAP/2212.

United Nations – Economic Commission for Europe (1992), *The Restructuring of the Steel Industry in the European Community*, pages 3 ff., STEEL/SEM.18/R.23, 16 March.

U.S. Department of Commerce (1994), *1994 Annual Survey of Manufactures: Statistics for Industry Groups and Industries* M94(AS)-1.

U. S. Department of Commerce (2001), *Statistics for Industry Groups and Industries: 2001* M01(AS)-1.

U.S. International Trade Commission (USITC) (1987), *Report to the President on Investigation No. TA-203-17, Under Section 203 of the Trade Act of 1974*, Washington, D.C.

USITC (2003), *Andean Trade Preference Act: Impact on U.S. Industries and Consumers and on Drug Crop Eradication and Crop Substitution — Ninth Report 2002* Investigation No. 332-352, Washington, D.C.

USITC (2004a), *Texiles and Apparel: Assessment of the Competitiveness of Certain Foreign Suppliers to the U.S. Market*, Investigation No. 332–448, Washington, D.C., February.

USITC (2004b), *United States - Sub-Saharan Africa Trade Data*, Quarterly Updates, January-June, USITC, http://reportweb.usitc.gov/africa/trade_data.html

Valdés, Alberto (1993), Mix and Sequencing of Economywide and agricultural reforms: Chile and New Zealand, *Agricultural Economics*, Vol. 8, Issue 4.

Valdés, A. and W. Foster (2003a), "Recent Economic and Agricultural Policy Developments Affecting the Roles of Chilean Agriculture", *Roles of Agriculture Project*, FAO, October.

Valdés, A. and W. Foster (2003b), "The Positive Externalities of Chilean Agriculture: The Significance of its Growth and Export Orientation A synthesis of the ROA Chile Case Study", *Roles of Agriculture Project*, FAO, December.

Vannuccini, Stefania (2003), *Overview of fish production, utilization, fishery consumption and trade Based on 2001 data*, Information, Data and Statistics Unit, FAO, May.

Veblen, Thorstein (1915), *Imperial Germany and the Industrial Revolution*, New York: Macmillan.

Verma, S. (2002), *Export Competitiveness of Indian Textile and Garment Industry*, Indian Council for Research on International Economic Relations, Working paper no. 94, New Delhi.

Weeks, John, ed., (1995), *Structural Adjustment and the Agricultural Sector in Latin America and the Caribbean*, Institute of Latin American Studies, St. Martin's Press.

Wignaraja, Ganeshan (2001), *Firm Size, Technological Capabilities and Market-Oriented Policies in Mauritius,* United Nations University, Institute for New Technologies.

Wignaraja, Ganeshan (2002), *Competitiveness, productivity management and job creation in African enterprises: Evidence from Mauritius and Kenya*, ILO.

Winter-Ebmer, Rudolf (2003), "Coping with a Structural Crisis: Evaluating an Innovative Redundancy-retraining Project," *IZA Discussion Paper No. 277*, Bonn.

Winters, L.A. (2003), *"The Economic Implications of Liberalizing Mode 4 Trade"* in Mattoo, A. and A. Carzaniga (eds.) (2003) *Moving People to Deliver Services*, World Bank and Oxford University Press.

Winters, L. A. (2004), "Trade liberalization and economic performance: an overview", *Economic Journal*, Vo. 114 (2), pp. 4-21.

Wise, Carol (1999), *Latin American Trade Strategy at Century's End*, North-South Agenda Papers #37 Coral Gables, Florida: North-South Center.

World Bank (1995), *Global Economic Prospects and Developing Countries*, World Bank, Washington, D.C.

World Bank (1998), "Lesotho's Garment Exports: Attracting Foreign Direct Investment", *Africa Region Findings*, No. 103, World Bank, Washington, D.C. http://www.worldbank.org/afr/findings/english/find103.htm

World Bank (2002), *Country Assistance Strategy for Mauritius*, World Bank, Washington D.C.

World Bank (2003), *Kenya: Country Economic Memorandum*, World Bank, Washington D.C.

World Bank (2004a), *Thailand Economic Monitor*, World Bank, Washington D.C.

World Bank (2004b), "Sustaining India's Services Revolution", World Bank, Washington D.C.

World Bank (2004c), World Development Indicators Database, July 2004, World Bank, Washington D.C. http://www.worldbank.org/data/databytopic/GDP.pdf, [available online 23 August 2004].

World Bank (2004d), *Doing Business in 2005: Removing Obstacles to Growth*, World Bank, Washington, D.C.

World Health Organisation (WHO) (2002), *Life expectancy at birth (years), total population, 2002: Japan*, Core Health Indicators, WHO, http://www3.who.int/whosis/country/compare.cfm?language=english&country=JPN&indicator=strLEX0Both2002,strLEX0Male2002,strLEX0Female2002

World Trade Organization (WTO) (1991), *Services Sectoral Classification List*, MTN.GNS/W/120.

WTO (1998a), *Health and Social Services: Background Note by the Secretariat*, S/C/W/75, WTO, Geneva, www.wto.org.

WTO (1998b), *Presence of Natural Persons (Mode 4): Background Note by the Secretariat*, S/C/W/75, WTO, Geneva, www.wto.org.

WTO (2000), *Trade Policy Review, Bangladesh*, Report by the Secretariat, WT/TPR/S/68.

WTO (2001), *Trade Policy Review, Mauritius*, Report by the Secretariat, WT/TPR/S/90.

WTO (2002), *International Trade Statistics 2002*, Geneva.

WTO (2003a), *Communication from the International Monetary Fund: Trade and Safeguarding Public Revenues*, WT/TF/COH/16, 14 February.

WTO (2003b), *Revenue Implications of Trade Liberalisation, Communication from the United States*, TN/MA/W/18/Add.2.

WTO (2003c), *Trade Policy Review Chile*, Report by the Secretariat, WT/TPR/S/124, November.

WTO (2003d), *Trade Policy Review Southern African Customs Union*, Report by the Secretariat, WT/TPR/S/114, March.

WTO (2003e), *International Trade Statistics 2003*, Geneva.

WTO (2004a), *World Trade Report, 2004*, WTO, Geneva.

WTO (2004b), *International Trade Statistics 2004*, Geneva.

YeungLamKo, Louis (1998), “The Economic Development of Mauritius Since Independence”, School of Economics University of New South Wales, *Discussion Papers*, No. 6, Sydney, http://www.economics.unsw.edu.au/research/dp/dp98-6.pdf

Yoshino, Michael and Perry Fagan (2003), *The Renault-Nissan Alliance*, Harvard Business School Case 9-303-023, Cambridge, Massachusetts: HBS.

Yoshino, Michael and Masako Egawa (2003), *Implementing the Nissan Renewal Plan*, Harvard Business School Case 9-303-111, Cambridge, Massachusetts: HBS.

Zuart R., Atención Médica a Distancia. Se Inauguró un Nuevo Concepto en Servicios de Salud: Telemedicina. http://www.gdl.uag.mx/202/noticiasaldia.htm