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INDUSTRIAL PERFORMANCE AND COMPETITIVENESS IN AN ERA OF GLOBALISATION AND TECHNOLOGICAL CHANGE

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FOREWORD

The Industry Committee met at Ministerial level on 3-4 February 1998. To help organise this meeting, a series of reports were prepared to provide background and information on recent business and industry developments and policy directions. This report, co-ordinated and prepared by Graham Vickery of the Industry Division, Directorate for Science, Technology and Industry, provided the general background on policy issues of interest for the Ministerial meeting. It should be read in conjunction with the compendium of country reports released separately under the title "Policies for Industrial Development and Competitiveness". The Industry Committee agreed to wider circulation of this report at its meeting on 5 February 1998.

INDUSTRIAL PERFORMANCE AND COMPETITIVENESS IN AN ERA OF GLOBALISATION AND TECHNOLOGICAL CHANGE

The new business environment

The business sector has the primary role in creating economic growth, wealth and employment. However, an increasingly integrated world typified by globalisation, greater competition, and rapid technological change has altered the environment in which business operates, thus posing new challenges and opportunities for business and policy makers.

The ongoing globalisation of industry, both manufacturing and services, has been underpinned by declining computing, communications and transport costs, the liberalisation of product and factor markets, and a range of institutional and microeconomic reforms which have facilitated market entry. It is characterised by a diversified pattern of cross-border activities of firms, with high growth in international trade, investment and collaboration between firms for the purposes of product development, production, purchase of inputs, and marketing. In parallel with economic expansion, however, most industrialised countries have witnessed greater unemployment and growing income disparities.

The advancement of the globalised economy is intimately related to the development of new or improved goods and services which create additional demand, and firm-level innovations that increase productivity in the production of goods and services. Technological change both adds to the competitiveness of firms and increases competition amongst them. As a result, more firms from more countries operate in a greater number of markets, and competition is increasing nationally and internationally.

In this environment, businesses must improve their ability to deal with continuous change and build assets for the future. This includes becoming more responsive to customer needs, reorganising and integrating development, production and sales, and locating activities where they can be most efficient. Greater investment in new kinds of assets is crucial for flexibility and long-term competitiveness. Probably the most important change in firm strategies to improve competitiveness is their emphasis on investment in intangible assets (R&D and technology, managerial, entrepreneurial and employee skills, business organisation, market development, software). Intangible assets provide firms with the capabilities and flexibility needed to survive and prosper.

At enterprise level, this shift is part of the larger move towards a more knowledge-based economy. This is typified at firm level by increasing intangible investments, and by having a relatively large share of skill-intensive and technology-intensive economic activities. More broadly, the core mechanism of the new model which is emerging is increasing returns on knowledge across a broad spectrum. Meanwhile, capital and product markets are adapting more rapidly, owing in part to liberalisation efforts in these areas, whereas labour markets and some elements of the economic infrastructure have been slower to adapt to the requirements of the emerging growth model.

The development of intangible investments has been complemented by the expansion of service activities and extensive organisational change. Many areas of services which are closely inter-related with industry have grown rapidly. Business services have grown as firms have turned to external suppliers of former internal functions (often to provide intangibles-related services such as technical or software services); more manufacturers are providing services with their goods (for example, training, software, repair services); and in many high growth areas goods and services are complementary, for example for network-based multimedia services, and environmental protection where a range of environmental technical, professional and consumer services has developed to complement the supply of environmental technologies and equipment. Better understanding of the growth of new services and their linkages with traditional manufacturing is vital to assess the major factors affecting the business sector.

Accompanying these changes has been a shift towards smaller and more flexible units in manufacturing and in many areas of the economy, often associated with the trend towards outsourcing and downsizing in large firms. Small and medium-sized enterprises (SMEs) and smaller units can adapt more rapidly to changing circumstances, and are important for the diffusion of innovations and creation of new jobs throughout the OECD area. There remain particular issues related to SMEs, including how to promote a climate for entrepreneurship and the creation of firms and how to encourage their growth, and issues in such areas as access to finance, management constraints and skill development, and regulatory burdens.

These developments have profound implications for policy. The role of government is to put in place broad economic and institutional structures which enable firms -- of all sizes -- and individuals to invest and exploit new opportunities. Macroeconomic stability, an open international trading and investment system, and a sound microeconomic framework are of crucial importance for firms in a globalising business environment. Although the majority of policies remain domestically focused, more attention must be paid to economic interdependence in policy design and implementation. Furthermore, policies should not unnecessarily restrain globalisation by attempting to shield domestic firms and markets from competition or applying other protective mechanisms. In its broadest sense “The challenge for governments is to pursue policies whereby the benefits of globalisation are fully realised and widely shared by all groups of society...” [OECD, Meeting of the Council at Ministerial Level, 26-27 May 1997, Communiqué, par. 3].

Industry and business policies need to enhance the efficiency of markets and shape and reform the framework and policies for business, so that firms can prosper and the resulting benefits can be distributed widely. Policies should be based on, and communicate, a better understanding of the key elements that shape business performance across industry and related services, and be coherent in covering everything to do with business. Individual elements include: continuing liberalisation of trade and investment; encouraging the development of intangible assets, particularly technology and human resources, in the business sector, and ensuring that education and science institutions provide an appropriate supporting infrastructure for the development of these assets; fostering at national and regional level the mix of market-oriented infrastructure, institutions, and incentives that help firms become more flexible and innovative; having a coherent policy on regulatory reform linked to the objective of improving competitiveness; and systematically evaluating and improving the effectiveness of policies.

While this agenda is a long one, the task is not to do everything but to be selective and prioritise what the government should do and can do effectively. Markets and market-enhancing policies are usually most effective in allocating resources. However, there are circumstances where remedial actions can improve the distribution of resources and be cost-effective and benefit long-term aggregate growth as in the case of “market failures” (or serious imperfections in market mechanisms leading to under-investment by business in for example R&D or education); "government failures" (for example in the area of unnecessary regulation); and "system failures" (for example in the functioning of the complex science, research, technology and human resource systems that surround innovation).

Better business performance and an improved framework for business will help address broader social issues and overcome global problems currently facing OECD countries. Strong business performance and improved competitiveness will lead to greater prosperity and create jobs. Current global environmental challenges can be addressed by ensuring that firms internalise negative external diseconomies such as the generation of polluting waste. And governments need to recognise where "market failures" are likely to persist, hindering the achievement of cleaner environments and more sustainable production and consumption.

In many countries, there have also been considerable efforts to improve policy co-ordination and policy transparency, so that policies are mutually reinforcing and their impacts on the business environment more clearly defined and better understood. These efforts are generally linked to the need for widespread regulatory reform.

The role of policy in supporting business growth and job creation can be enhanced through identification, analysis and adoption of policy best practice. International comparisons (or benchmarking) can be an important tool for identifying elements in the business environment and business policies in need of reform and improvement. Review and evaluation of design, implementation and impacts of policies are a necessary part of this process to improve policy performance and, where necessary, to redirect polices towards more cost-effective ways of improving the framework for business.

Two sets of issues are addressed in more detail below. First, policy reforms and policy co-ordination are needed to enable firms to grow, become more innovative, increase productivity, create jobs and improve job quality. Second, policy reforms are needed which provide an encouraging climate specifically for small and medium-sized firms.

Policies for investment, jobs and growth in a global context

The major task for governments is to create conditions conducive to growth and employment. A strong microeconomic framework is required to complement macroeconomic stability and an open international trading and investment system.

Responding to globalisation and technological change

Globalisation is a complex process which is not uniform in extent or characteristics across industries and countries. For example, large firms in science-based industries and industries which have economies of scale in component assembly of complex final consumer products have their particular forms of international expansion: collaboration for R&D and development; direct investment and intra-firm trade to organise production; affiliate sales and exports to enter markets. These contrast with the expansion strategies pursued in labour and resource-intensive industries and with strategies adopted by the majority of small firms, which in many cases are traditional, reactive and based on trade in finished and intermediate products. The strategies and patterns of global business expansion have important implications for the development of policy, and for their impacts.

Policies which promote open markets, trade and investment liberalisation and non-discrimination are particularly important for facilitating globalisation. Extension and liberalisation of the multilateral trading system is the cornerstone of the approach of OECD countries to ensuring expansion of trade in goods and services. The momentum for further trade liberalisation is reflected in the commitment of OECD countries to the broadened trade agenda and in agreements for information technology and basic telecommunications services [OECD, Meeting of the Council at Ministerial level, 26-27 May 1997, Communiqué, par. 20-26]. Greater integration in the world economy is also being pursued through bilateral trade agreements, integration into regional arrangements and access to multilateral fora. All OECD countries encourage investment inflows, by providing a business environment hospitable to foreign direct investment, establishing programmes designed specifically to promote investment, and liberalising investment and capital movements.

At the same time, industry policies are focusing on strengthening the capacity of economies to deal with rapid change and growing competition. These policies have traditionally had a largely domestic orientation, but they are increasingly the counterpart to globalisation of firms and liberalisation of trade, investment and capital movements. They include: improving the business environment by encouraging the development of competitive business infrastructures, efficient financial markets and physical infrastructure; upgrading skills and workforce adaptability and expanding investment in education and training; ensuring that policies are co-ordinated and delivered at the appropriate level (*e.g.* at regional level) to ensure that they reach firms effectively; and enhancing small firm policies, including enabling small firms to internationalise and measures to encourage diffusion of management and technology best practice, simplifying regulations, and lowering financing costs (see next section on SMEs for details).

Globalisation and investment

Although the globalisation of business R&D and innovation has lagged behind production, sourcing and marketing, a considerable and growing share of R&D and innovation is being carried out in all OECD countries by foreign firms. The location of R&D by foreign firms, and the factors that determine why national firms carry out R&D abroad, and how the benefits of R&D and innovation are distributed internationally are increasingly important in determining competitiveness.

Furthermore, due to sector and firm-specific characteristics of globalisation, “horizontal” policies in areas such as R&D or skills development will have different impacts in different sectors. More subtle policy management and improved co-ordination are required to safeguard the broad development and international expansion of business across a wide range of new and established sectors. Overall, more attention must be paid to global interdependence. While microeconomic policies are primarily domestically focused, they are implemented, and affect firms, in an industrial and commercial context where firm operations are increasingly globalised.

As well as continuing efforts to remove regulatory and other obstacles to the development of an open international trading and investment system, there is the further issue of international competition to attract investment. This takes many forms, including direct public support and investment incentives, as well as the provision of attractive business environments.

In the past, direct subsidies and investment incentives were used extensively to attract investment, but there is growing acceptance that such subsidies reduce the need to innovate and adapt to market prices and market forces, thereby reducing long-term competitiveness, while at the same time distorting competition. Attention is now switching to improving the business environment to make particular locations more attractive for investment, including at the regional level. This includes paying more attention to the availability of high-skilled human resources, the quality of the research and business infrastructure, and efficient communications and transport, as well as whether there are simple rules for corporate start-up and operation, limited and predictable regulations, reasonable tax burdens, etc. Governments have an important role in many of these areas, providing non-distorting incentives or encouraging private sector development.

In the area of taxation and investment, given that tax reforms in many countries have improved the business environment and had favourable impacts on business performance by enhancing fairness, neutrality and simplicity of tax systems, it is important to remove remaining tax-induced distortions on investment decisions.

Technological change in a global context

Of particular importance in the context of globalisation is the strength of the national science and technology base, how national science and research infrastructures and institutions are developing, and how they contribute to short and long-term growth objectives and the balance among them. These are all areas where there has been extensive government involvement owing to the contribution of technology to growth, extensive positive spillovers associated with R&D and technology development, and business under-investment. There are new policy challenges for governments to ensure that the science and technology base provides an attractive location for R&D and innovation, and is efficiently linked with global R&D and technological development. (These issues are also being addressed in the work on Technology, Productivity and Job Creation - Phase II, and in the Committee for Scientific and Technological Policy). They include:

– addressing the slowdown in business R&D in many OECD countries, in part because these expenditures have followed the business cycle in the 1990s. Business expenditures on basic research are limited and may be declining as business time horizons shorten and investment resources are shifted into development, and this has been coupled with declining government financing of business defence-related expenditures and a shift in government support towards applied R&D.

- Examining the effectiveness of technology diffusion mechanisms and, if necessary, identifying ways of improving them. Most OECD countries pay greater attention to the importance of diffusion for productivity and growth. There are many examples of market-led programmes and mechanisms in OECD countries for overcoming lack of information regarding technologies and associated management, skills and organisational issues, and best practice is beginning to be identified.
- Improving the science and research infrastructure. This includes ensuring that intellectual property right systems strike the appropriate balance between rewarding innovation and rapidly diffusing results, and developing efficient ways for business and government to work together to set standards and organise technical testing bodies.
- Maintaining a sustainable science base. Support for broadly defined competitiveness has become the most important R&D funding objective in many countries, implying reorientation of much university and government research. At the same time, in some fields of basic science, a greater share of research is being carried out in large facilities and projects, raising important questions about financing and how to expand international co-operation to increase efficiency in a period of government budget restraint.

Impacts on employment

Finally, changing trade and investment patterns, domestic market liberalisation and technological development provide opportunities for greater global efficiency, growth and employment, but have considerable structural and adjustment effects. The processes of globalisation and technological change are not smooth; while benefits far exceed costs, they accrue to different firms and individuals. Overall, high-performance firms (often characterised as “high skill” and “high trust”) and knowledge-based industries (high-technology manufacturing plus financial and business services, characterised by innovative behaviour and use of advanced technologies), benefit from change and tend to have above-average productivity and employment growth and employ more skilled workers.

There has been a sharp increase in demand for more skilled workers, but impacts have been different across countries. English-language countries (notably the United States and United Kingdom) have seen increasing wage dispersion between high-skill and low-skill workers. In continental Europe, there has been less evidence of growing wage differences, but unemployment has affected low-skill workers most. In Japan, many firms have made efforts to maintain long-term employment, but have begun reviewing seniority-based practices. The current situation of high and persistent unemployment and widening wage and income inequalities in many OECD countries mean that structural changes associated with globalisation and technological change are often difficult to absorb and that comprehensive responses are needed to ensure that the benefits of globalisation are fully realised and widely shared.

Enhancing firm-level competitiveness

Firm-level competitiveness in many industries has shifted from being based simply on price factors, to being based much more on harnessing strategic intangible resources to achieve product innovation, more flexible high-quality production and new ways of marketing products. Competitiveness thus increasingly depends on the way that firms combine technology, managerial entrepreneurship, employee skills, business organisation and software to service markets and interact with customers and suppliers. The ability of enterprises to adapt to continuous change and to build assets for the future is crucial. But firms, sectors, regions and countries vary in their use of and access to factors such as technology and skilled human resources which are critical for competitiveness.

Although all OECD governments face similar challenges in fostering firm-level competitiveness, the potential for effective action depends on specific points of departure and policy constraints, such as varying levels of human capital accumulation and budgetary situations. Furthermore, the national framework for business contains a wide range of elements, some of which fall outside the direct jurisdiction of industry and business policy makers. Working out new ways of ensuring that the broad business framework is conducive to growth, wealth generation and job creation is the crucial challenge for governments.

Some recent elements of policy are restated in the accompanying box. They are based on the following approaches: markets provide the best outcomes in terms of efficient resource allocation; governments provide the broad framework that allows market forces to deliver their results; there are individual areas where market failures (and in some cases, government failures, or broad system failures) may need to be addressed, or where policies may need to be reformed to enhance markets.

The principal role of competitiveness policy is to help set the broad framework for efficient markets and to correct market failures that can retard business's contribution to strong economic and employment growth. Business has the primary role in generating growth and employment. Industry and business policy is central, in that it aims to achieve an optimum framework for industry to contribute to economic prosperity. Elements of policy include:

identifying and prioritising areas for attention to help create a strong business framework;

efficiently addressing market failures in areas such as R&D, human capital formation, the business infrastructure;

promoting reform throughout the economy to eliminate unnecessary regulation and government-imposed costs, and encourage new entry;

addressing international market access and market distortion issues;

putting in place appropriate adjustment measures to maximise the benefits from structural reform while minimising transition costs;

adopting and implementing strong competition policy to prevent firms from reducing competitive pressures on production, enhance innovation, and ensure that benefits are shared with consumers;

developing and diffusing best policy practice, and improving policy co-ordination across all areas and levels of government (national, regional and local) affecting business performance and competitiveness.

Policy also needs to consider broader issues. Examples include education, taxation, industrial relations, and global environmental challenges, where industry has a key role to play and can make major contributions to improving environmental performance.

Within this broad approach to policy, many governments are attempting to identify promising cutting-edge areas for growth and employment and government action to stimulate the growth of new areas, without resorting to picking-the-winner policies, and to formulate comprehensive policies for liberalisation and competition in business-related producer services to improve overall economic efficiency.

The importance of intangible investments

Investment is the key to growth by expanding production capacity, changing the structure and direction of production, and enabling new products to be developed and introduced. The absolute level of investment is important, but equally important is the composition of investment. Although there have been long-term declines in the share of gross fixed capital formation in GDP in most OECD countries from the 1960s to the 1990s, there is increasing acknowledgement of largely unmeasured but growing investments in intangibles assets. There are at least three reasons why more policy attention needs to be paid to intangibles. First is market failure, second is enterprise-level measurement problems and management, and third, government policy bias towards support for fixed assets.

Market failure arguments have long been the rationale for government intervention in areas such as science, education and some basic infrastructure. Essentially, because they have some of the characteristics of public goods, the full benefits of investments in intangibles such as R&D and training may be difficult for investing firms to capture. These investments have large spill overs, others benefit from them, and there is likely to be under-investment by individual firms in developing these assets.

At enterprise level, the importance of intangible assets exceeds abilities to measure and manage them systematically. This measurement deficiency is evident in company accounts, capital markets, and national statistics. At the level of the enterprise, the gap is particularly evident in financial statements and annual reports to shareholders, where information on intangibles is either absent or incomplete and difficult to interpret because of its lack of comparability. Within enterprises, it would appear that knowledge about intangibles and the ability to manage them effectively is variable, despite evidence that they are key resources for future growth and profitability. Tax treatment of intangibles as current costs, along with other recurrent costs such as raw materials and other operating expenses, further obscures their importance. The inability of enterprises to effectively report externally to capital markets on the extent, importance and utilisation of intangible assets further reduces their external visibility and incentives to improve their internal management.

Nearly 70 per cent of all OECD government support programmes to industry went to investment in the early 1990s. But net transfers to industry favoured physical asset investment over the development of intangibles. This indicates that government policies have not yet fully appreciated the key importance of technology, knowledge and business organisation to driving business growth, flexibility and innovation, or the declining role of physical assets and physical investment-intensive traditional industries. The slow reaction at policy level is a reflection of the continuing focus by many firms, institutions, and national statistical bodies on physical investment, and the slow penetration of ideas regarding the necessary complementarity of technology, human resources and other intangibles with physical assets.

Overall, public policy is hampered by lack of knowledge and understanding of the extent and importance of intangible assets in enterprise strategies and practices. Intangibles need to be measured, reported and accounted for more explicitly, to strengthen their internal management and develop reliable external guides to their value for capital markets and other resource providers. A first step is to strengthen incentives for reporting and disclosure of comparable information on intangibles, and public authorities can help establish frameworks for improved reporting and disclosure. Furthermore, as intangibles become more important, it is crucial to strike the appropriate balance between rewarding inventors and innovators for their investments in R&D, technology and intellectual capital, and ensuring widespread use and diffusion of innovations. Increased consistency and/or harmonisation of national intellectual property rights (IPR) systems is necessary. It is also necessary to address the commercial problems of counterfeiting, owing to difficulties in enforcing IPRs and to the non-comprehensive nature of international agreements in these areas.

Investment and corporate governance

The interaction between business enterprises and investors is undergoing fundamental change as a result of globalisation, technological change and capital market deregulation. While widening the global scope of their investments, capital suppliers have gained increased abilities to seek profitable investment opportunities, make more frequent use of investor rights and adapt their participation to the specific needs of individual companies. For enterprises, this implies access to a wider pool of financing and access to a greater range of investment vehicles, including equity placements, which are of major importance for start-ups, spin-offs, new product development, R&D, marketing and new capacity creation. With globally mobile capital and more sophisticated investors, the ability of enterprises to seize the full benefits of these new opportunities depends in part on their corporate governance arrangements and their ability to design and adapt new arrangements. Important elements include efficient communication of corporate information, proper incentive systems, the functioning of the board of directors, and the ability of the legal framework to allow for flexible and adaptive relations with investors.

Policy makers and regulatory bodies play a major role in providing investors and enterprises with appropriate regulatory and institutional frameworks. The ability to attract the capital needed for entrepreneurship, long-term growth, and employment creation depends on the quality of this institutional infrastructure. Despite an increasing number of policy initiatives and strong interest from the business community, coherent approaches to support reform and efforts to improve the quality of this institutional infrastructure have not yet fully taken shape. Through co-operation with the international business community, the role of the OECD is to assist national reform efforts by providing a more common perspective on present trends, and to study the complex links between policy frameworks, corporate governance practices, and economic outcomes [see 1997 OECD Ministerial Communiqué, par. 16].

Fostering electronic commerce

Electronic commerce is bringing considerable opportunities to industry. However, despite optimistic estimates of its impact, for example that the Internet is adding a significant share of all US job growth, there are large gaps between the potential for new commercial uses of information technology and its actual use by industry. So far, the development of electronic commerce has been technology-driven, as new opportunities and technologies are explored.

This emerging technology is opening up a range of important issues, such as the adaptation of business codes, the security of data flows and contract information, government revenue collection, and development of the basic system infrastructure. Private sector and government policies and initiatives in all of these areas can help foster the use of electronic commerce by businesses. In turn, a reliable electronic commercial environment can help to open new global market opportunities, encourage innovation, and increase efficiency, productivity and the quality of day-to-day business operations. At this early stage in the evolution of electronic commerce, business-led self-regulatory solutions that encourage the development of globally accepted standards and promote reliability and interoperability are crucial. Such solutions need to take into account the rapid pace of technological change, encourage broader user involvement and participation, and encourage greater co-operation at national and international levels to foster innovation and experimentation. The OECD is examining a variety of issues with respect to electronic commerce and its potential impact on the global marketplace, with work that includes the recent conference in Turku, Finland, in November 1997 and the forthcoming Ministerial meeting scheduled for Ottawa, Canada, in October 1998. The continued development and widespread use of electronic commerce is likely to have different impacts on different sectors, as well as different rates of application world-wide. It will be important to identify and examine the barriers to widespread use at sector level and seek out ways to enable industry to take full advantage of the opportunities and potential of electronic commerce.

Regulatory reform

The reform and streamlining of government regulations can have major impacts on firm competitiveness, by reducing input costs and shortening administrative processes. Review and reform of regulatory practices can improve economic efficiency and the ability of economies to adapt. General policy recommendations for regulatory reform are as follows: i) adopt at the political level broad programmes of regulatory reform which establish clear objectives and frameworks for implementation; ii) review regulations systematically to ensure that they continue to meet their intended objectives efficiently and effectively; iii) ensure that regulations and regulatory processes are transparent, non-discriminatory and efficiently applied; iv) review and strengthen where necessary the scope, effectiveness and enforcement of competition policy; v) reform economic regulations in all sectors to stimulate competition, and eliminate them except where clear evidence demonstrates that they are the best way to serve broad public interests; vi) eliminate unnecessary regulatory barriers to trade and investment by enhancing implementation of international agreements and strengthening international principles; vii) identify important linkages with other policy objectives and develop policies to achieve those objectives in ways that support reform [OECD (1997), The OECD Report on Regulatory Reform. Synthesis].

This is a comprehensive list, which, if applied across all countries, would have profound implications for the efficiency of the business environment, business performance, and the conduct of government, particularly if coupled with ongoing reform in product, capital and labour markets. From the viewpoint of business and industry policy, emphasis should be placed on improving the quality of regulations, designing regulatory institutions that facilitate innovation and stimulate competition, and reforming the regulatory process. It is increasingly important to review how regulatory regimes affect such factors as impacts on costs, the development and adoption of new technologies and competitiveness in general, and, with globalisation, the attractiveness of a country as a location for investment by global firms.

Making policies more effective

There is increasing emphasis on focusing policies on optimising the business environment to improve business performance, productivity and employment. Important elements include macroeconomic stability and fiscal prudence; an open international trade and investment system; the quality and structure of investment, particularly in intangibles; the skills of the work force; the government as a client-oriented provider of quality services. Furthermore, the pressures on firms to continuously adapt and reorganise is generating widening information gaps and information failures in knowing how to change.

Within this broad approach, budgetary stringency and perceptions of the changing role of government have increased the relevance of learning from the experience of other countries how to improve policy design, implementation, and overall effectiveness, and how to improve government performance *vis-à-vis* business. The challenge for policy makers is to improve policy performance.

There is growing consensus on the broad lines that are needed to improve policy design, delivery and effectiveness. These include: clear articulation of the rationales and objectives of policy; better programme design and implementation with wider involvement of business and other actors, including policy monitoring and evaluation from the outset; and systematic feedback of the results of such monitoring and evaluation into the process of adjustment of existing policies and design of new ones.

Learning from the experience of other countries is an increasingly important aspect of policy and programme improvement. New tools are being developed which can help improve policy design and effectiveness in a wide range of areas, including innovation and technology diffusion, SMEs, and regional development policies. Their adoption requires better international comparisons of: business performance and sectoral performance (including R&D efforts and use of new technologies); factors which affect business performance (including input costs and infrastructure efficiency); the broad framework within which business operates (regulations, labour conditions, competition law); and the benefits and costs of policies targeted on business. These different kinds of "benchmarking" of business performance, of factors affecting business, and of policy approaches and outcomes can improve policy and provide important directions for regulatory reform.

Overall, globalisation, greater competition, and technological change are presenting opportunities and challenges to industry and business, and to policy making. The broad lines of policy to improve the business environment have been summarised above: adopting an open international orientation, including continuing liberalisation of trade and investment; encouraging the growth of the knowledge-based economy; and reforming policy and improving its design and delivery. The challenges and opportunities for small and medium-sized enterprises are considered in more detail below.

Small and medium-sized enterprises in the knowledge-based economy

The contributions of small and medium-sized enterprises to our societies are widely recognised. SMEs add to the dynamism of economies by ensuring more productive and efficient use of resources, stimulating invention and innovation, enhancing competition, and providing avenues for employment. SMEs not only account for 60 to 70 per cent of jobs in most OECD countries, but also generate a disproportionately large share of new jobs. However, globalisation, along with the transition to a knowledge-based economy, is changing the business environment for small firms. Both trends highlight specific problems faced by SMEs. These are related, for example, to a deficit in intangible investments and assets (access to and effective use of technology, management skills, education and vocational training, quality of business organisation, marketing skills, software). Many regulations and poor markets for the provision of venture capital, skilled labour or information services are particularly burdensome.

Realising the potential contribution of SMEs to economic growth and job creation depends on the prevalence of business opportunities, an entrepreneurial culture, a supportive business and technical infrastructure, the availability of and access to key resources and production factors, and an appropriate regulatory framework. OECD governments thus have a major responsibility to create a conducive business environment for SMEs, and especially to enable them to take full advantage of the opportunities offered by globalisation and technological advances. In the following, main issues and opportunities for SMEs are discussed along with related policy implications.

Encouraging globalisation and access to markets

The special difficulties that SMEs encounter when they try to globalise are often related to their traditional emphasis on domestic markets. In broad terms, OECD analysis suggests that 1 per cent or less of all SMEs can be said to be truly global, meaning that they are active in multiple countries and/or across several continents. It is further estimated that those firms that are already internationally competitive make up about 25 per cent of manufacturing SMEs, and less than that in the case of service SMEs. Those that are unable to adapt and at risk as a result of globalisation pressures -- between 25 and 50 per cent of SMEs at present -- will not survive without significant upgrading of output quality, cost competitiveness and management practices. The remainder, mainly small service providers, appear presently insulated from the effects of globalisation. In the future, the first three groups are likely to grow, given adequate conditions, while the last group may be shrinking. Overall, as of the mid-1990s it is estimated that SMEs contribute between 25 and 35 per cent of world manufactured direct exports, which is less than their aggregate economic importance.

In addition to tariffs and customs regulations, market access is impeded intentionally or unintentionally by: approval procedures, including certification and normalisation; costs of establishing a legal entity; difficulties in using flexible organisational arrangements such as alliances or franchises; immigration restrictions on the use of skilled staff; excessive protection of brand names, techniques, innovative processes or products; and cultural impediments to distribution channels or resources. In particular, potential foreign investors and exporters among SMEs may: lack expertise to assess new information and be ill-equipped to deal with new markets and technologies; face difficulties with foreign regulatory and administrative barriers as well as with significant differences in policies and regulations in foreign countries; and encounter special difficulties in obtaining capital to develop new markets or increase working capital.

Successful policy practice shows that public programmes can be used to help SMEs understand and operate collaboratively in the global market place. In particular, governments can facilitate access to markets, product information and advanced knowledge and research that generally would be available only to large multinational firms.

The development of the Information Highway and electronic commerce is creating a tool for SMEs to catch up in accessing global markets, since size is becoming less of a prerequisite for obtaining information about new business opportunities. However, non-discriminatory development of electronic commerce can be achieved only if SMEs' requirements -- which in a number of areas may be different from those of large firms -- are taken into account. These requirements are of a legal, institutional, financial and technical nature and include multilingual and multicultural aspects (*e.g.* easy and meaningful access at a reasonable cost, security and copyright protection). Furthermore, entrepreneurs need to be persuaded by experience that the global information network and electronic commerce can enhance performance. It is thus necessary to identify and assess the needs of SME users, before broad-based entry by SMEs can be expected. This calls for close co-operation between SME users, information providers and governments. In some cases, information and advisory services (private or publicly backed) could help small firms take advantage of these new technological opportunities.

Information technologies can also allow governments to deliver information to SMEs cost-effectively (*e.g.* on government regulations, activities, etc.) in ways that add value to their operations. However, given the proliferation of private providers of information, data systems and information technology, there is debate as to the future role of government as an information provider and how to achieve best practice in delivering public services to SMEs.

Promoting financing

SMEs, especially potential start-ups and young firms, face difficulties in raising capital for investments and innovations. Start-ups lack credit histories and often lack collateral. SMEs are less able to counter or cope with late payment by customers (where governments themselves often give a bad example) and other cash flow problems which also make them vulnerable financially. Financial institutions generally charge SMEs higher interest rates, lend for shorter periods and require relatively more costly guarantees than for large companies, in order to compensate for the higher costs of information collection, the smaller size of individual transaction and the higher risk of failure. Bankers and venture capitalists argue that SMEs often have inadequate management and business planning skills and lack understanding of investor requirements and that this contributes to their difficulty in obtaining financing.

Regulations may impede the creation or functioning of venture capital markets and deter the availability of equity financing for SMEs. Capital market regulations may counteract the kinds of standardised information about prospective lending opportunities that lower transactions costs and allow all classes of borrowers to compete effectively. Furthermore, efficient exit mechanisms and repurchases provide effective ways for investors to allocate capital, and are crucial to the continuing supply of venture capital. Second-tier or parallel markets constitute efficient exit vehicles in the United States and increasingly in Japan. The lack of efficient exit mechanisms in Western Europe has stimulated efforts to set up new second-tier markets and similar alternatives to facilitate exit and stimulate the provision of venture capital.

The tax system itself should not impede the development of SMEs, and should be reviewed to the extent that it is not neutral in this respect. Taxation, for example, may impose a heavier burden on

SMEs than on large businesses due to relatively high compliance costs. These costs should be reduced where possible. Capital gains taxes and taxes on the transfer of assets (for example gift and inheritance taxes) may in some cases contribute to the break-up of family businesses when the original owner of a business wishes to transfer ownership. However, tax policies that favour transfer within the family over transfer to third parties may distort efficient allocation of resources. Also, reform in this area must ensure that "rollover" provisions do not become vehicles for tax avoidance. Finally, the tax system should not impede the creation of venture capital markets and investments in intangibles; tax policies in these areas should also be reviewed to the extent that they pose particular problems.

Governments have scope for action in these areas in many countries and should look for ways to improve the availability of equity capital, and, to the extent that it is a general problem, to overcome unnecessary difficulties which SMEs have in obtaining finance. Governments should also ensure that the tax system is part of a business environment conducive to growth and development of SMEs, and hence economic growth and job creation in general.

Promoting access to technology and innovation

A number of studies have stressed the importance of innovation by small enterprises. In turn, technological changes have stimulated the growth of SMEs, while affecting the form and operational structure of enterprises. New technology-based firms demonstrate greater flexibility in seizing market opportunities and developing innovative responses.

There is evidence, however, that a large number of SMEs are still at a disadvantage in accessing innovation and technology. For instance, since SMEs find it difficult (lack of time and staff, high costs of access to information) to undertake R&D internally, they are more dependent than large companies on external sources of scientific and technological information. SMEs also need technological information to be tailored as closely as possible to the individual firm, to be addressed to the owner/manager, and to fit into his/her information network. Technology-based SMEs are also particularly affected by weaknesses in intellectual property rights and protection of proprietary technology, and by sharper competition with large firms and other institutions to obtain declining public R&D funding.

Governments have a role in strengthening the ability of SMEs to access technology and innovation. Possible actions include: increasing and optimising the links between the science system (universities, public laboratories, research companies, research organisations) and SMEs; sponsoring exchanges of information; encouraging the creation of networks, etc.

Developing human resources and management capabilities

To be successful, and not least to be able to access and exploit new technology, firms need an educated and trained workforce and appropriate management capabilities. In many OECD countries, education systems are not meeting the needs of small businesses in terms of developing an entrepreneurial culture and providing new labour force entrants with the necessary skills. SMEs often face major difficulty in recruiting skilled workers.

One important reason for the relatively high failure rate of SMEs is the sometimes inadequate managerial skills of the owner/manager. Management attitudes and capabilities are often an impediment to the introduction of new technologies and processes. SME managers are often less educated than their counterparts in larger enterprises and are less likely to have received formal training. Nevertheless, to keep pace with changes in today's technology-intensive and knowledge-based economy, SMEs have to adopt new management practices.

Although special management and other staff training is primarily the responsibility of the firms and employees themselves, there are problems with information and the scale required to organise individual training effectively. Some governments have responded to this situation by subsidising, or encouraging in other ways, small firm owners and managers to undertake management and other training, *e.g.* by helping to set up co-operative bodies where demand for training can be pooled. However, these programmes often encounter resistance on the part of SME owners and managers on the grounds that the training is not directly relevant to their needs or is not accessible to them. Assessment of these management training programmes and their impact on SME performance should assist governments in adopting "best practice policies" in this area.

Promoting networks and alliances

SMEs' capacity to change the industrial context within which they operate, and hence raise their competitiveness, often becomes available when SMEs work in concert for purposes of access to and use of technological resources, training and know-how, access to markets, etc. SMEs can obtain size advantages through new forms of economic association such as: formal and/or informal networks, clusters, or joint ventures and strategic alliances. However, such partnerships present small businesses with the challenge of managing new and complex external relationships.

Coherent strategies to support the development and operation of formal and informal business networks or clusters by SMEs can make a major contribution to economic growth in their communities. There is already substantial evidence that one of the major determinants of dynamic local economies is the strength and effectiveness of their system of informal and formal business-to-business networks, usually focused on specific business activities (*e.g.* training, marketing). A number of these success stories came about without outside intervention, mainly as a result of the efforts of individual groups of firms. However, governments can also assist the process through specific programmes, public procurement schemes, etc.

Focusing on high-growth SMEs and the gender dimension

A significant proportion of gross job creation in OECD economies occurs in a comparatively small number of very rapidly expanding SMEs. Although the factors shaping these high-growth firms are not yet fully understood, they are known mainly to be associated with their management capabilities and an emphasis on innovation and human resources. Market and policy failures in capital markets lead to insufficient financing to fund the expansion of these firms. Government regulations, access to foreign markets, access to existing technologies and difficulties in recruiting qualified staff and skilled workers are among the main challenges they face. A more thorough understanding of high-growth SMEs may lead to adjustments in government policies so as to enhance their contributions to economic growth.

Governments can help to strengthen the preconditions for SME growth. Their scope for action includes the areas that have been addressed above, such as the timely provision of vitally needed information, knowledge and expertise, in particular with regard to access to foreign markets, access to technology, skill building and encouraging the creation and support of business networks.

Special attention also needs to be paid to women-owned SMEs, a segment growing at a faster rate than the economy as a whole in many OECD countries. The development of women-owned SMEs allows societies to capitalise on the skills of educated and trained women who may be blocked in corporate advancement because of the “glass ceiling”; the increased flexibility inherent in owning one’s own business allows women to contribute to the income of their families while balancing their work and family responsibilities, thus enhancing social cohesion; lastly, the resulting economic independence reduces disparities between men and women, which is conducive to a more active and representative role by women in economic and political life.

While the growing importance of women-owned SMEs is recognised, the potential of women entrepreneurs remains partly untapped. Access to capital is one of the principal barriers. Women tend to be risk-averse and borrow less capital than men, raising the average cost of their loans. Similarly, women are less likely to seek counselling and expert advice in starting up and developing their businesses, due in part to their lack of awareness of the existence of these services, and because women’s enterprises (due to their size and sector) are often not targeted by SME experts. Women in many areas also lack networks that would allow them to facilitate business development.

The OECD Conference on “Women Entrepreneurs in SMEs” (April 1997) stressed a number of policy implications and recommended, in particular: knowledge of women’s entrepreneurship should be deepened with a view to increasing the overall effectiveness of SME policy; best practices in the financing of women entrepreneurs should be identified; international networks of existing national women entrepreneurs’ associations should be encouraged and strengthened in partnership with government and corporations; technology use should be promoted to improve competitiveness and networking; education and training in technology and business skills should be provided to women business owners.

Promoting a conducive regulatory framework

Maintaining the current trend of reducing administrative and regulatory burdens in OECD countries is of considerable importance for SMEs. Because they have fewer resources to cope with fixed costs, SMEs are at a disadvantage in dealing with problems arising from the complexities of regulatory and bureaucratic burdens. Regulatory regimes need to be reviewed to ensure that they do not adversely and unnecessarily affect the competitiveness of SMEs, the creation of new technology-based firms and innovative start-ups, or the ability of young and dynamic firms to become high-growth SMEs. The regulatory environment should be conducive to improving the competitiveness of SMEs, and should not increase costs or create unnecessary barriers to upgrading R&D and developing and acquiring technology, improving management practices and quality, expanding access to information and to capital, so that they can adapt to new competitive pressures.

Making policies more effective

Most OECD countries have programmes which support SMEs. One-quarter of all public support programmes in the manufacturing sector reported to the OECD primarily target SMEs. Of this, in 1993 a total of US$ 3.75 billion of public money in the form of direct grants, tax concessions, low interest rate loans, or loan guarantees was paid to help start-ups in the acquisition of equipment, R&D, training and consultancy services.

In the past, governments have responded favourably to the requests of SME interest groups to give more public support to small businesses. However, many governments and public funding bodies are now facing budget constraints and the need to reduce public deficits, a situation which is affecting these SME subsidies. Reform of such policies is therefore necessary. The main challenge is to implement policies which: have maximum effectiveness in reaching targets and efficiency in using resources; do not distort market competition; are implemented only where market forces fail to provide necessary services and other inputs; are forward-looking so as to enhance SMEs' abilities to take advantage of the opportunities presented by globalisation, technology and regulatory change.

There is a need for SME policies to be more user-friendly. There tend to be too many fragmented programmes for SME managers to understand and access. Public authorities need to consider streamlining, simplifying, and amalgamating programmes and measures with a view to improving user-friendliness, lowering administrative costs, and enhancing provision of information and channelling of support to SMEs. Sub-national, regional and local governments also have an important role in SME policy and programme delivery, and streamlining must co-ordinate effectively at all levels, and use the most effective level of government to deliver policies and programmes.

A number of factors seem critical to the success of programmes and measures aimed at fostering small firm start-ups and encouraging SME growth. To be effective, government action needs to be: customer-oriented (driven by needs and demands of SMEs), in many cases collective (directed at groups of enterprises rather than individual firms), and cumulative (one-off improvements are not enough).

The role of business services (advisory, consultancy and extension) also needs to be considered in this context. By providing specialised external advice and expertise on a temporary basis, business services can be of crucial help to SMEs to overcome internal weaknesses in organisational and financial management, technology use, marketing, etc. While many OECD countries are strengthening the supply and encouraging the use by SMEs of such services provided by intermediary organisations, government programmes need to strengthen, rather than substitute for, the market for these services. Third-party organisations, such as business associations and SME networks, business support institutions, spin-off groups from universities, and private consultants qualified by the government or third-party organisations, appear to be best at providing such services. Governments may also have a role in encouraging SMEs to apply cheap and effective benchmarking as a tool to improve performance.

There is also evidence that ensuring efficient policies hinges on appropriate collaboration among all those involved (entrepreneurs, small enterprises, business associations, business services, financial institutions, public authorities), as well as adequate and improved co-ordination between national, regional and local authorities when designing, implementing, monitoring and evaluating programmes and measures for SMEs.