B Globalization and trade

While there is no universally agreed definition of globalization, economists typically use the term to refer to international integration in commodity, capital and labour markets (Bordo et al., 2003). Using integration in these markets as the benchmark, it is clear that globalization is not a new phenomenon. Since the mid-19th century, there have been at least two episodes of globalization (Baldwin and Martin, 1999).

The first episode began around the mid-19th century and ended with the commencement of World War I (WWI). The second episode began in the aftermath of World War II (WWII) and continues today. In both these episodes of globalization, rapid trade and output growth went together with major shifts in the relative size of the economies involved. One valuable lesson from history is that globalization has not been a smooth process. It has often been marked by periods of accelerated integration (as observed in the 19th century and in the second half of the 20th century) and by periods of dramatic reversals (as in the inter-war period) sometimes with costly consequences.

The two most recent episodes of globalization were characterized by increased integration in trade, capital flows and movement of labour, although there are differences in the importance that each of these elements played in the two episodes (see Table 1).

1. Trends in globalization

International trade after WWII entered a long period of record expansion with world merchandise exports rising by more than 8 per cent per annum in real terms over the 1950-73 period. Trade growth slowed thereafter under the impact of two oil price shocks, a burst of inflation caused by monetary expansion and inadequate macroeconomic adjustment policies. In the 1990s, trade expanded again more rapidly, partly driven by innovations in the information technology (IT) sector. Despite the small contraction of trade caused by the dotcom crisis in 2001, the average expansion of world merchandise exports continued to be high – averaging 6 per cent for the 2000-07 period. For the entire 1950-2007 period, trade expanded on average by 6.2 per cent, which is much stronger than in the first wave of globalization from 1850 to 1913.[1] As dollar prices expanded much faster after WWII than before WWI the nominal trade expansion of the former period is more than twice as fast as in the earlier period (9.8 per cent versus 3.8 per cent per annum).

The most dynamic traders in the 1950-73 period were the west European countries and Japan (see Chart 1). Post WWII reconstruction and the Korean War provided a major stimulus to Japanese and European exports in the early 1950s. Thereafter, European integration sustained the expansion of intra-European trade. The share of intra-west European trade in world trade rose from 18.3 per cent in 1953 to 31.2 per cent in 1973 while extra-regional trade expanded somewhat less than global

Table 1
Globalization waves in the 19th and 20th century
(Percentage change unless indicated otherwise)

World	1850-1913	1950-2007	1950-73	1974-2007
Population growth	0.8 [a]	1.7	1.9	1.6
GDP growth (real)	2.1 [a]	3.8	5.1	2.9
Per capita	1.3 [a]	2.0	3.1	1.2
Trade growth (real)	3.8	6.2	8.2	5.0
Migration (net) Million				
US, Canada, Australia, NZ (cumulative)	17.9 [a]	50.1	12.7	37.4
US, Canada, Australia, NZ (annual)	0.42 [a]	0.90	0.55	1.17
Industrial countries (less Japan) (cumulative)	...	...	...	64.3
Global FDI outward stock, year			1982	2006
FDI as % of GDP (world)	...	...	5.2	25.3

a Refers to period 1870-1913.
Source: Maddison (2001), Lewis (1981), UNCTAD (2007), WTO (2007a).

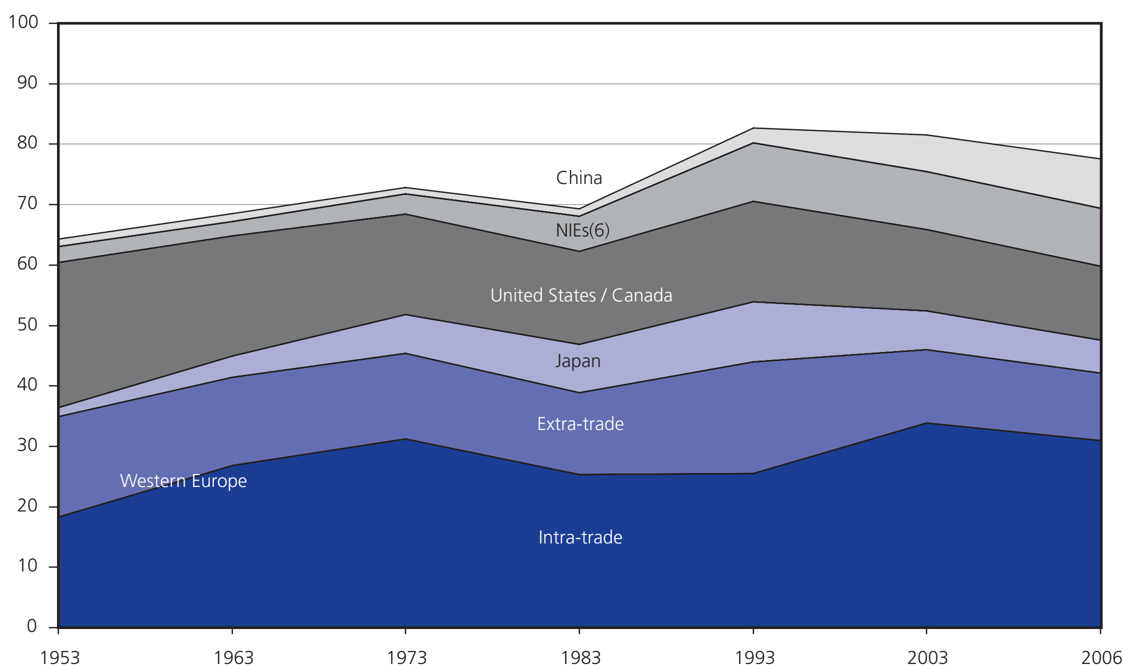
trade. While the United States remained Japan's largest export market throughout that period, Japanese export shipments grew more rapidly to western Europe and the Asian newly industrialized economies (NIEs).[2] From the early 1960s onwards, the six NIEs followed an outward oriented trade policy and succeeded in sharply increasing their merchandise exports. In the two decades following 1963 the share of the Asian NIEs rose from 2.4 per cent to 9.7 per cent of world merchandise exports. These economies initially excelled in exporting textiles but diversified later into exports of consumer electronics and IT products.

The dominant share of the United States in world trade in the early 1950s was eroded in subsequent decades. While the automotive agreement between the United States and Canada in 1965 strengthened intra-North American trade, the combined share of the two countries in world trade shrank by 10 percentage points between 1953 and 1973 (see Chart 1). During the following two decades, the share of regions in world merchandise exports varied, largely due to the fluctuations of commodity prices and exchange rates. The oil-exporting developing countries (especially those in the Middle East) increased their share between 1973 and 1983 but lost almost all their gains when oil prices fell back thereafter. In 1993, after the disintegration of the Soviet Union and the demise of the Council of Mutual Economic Assistance (CMEA) industrial countries' (i.e. western Europe, North America and Japan) share of world merchandise exports reached a peak, in excess of 70 per cent. Together with the six NIEs, they accounted for more than 80 per cent of world trade in 1993.

In the 1990s, Japan's share in world exports started to shrink significantly owing to the competitive pressure exerted by the NIEs and China. The stimulus provided by the creation of the North American Free Trade Agreement (NAFTA) in 1994 was not sufficient to reverse the downward trend in the share of Canada and the United States in global trade. Similarly, the European integration process which continued to deepen and expand to cover the central European countries and the Baltic states could not halt the relative decline of European exports.

The reduced share of the industrial countries can be attributed first to the rise of China, the recovery of the Commonwealth of Independent States (CIS)[3] and in more recent years to the boom in commodity

Chart 1
Share of major exporters in world merchandise trade, 1953-2006
(Percentage)



Note: Break in series between 1993 and 2003. Western Europe becomes Europe including Eastern Europe and Baltic States.
NIEs - Newly Industrialised Economies comprising Chinese Taipei; Hong Kong, China; Rep. of Korea; Malaysia; Singapore and Thailand.
Source: WTO Secretariat.

prices which boosted the shares of Africa, the Middle East and Central/South America, regions which export mostly minerals and other primary products. Increased competition from China in the world trade of manufactured goods was concentrated initially in textiles trade and other labour-intensive goods, such as footwear and toys, but expanded quickly into consumer electronics and IT goods. More recently, China's biggest gains in market share were in iron and steel products. China more than tripled its share in world exports between 1990 and 2007 and is likely to become the number one merchandise exporter in 2008.

These shifts in regional shares do not indicate how international trade progressively split into three broad groups in the first three decades after WWII. The first group consisted of the "old" industrial countries which complemented market-oriented domestic economic policies with increasingly liberalized trade under the General Agreement on Tariffs and Trade (GATT). The second group, comprising the Soviet Union, the rest of eastern Europe and China, consisted of centrally planned economies in which state-owned firms followed government diktat in production and trading decisions. International trade played a relatively minor role in these economies, although some cooperation within the group was organized under the umbrella of the CMEA. Some of the CMEA countries were also members of the GATT, although their participation remained rather limited.

The third group, developing countries, comprised many nations that had gained their political independence between 1946 and 1962. Many opted for a mixed system in which governments tended to intervene in order to encourage industrialization. In general, this led to import-substituting policies that relied on high tariffs and non-tariff barriers to protect domestic industry. It can hardly be a surprise that under these conditions the share of industrial countries in world trade increased (above all, trade among industrial countries) while those of the centrally planned and developing economies decreased. The limited intra-regional trade links of the two latter groups could not offset the impact caused by the marginal role of international trade in these economies.

This tripartite trading system started to falter with the success of a group of East Asian economies in combining high per capita income growth with strong trade expansion in manufactured goods. Among the contributory factors were economic policy re-orientation in Mexico and China in the early 1980s combined with the fall of the Berlin Wall and the dissolution of the Soviet Union a decade later.

The prominent role played by the industrial economies in world merchandise exports up to the 1990s was closely linked to their very large share in exports of manufactured goods, the product category most in demand. The long-term shifts in the composition of world merchandise trade show a strong rise in the share of manufactured goods and a marked decline in agricultural products and non-fuels minerals.[4] The share of agricultural products (including processed food) declined from more than 40 per cent in 1950 to less than 10 per cent since 1999. The share of fuels in world merchandise exports has fluctuated sharply due to a marked variation in prices, with highest shares recorded in 1974, 1981 and 2007 (20 per cent of world trade on each occasion).[5]

Among manufactured goods, there has been a long-term decline in the relative importance of iron and steel as well as that of textiles. The share of clothing experienced a substantial increase in the first two decades after WWII and exceeded that of textiles from 1980 onwards. Road motor vehicles also increased their share in world trade between 1950 and 1973, while office and telecom equipment were the most dynamic products in the 1990s. In 2001, the dotcom crisis arrested the dramatic growth of office and telecom products. Due to falling prices and less buoyant demand, these products could no longer expand their share in world exports of manufactured goods.[6]

The industrial countries accounted for 85 per cent of world exports of manufactured goods in 1955 but their share declined to about two-thirds in 2006. In contrast to manufactured goods, the share of industrial countries in exports of agricultural products (including processed food) rose strongly from 40 per cent in 1955 to about 60 per cent in 2006 (see Appendix Chart 1). The share of industrial countries in world exports of fuels and other mining products was already low in 1955 (less than 40 per cent) and decreased to around 30 per cent in 2006.

Between 1955 and 2006, a decline occurred in the share of the industrial countries in world manufactured exports. There is a noticeable

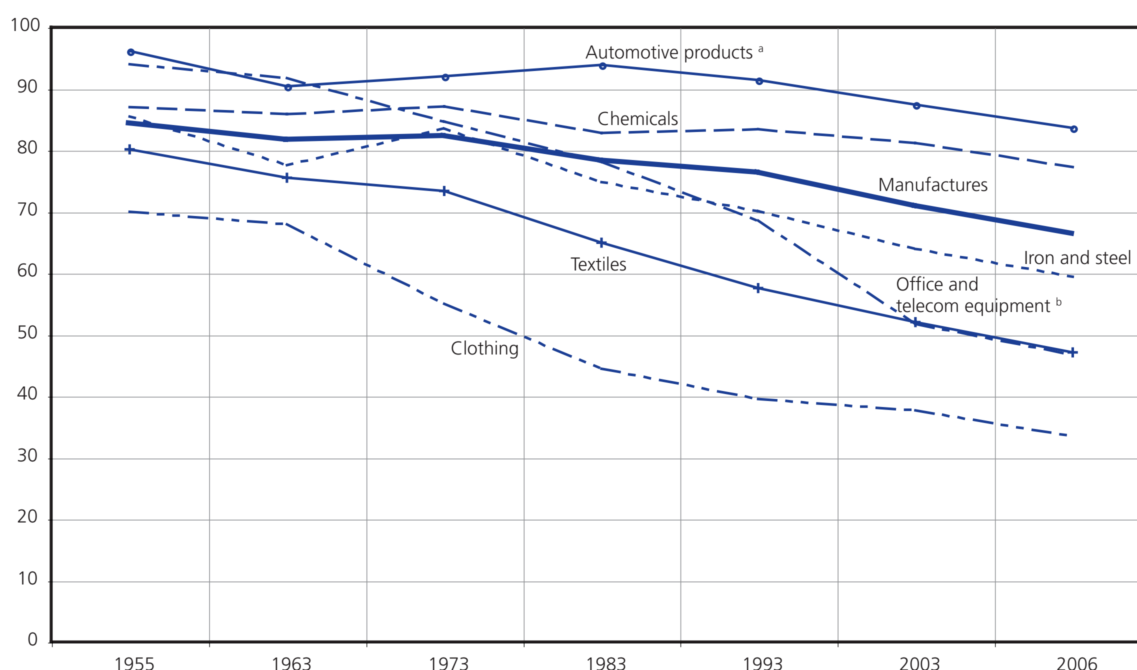
difference in the timing of the decline (see Chart 2). Industrial countries' share of world exports of clothing, textiles and office and telecom equipment decreased steadily from 1955 onwards. For iron, steel and chemicals, the decline began in 1973. It occurred much later for automotive products (around 1983). For relatively labour-intensive products, such as textiles and clothing, the share of the industrial countries was well below the average for manufactured goods as a whole. Their share in this sector also declined much earlier while the share of the more capital- and research-intensive product groups such as chemicals and automotive products continued to be above average for manufactured goods as a whole. The decline in these capital- and research-intensive sectors has been more moderate and sets in much later.

The mirror image to this relative decline of the industrial countries is the rise of a highly diverse group of developing economies that now account for more than two-thirds of world clothing exports and more than one-half of world exports of textiles and office and telecom equipment. The strongest increase in the share of developing countries was in office and telecom equipment, a sector in which the fragmentation of production has been the most visible.[7] For all manufactured goods, the developing countries' share is slightly more than a third, double their share 25 years ago (see Appendix Chart 2).

The structure and size of international capital flows has varied greatly over the last 60 years. In the aftermath of WWII, the economies of Europe and Japan suffered large trade deficits and could generate only limited savings for rebuilding their capital stock. The Marshall Plan, the European Payments Union and at a later stage United States' foreign direct investment (FDI) provided the necessary liquidity for the expansion of international trade.

The famous dollar shortage of the immediate post-WWII period faded when the United States started to run into current account deficits. A number of countries placed a part of their dollar earnings with international banks in London and created a pool of dollar liquidity outside the control of the US Federal Reserve Bank system. This was soon labelled as the Euro-dollar market. The need to hold dollar reserves was further reduced when the United States abandoned the fixed dollar–gold relationship in 1971. The currencies of the major traders started to

Chart 2
Share of industrial countries in world manufactures exports by product group, 1955-2006
(Percentage)



a Road motor vehicles for the years 1955-73.
b Break in time series between 1973 and 1983.

Note: EU(15) before 2003 and afterwards EU(25).
Source: GATT, Networks of World Trade, 1978 for the years 1955-73 and GATT, International Trade 1985 for the year 1983, and WTO, SDB for the years 1993-2006.

float and the International Monetary Fund (IMF) no longer maintained an official reference price for gold.

Following the oil price hikes in 1973-74 and again in 1979-81 the large increase of foreign exchange earnings of the oil-exporting countries led them to place a part of their revenues with international banks, which in turn lent funds to sovereign borrowers. While the "re-cycling" of earnings from the trade surplus countries to the deficit countries cushioned the adverse impact on trade, a critical situation emerged when the newly indebted countries faced higher dollar interest rates and falling commodity prices in the early 1980s. The tightening of monetary policy in the United States had a dramatic impact on many developing countries. The solution to the crisis came through a combination of domestic economic adjustment programmes combined with a change in trade policy orientation and debt forgiveness. These new reforms also included a partial liberalization of capital markets, and in particular a more welcoming attitude to FDI. These reforms involved both developing and developed countries and contributed greatly to the surge in FDI flows from the mid-1980s onwards.

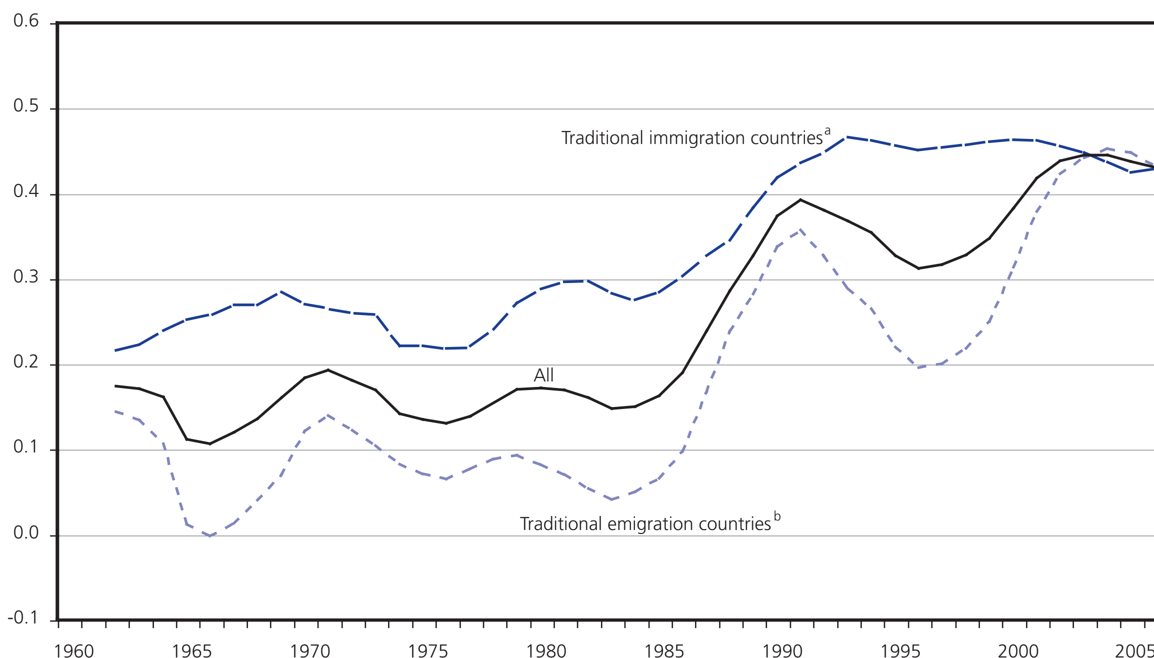
FDI flows increased in the 1980s by 14 per cent annually and by more than 20 per cent annually in the 1990s, reaching a peak level of US$1.4 trillion in 2000. The dotcom crisis in 2001 – caused largely by the internet bubble – sharply reduced FDI flows. These flows started to recover in 2004 and reached their previous peak again in 2007. It is estimated that the ratio of global FDI stock to world GDP exceeded one-quarter in 2006, five times larger than it was a quarter of a century earlier (see Table 1). The persistent US current account deficit and large dollar exchange rate fluctuations encouraged monetary integration in western Europe. It found its most visible expression in the creation of the euro, the common currency of 15 west European countries with a total population of more than 300 million people.

The flow of people across regions was a major feature of the globalization process in the 19th century. Between 1850 and 1913, more than 20 million people moved from Europe to new settlements, mainly in North and South America, Australia and New Zealand. These flows helped to absorb the fast growing European labour force which could no longer be productively employed in European agriculture, and which contributed to the massive expansion in agricultural output in the new areas of settlement. The inter-war period saw severely limited migration flows to these areas of European settlement, but the situation started to change again in the second half of the 20th century. It is worth recalling that this period was characterized by unprecedented population growth. While the global population expanded by about 0.8 per cent annually between 1870 and 1913, the 1950-2005 period witnessed annual population growth of 1.7 per cent, or more than twice that observed in the former period (see Table 1).

Although there was a marked deceleration in global population growth in the 1973-2005 period, most of this decline was concentrated in the developed countries, Russia and China. In many developing regions, particularly Africa, population growth rates still remain very high by historical standards. These different rates of population growth are not matched by corresponding differences in economic growth rates, and this is reflected in growing income inequality and migration pressures. The traditional immigration countries of the past (United States, Canada, Australia and New Zealand) have seen an increase in recorded net migration since the early 1990s compared with the three preceding decades.[8] Many previously net-emigration countries in western Europe have become immigration countries (e.g. Italy, Ireland, Portugal and Spain), with the result that a group of 18 west European countries have experienced net immigration rates since the mid-1990s similar to those observed in the "traditional" immigration countries in the 1960s and 1970s (see Chart 3).

For the industrial countries, cumulative official net migration amounted to 64 million people for the 1974-2006 period. But migration is not limited to South to North flows. Important migration flows can also be observed from South Asia to the Gulf region and in Southern Africa. The increase in migration flows has a number of positive impacts in economic terms but can also be a source of difficulties if integration into the host community proves challenging. One of the most visible impacts of the increase in migration flows is the rise in worker remittances These have been estimated to be in the order of US$400 billion in 2006, exceeding by far the official development assistance of OECD countries to developing countries (see Appendix Chart 3).

Chart 3
Net immigration into developed countries, 1960-2006
(Five-year moving averages, net immigration as percent of population)



a Traditional immigration countries comprise Australia, Canada, New Zealand and United States.
b Traditional emigration countries are composed of 18 western European countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.
Source: OECD, Labour Force Statistics.

2. MAIN DRIVERS OF GLOBALIZATION

The main forces that have driven global integration have been technological innovations, broader political changes and economic policies. Table 2 attempts to provide a chronology of the major events and forces that have contributed to today's globalization.

In the case of technological innovations, chief among these driving forces of globalization were inventions that improved the speed of transportation and communications and lowered their costs. These included the development of the jet engine and its universal use in aviation for transporting people and goods and the adoption of containerisation in international shipping. Massive investments in road infrastructure have allowed large shares of trade to be carried by freight trucks in western Europe and North America. The other dramatic change was the revolution in information and communication technology. New products such as the microprocessor, the personal computer and the cellular phone have contributed to profound socio-political and economic transformation. This is equally true of the internet and the World Wide Web. A more detailed discussion of how these innovations have affected trade can be found in Section C.

Less noted in the globalization literature are changes in production methods which created new tradable products (such as plastics), or expanded global production in food (green revolution) or made production more efficient (just-in-time methods). The large switch from coal to oil and gas in industrial countries was also an important step towards globalization, providing a large and cheap source of energy to power economic growth, and integrating the oil-exporting countries of the Middle East into the global economy.

The link between political developments and globalization has been far more complex. The dissolution of empires and the birth of the Cold War had the initial effect of fragmenting the world and the global economy into a first, second and third world. The divide between East and West reached its peak in the early 1960s with the construction of the Berlin Wall and the Cuban missile crisis. But well before these dramatic events occurred, the seeds of economic integration had been sown in

Europe, with the Marshall Plan providing a huge impetus to economic recovery and integration. Subsequently, with China's economic reform, the fall of the Berlin Wall and the collapse of the Soviet Union, the major political impediments to global economic integration ended.

A key driver of globalization has been economic policy, which resulted in deregulation and the reduction or elimination of restrictions on international trade and financial transactions. Currencies became convertible and balance-of-payments restrictions were relaxed. In effect, for many years after the end of WWII it was currency and payments restrictions rather than tariffs that limited trade the most. The birth of the Eurodollar market was a major step towards increasing the availability of international liquidity and promoting cross-border transactions in western Europe. Beginning in the 1970s, many governments deregulated major service industries such as transport and telecommunications. Deregulation involved a range of actions, from removal, reduction and simplification of government restrictions, to privatization of state-owned enterprises and to liberalization of these industries so as to increase competition.

In the case of trade, liberalization was pursued multilaterally through successive GATT negotiations. Increasingly, bilateral and regional trade agreements became an important aspect of (preferential) trade liberalization as well. But many countries undertook trade reforms unilaterally. In the case of developing countries, their early commercial policies had an inward-looking focus. Industrialization through import substitution was the favoured route to economic development. The subsequent shift away from import substitution may be owed partly to the success of a number of Asian newly-industrializing countries that adopted an export-led growth strategy, but also partly to the debt crisis in the early 1980s, which exposed the limitations of inward-looking policies.

Other points to consider include important actions that contributed to global macroeconomic stability and therefore provided an environment conducive to global integration. These would include the Volcker US Federal Reserve's successful steering of US monetary policy to put an end to US and hence global inflation in the early 1980s and the Louvre Accord, which stabilized major exchange rates. Finally, it would be remiss to exclude the role that international institutions such as the IMF, the World Bank and the GATT played in the process of globalization. They have provided cohesion and greater coherence to international economic policymaking.

3. PUBLIC ATTITUDES TO GLOBALIZATION

Global integration in product, capital and labour markets has resulted in a more efficient allocation of economic resources over time. The outcome of integration is greater levels of current output and prospects of higher future output. Consumers have a wider choice of products and services at lower prices. Capital can flow to countries which need it the most for economic growth and development. To the extent that technology is embodied in capital goods or is closely linked to FDI flows, openness further improves the growth prospects of developing countries. Allowing workers to move across national borders can alleviate skill shortages in receiving countries or improve dependency ratios in rapidly ageing societies while alleviating unemployment or under-employment in countries providing these workers. Remittances from overseas workers or emigrants can represent a substantial share of national income for these countries.

These benefits are sufficiently tangible and large enough for international surveys of public attitudes to suggest broad support for globalization. A majority of respondents recognize that trade benefits consumers by offering them a broader range of choice and lower prices and that trade creates market access opportunities for domestic firms. But this is not to deny that there is also a lot of disquiet about the challenges that come with globalization.

Since 2002, the Pew Global Attitudes Project has conducted a series of worldwide public opinion surveys encompassing a broad array of subjects, including attitudes towards trade. Its latest global survey in 2007 (Pew, 2007) was perhaps the most ambitious, covering 47 countries and more than 45,000 interviews. The countries surveyed included: the major industrial countries, such as the United States, Japan and Germany; emerging economies, such as Brazil, China, India and Russia; and least-developed countries, such as Ethiopia and Mali. Pew found that in all 47 nations surveyed, large majorities believed that international trade was benefiting their countries. But accompanying this belief was a fear about the disruptions and

downsides of participating in the global economy. People were concerned about inequality, threats to their culture, threats to the environment and threats posed by immigration.

One interesting conclusion from the survey was that there is apparently stronger support for trade in some emerging economies than in industrial countries. Support for globalization appeared to be waning in the industrialized countries even though a majority of the public still supported it. For example, 78 per cent of Americans surveyed in 2002 said that trade was good for their country. In 2007, this was down to 59 per cent. Sharp falls in public support were also seen in Italy, France and even the United Kingdom. In contrast, there was near universal approval of trade in China and India. Ninety-one per cent of those surveyed in China expressed approval of trade. In India, a nearly similar proportion (89 per cent) believed that trade was good for the country.

The results of Pew's Global Attitudes Project (Pew, 2007) are mirrored by other surveys. Since 2004, the German Marshall Fund has undertaken annual surveys of public attitudes in the United States and countries of the European Communities (EC) towards trade and poverty reduction. The 2007 survey (German Marshall Fund, 2007) showed that US and European support for trade and for the World Trade Organization (WTO) remained high. In the United States, 64 per cent favoured trade while nearly half (48 per cent) also favoured the WTO. In Europe, 75 per cent had favourable views about trade and 58 per cent approved of the WTO. But the German Marshall Fund survey has detected a softening of support since 2004. Interestingly, when it came to job losses, the US and European public both rated outsourcing to another country as its main cause. Furthermore, public attitudes towards emerging economies appeared to be complicated, with China seen more as a threat, while India was perceived more as an opportunity.

For policymakers who embrace more open markets, there is much to take heart in these results. But rising public concern about some aspects of globalization should also cause them to ponder. For those who believe that the gains from global integration outweigh its costs, it would not be wise to leave these concerns unattended. Perhaps the answer lies in a balance between open markets and complementary policies, along with international initiatives that manage better the risks arising from globalization.

Table 2
Globalization chronology

Time	Economic	Political	Technological
1940s	• Establishment of the Bretton Woods System, a new international monetary system (1944-71)	• Foundation of the United Nations (1945)	• Expansion of plastics and fibre products, e.g. first nylon stockings for women (1940)
	• Establishment of GATT (1947) entering into force in January 1948	• Launch of the Marshall Plan (1948–57), a European recovery programme • Founding of the Organization for European Economic Cooperation (1948)	
	• Soviet Union establishes the Council for Mutual Economic Assistance (CMEA) for economic cooperation among communist countries (1949-91)	• Decolonization starts (1948-1962). Independence of India, Indonesia, Egypt, for example • China becomes a socialist republic in 1949	• Discovery of large oil fields in the Middle East. especially in Saudi Arabia (1948)
1950s	• Treaty of Rome establishes the European Community (1957). EC and the European Free Trade Association (1959) favour west European integration	• Korean war (1950-53) • Suez crisis (1956)	• Increased use of oil from the Middle East in Europe and Japan • "Just-in-time" production implemented by Toyota
	• Major currencies become convertible (1958-64)	• Decolonization in Africa (15 countries become independent between 1958 and 1962)	• Increasing usage of jet engines in air transport (1957-72)

Time	Economic	Political	Technological
1960s	• Foundation of the Organization of the Petroleum Exporting Countries (OPEC) (1960)		• First person in space (Yuri Gagarin, 1961) and first man on the moon (Neil Armstrong, 1969)
	• Development of the Eurodollar Market in London which contributed to the expansion of international liquidity		• Integrated circuits become commercially available (1961) • Offshore oil and gas production developed
	• Kennedy Round, 6th session of the GATT (1964-69) • Rapid spread of automobiles and highways in the North accelerates demand and shift in fuels consumption (from coal to oil)	• Erection of Berlin Wall (1961) and Cuban missile crisis (1962) highlight sharp confrontation between East and West	• Green Revolution - transforming agricultural production in developing countries (1960s onwards) • First line of Japan's high-speed train system (shinkansen) opened in 1964 • Mont Blanc Road Tunnel (1965)
	• Trade policies of East Asian countries put more emphasis on export-led development than on import substitution • Elimination of last customs duties within EC (1968)		• Increasing usage of containerization in ocean transport (1968 onwards)
1970s	• Departure from US dollar exchange rate gold standard (1971)	• Yom Kippur war (1973) helps to trigger oil price hike	• First single chip microprocessor (Intel 4004) is introduced (1971)
	• Tokyo Round of the GATT (1973-79)	• EU enlargement to nine members (1973)	
	• Oil price "shocks" (1973-74 and 1979) reverse decades of real oil price declines		
	• Rise of Asian newly industrialized countries • China's economic reform (1978)		
1980s	• Volcker Fed successfully extinguishes US inflation		• IBM introduces the first personal computer (1981)
	• Developing country debt crisis • Mexico starts market reforms and joins the GATT in 1986	• Enlargement of the EU to 12 members	• Microsoft Windows introduced (1985)
	• Louvre Accord promotes stabilisation of major exchange rates (1987)	• Fall of the Berlin Wall (1989)	
1990s	• Indian economic reforms launched in 1991 • Establishment of the North American Free Trade Agreement (1994) • Asian financial crisis (1997)	• Dissolution of the Soviet Union (1991) leads to the formation of 13 independent states	• Eurotunnel opens in 1994 linking the United Kingdom to continent • The number of mobile phones increases due to the introduction of second generation (2G) networks using digital technology • Launch of the first 2G-GSM network by Radiolinja in Finland (1991)
	• Establishment of the WTO (1995) following Uruguay Round (1986-94)		• Invention of the World Wide Web by Tim Berners-Lee (1989) - first web site put online in 1991. Number of internet users rises to 300 million by 2000
	• Adoption of the euro by 11 European countries (1999)	• Maastricht Treaty (formally, the Treaty on European Union) signed (1992)	
2000s	• Dotcom crisis (2001)		• Container ships transport more than 70 per cent of the seaborne trade in value terms
	• China joins WTO (2001)		• Number of internet users rises to 800 million in 2005
	• End of the Multifibre Arrangement (quantitative restrictions of textiles lifted)	• Enlargement of the EU to 27 members	

Endnotes

1 According to Annex III Table 4 of Lewis (1981) real world export growth averaged 3.8 per cent over the 1850 to 1913 period. Maddison (2001) (Table F 4) estimates that world exports grew by 3.4 per cent annually between 1870 and 1913. The number of years in which trade shrank was somewhat less in the post-WWII period than in the 1850-1913 period (7 (12) against 5 (9) in real (nominal) terms or 1.1 and 0.9 for every ten years).

2 Hong Kong, China, Malaysia, Republic of Korea, Singapore, Chinese Taipei, Thailand

3 Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Russia, Tajikstan, Turkmenistan, Ukraine, Uzbekistan.

4 While the long-term rise of manufactured goods in world trade since 1950 is well known, it is less well known that the share of manufactures did not increase during the height of northern industrialization between 1850 and 1913. The share of manufactured goods increased in UK imports but decreased in United States' imports and stagnated in German imports. Between 1850 and 1913 the share of manufactured goods remained in a range of 36-42 per cent of world trade (in current prices) and is estimated to have stood in 1913 at 39 per cent, a lower rate than in 1850 (42 per cent), according to data provided by Tables 3 and 7 in Lewis (1981).

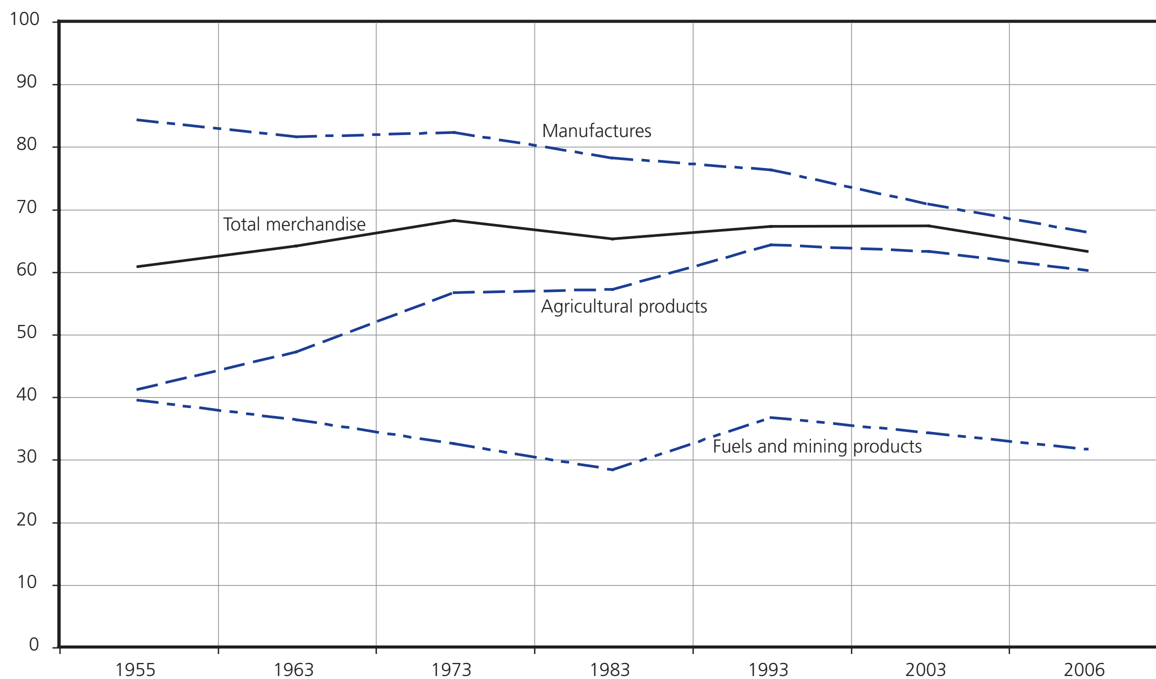
5 Measured in real terms the picture is of course quite different. Between 1950 and 1973 the real price decline of fuels stimulated demand and world fuel exports expanded faster in volume terms than total trade. However, during the period of relatively high energy prices (1974 through 1985) trade in fuels stagnated. Sharply lower real prices after 1985 stimulated a strong recovery in fuels trade in real terms.

6 In real terms, however, electronics goods continued to expand faster than other manufactures. The high value-to-weight ratio of electronic goods and the falling cost of air freight sustained the expansion of trade in this product group. More information on falling air transport cost is provided in Section D.1.

7 See Section D for a theoretical discussion of the fragmentation of production and its impact on trade.

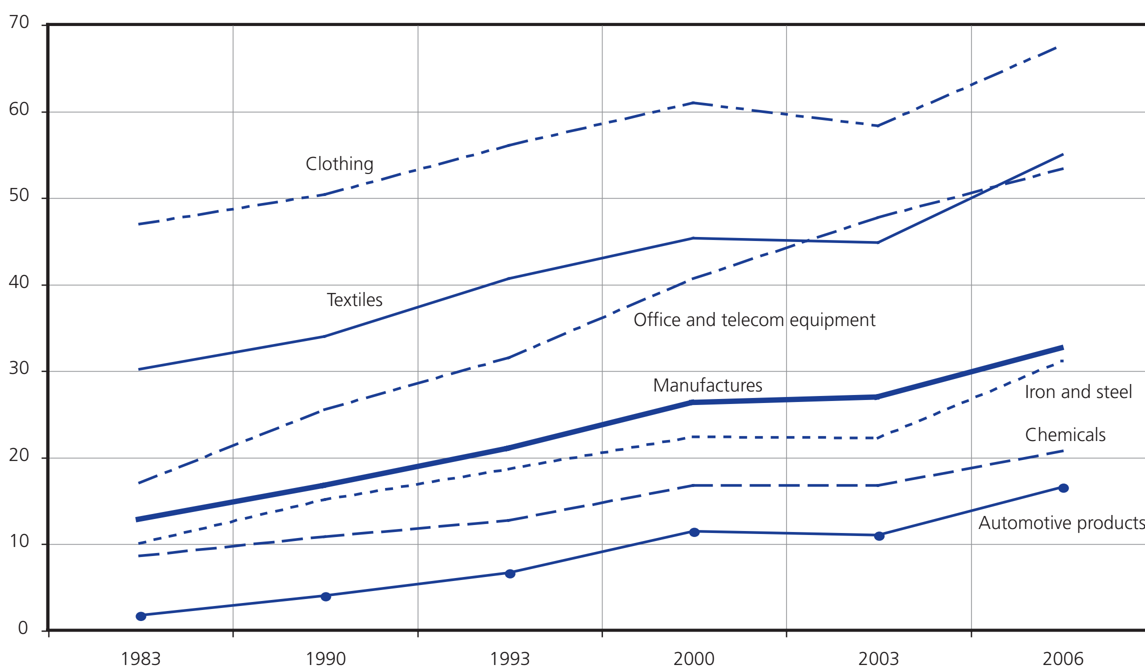
8 There are indications that these estimates contain a severe downward bias as illegal immigration is insufficiently taken into account. According to separate estimates unrecorded immigration into the United States amounted to 0.4 million annually in the (1995-2005) period (see Table 46 of US Census Bureau, 2008).

Appendix Chart 1
Share of industrial countries in world exports by major product group, 1955-2006
(Percentage)



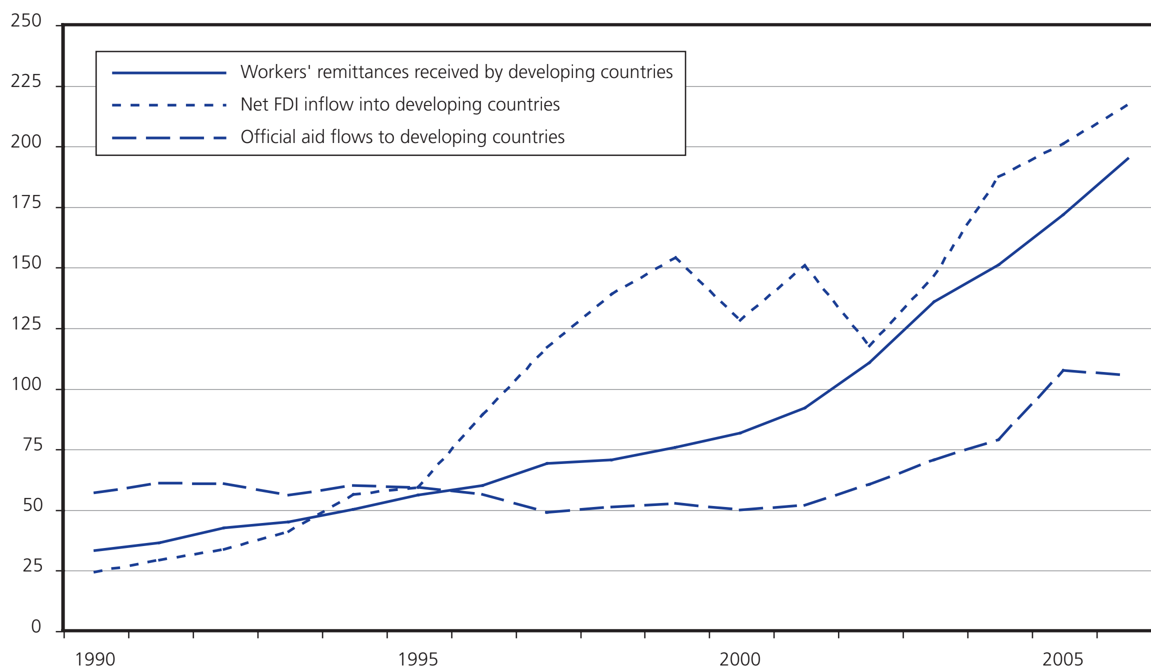
Note: EU(15) before 2003 and afterwards EU(25).
Source: GATT, Networks of World Trade, 1978 for the years 1955-73 and GATT, International Trade 1985 for the year 1983, and WTO, Statistical Data Board for the years 1993-2006.

Appendix Chart 2
Share of developing economies in world manufactures exports by product group, 1983-2006
(Percentage)



Source: GATT, International Trade 1985 for the year 1983, and WTO, Statistical Data Base for the years 1993-2006.

Appendix Chart 3
Selected financial flows to developing countries, 1990-2006
(Billion dollars)



Source: World Bank, World Development Indicators, UNCTAD, World Investment Report 2007, OECD, Development Assistance Committee online database and WTO estimates.