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**TRENDS IN MARKET OPENNESS**

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## ABSTRACT/RÉSUMÉ

Widening imbalances in current account positions across some of the major OECD economic areas have raised concerns about related increases in protectionist sentiments. This paper reviews recent trends in market openness indicators and assesses whether barriers to international trade and investment have risen. It finds that tariffs, the most transparent form of protection, have fallen steadily over a long period. Usage of non-tariff barriers also declined up to 1996. But despite these developments most OECD countries continue to highly protect certain sectors such as agriculture. The paper reviews in some depth the incidence, geographical distribution and product composition of anti-dumping initiations, since their use as disguised protection is feared. Against the background of a general decline in direct trade restrictions the paper shows, using a variety of indicators the steady - albeit uneven across sectors and countries - improvement in market openness. The study also examines domestic policies, since it is likely that future efforts to liberalise trade will require modification of internal measures. These areas include competition policies and investment barriers which favour local national producers or limit the ability of foreign firms to establish local production or distribution facilities.

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Le creusement des déséquilibres des paiements courants entre certaines grandes zones économiques de l'OCDE a fait craindre une montée des sentiments protectionnistes. Ce papier étudie l'évolution récente des indicateurs d'ouverture des marchés et évalue si les obstacles aux échanges et aux investissements internationaux se sont accrus. Il constate que les droits de douane, la forme la plus transparente de protectionnisme, ont diminué régulièrement sur une longue période. Le recours aux obstacles non tarifaires s'est aussi inscrit en repli jusqu'en 1996. Mais en dépit de ces évolutions la plupart des pays de l'OCDE continuent à fortement protéger certains secteurs tels que l'agriculture. Cette étude analyse l'incidence, la distribution géographique et la composition par produits des mesures antidumping, car l'on craint leur utilisation comme moyen déguisé de protection. Dans ce contexte de recul général des mesures visant à restreindre les échanges, ce papier montre en s'appuyant sur différents indicateurs l'amélioration régulière, quoique les évolutions soient différentes entre secteurs et entre pays, du degré d'ouverture des marchés. Cette étude examine aussi les politiques internes car il est vraisemblable que les efforts futurs pour libéraliser le commerce supposeront des modifications des mesures domestiques. Parmi ces mesures, on retiendra la politique de la concurrence et les obstacles à l'investissement qui favorisent les producteurs locaux ou limitent la possibilité pour des entreprises étrangères d'établir des installations locales de production ou de distribution.

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## TRENDS IN MARKET OPENNESS

Jonathan Coppel and Martine Durand<sup>1</sup>

### I. Introduction and summary

Widening imbalances in current account positions across some of the major OECD economic areas<sup>2</sup> have raised concerns about related increases in protectionist sentiments. So far trade disputes have been confined to a few, highly visible areas covering a very small fraction of global commerce, but concerns have been expressed that tensions in trade relationships could spread to other sectors if external imbalances persist. According to the OECD Medium-Term Reference Scenario (see *OECD Economic Outlook 65*) present current account imbalances are unlikely to narrow much, at current real exchange rate levels, even if differences in cyclical conditions are eliminated. This implies a risk that protectionist sentiments may strengthen over the coming years.

If protectionist measures are implemented, prospects for sustained growth would be damaged and the adjustment process taking place in emerging markets adversely affected.<sup>3</sup> Moreover, the effects on current account adjustments would be small, as ultimately restoring more balanced positions depends on securing changes in saving and investment behaviour. Protectionist policies cannot directly influence these at an aggregate level and tend over time to result in lower levels of both imports and exports, leaving the trade balance broadly unchanged.<sup>4</sup>

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1. The authors are Senior Economist and Counsellor respectively in the Director's Office of the Economics Department. They would like to thank their colleagues Sven Blondal, Dimitris Diakosawas, Jørgen Elmeskov, Mike Feiner, Peter Hoeller, Tony Kleitz, Stephen Thomsen and Ignazio Visco for comments and suggestions on previous versions of the paper. They also thank Debra Bloch for technical support and Susan Gascard and Brenda Livsey-Coates for secretarial assistance.
  2. In the United States the current account deficit increased from 1.8 per cent to an estimated 2.7 per cent of GDP (the change being worth \$ 99 billion) between 1996 and 1998, whereas the surplus for Japan widened from 1.4 per cent to an estimated 3.2 per cent of GDP (the change being worth \$ 55 billion). In contrast, the current account surplus of the European Union has remained relatively stable at around 1 per cent of GDP. Movements in the balance on goods and services account for most of the change in the current account positions.
  3. For a summary of these issues, see Mankiw (1999).
  4. Imports fall because protection directly raises the price level of imported products and thereby lowers demand for such products. Exports also fall since a higher price level on imported goods tends to lead to an appreciation of the real exchange rate and thus crowds out exports.

Nonetheless, it is still sometimes argued that protectionism and lack of market openness are contributing to current account imbalances. This paper reviews whether barriers to international trade and investment have risen and assesses trends in market openness indicators. Its main findings are:

- Tariff levels on industrial goods have fallen considerably up until the late 1980s in most OECD countries and since then have been broadly constant.
- Up to 1996, the frequency of use of non-tariff barriers to trade also declined, but their importance may have escalated recently following the financial turmoil in emerging market economies.
- Anti-dumping cases have typically been initiated by OECD countries, especially the United States, the European Union, Canada and Australia. But there has been a marked increase recently in resort to them by non-OECD countries.
- The countries most affected by anti-dumping actions are mainly China, the United States, Korea and Japan. The five Asian countries mainly affected by turmoil in financial markets since mid-1997 have not been disproportionately hit by the rise in anti-dumping actions by OECD countries.
- Over a longer time period, recourse to anti-dumping actions appears, to some extent, to be related to cyclical economic conditions, tending to increase during periods of high spare capacity and falling when capacity is tight. There is also evidence of this pattern in prices: filing of anti-dumping investigations follows drops in the world price of the affected product.
- Aggregate measures of trade openness over the past 30 years show that it has increased, but changes have been uneven across sectors and countries, with Japan still displaying a lower degree of openness than either the United States or the European Union (EU).
- Restrictions on direct foreign investment have declined in the manufacturing sector over the past decade and inflows have increased, except in Japan. A number of barriers remain in the service sector in most countries. Scattered evidence suggests that barriers to competition seem to restrict market access more in Japan than elsewhere.

## II. Is protectionism creeping back?

A large number of commercial policy instruments exist to directly restrict foreign trade flows. Such instruments include import tariffs and quotas, foreign trade licensing and export taxes. Recourse to these border measures has fallen considerably in most OECD economies. By the end of the 1980s, average tariff rates on industrial goods had dropped by almost a factor of three since the 1960s to below 5 per cent in Japan, to around that level in the United States and slightly above that in the European Union (Table 1). For some products, however, notably textiles and apparel, tariffs still remain high and in others, such as food, beverages and tobacco, the “tariffication” (see below) of certain quantitative border measures in the mid-1990s has meant a rise in the production-weighted tariff rate,<sup>5</sup> especially in the United States, Canada, Norway, and Mexico.

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5. Production weighted averages of tariffs are similar in concept to producer support estimates and provide a measure of the value of transfers from domestic consumers to domestic producers. But they do not capture the efficiency costs, and thus the loss in economic welfare attributable to such measures. A more theoretically appealing indicator of welfare losses caused by commercial policy instruments would be the trade restrictiveness index (TRI) developed by Anderson and Neary (1994, a and b). The TRI weights trade

**(Table 1. Production-weighted average tariff rates )**

Tariffs, from an economic welfare perspective, are generally preferred to other trade inhibiting commercial policies due to their transparency and readily quantifiable efficiency costs. In broad terms, the distortionary impact of a tariff depends on the price elasticity of demand of the product on which the tariff is levied and rises disproportionately with the level of the tariff. A low average tariff rate could thus disguise significant efficiency losses if the dispersion of tariff rates were high. Widely used dispersion measures, such as the standard deviation, and trade policy specific measures such as the number of tariff “spikes”<sup>6</sup> have risen or remained constant over the past decade in those OECD countries for which data are available (Table 1). In part, this reflects the gradual replacement and ultimately the abolition of virtually all quantitative restrictions on imports of agricultural products, with their estimated tariff equivalent as agreed in the context of the Uruguay Round Agreement on Agriculture (URAA).<sup>7</sup> This process, known as “tariffication” was one of the major commitments accomplished at the last round of global trade talks -- the Uruguay round. Thus, the rise in tariff dispersion measures and the corresponding small increase in the average tariff level between 1993 and 1996 is unlikely to have been associated with an overall increase in distortionary costs.

While much progress has been achieved in lowering protection on industrial goods, barriers to trade in agriculture remain pervasive in most OECD countries. Protection in the agricultural sector, as measured by producer support estimates (PSEs), has remained broadly constant at a very high level in Japan at around 60 per cent and at about 40 per cent in the European Union and 20 per cent in the United States over the past decade (Figure 1). In Canada over the same period, PSEs have fallen by some 10 percentage points to around 15 per cent, but still remain above the levels in those OECD countries with low assistance to agriculture, such as Australia and New Zealand.<sup>8</sup> Up until the Uruguay Round, agriculture had been largely excluded from the agenda of multilateral trade talks. Some progress began to be made with the URAA and its disciplines on market access, export subsidies and domestic support.<sup>9</sup> Furthermore, it was agreed to resume multilateral trade negotiations on agricultural products towards the end of 1999 as part of the Uruguay Round’s “built-in” Agenda (see box). Efficiency gains from the dismantling of market access barriers in the agriculture sector are likely to be substantial. For example, empirical work by the OECD (Goldin *et al*, 1993) suggests that full multilateral trade reform in agriculture could yield over \$ 450 billion per year in net welfare gains.

**(Figure 1. Protection in the agriculture sector)**

While the level of tariffs and certain quantitative import controls have declined and are programmed to fall further, there are concerns that non-tariff barriers to trade in general (NTBs) may be gaining greater importance as a means of protecting domestic producers of goods and services and impeding access to international markets. A basic problem in analysing NTBs is the lack of a clear definition of what they are: NTBs consist of all barriers to trade that are not tariffs. Examples of these

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policy measures by their associated welfare losses to compile a single synthetic measure, but such an approach is demanding in terms of data requirements and thus, in practice, difficult to implement.

6. Domestic tariff “spikes” are defined as those tariff rates that exceed a certain threshold value usually taken to be three times the overall simple bound rate, or above 15 per cent.
7. See OECD (1995) for an assessment of the impact of the Uruguay Round Agreement on Agriculture in OECD countries.
8. New Zealand is not shown in Figure 1, but it has lower levels of assistance than Australia.
9. For further details, see Josling (1998).

NTBs thus include countervailing<sup>10</sup> and anti-dumping duties, “voluntary” export restraints,<sup>11</sup> subsidies which sustain in operation loss making enterprises, technical barriers to trade,<sup>12</sup> and obstacles to the establishment and provision of services. Moreover, the term is often used to include certain domestic measures, such as restraints on distribution and non-competitive practices that can also distort trade in the same way as border measures do.

Some of these instruments -- in particular, technical regulations, minimum standards and certification systems regarding health and consumer safety -- do not, *ipso facto*, constitute barriers to trade, as they are generally employed to meet legitimate policy goals. However, there is a perception that, in some circumstances these sorts of policy instruments are being mis-used.<sup>13</sup> A rising proportion of trade disputes concern technical barriers to trade (TBTs) in the human health and safety area. Two recent examples which have received considerable attention concern bans on imports into Europe of hormone-fed beef and genetically modified organisms on the basis of possible health risks. Exporters of these products argue that there is no conclusive scientific evidence to suggest a health risk and feel either that stated policy objectives dissemble protectionist measures or that the original (legitimate) objectives have been distorted for protection purposes. Trade disputes of this complex kind, which also involve issues such as environment standards and animal rights, are likely to rise, given the recent sharp increase in the number of notifications to the World Trade Organisation (WTO) of TBTs, especially for the protection of human health and safety (Figure 2). It is thus important that newly created dispute settlement procedures are promptly adhered to by all parties and the judgements which are handed down respected.

**(Figure 2. Number of notifications of technical barriers to trade)**

Trends in the use of NTBs are difficult to monitor because these instruments of trade policy are generally less transparent than tariffs.<sup>14</sup> Most indicators focus on the incidence or frequency of use of NTBs (Table 2) and do not capture the restrictiveness of such measures. As a consequence, it is difficult to measure the distortionary impact of NTBs, as this requires information which is intrinsically hard to measure and presupposes an ability to correctly identify the purpose of the NTB measure as a genuine obstacle to trade.<sup>15</sup> To complicate matters further, the mere threat of certain NTBs, for instance an anti-

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10. Countervailing duties (CVD) are intended to counteract foreign government subsidies for exports or domestic duties.
  11. Voluntary Export Restraints (VERs) and orderly marketing arrangements are banned under Article 11 of the WTO Agreement on Safeguards, but some prominent examples have yet to expire, such as the 1991 EU “consensus” on imported Japanese cars, which is expected to be abolished by December 1999.
  12. Technical regulations, minimum standards and certification systems, which are used by all OECD governments for health, safety and environmental protection and to enhance the availability of information about products, may result in the erection of technical barriers to trade (TBTs). TBTs are mainly caused by the differential application of technical regulations, standards and certification systems between domestic and foreign suppliers, although the fact that such regulations, standards and certification systems differ across countries may in itself be a barrier to trade. In practice it is difficult to evaluate the extent to which standards are applied or enforced differentially. See Hoekman and Kosteckı (1995) for a detailed discussion of TBTs.
  13. To the extent that they are abused, they are contrary to the WTO’s most-favoured nation principle. As it is difficult to distinguish between the use of trade policy instruments, such as anti-dumping and countervailing duty actions which are legitimate and those which are not, recourse to these instruments are treated as NTBs for the purposes of this study.
  14. For a discussion of these issues, see Deardorff and Stern (1997).
  15. For example, an import coverage (IC) ratio of 20 in the motor vehicle industry, which is associated with the presence of a “voluntary” export requirement is not directly comparable in terms of its distortionary

dumping investigation, even if it never materialises, can be sufficient to change behaviour and thereby generate welfare losses.<sup>16</sup>

#### **A millennium trade round?**

The next WTO Ministerial Conference, to be held in late 1999 will consider whether to launch a new round of multilateral trade negotiations -- called by some "the Millennium Round". Most OECD countries broadly support a new round of trade negotiations to further relax impediments to movements of goods and services across countries and as a stimulus to global economic activity. Some developing countries, however, are more hesitant and others are even critical of the idea of a new round. They claim that most suggested agenda topics for negotiation would disproportionately benefit the developed OECD countries. Other countries are concerned that a new round is premature, given the current accession process to the WTO of some 30 countries, including China and Russia, and would divert attention from the gradual implementation of commitments agreed during the last Round. These include the expected elimination by 2005 of quotas on imports of textiles and clothing, the implementation of guidelines in the areas of trade-related investment measures (TRIMs), trade-related aspects of intellectual property rights (TRIPs) and agriculture. Furthermore, under the Uruguay Round a range of selective negotiations, in the areas of trade in agriculture, trade in services and aspects of intellectual property were scheduled -- the so-called "built-in" Agenda -- regardless of whether the WTO Ministerial Conference results in an agreement to launch a new round of multilateral trade negotiations.

An agenda for a new round of negotiations has yet to be agreed, but many suggestions have been put forward. These include additional cuts in industrial tariffs and a host of trade facilitation issues covering agriculture, electronic commerce, competition, investment and government procurement policies. It remains an open question whether the "built-in" agenda would follow its own course or whether it would be merged into the new round's agenda. The least developed countries are also expected to link negotiations with assistance for other initiatives such as "capacity-building", while some OECD countries would like to establish links between trade and labour standards and with environment standards. These proposals are strongly resisted by developing countries who fear that such links would ultimately be used as disguised protectionism and would effectively deny their comparative advantages. While negotiations are still proceeding on the timing and agenda of a new round, wide support already exists for a negotiation process that favours a short round; some have suggested a three-year period. Suggestions have also been made to conclude, when possible, negotiations in specific areas before the set deadline for the whole round -- the concept of an "early harvest".

#### **(Table 2. Pervasiveness of non-tariff barriers)**

Indeed, one trade policy instrument which has received much attention, is anti-dumping actions, since their use as disguised protection is feared.<sup>17</sup> Anti-dumping initiations have proliferated during the past few years

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consequences with an IC at the same level in the energy sector in a country with few indigenous resources and which sets health and safety standards on the discharge of oil from oil tankers.

16. For empirical evidence on this point, see Messerlin (1991).

17. Anti-dumping and countervailing duties are permitted under the trade remedy laws of the WTO provided "material" injury from dumping can be established. Their purpose is twofold: i) to help local producers adjust to intensified competition from foreign trade and ii) to remove "unfair" competition by foreign producers. About one quarter of actions brought to the WTO result in the imposition of duties or price undertakings. Initiations of anti-dumping procedures, or intentions to start them, have frequently led to other arrangements outside the WTO, with foreign governments or firms, on "grey" area measures such as voluntary export restraints, exporter's consent to respect price minima, which replace final WTO



to levels reached at the beginning of the decade and are used by a growing number of countries. In the late 1980s fewer than 10 countries (treating the EU as a bloc) -- which were all OECD members -- launched anti-dumping procedures. Now more than 20 countries, most of which are non-OECD members, regularly use them. Nonetheless, the majority of cases are still filed by the United States, the European Union, Australia and Canada (Table 3); indeed these countries account for over three-quarters of the anti-dumping measures currently in force. Anti-dumping cases filed by OECD countries are concentrated among a small number of products including base metals (primarily steel), chemicals, machinery and electrical equipment and plastics.

**(Table 3. Use of anti-dumping actions)**

Investigations span a much wider spectrum of countries. Over the past decade some 100 countries have been concerned by such measures, of which OECD countries account for roughly 40 per cent of the total. The most affected countries include China, the United States, Korea and Japan. The five Asian countries<sup>18</sup> struck by the turmoil in financial markets over the past 18 months and where current account adjustments have been most marked have not, however, been disproportionately hit by the rise in anti-dumping actions by OECD countries.

Over a longer time period, recourse to anti-dumping actions, to some extent, appears to be related to cyclical economic conditions. The number of anti-dumping investigations initiated by the European Union and the United States has tended to increase during periods of high spare capacity -- proxied by the output gap -- and fall when capacity is tight (Figure 3).<sup>19</sup> Such a relationship, however, is difficult to reconcile with activity developments in the US economy over the past four years or so. While the output gap for the United States is estimated to have closed in 1996 and excess demand to have risen above 2 per cent by 1998, the number of anti-dumping initiations almost doubled over the same period from 16 to 28 actions. This increase, however, is almost entirely associated with a greater number of actions brought against steel products, an area where considerable spare capacity in the United States remains. There is also fragmented evidence of an inverse pattern between world prices -- which themselves are related to capacity developments -- and anti-dumping actions. In the first quarter of 1999, the World Bank's steel product price index was 20 per cent below its year earlier level and reached its lowest point in over 20 years. This drop has coincided with renewed allegations of dumping, and in the United States, where 40 per cent of all anti-dumping measures are imposed on steel products, legislation for the introduction of steel quotas has been proposed, and the Administration is discussing "voluntary" export restraints with Russia and Korea. Prices of other commodities on which anti-dumping measures are frequent, such as woodpulp and urea (fertiliser) have also dropped, and by similar magnitudes over the past year.

**(Figure 3. Anti-dumping initiations and economic slack)**

In summary, levels of assistance afforded to domestic industries through protectionist trade policies have gradually fallen over the past 40 years. The average level of tariffs and the incidence of use of NTBs in most OECD countries for which data is available reached relatively low levels by the mid-1990s. There are concerns, however that recourse to some trade policy instruments are being mis-used and that these instances are on the rise. But it is difficult to advance conclusive evidence.

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determinations like definitive anti-dumping duties or price undertakings. Care, therefore, should be used in interpreting trends, levels and the composition of anti-dumping statistics.

18. These countries are Indonesia, Korea, Malaysia, the Philippines, and Thailand.
19. The correlation coefficient between the number of anti-dumping initiations filed and the output gap calculated between the period 1981 to 1998 is -0.41 for the United States and -0.29 for the European Union.

### III. Evidence on external openness to trade

Against the background of a general decline in direct trade restrictions, market openness has increased significantly over the past five decades. The volume of world merchandise trade is today about sixteen times what it was in 1950 and has almost tripled as a share of global GDP. Services trade has also grown at a rapid pace, becoming one of the fastest growing components of world trade since the mid-1980s. However, the evolution of openness -- calculated as the average share of imports and exports of goods and services in GDP -- has differed visibly across the major OECD economic areas (Figure 4). Since 1970, trade openness has increased in the European Union and especially in the United States. In Japan, after rising in the 1970s and early 1980s, it fell back to its 1970 level in the mid-1980s and has been quite stable since then.<sup>20</sup>

#### (Figure 4. Trade openness)

The share of trade in output, however, is but one indicator of the extent to which OECD markets have become more open. Other measures, such as the import penetration rate and the intensity of exposure of manufacturing industries to foreign competition provide additional information (Tables 4 and 5). They show wide variations across countries, sectors and by the technology content of traded manufactured goods. Since 1970, the import penetration rate in all three major OECD regions has doubled, or more than doubled, although in Japan the level is about half the size of what it is in the other two major regions. Exposure to foreign competition is also lower in Japan than elsewhere, albeit less strikingly so. Based on disaggregated import penetration rates, the following industries: motor vehicles, computers, office machinery and communication equipment and semiconductors are more exposed to import competition than for example, food, beverages and tobacco, non-metallic mineral products and basic metals. Indeed, import penetration appears to have increased most in the high and medium technology sectors (Figure 5). This may reflect the trend towards increased intra-firm and intra-industry trade,<sup>21</sup> and given Japan's low share of intra-industry trade it may at least partly explain its low import penetration rate.

#### (Table 4. Import penetration rates for manufacturing industries)

#### (Table 5. Exposure to foreign competition for manufacturing industries)

#### (Figure 5. Import penetration by type of manufacturing industry)

### IV. The role of internal measures on market openness

While there has been a general trend towards opening markets to international trade, it is most likely that future progress in this field will be achieved through other means than changes in trade policy regimes. The degree of a country's overall openness also depends on domestic policies that restrict entry

20. In Japan, and to a lesser extent the European Union, movements in this measure of trade openness are influenced by changes in world commodity prices. For example, the threefold rise in the price of oil in the early 1970s and Japan's high dependency on imported energy was a major factor behind the increase in trade openness for Japan. The indicator is also influenced by the magnitude of an economy, with an inverse relationship between the size of the domestic economy and the level of trade openness.

21. The share of trade by multinational companies in the OECD countries for which data are available, is about 50 per cent, of which intra-firm trade accounts for about 40 per cent. For an analysis on the role of multinationals in trade patterns see OECD (1996). This is a factor behind the high share of intra-industry trade in the OECD total which is around 60 per cent in the EU and the United States. The proportion in Japan is lower at 40 per cent, albeit on a rising trend since imports and exports are more diversified between investment, intermediate and consumer goods.

into national markets. Such policies include competition policies and investment barriers which favour local national producers or limit the ability of foreign firms to establish local production or distribution facilities, discriminatory industrial subsidies, tax concessions, government procurement practices and restrictions on land ownership or use. In many countries, policy reforms in certain of these areas could most certainly contribute to increased market openness.

In nearly all OECD countries restrictions on outward and inward direct investment in manufacturing have been substantially reduced over the past decade. Bureaucratic prior authorisation arrangements have mostly been replaced with simple notification procedures required for administrative and statistical purposes. The easier regulatory framework governing foreign investment in manufacturing has favoured increased FDI flows and contributed to the globalisation of production systems.<sup>22</sup> As in the case of trade, however, the realised degree of openness to foreign investment varies significantly across countries. While for manufacturing, the stock of foreign investment abroad by US and Japanese firms is broadly similar as a per cent of GDP, at about 3½ per cent, and some 8 per cent for companies based in the European Union,<sup>23</sup> the stock of inward investment is much lower in Japan than in the other two regions, at just under ½ per cent. This compares with 3½ per cent and 4 per cent in the United States and the European Union, respectively. The disparity in FDI inflows is also evidenced in the share of foreign affiliates in Japanese manufacturing production which is between six to ten times lower than in any other major seven OECD country and has declined since the early 1980s (Table 6).

**(Table 6. Share of foreign affiliates in manufacturing production)**

An increasing proportion of FDI flows now goes to services (Figure 6) and about half the stock of outward FDI by OECD countries is in services. These investments are mostly concentrated in the finance, insurance and non-financial business sectors. Despite the extensive liberalisation of FDI regimes, especially in the 1980s, restrictions on foreign direct investment remain in all OECD countries. These restrictions are concentrated in the services area, especially transportation, banking and financial intermediation, communications and professional and business related services. This can be seen from the reservations they maintain to the OECD Code of Liberalisation of Capital Movements and from the draft country exemptions they filed in the course of the MAI negotiations that are no longer taking place (Figure 7). The actual importance of these reservations is hard to evaluate, given that they may cover a wide range of situations which are likely to differ across countries. Nevertheless, the fact that such a large number of countries filed reservations on FDI in many service sector industries point to potentially important barriers to market access by foreign companies, and hence some scope for further liberalisation of foreign investment regimes.

**(Figure 6. Foreign direct investment flows, total OECD)**

**(Figure 7. Reservations filed on FDI liberalisation in the service sector)**

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22. Increasing FDI by multinational companies has influenced international trade patterns, though in ways that are not always straightforward. Empirical evidence on the impact of foreign investment on exports and imports remains largely inconclusive, the effects varying significantly between countries and the time period under consideration. For more details, see Barrell and Pain (1997), Barry and Bradley (1997) and Blomström *et al.* (1997). In the case of Japan, a MITI study on the impact of Japanese overseas activities in manufacturing on the balance of trade finds a positive, but declining, impact of foreign affiliates on Japan's trade surplus.
23. Includes intra-EU area stocks of foreign direct investment. Belgium, Denmark, Greece, Ireland, Luxembourg, Portugal and Spain are not included due to lack of data.

Synthetic indicators of barriers to international trade and investment have been constructed by the OECD in the context of its work on Regulatory Reform.<sup>24</sup> As expected from the analysis presented in Parts II and III, Japan displays the largest degree of openness on explicit barriers, but an overall summary indicator, which also takes into account implicit barriers, such as national discrimination implied by regulatory and administrative procedures, indicates that, when implicit barriers are also considered, the United States and most EU countries are more open than Japan.<sup>25</sup>

To some extent, cross-country comparisons of price levels for traded goods may also provide some insight as to whether domestic competition policies limit market access. Countries where prices appear to be consistently lower than in trading partners may be considered as being more open than countries with relatively higher prices. Figure 8 compares price performance in the manufacturing sector for the major seven OECD countries. This comparison is based on levels of PPPs for nine industries.<sup>26</sup> The United States and Canada stand out as having particularly low manufacturing prices, while Japan has particularly high prices in all manufacturing sub-sectors. Conducting the same comparison on prices of three service industries most exposed to foreign competition (distribution, transportation and communication and business services) shows the same hierarchy in price levels.

**(Figure 8. Comparative price performance in manufacturing)**

Another indicator of potential barriers to competition is the level of mark-ups earned by firms in the traded goods sector. Work carried out by the OECD<sup>27</sup> suggests that mark-up ratios in the manufacturing sector estimated up to the early 1990s were highest for Japan, Germany, the Netherlands and Finland, and lowest for the United States and the United Kingdom. Tentative estimates for selected service industries (wholesale and retail trade and transport and communication) display wider cross-country variation than for manufacturing and show that mark-ups are highest in most of the EU countries and lowest in the United States, Canada and Japan.

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24. A summary indicator has been derived by conducting factor analysis on five first-level indicators: (i) legal and administrative barriers to foreign ownership of businesses, (ii) the existence of explicit provisions discriminating against business activity on the basis of nationality, (iii) nationality discrimination implied by regulatory and administrative procedures, (iv) average trade tariffs and (v) the incidence of NTBs. For more details, see Nicoletti and Scarpetta (forthcoming).

25. In Japan, private practices, such as cultural differences in the way business is done may also play a role, limiting the size of FDI inflows. For further details see Lawrence (1993).

26. Indicators of levels of producer prices would be more relevant here. These indicators, however, are not available for a sufficiently large number of countries, so PPPs have been used instead. One shortcoming of PPPs is that they also include indirect taxes and distribution margins.

27. See Oliveira Martins and Scarpetta (1999).

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Table 1. **Production-weighted average tariff rates<sup>a</sup>**  
Per cent

(ISIC) <sup>b</sup>	Agriculture, forestry fishing (1)	Mining and quarrying (2)	Manufacturing (3)	Food, beverages and tobacco (31)	Total, all products	Domestic tariff spikes <sup>c</sup>	Standard deviation
<b>United States</b>							
1989	3.8	0.2	4.7	7.6	4.4	4.5	7.7
1993	4.1	0.2	5.0	8.2	4.7	4.0	8.6
1996	7.9	0.2	5.4	15.9	5.2	3.8	14.2
<b>European Union</b>							
1988	6.4	0.5	8.4	27.4	8.2	2.2	6.1
1993	6.1	0.3	8.6	27.1	8.4	2.3	6.1
1996	10.7	0.6	7.7	32.5	7.7	4.8	20.7
<b>Japan</b>							
1988	5.1	0.5	4.1	15.6	4.2	5.3	8.9
1993	5.1	0.3	3.5	17.5	3.6	5.7	12.7
1996	5.0	0.3	3.3	18.9	3.4	6.8	11.8
<b>Canada</b>							
1988	4.1	3.4	10.0	16.8	8.7	0.5	8.8
1993	4.0	3.4	9.7	15.6	8.4	0.3	8.4
1996	5.5	1.9	14.4	57.4	12.1	1.4	27.5
<b>Norway</b>							
1988	1.9	6.6	4.8	7.9	5.3	12.2	6.9
1993	1.5	3.8	4.9	8.1	4.0	12.3	6.9
1996	60.3	3.0	33.4	135.1	22.3	7.6	91.1
<b>Switzerland</b>							
1988	2.9	0.7	5.0	23.4	4.8	6.4	13.0
1993	2.7	0.5	4.6	18.7	4.5	6.3	11.6
1996	2.6	0.8	3.2	11.7	3.2	4.9	7.4
<b>Australia</b>							
1988	1.7	2.2	12.8	6.2	11.2	3.1	14.3
1993	0.7	0.7	7.7	3.2	6.6	7.9	12.1
1996	0.5	0.5	4.8	3.3	4.2	10.8	9.1
<b>New Zealand</b>							
1988	2.9	2.2	13.7	8.9	10.6	2.4	15.7
1993	1.8	1.5	7.3	5.6	5.7	6.2	10.4
1996	1.7	1.2	6.4	5.2	5.1	8.3	15.5
<b>Mexico</b>							
1988	10.6	3.4	11.8	14.0	11.0	0.0	7.0
1993	12.2	12.2	13.5	15.2	12.9	0.0	5.2
1996	14.7	14.7	19.9	43.6	18.0	0.7	13.7

a) Calculations are based on each country's own value-added.

b) International Standard of Industrial Classification.

c) Domestic tariff "spikes" are defined as those tariff rates exceeding three times the overall simple average most favoured nation rate.

Source: OECD (1997c).

Table 2. **Pervasiveness of non-tariff barriers**  
Per cent

	Frequency ratio <sup>a</sup>			Import coverage ratio <sup>b</sup>		
	1988	1993	1996	1988	1993	1996
<b>United States</b>						
All Non-Tariff Barriers	25.5	22.9	16.8	16.7	17.0	7.7
Quantitative NTBs <sup>c</sup>	20.4	18.1	10.9	13.7	10.2	2.7
Price NTB Measures <sup>d</sup>	17.8	10.8	7.6	3.6	7.3	5.2
<b>European Union</b>						
All Non-Tariff Barriers	26.6	23.7	19.1	13.2	11.1	6.7
Quantitative NTBs	19.5	17.2	13.1	7.8	7.1	3.8
Price NTB Measures	12.4	8.4	3.2	6.0	3.5	0.5
<b>Japan</b>						
All Non-Tariff Barriers	13.1	12.2	10.7	8.6	8.1	7.4
Quantitative NTBs	11.7	10.5	9.2	6.6	3.0	1.8
Price NTB Measures	0.8	0.9	0.7	0.7	0.8	0.8
<b>Canada</b>						
All Non-Tariff Barriers	11.1	11.0	10.4	5.7	4.5	4.0
Quantitative NTBs	6.6	6.8	5.9	3.0	1.7	1.2
Price NTB Measures	2.4	1.4	1.3	1.1	0.8	0.7
<b>Norway</b>						
All Non-Tariff Barriers	26.6	23.7	4.3	13.8	11.1	3.0
Quantitative NTBs	19.5	17.2	2.6	7.8	7.1	2.6
Price NTB Measures	12.4	8.4	0.0	6.0	3.5	0.0
<b>Switzerland</b>						
All Non-Tariff Barriers	12.9	13.5	7.6	13.2	13.2	9.8
Quantitative NTBs	1.7	1.8	0.2	2.2	2.7	0.6
Price NTB Measures	1.6	1.7	0.0	0.8	0.8	0.0
<b>Australia</b>						
All Non-Tariff Barriers	3.4	0.7	0.7	8.9	0.4	0.6
Quantitative NTBs	0.5	0.0	0.0	6.8	0.0	0.0
Price NTB Measures	2.9	0.7	0.7	2.2	0.4	0.6
<b>New Zealand</b>						
All Non-Tariff Barriers	14.1	0.4	0.8	11.5	0.2	0.2
Quantitative NTBs	13.9	0.0	0.0	11.2	0.0	0.0
Price NTB Measures	0.3	0.4	0.8	0.4	0.2	0.2
<b>Mexico</b>						
All Non-Tariff Barriers	2.0	2.0	14.6	18.6	17.4	6.9
Quantitative NTBs	1.9	2.0	1.0	18.6	17.4	5.7
Price NTB Measures	0.1	0.0	13.1	0.0	0.0	1.2

- a) The frequency ratio is the proportion of national tariff lines that are affected by a particular non-tariff barrier (NTB) or by a specified group of NTBs, irrespective of whether the products affected are actually imported.
- b) The import coverage ratio is the share of a country's own imports that is subject to a particular NTB or any one of a specified group of NTBs.
- c) Quantitative NTBs include measures such as non-automatic licensing, export restraints and quotas.
- d) Price NTB measures include voluntary export restraints imposed by exporters at the request of the importing country, anti-dumping and countervailing duties and variable charges which raise the market price of imported products.

Source: OECD (1997c).



Table 3. **Use of anti-dumping actions**  
 Actions reported for the year ending 30 June

	1987	1993	1996	1997	1998
<b>European Union<sup>a</sup></b>					
Initiations	17	33	16	26	44
Provisional measures	12	17	23	26	28
Duties imposed	7	19	25	10	38
Price undertaking	11	7	6	5	7
Total	47	76	70	67	117
<b>United States</b>					
Initiations	41	68	16	20	28
Provisional measures	55	70	13	22	15
Duties imposed	38	35	17	15	12
Price undertaking	2	5	0	0	5
Total	136	178	46	57	60
<b>Canada</b>					
Initiations	24	37	6	8	10
Provisional measures	12	31	12	8	10
Duties imposed	8	12	6	3	5
Price undertaking	2	3	0	0	0
Total	46	83	24	19	25
<b>Australia</b>					
Initiations	40	61	8	22	35
Provisional measures	17	21	2	6	23
Duties imposed	3	24	1	1	3
Price undertaking	1	0	0	1	4
Total	61	106	11	30	65
<b>Other OECD<sup>b</sup></b>					
Initiations	6	39	18	29	19
Provisional measures	5	33	3	23	12
Duties imposed	0	19	24	16	11
Price undertaking	7	2	3	5	5
Total	18	93	48	73	47
<b>OECD Total<sup>b</sup></b>					
Initiations	128	238	64	105	136
Provisional measures	101	172	53	85	88
Duties imposed	56	109	73	45	69
Price undertaking	23	17	9	11	21
Total	308	536	199	246	314
<i>of which against Asia-5<sup>c</sup></i>					
Initiations	9	30	13	14	21
Provisional measures	5	19	14	10	12
Duties imposed	4	21	10	8	13
Price undertaking	0	1	1	2	0
Total	18	71	38	34	46
<b>Total non-OECD<sup>b,d</sup></b>					
Initiations	..	7	85	95	99
Provisional measures	..	7	17	58	52
Duties imposed	..	7	43	40	61
Price undertaking	..	0	0	3	0
Total	..	21	145	196	212
<i>of which against Asia-5<sup>c</sup></i>					
Initiations	..	1	6	14	12
Provisional measures	..	1	3	6	10
Duties imposed	..	0	4	4	9
Price undertaking	..	0	0	0	0
Total	..	2	13	24	31

a) Before 1995, excludes Austria, Finland and Sweden. Data prior to 1993 refer only to actions against Parties to the anti-dumping Agreement.

b) Of those countries reporting.

c) Asia-5 comprises Korea, Indonesia, Thailand, Malaysia and the Philippines.

d) No non-OECD countries reported in 1987. In 1993, Brazil and India reported actions.

Source: WTO, *Report of the Committee on Anti-dumping Practices*, various years.

Table 4. **Import penetration rates for manufacturing industries<sup>a</sup>**  
Per cent

	1970	1975	1980	1985	1990	1995	1996
United States	5.3	6.7	8.9	12.3	14.5	17.9	18.2
Japan	4.0	4.2	5.5	5.4	6.8	7.7	9.1
European Union <sup>b</sup>	7.2	8.9	10.3	11.3	10.7	12.7	12.9
Canada	25.2	28.1	30.6	35.7	37.3	49.7	49.4
Australia	16.2	17.9	21.5	26.4	24.2	31.9	31.4
Iceland	..	64.1	53.8	52.7	55.2	56.7	..
Korea	..	..	..	..	..	27.0	26.3
Mexico	..	..	..	..	15.7	39.1	40.2
New Zealand	32.4	32.0	35.5	37.8	36.2	39.9	..
Norway	39.8	39.6	38.7	42.6	43.4	43.8	45.8

a) Import penetration is defined as the ratio of manufacturing imports to apparent consumption of manufactured goods (domestic production minus exports plus imports).

b) Net of intra-EU trade. Excludes Austria, Belgium, Ireland and Luxembourg.

Source: OECD, STAN Database.

Table 5. **Exposure to foreign competition for manufacturing industries<sup>a</sup>**  
Per cent

	1970	1975	1980	1985	1990	1995	1996
United States	10.6	14.2	17.5	18.9	24.2	29.2	29.7
Japan	12.1	15.1	16.7	19.0	18.0	19.4	21.2
European Union <sup>b</sup>	15.9	20.2	22.0	24.6	20.9	26.6	27.6
Canada	45.1	44.7	51.4	58.4	59.8	74.9	74.8
Australia	25.9	29.0	34.2	37.2	34.8	45.5	45.1
Iceland	..	78.4	77.4	75.0	77.7	81.0	..
Korea	..	..	..	..	..	48.0	46.1
Mexico	..	..	..	..	24.2	63.3	63.7
New Zealand	53.7	48.3	58.4	59.2	57.3	61.5	..
Norway	58.5	58.9	57.1	61.4	63.4	64.0	66.2

a) The exposure to foreign competition indicator (E) is a synthetic measure which takes into account both the export orientation of an industry and its import penetration. The indicator is based on the notion that the share of output exported (export ratio) is fully exposed and that the exposure of the share sold on the domestic market is proportional to the import penetration rate on that market. It is defined as  $E = X/Y + (1 - X/Y) * M/D$ , where Y is output, M imports, X exports and D domestic demand.

b) Net of intra-EU trade. Excludes Austria, Belgium, Ireland and Luxembourg.

Source: OECD, STAN Database.

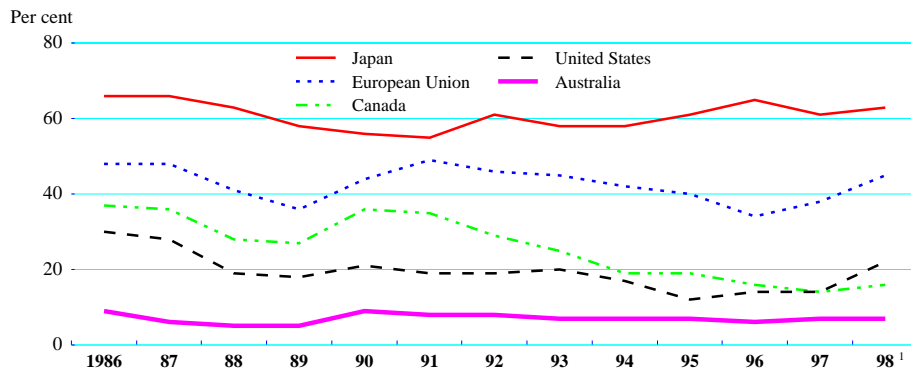
Table 6. **Share of foreign affiliates in manufacturing production<sup>a</sup>**

Host country	1981	1988	1995
United States <sup>b</sup>	7.0	10.6	15.7
Japan <sup>b,c,d,e</sup>	4.7	2.4	2.5
Germany <sup>b</sup>	16.7	13.1	12.8
France <sup>b,d</sup>	29.4	28.4	31.0
Italy <sup>b,d,f</sup>	16.9	21.3	24.6
United Kingdom	19.3	20.2	30.5
Canada <sup>g</sup>	..	27.3	31.2
Finland <sup>h</sup>	2.6	3.3	10.1
Ireland <sup>i</sup>	46.1	55.1	65.2
Mexico <sup>d</sup>	..	18.9	..
Netherlands <sup>d,h,i</sup>	42.5	40.7	42.8
Norway	10.5	10.9	19.5
Sweden <sup>b</sup>	8.3	14.9	21.6
Turkey <sup>i</sup>	..	6.3	12.1

- a) The criterion used for the collection of data on foreign affiliates is the effective exercise of control over company decisions. For statistical purposes, this is defined as an equity holding of over 50 per cent in a company.
- b) Turnover instead of production
- c) Data for 1980 instead of 1981.
- d) Data for 1989 instead of 1988.
- e) Data for 1992 instead of 1995.
- f) Data for 1993 instead of 1995.
- g) Data for total industry are used instead of manufacturing industry.
- h) Turnover instead of production in 1995.
- i) Data for 1983 instead of 1981.

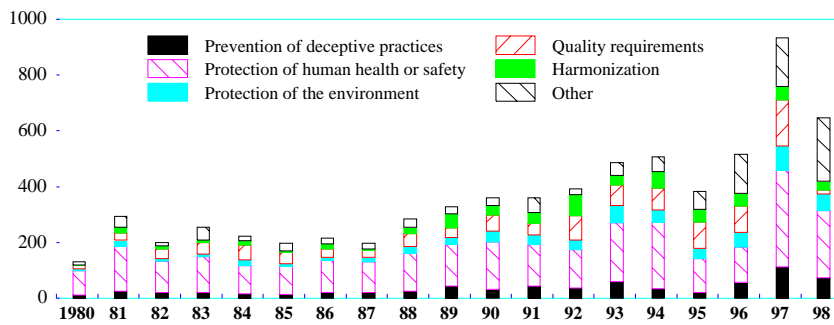
Source: OECD, Activities of Foreign Affiliates and STAN Databases.

**Figure 1. Protection in the agriculture sector**  
 Producer support estimates



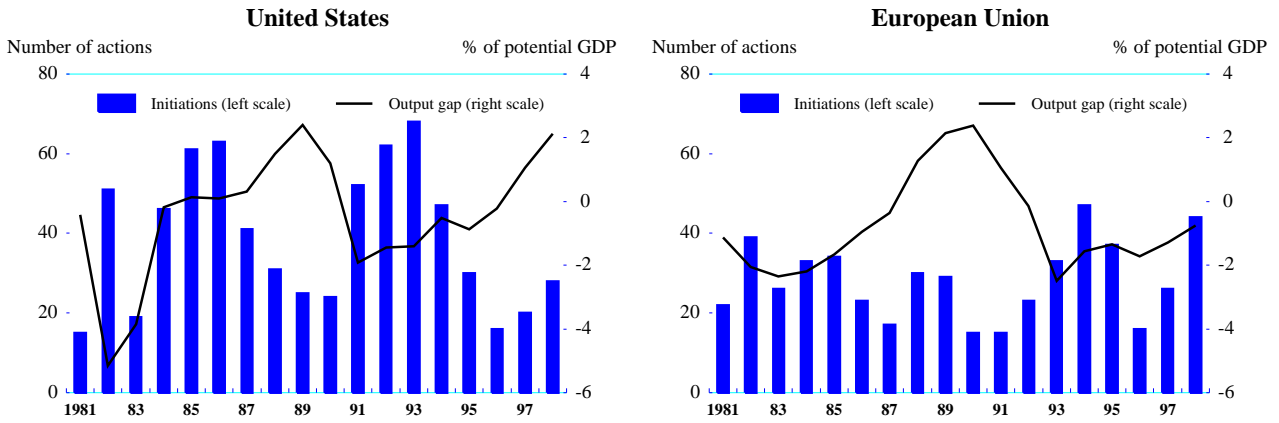
1. Data for 1998 are provisional estimates.  
 Source: OECD, PSE/CSE Database.

**Figure 2. Number of notifications of technical barriers to trade<sup>1</sup>**



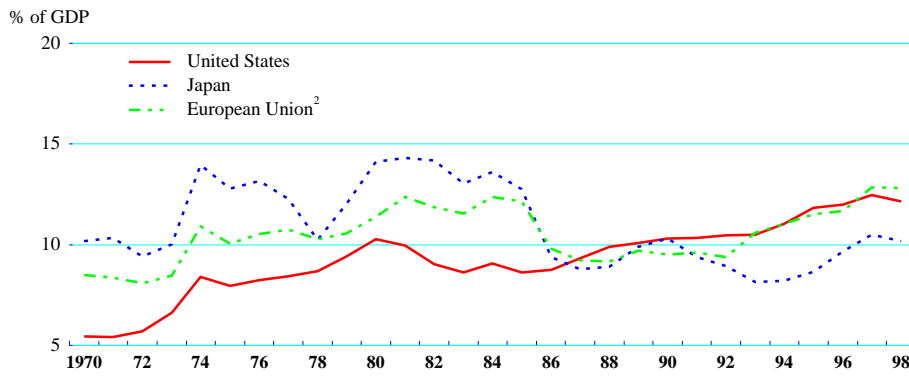
1. For certain years, several notifications indicated more than one objective. As a result, the total number of objectives may not correspond to the total number of notifications received.  
 Source: WTO Secretariat.

**Figure 3. Anti-dumping initiations and economic slack<sup>1</sup>**



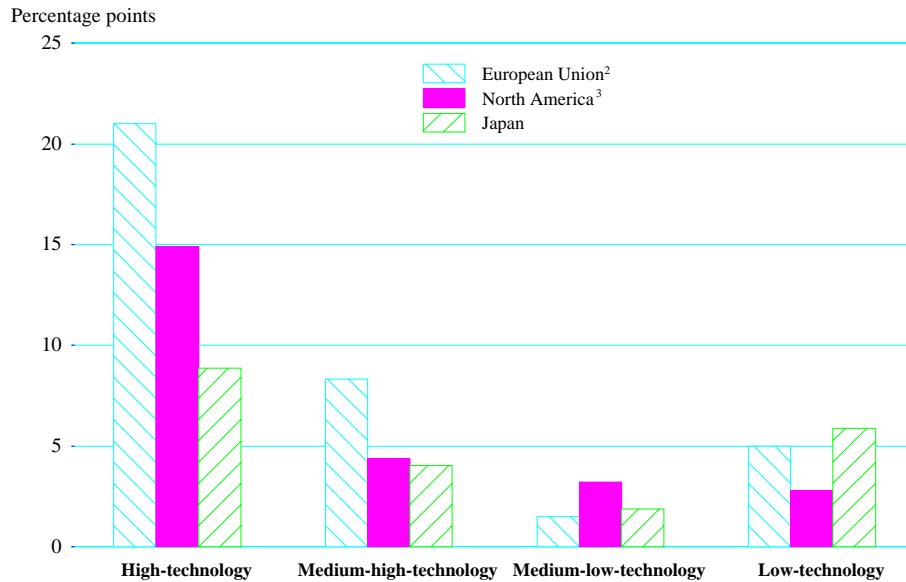
1. Anti-dumping initiations over 12 months to mid-year.

**Figure 4. Trade openness<sup>1</sup>**



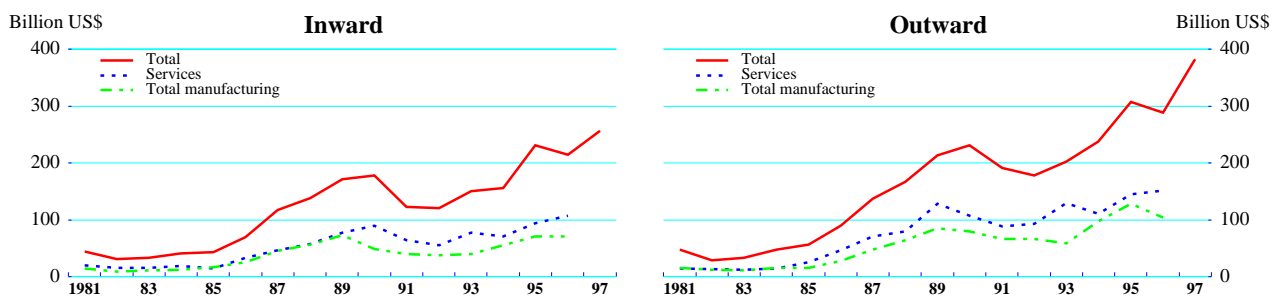
1. Average share of imports and exports of goods and services as a per cent of nominal GDP.  
 2. Net of intra-EU trade.

**Figure 5. Import penetration by type of manufacturing industry<sup>1</sup>**  
Change over the period 1986-96



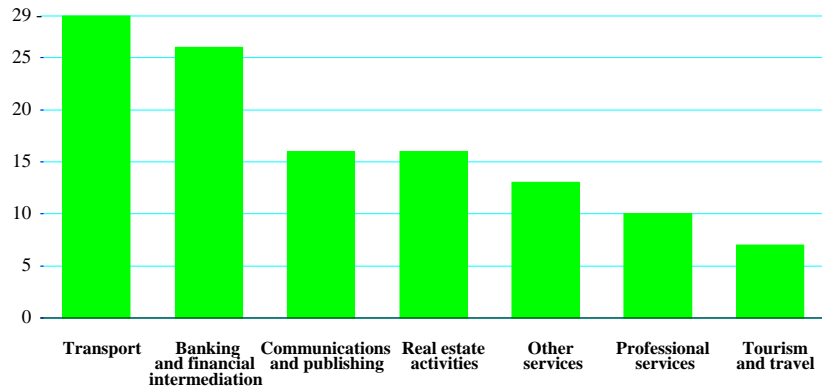
1. The classification of industries on the basis of technology intensity is based on three indicators: i) research and development expenditures as a proportion of value added, ii) research and development expenditures as a proportion of production, and iii) research and development expenditures plus technology embedded in intermediate and investment goods as a proportion of production. For more details, see OECD, 1997b.  
2. Excluding Austria, Belgium, Ireland and Luxembourg.  
3. United States and Canada only.  
Source: OECD, STAN Database.

**Figure 6. Foreign direct investment flows, total OECD<sup>1</sup>**



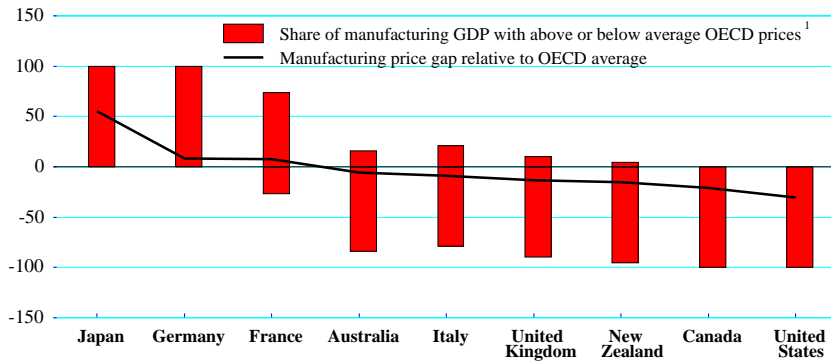
1. Where data available. For certain countries, data for total flows are available, while the sectoral breakdown is not. The total includes the services sector, manufacturing sector, primary sector and unallocated investment flows. Foreign investment is classified as a direct investment if the foreign investor holds at least 10 per cent of the ordinary shares or voting rights in an enterprise (20 per cent in Germany, Italy and the United Kingdom; no threshold in Greece, Japan and the Netherlands).  
Source: OECD, International Direct Investment Statistics Yearbook 1998.

**Figure 7. Restrictions filed on FDI liberalisation in the service sector**  
 Number of OECD countries with restrictions



Source: OECD.

**Figure 8. Comparative price performance in manufacturing**  
 1993 sectoral PPP's, OECD=100



1. Contribution of industries with above or below average OECD prices.  
 Source: OECD.

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190. *Submission by the OECD to the G8 Growth, Employability and Inclusion Conference*  
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