

Moving up the (Global) Value Chain

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Introduction

Globalisation raises many important challenges and is high on the policy agenda in many OECD countries. Globalisation itself is not new – the process of international economic integration has been underway for decades – but the pace and scale of today’s globalisation is unprecedented.

One reason for the speeding-up of the whole globalisation process is the rapid emergence of “global value chains”. The whole process of producing goods, from raw materials to finished product, has increasingly been “sliced” and each process can now be carried out wherever the necessary skills and materials are available at competitive cost.

But globalisation is no longer only about goods and products; it increasingly involves foreign direct investment (FDI) and trade in services. Information and communication technologies (ICT) have made it possible to base services such as customer call centres anywhere in the world, regardless of where the customers are.

This globalisation of the value chain is driven by companies’ desire to increase efficiency, as growing competition in domestic and international markets forces firms to become more efficient and lower costs, as well as the desire to enter new emerging markets and gain access to strategic assets that can help tap into foreign knowledge.

How has the globalization of production changed the industrial structure within OECD countries? What are the effects in terms of jobs and productivity? Can OECD countries stay competitive in the global economy? This *Policy Brief* looks at the results of recent OECD work on these questions, and identifies policy issues that warrant attention in order to address concerns related to globalisation. ■

How is globalisation affecting value chains?

The rapid pace of globalisation in recent years has attracted much attention, but globalisation itself is not new. The process of international economic integration has been underway for decades, facilitated by more open economic policies and trade liberalisation in a growing number of countries. Technical advances, notably in transport and communication, have lowered costs and also fostered globalisation.

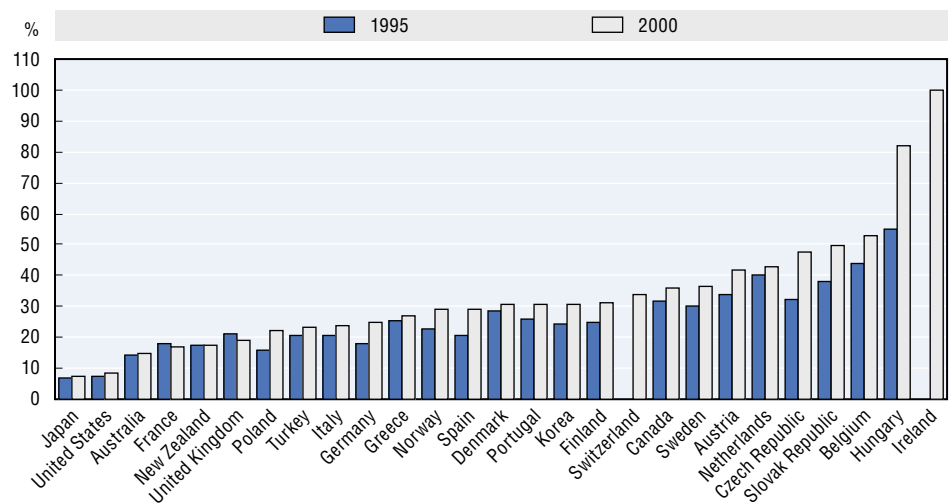
But what is new is the speed and scale of the current wave of globalisation, and the associated phenomena of outsourcing and offshoring – subcontracting parts of the production process to specialized firms in the same country or abroad, or outright shifting production to a new location in another country in an effort to increase efficiency and lower costs.

ICT has helped make this possible, not only for goods but also for services. Another distinctive feature of current economic integration is that it is no longer restricted to OECD countries, but also involves large emerging global players like Brazil, China, India and Russia.

So the “value chain” for any particular business – the value added by different processes or activities at each stage of production – is now often truly global. This makes sense for business, constantly trying to increase efficiency as growing competition in domestic and international markets forces firms to lower costs. Business is also keen to gain access to new emerging markets and strategic assets that can help tap into foreign knowledge.

As a result, an ever lower share of production is created within national boundaries and domestic production increasingly relies on foreign inputs. More than half (54% in 2003) of world manufactured imports are intermediate goods (primary goods, parts and components, and semi-finished goods). ■

Figure 1.
RATIO OF IMPORTED INTERMEDIATES TO DOMESTIC INTERMEDIATES, 1995 AND 2000



Note: Australia: 1995 and 1999; Canada: 1997 and 2000; Greece: 1995 and 1999; Hungary: 1998 and 2000; Norway: 1995 and 2001; Portugal: 1995 and 1999.
Source: OECD, Input-Output Tables Database.

Are all industries affected?

Economic globalisation has resulted in a growing openness of the manufacturing sector, but not all manufacturing industries are affected to the same extent. High technology industries are generally more internationalised than less technology-intensive industries, mainly because high-technology firms no longer have all the required knowledge in-house and increasingly have to look outside.

While manufactured goods still account for the largest share of international trade, globalisation increasingly extends to FDI and trade in services. Improvements in technology, standardisation, infrastructure growth and decreasing data transmission costs have all facilitated the sourcing of services from abroad. In particular, “knowledge work” such as data entry or research and consultancy services can easily be carried out via the Internet and e-mail, and through tele- and video-conferencing.

Multinational firms (MNEs) play a prominent role in globalised value chains. The importance of MNEs in today’s global economy is linked to their strengths in a range of knowledge-based assets, such as management and intellectual property, which allow them to take advantage of profitable opportunities in foreign markets by setting up subsidiaries and affiliates abroad.

Affiliates under foreign control not only serve local markets, but have also become essential links in global value chains as they serve other (neighbouring) markets and provide inputs for other affiliates in the multinational’s network. Cross-border trade between multinational firms and their affiliates, often referred to as intra-firm trade, accounts for a large share of international trade in goods.

The development of global value chains also offers new opportunities to small and medium enterprises (SMEs), although they also face important challenges in reaching international markets: management, finance and the ability to upgrade and protect in-house technology can all be hurdles. As suppliers, SMEs are often given more responsibilities in the value chain and more complex tasks than in the past. This places them under increasing pressure to merge with other firms in order to achieve the critical mass required to support R&D, training of personnel, control over firms in lower levels of the chain, and to fulfil requirements in terms of standards and quality. ■

Where do emerging economies fit in?

The development of global value chains is also associated with the growing integration of developing countries in the global economy. Although OECD countries still dominate global manufacturing, accounting for almost 80% of global value added (at market prices), manufacturing production in some non-OECD economies has increased significantly and is expected to grow further in the near future.

China, in particular, has recorded very high growth rates of manufactured exports and recently surpassed Japan to become the third-largest trading economy in the world, after the United States and Germany. China has become a major trading partner for most OECD countries and its market share in OECD export markets has risen significantly. China is also the largest recipient of FDI inflows among developing economies, with an estimated USD 72 billion in 2005. FDI data show that developing countries are starting to invest abroad, although the level of outward investment remains small.

Nonetheless, trade and FDI of OECD countries are still largely concentrated in developed countries. Almost 78% of all OECD exports of manufactures go to other OECD countries, while 75% of the manufacturing imports in OECD countries come from within the OECD area. ■

How are jobs affected?

Concerns about the effect of globalisation on jobs abound in many OECD countries. Many people see jobs being “exported” abroad, resulting in a direct loss to the country and its workers.

Globalisation has a variety of effects, both positive and negative, but the visible, short-term costs such as job losses often gain most attention, while the long-term benefits, such as overall increased productivity in a more competitive, high-skilled economy, with better-paid jobs may be much harder to calculate.

Concerns about lost jobs go beyond manufacturing, as the services sector is now also experiencing the effects of offshoring, affecting high-skilled jobs. India, in particular, is specialising in ICT- and ICT-enabled services.

The numbers of jobs lost to offshoring may be large in absolute terms, but is relatively small compared with overall job creation and loss in the labour market. Jobs can also be lost to increased productivity and technological change, which are not necessarily linked to offshoring. Offshoring may actually help preserve jobs by enabling firms to expand higher value-added activities and skill-intensive employment at home.

In fact, the long-term overall effect of globalisation primarily seems to affect the type of jobs available rather than the number of jobs. Higher imports of products of low-skilled labour from lower-wage countries, result in pressure on lower-skilled groups in higher-wage countries. The problem is that these workers often tend to be older, with lower qualifications, and thus find it more difficult to find new jobs. The policy challenge in many countries is thus not so much supporting overall employment as reintegrating specific groups of workers into the labour market. ■

What about productivity?

One of the clear positive effects of globalisation is improved productivity as a result of more open markets. At the economy-wide level, the OECD has estimated that an increase in openness by 10 percentage points translates over time into an increase of 4% in per capita income in the OECD area. Trade opens foreign markets for goods and services that can be efficiently produced in the home

Table 1.
CHINA'S SHARE IN MAJOR MARKETS
(% of total imports)

Partner	1990	2000	2001	2002	2003	2004
Japan	5.2	14.5	16.6	18.3	19.7	20.8
United States	3.1	8.6	9.3	11.1	12.5	13.8
Korea	2.1	8.1	9.5	11.6	12.4	13.4
Australia	2.7	7.9	9.0	10.3	11.3	13.0
EU15	2.5	6.2	6.8	7.7	9.1	10.7
New Zealand	1.2	6.3	7.0	8.0	9.0	10.2
Canada	1.0	3.2	3.7	4.6	5.5	6.8
Russia*	1.6	2.1	3.9	5.7	5.7	6.3
Mexico	0.8	1.7	2.4	3.7	5.5	n.a.
Turkey	1.1	2.4	2.3	2.7	3.9	4.8

Source: UN Commodity Trade Statistics Database (COMTRADE); EU data derived from OECD International Trade Statistics in OECD (2006c), “China’s Trade and Growth: Impact on Selected OECD Countries”.

country, and accessing larger markets may enable firms to take advantage of economies of scale. At the same time, trade generally results in lower prices for imported goods and services and increases product variety and quality in the home country. Access to better, cheaper and a wider variety of inputs helps improve the productivity of firms that incorporate them into their products and services.

Globalisation may also improve the long-term growth of productivity, although these gains are harder to measure. Operating in a globally competitive market may force firms to become more engaged in innovative activities, while globalisation offers an important channel for flows of foreign technology that embody significant innovations. Indeed, foreign technology accounts for the bulk of productivity growth in most countries.

These gains depend on the speed and extent to which resources are re-allocated to industries and activities in which countries have a comparative advantage. As firms reallocate resources towards higher value-added activities, a country will increase productivity growth and boost real incomes and wealth. Such developments may also help create jobs in other parts of the economy as they help businesses to remain profitable. Firms may also use the efficiency gains from offshoring to lower prices, to offer better products and services and/or to invest in new technologies.

Multinational firms may generate additional positive effects on host countries' economies because of their typically superior performance. This is linked to their use of more advanced production methods, their network of international suppliers, customers and contracting firms and their intangible assets that are the source of value creation. Productivity in host countries is positively influenced by the presence of subsidiaries of foreign MNEs since they are more successful than domestic firms in increasing their level of productivity.

The presence of multinational firms also affects the productivity of host countries in indirect ways, such as increased competition resulting in higher productivity, lower prices and a more efficient resource allocation. But technology transfers and spillover are perhaps the most important channel through which foreign corporate presence may boost productivity in host countries. But this is not only true of multinationals. Any internationally engaged firms, whether through importing/exporting, offshoring or having affiliates abroad, tend to have higher productivity. ■

Does investing in knowledge help?

If developed countries are to remain competitive in the global economy, they will have to rely more on knowledge, technology and intangible assets. Investment in knowledge is therefore crucial. Indeed, investment in knowledge has increased in all OECD countries in recent years. At the same time, most OECD countries are shifting into higher technology-intensive manufacturing industries and into knowledge-intensive market services.

The evolution towards a more knowledge intensive economy is also reflected in trade flows; trade in high- and medium-high technology industries has grown faster than total manufacturing trade in the OECD area. High-technology industries are the most dynamic manufacturing industries, representing about one-quarter of total OECD trade. A considerable number of OECD countries nevertheless still have a strong comparative advantage in medium-low-technology and low-technology industries.

But high-skilled business functions like research and development (R&D) seem no longer immune to being outsourced and offshored. This has contributed to concerns about the future of the domestic knowledge base and resulting impacts on competitiveness. Large increases in foreign R&D investment in Asia, in particular in China and India, have attracted much attention in recent years. It can be expected that this shift will continue to some extent as these countries offer a combination of relatively low wages with a good education system, resulting in a large pool of well-trained researchers.

This increased activity of non-OECD economies in high-technology activities poses additional challenges for OECD countries. China in particular is also moving up the value chain and thus seems to compete directly with OECD countries. The imported technology embodied in FDI has changed China's trade over the past decade as it has diversified into higher technology-intensive industries. China's trade surplus, however, is still due to lower-technology industries such as toys, textiles and footwear.

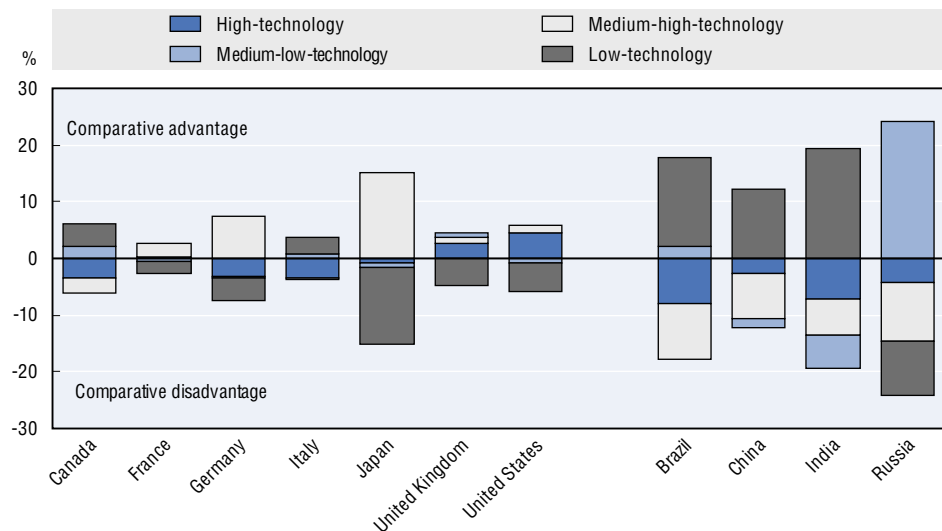
An important question is how long this specialisation in labour-intensive activities will last and whether China will develop its own technological capabilities. So far the Chinese economy has only reaped limited knowledge spillovers and benefits from globalisation, and given that there are still more than 100 million low-skilled agricultural workers who could move into the manufacturing sector in coming decades, China's comparative advantage is likely to remain in labour intensive activities and products for years to come. ■

Where do we go from here?

The globalisation of value chains raises major policy challenges for OECD countries, not least how to continue moving economic activity further up the value chain to ensure that their economies can continue to compete and prosper in the global environment. This implies a continuous process of change, innovation and productivity growth.

Policies to make labour, product and financial markets work better are necessary but may no longer be sufficient for successfully moving up the value chain. The

Figure 2.
CONTRIBUTION TO THE MANUFACTURING TRADE BALANCE, 2003
As a percentage of manufacturing trade



Source: OECD (2005c), OECD Science, Technology and Industry Scoreboard.

current policy debate in several OECD countries is moving beyond these types of policies, looking for actions that government can undertake to strengthen the capacity of firms to compete in the global market. Such actions include fostering innovation and entrepreneurship, which have become the core of industrial policy in the 21st century.

Developed economies can only grow by inventing new technology, by innovating products and processes and by designing new management methods.

To foster and support the **innovation process**, several policy areas could be considered:

- **Innovation policies** can help increase the level of knowledge and technology embodied in production and exports.
- **Policies to upgrade the human resource base of the economy** can help meet the need for more highly skilled workers or a different mix of skills.
- **Policies to foster entrepreneurship and new areas of economic activity** could help create new areas of economic activity, stimulate creation of new firms and entrepreneurship, or stimulate innovation and technology in new areas.
- **Cluster policies and efforts at the local/regional level** could capitalize on local and regional strengths that are also an important asset for economic policy.
- **Policies to enhance attractiveness** of a country for economic activities can help attract foreign direct investment and foster new areas of economic activities.
- **Intellectual property rights (IPR)-related policies** are also important. Striking an appropriate balance between diffusion of technology and providing incentives to innovation remains an important consideration.

Governments also face the challenge of the **adjustment costs** necessary if their economies are to benefit from the innovation, productivity growth and creation of new jobs made possible by globalisation. Governments should reform employment regulations when they inhibit change, adapt wages to the new economic patterns, and stimulate geographic mobility. A promising avenue may be to address more directly the costs of globalisation, by compensating those who may suffer a short-term decline in income. Complementary structural policies aimed at helping workers reallocate between industries and ensuring that all workers have adequate skills is key to reducing adjustment costs.

The short-term employment losses in some countries have led to demands for protection from competition in some OECD countries. But such protectionist measures are likely to raise costs for firms and reduce their efficiency, and would have detrimental effects on other, often poorer, countries.

Spreading the benefits of globalisation is necessary not only within OECD countries but also between developed and developing countries, particularly in Africa. Further trade liberalisation in sectors where poorer countries have a comparative advantage, especially agriculture, complemented by capacity-building and development policies, may help to spread the benefits of globalisation. Addressing other global concerns, notably climate change, is also needed if globalisation is to be regarded as an opportunity, rather than a threat. ■



For further information

For more information about the OECD's work on globalisation and value chains, please contact Koen De Backer, koen.debacker@oecd.org, tel.: (33 1) 45 24 76 61.

For further reading

OECD (2007), **Staying Competitive in the Global Economy: Moving up the Value Chain**, ISBN 978-92-64-03365-8, € 35, 126 pages.

OECD (2007), **Offshoring and Employment: Trends and Impacts**, ISBN 978-92-64-030923, € 40, 189 pages.

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The OECD Policy Briefs are prepared by the Public Affairs Division, Public Affairs and Communications Directorate. They are published under the responsibility of the Secretary-General.