**UNITED NATIONS**

**TD**

**United Nations Conference on Trade and Development**

Distr.
GENERAL

TD/B/COM.3/51
20 December 2002

Original: ENGLISH

TRADE AND DEVELOPMENT BOARD
Commission on Enterprise, Business Facilitation and Development
Seventh session
Geneva, 24–28 February 2003
Item 3 of the provisional agenda

# IMPROVING THE COMPETITIVENESS OF SMEs THROUGH ENHANCING PRODUCTIVE CAPACITY

Report by the UNCTAD secretariat

**Executive summary**

Competitiveness is considered by all countries to be a prerequisite for maintaining high levels of income and employment. It has been defined as a nation's ability to produce goods and services that meet the test of international markets while simultaneously maintaining and expanding the real incomes of its people over the long term. Competitiveness has been the subject of a number of recent annual reports: UNCTAD's *World Investment Report, 2002*, UNIDO's *Industrial Development Report, 2002/2003* and the World Economic Forum's Global Competitiveness Reports. While each has a slightly different focus, they all agree that an important element in improving competitiveness is building domestic capabilities. *WIR 2002* states: "If developing countries are to strengthen competitiveness, they will have to strengthen their capabilities, attract and stimulate activities suited to their endowments (or lack of) and upgrade them over time". None of these reports goes into detail about the policies and support programmes that are necessary for strengthening productive capacity at the enterprise level, particularly that of small and medium-sized enterprises. This report fills that gap and examines the groundwork that developing countries must lay if their domestic enterprises are to become competitive. Its objectives are to build a consensus on what competitiveness is at the level of a nation and at the level of an enterprise; to identify the drivers of competitiveness; and to examine the policies and measures that Governments could adopt to enhance enterprise competitiveness. In this regard, policy directions as opposed to precise policy prescriptions are given so that developing countries can begin to put together a road map for competitiveness at the micro level taking into account their specific environments.

GE.02-52672

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# 1. GENERAL CONCEPT OF COMPETITIVENESS

## 1.1. At the national level

1. Competitiveness is considered by all countries to be a prerequisite for maintaining high levels of income and employment. Greater competitiveness allows developing countries to diversify away from dependence on a few primary-commodity exports and move up the skills and technology ladder, this being essential in order to sustain rising wages and permit greater economies of scale and scope in production (*WIR 2002*, p. 117). Competitiveness can be assessed at either the national or the enterprise level. At the national level it has been defined as *a nation's ability to produce goods and services that meet the test of international markets while simultaneously maintaining and expanding real incomes of its people over the long term* (US Presidential Commission on Industrial Competitiveness). The ability to compete in international markets is usually *thought* to be dependent on macroeconomic policies and conditions (trade policies and exchange rates etc.) as well as on a nation's comparative advantage, that is its factor endowment (land, labour and capital). There are a few exceptions to this. For example, Singapore became the most competitive country in the world by adopting far-sighted policies that invested in institutions and human resources and attracted foreign direct investment (FDI) in order to make up for its lack of natural resources and capital.

2. It is generally believed that technology development plays an important role in economic competitiveness. However, economists have commonly been wary of, and sometimes openly hostile to, the joining of economic analysis with detailed discussions of technology issues (Efendioglu, 2001). The empirical approaches that economists have adopted tended to measure technology and technical change in terms of their impact on "productivity". The lack of measurable correlation (at least in the short run) between productivity change and technology development made it difficult to properly assess the impact of technology on economic development, growth and competitiveness.

3. The notion of national competitiveness has been called a "dangerous obsession" by Paul Krugman (Krugman, 1994). He argues that it is sufficient to reject the case for policies favouring high-tech industries on the ground that they are not necessarily high-productivity industries. This is another case of equating technology with productivity and ignoring the "external" effects of technology on the productivity of "user" industries. Technology creation, adaptation and innovation are important, but technology diffusion and use may be even more important for developing countries. New technologies such as information and communications technologies and biotechnologies are cross-section technologies and their application to traditional agricultural, manufacturing and service activities can revolutionize both processes and business methods, increasing both productivity and competitiveness.

4. Krugman is also sceptical about government capabilities to intervene in imperfect markets, and hence opposes a competitiveness strategy. However, if well designed and applied, a

strategy to transit the high road to competitiveness may not become a dangerous obsession but a healthy national development.

5. Competitiveness is dependent not only on macroeconomic adjustments or natural endowments but also on the ability to achieve high productivity by deploying and using these assets (human resources, and capital and physical assets) in the most effective manner. Getting the macroeconomic fundamentals right will not necessarily lead to competitiveness, particularly if the enterprise sector is weak, that is if there is little or no productive (supply) capacity. As Porter says, "For sound policies at the macro level to translate into an increasingly productive economy, then parallel *microeconomic improvements* must take place" (Porter, 2000). New patterns of competition require active micro policies and measures aimed at shaping new industrial locations; and enterprises have to restructure activities and facilities and acquire skilled labour.

6. According to the *Global Competitiveness Report 2000*, the competitiveness of nations depends on their economic creativity. Economic creativity is measured using a technology index (innovation index and transfer of technology index) and a business start-up index. The start-up index includes the ease of starting a business, access to loan capital without collateral and access to venture capital.

7. Some countries do well on the technology index but fall down on the ease of starting a business. In some cases this is borne out by the low rate of employment growth, such as in Europe, where starting a new business can take up to 35 days (see table 1 in the addendum to this document) For example, in the past decade employment growth in France stood at 0.5 per cent per annum and at 0.0 per cent in Germany, while in Italy employment contracted by 0.1 per cent compared with 1.5 per cent growth in the United States, where businesses can be set up in a matter of days (*European Competitiveness Report 2002*).

### 1.2. Systemic competitiveness

8. Not only is it helpful to separate out and reflect on the relative contributions of both macro and micro policies to competitiveness, but also it is useful to incorporate the notion of "systemic competitiveness" when designing the appropriate improvements in the micro or business environment. The key assumption in systemic competitiveness is that competitive advantages are to a large extent created by deliberate collective action rather than being mere products of the invisible hand of the market.

9. The concept of systemic competitiveness is characterized by two distinguishing features. First, it emphasizes the significance of the meso level in addition to the micro and macro levels. The meso level includes local systems, both policies and supporting institutions. Second, the most important aspect of systemic competitiveness is the interaction or connectivity among the various actors at the various levels and their collaboration in the design and implementation of policies and support institutions and programmes.

10. Very interestingly, Lall (2001) proposes a framework illustrating the determinants of enterprise competitiveness which brings to mind Porter's famous "diamond",[1] but instead of introducing government as an extraneous variable it places it at the centre of the action. Lall's "triangle" of competitiveness shows enterprises interacting with three sets of variables (incentives, factors and institutions), two of which mainly belong to the meso level. From a policy perspective, this means that while macro policies are needed (such as ensuring a stable currency and exchange rates, controlling inflation, promoting open markets by gradual cuts in tariff rates, providing effective infrastructure and protecting property rights), successful industrial development is based also on market-friendly measures for increasing efficiency and interaction of meso-level institutions. These measures should follow a decentralized, flexible, bottom-up and tailor-made approach.

### 1.3. At the enterprise level

11. According to Altenburg et al. (1998), enterprise competitiveness is the ability to sustain a market position by *inter alia* supplying quality products on time and at competitive prices through acquiring the flexibility to respond quickly to changes in demand and through successfully managing product differentiation by building up innovative capacity and an effective marketing system. The difference between the competitiveness of an enterprise and that of a nation is that the enterprise will cease to exist if it remains uncompetitive for long whereas a nation never goes out of business no matter how badly it is managed or how uncompetitive it is. When a nation loses its competitiveness, this is reflected in its deteriorating welfare conditions rather than elimination from the market.

12. According to Porter, competitiveness is based on the increased productivity of a nation's enterprises (continuous increases in value-added). To achieve these continuous increases in value-added, enterprises must transform their ways of competing: they must shift from comparative advantages (i.e. low-cost labour etc.) to competitive advantages, namely the ability to compete on cost *and* quality, delivery and flexibility. The competitiveness of enterprises depends on the business environment and the sophistication of company operations, including inter-firm cooperation. Getting the business environment right can be looked at from the policy and institutional point of view—are all the institutions and laws in place to create an enabling business environment? Or looked at from the enterprise level – what policies and support structures are necessary for enhancing their capacity?

13. Competitiveness has been the subject of a number of recent annual reports: UNCTAD's *World Investment Report, 2002,* UNIDO's *Industrial Development Report, 2002/2003* and the Global Competitiveness Reports (1979–2002). While each has a slightly different focus (transnational corporations, industrial development, government intervention), they all agree that

[1] According to Porter's competitive diamond, economic competitiveness is determined by the quality of four factors, namely demand conditions in the domestic market, factor conditions and support institutions, the strategy and vision of local firms, and supporting industries.

an important element in improving competitiveness is building domestic capabilities. For example, *WIR 2002* states: "If developing countries are to strengthen competitiveness, they will have to strengthen their capabilities, attract and stimulate activities suited to their endowments (or lack of) and upgrade them over time." None of the preceding reports goes into detail about the policies and support programmes that are necessary for strengthening productive capacity *at the enterprise level*, particularly that of small and medium-sized enterprises (SMEs). Therefore, in filling out the picture on competitiveness, this report examines the groundwork that developing countries must lay if their domestic enterprises are to become competitive.

### 1.4. Importance of SMEs

14. In order to get Governments to focus on both macro and micro policies, particularly for SMEs, the case must be made for supporting SMEs. While it is generally accepted that SMEs are important contributors to the domestic economy, not many Governments have framed policies to enhance their contribution or increase their competitiveness. Most Governments do not even have reliable statistics on SMEs. The statistics on SMEs are poor for a number of well-known reasons: lack of a uniform definition, high cost of an industrial census, and the fact that many SMEs do not register and remain outside the formal economy. The European Union (EU) and the Organisation for Economic Co-operation and Development (OECD) have probably done the most comprehensive job in measuring the contribution of SMEs to their economies. Table 2 (Addendum) shows the SME share in the total number of enterprises, employment and output in selected developed and developing countries. SMEs usually comprise about 99 per cent of all enterprises, and account for from 44 to 70 per cent of employment and 50 per cent of manufacturing output. The figures for developing countries, although suspect reveal the same situation: SMEs appear to account for 98 per cent of enterprises, 50 to 80 per cent of industrial employment, and 50 per cent of manufacturing output.

15. Very often the single most important indicator of competitiveness is export competitiveness. This consists not only of higher exports, but also more diversified exports and an increase in their technology and skill content. It also includes "an expanding base of domestic enterprises able to compete globally; thus, competitiveness is sustained and is generally accompanied by rising incomes" (*WIR 2002*, p. 117). The ability of SMEs to contribute to export varies widely – between 10 and 60 per cent (see tables 3 and 4, Addendum). This varying ability to export is in itself an indication of how competitive SMEs can be or not be in the global economy and the fact that specific support measures might be needed to improve their performance.

### 1.5. Winners in industrial competitiveness

16. Some experts have described three stages in competitiveness: catching up, keeping up and getting ahead. UNCTAD has recently tracked a number of countries that have done well in overall export competitiveness in terms of rapidly increasing market shares and upgrading into advanced activities (see table 5, Addendum).Growing market shares show dynamic

competitiveness and reveal the ability of a country to "get ahead" in terms of technology and trade (*WIR 2002*, p. 149).

17. The United Nations Industrial Development Organization (UNIDO) has developed a competitive industrial performance scoreboard that enables one to spot the "winners" or those who are getting ahead. The scoreboard is based on a number of indicators that measure a country's industrial productive capacity and its industrial competitive capability. The industrial competitive capability is measured by manufacturing exports per capita. UNIDO found that only 16 developing countries had upgraded their industrial structure towards technology-intensive products between 1985 and 1998. Industrial production and manufactured exports within the developing world are highly concentrated. The top five developing countries account respectively for 60 per cent of industrial production and 61 per cent of manufactured exports. UNIDO's in-depth analysis of the drivers of industrial performance allows us to identify "common denominators" in success stories and derive a taxonomy for strategic competitiveness (Efendioglu, 2001).

18. According to Efendioglu, strategic competitiveness has two main aspects: the ability to stay close to the frontier of technology and of integrated international production systems (getting ahead), and the capability and flexibility to accommodate change in old and new industries (catching up/keeping up).

19. Among the drivers of competitive industrial performance and capability are the level of skilled labour, technological effort as shown by research and development expenditures by productive enterprises, technology imports and infrastructure. The 16 countries identified by UNIDO have used varying strategies for their industrial performance. Not surprisingly, East Asia has the highest industrial competitiveness capability—outstripping Latin America by a factor of more than two. Domestic technological effort, as measured by R&D financed by productive enterprises, is the most consistent and significant of the drivers, and FDI is gaining in significance. The analysis of the individual drivers revealed that Latin American lags behind in terms of domestic technological effort. East Asia dominates in almost every variable, while sub-Saharan Africa is consistently the weakest. UNIDO's analysis of industrial performance and its drivers provides possible elements of a strategy for attaining competitiveness (Richard, 2002).

20. Another finding of importance is that while the performance rankings were fairly stable over time, a few countries managed to take large leaps forward because of their insertion into global production systems for technology-intensive products. While this contributed to their industrial and export growth, for example in the cases of Mexico and the Philippines, this does not mean that they have built the capabilities needed for sustained growth in the future. The developing countries that have built strong local capabilities remain few. Thus, both the UNCTAD and UNIDO studies agree that gains in market shares might be temporary as a result of preferential market access or recent insertion into a supply chain. If gains are to be sustained they must be based on upgrading human skills and technologies.

21. As mentioned, East Asia dominates the developing world by all performance measures. Another fact that stands out is not only how different the mature "tiger" economies are from the rest of the developing world but also how they differ from on to another. While the drivers have been clearly identified, these countries combined them in many different ways. Thus, experience seems to show that there may be no unique road to industrial success (UNIDO, *Industrial Development Report 2002/2003*).

22. At the other end of the spectrum is sub-Saharan Africa. It has lost its already small shares of global industrial production and exports. Its industrialization levels remain very low and the technology composition of both manufacturing value-added and exports has deteriorated over time. This is the only region where this has happened.

23. According to Lall, divergence and marginalization are strong features in the industrial scene. But industrial development is not a zero-sum game: it is possible for all countries to gain from increased production and trade. Successful industrialization requires countries to link to the global economy and leverage the resources that it offers in order to improve endogenous capabilities and competitiveness. This linking needs strong initiatives, not just passive opening up, and it is essentially up to the countries to build the capabilities needed. Thus, policies and programmes to enhance competitiveness must centre on building productive capacities at the enterprise level within the country.

## 2. MICRO POLICIES AND SUPPORT PROGRAMMES FOR ENTERPRISE COMPETITIVENESS

### 2.1. Competitiveness as a long-term strategy

24. The main goal of a competitiveness strategy is to improve the structural position of the country in the global economy by upgrading current activities and incorporating new skills and capital-intensive activities. A national vision should be based upon a consensus among the national stakeholders and an awareness of both the national goals and the steps that have to be taken to achieve them. This should begin with stocktaking in terms of strengths and weaknesses of existing policies, programmes and structures at all levels (macro, meso and micro). Then, on the basis of the stocktaking, the stakeholders should design policies and programmes that contribute to increasing the value-added of national production.

25. The case for government intervention to assist SMEs is based on the fact that numerous market failures prevent domestic enterprises from building capabilities because they cannot access finance, information, technology and markets. Specific policies, programmes and appropriate institutional frameworks are needed to help SMEs overcome these failures. According to Chudnovsky (2001), to transit the high road to competitiveness, firms both large and small in developing countries have to build and continuously enhance endogenous

capabilities. These capabilities can be applied to add value to existing activities and to make new products and start new services that can compete in the global economy.

26. Although a number of enterprise policy instruments have been used in some developing countries, there is plenty of room for identifying and applying measures for the financing of SMEs, including through venture capital; for linkages between foreign and local enterprises; and for the promotion of R&D, technology diffusion, adaptation and mastery. However, most developing countries have neither technology nor enterprise polices and the challenge for them is to adopt them in the near future. Possible policy interventions are indicated (in italics) in the sections that follow.

27. To avoid possible coordination failures it is important to create institutions to articulate and lead the multiple efforts to be made at the macro, meso and micro levels. There is a growing demand for adequate institutions to be designed to deal with technology and enterprise policies that have been largely ignored by the Washington Consensus prescriptions, and that the revival of protectionist practices in the name of competitiveness be avoided (Chudnovsky, 2001).

### 2.2. Public–private sector dialogue

28. An effective policy framework for SMEs should begin with stocktaking to identify real constraints and possible solutions. A useful way of identifying such constraints is through public–private sector interaction and dialogue, thus creating an enabling environment and fostering policy coherence. Government needs to recognize and accept the role and status of private sector organizations as partners in development and as the spokesperson of private enterprises.

29. The quality of such a working relationship between the public and private sectors might even be a competitive advantage for a country in its own right. In fact, it has been suggested that, in an increasingly interdependent world, competition among enterprises is often competition among different systems of government–private sector relationships.

30. Dialogue should be periodic, representative, that is involving all stakeholders, and have an announced agenda. The timing, participation and location of its occurrence can and should be organized to ensure that the relevant stakeholders are included. It is reasonable that dialogue be more frequent where it is nearest the individual business, that is at the local level (meso level).

### 2.3. SMEs' access to business development services

31. Over the past decade, Governments and international donors have increasingly turned their attention from merely offering financial assistance to providing business development services (BDS) for SMEs, recognizing that financial support alone is not enough for achieving sustained competitiveness.

32. BDS are all types of SME support services, including training, consulting, technical and managerial assistance, marketing, physical infrastructure and policy advocacy. BDS interventions are specifically aimed at helping small enterprises to overcome market imperfections and inadequate access to technology, as well as to operate more competitively and with greater efficiency in domestic and global markets.

33. There have been important developments and innovations quite recently in the field of BDS, in an attempt to make such services more cost-effective and to reach a larger number of businesses in a sustainable manner. Early BDS interventions consisted of costly and supply-driven services offered by public agencies, which rarely managed to respond to the true needs of the SME sector or to implement strategies for existing from full subsidization.

34. In 1997 the Committee of Donor Agencies for SME Development started to develop new guidelines in the design and delivery of BDS, aimed at increasing the effectiveness, outreach and sustainability of BDS interventions. A series of principles for good practices were subsequently endorsed by the international community, among which are the principle of subsidiarity, the principle of market orientation and the principle of cost recovery.

35. The guidelines are based on the recognition that government institutions should not be direct service providers but should make indirect use of local support structures. When BDS are strategically important but not yet adapted to local needs or acknowledged by target beneficiaries as such, joint efforts by public and private institutions should provide effective institutional responses.

*36. From a policy perspective, it is important to rely as much as possible on the private sector in offering SME services, in order to minimize market distortions, duplication and inefficiency. Governments should therefore: (a) focus on developing the demand side of the BDS market; (b) replace direct service provisioning with the development of facilitators/intermediaries; and (c) make targeted and time-bound use of subsidies.*

37. When subsidies are needed, as may be the case in the early years of a BDS development, or of particularly disadvantaged target groups, cross-subsidization strategies can be implemented. For example, fees from more profitable, larger SMEs can subsidize poorer SMEs or fees from certain lucrative services such as accounting can subsidize loss-making services such as training. However, subsidies should always be transitional and businesses should cover part of the cost even in the early stages. If this is not feasible, policy makers should have a clear understanding of the justification for long-term public support and be ready to absorb its costs.

38. There are also important objective requirements in the organization of the delivery of BDS, mainly related to the systemic nature of economic development processes and to their deeply rooted territorial dimension. Evidence shows that often the sub-sectoral, value chain or cluster approach has greater relevance and achieves greater success. BDS can be very costly, especially if provided on a one-to-one basis, and some of the costs can be reduced by attempting

to operate services for groups of similar businesses from the same sub-sector or located close to each other. The services thus provided can be more synergistic and their demonstrative effect more visible when the range of beneficiaries that have common problems and face similar technical difficulties is handled in a collective way.

### 2.4. SMEs' access to finance

39. Finance has been identified in many business surveys as the most important factor determining the survival and growth of SMEs in both developing and developed countries. Despite the importance of SMEs to the economies of both developing and developed countries, they have traditionally had difficulty in obtaining formal credit or equity. Commercial banks and investors have been reluctant to service SMEs for a number of reasons, including the following:

- SMEs are regarded by creditors and investors as high-risk borrowers because of insufficient assets and low capitalization, vulnerability to market fluctuations and high mortality rates;
- Information asymmetry arising from SMEs' lack of accounting records, inadequate financial statements or business plans makes it difficult for creditors and investors to assess the creditworthiness of potential SME proposals;
- High administrative/transaction costs of lending or investing small amounts do not make SME financing a profitable business.

40. As a result, commercial banks are generally biased towards large corporate borrowers, which provide better business plans, more reliable financial information, better chances of success and higher profitability for the banks and have credit ratings. When banks do lend to SMEs, they tend to charge them a premium for assuming risk and apply tougher screening measures, thus driving up costs on all sides. Commercial banks in developing countries and countries with economies in transition often prefer to lend to government and thus the public sector crowds out the private sector. Lastly, there is also the problem of insider lending and/or cronyism, which diverts finance away from SMEs.

41. In recent years leading commercial banks in developed countries have been particularly successful in servicing the SME market. They have managed to increase the volume and profitability of lending to SMEs while driving down transaction costs and risks. Their strategy has been to improve their core competencies by adopting sophisticated credit techniques such as credit scoring, strengthening management and information systems and developing highly efficient automated processes, efficient marketing and distribution, and developing close ties to clients.

42. Although the business environment in developing countries and developed countries differs in many respects, the problems of servicing SME customers are similar, namely high perceived risk, problems with information asymmetry and high administrative costs. Therefore, recent innovations in developed countries to improve SMEs' access to credit can provide

valuable insights for developing country banks to become more SME-oriented and to increase the volume and the quality of their services to this sector.

43. To encourage commercial banks to lend to SMEs, central banks and designated financial service regulators must play a proactive role. Government and the central bank must set out a policy framework for channelling adequate funds to the SME sector. In clearly indicating the right direction to the suppliers of capital, regulators could explore set-aside mechanisms for SMEs (i.e. quotas and targets). Certainly, increased transparency would influence the lending practices of commercial banks. The central bank could require, for example, disclosure of the composition of bank loan portfolios by different categories of borrowers. The Government/central bank might also consider a set of special measures for SMEs (guarantee programmes, more user-friendly and transparent disclosure systems, information-technology-driven appraisal systems) to reduce the risks perceived by banks.

### 2.5. Combining BDS and finance

44. Combining financial services with non-financial services through partnerships has proved to be an efficient way of enabling banks to lend to SMEs. BDS providers are often better placed than financial institutions to identify potential clients, ascertain their creditworthiness, disseminate adequate financial and accounting techniques, pre-screen project proposals, monitor repayment, exert peer pressure, and maintain one-to-one contacts during the entire payback period. Thus, the complementarity between BDS providers and financial services helps to minimize both the risk and the transaction cost to creditors and investors, and make access to credit and equity less costly and less cumbersome for SMEs.

### 2.6. Access to technology

45. In a liberalized and open economy, competitiveness increasingly depends on the ability to incorporate new technology and management practices. Since the 1970s, manufacturing production has become extremely complex and knowledge-intensive as investments in intangibles such as R&D, software, design, engineering, training, marketing and management come to play a greater role in the production of goods and services (Mytelka, 1999). This has gradually extended beyond the so-called high-technology sectors to reshape a broad spectrum of traditional industries, thereby creating a platform for increased technology accumulation and catching-up possibilities, which has led to the development of a competitive national production capacity in many first-tier and second-tier newly industrialized economies (NIEs).

46. NIEs are successful examples of export-led growth based on traditional industries. Initially focused on the manufacturing of clothing and textiles, leather and footware, plastics and toys, they have switched to the “low-technology side of the high-technology industries”, and some are now leading exporters of technology in the electronics and information technology field (Hobday, 1995). Such linear progress is not necessarily an invariant sequence and is probably very much related to historical and geographical circumstances. The key to sustained

growth, however, invariably calls for a structural change from simple to more advanced technologies. When countries are catching up, this consists mainly in problem-solving capabilities that enable firms to improve their productivity and to imitate and adapt products; when countries are keeping up, technological upgrading within the firm and continuous improvements in product quality become crucial in order not to lose recently gained competitive advantages. Finally, when countries are getting ahead, the capability to design and develop new products and processes becomes vital, on the basis of both R&D and continuous innovation efforts.

47. The ability to acquire, diffuse and master technologies as well as innovate can be achieved in many ways. Two are explored here: clustering and inter-firm cooperation or business linkages.

### 2.6.1. Clusters

48. To a large extent, export competitiveness in the SME sector can be increased by cluster formation, especially in traditional and mature industries. The competitive advantage of clustered companies derives from two main sources: the extent to which the knowledge base of these companies deepens and broadens to include design, quality control and information related to markets and marketing, and the establishment of linkages to a wider set of technology inputs and actors.

49. The success of the cluster model is due to the fact that it is an example of endogenous development based on SMEs, which is strongly rooted in the local communities and often combines competitiveness and social stability. It is also due to the fact that areas with consolidated systems of specialized small firms are generally more likely to create the conditions that increase efficiency and productivity on a long-term basis and therefore to become attractive to FDI.

50. However, not all clusters are innovative and dynamic. Thus clusters should not be regarded as "silver bullets" of competitiveness strategies. Some of them are caught in the spiral of stagnation and decline, while others never translate their potential into reality and never mature past the embryonic stage. Clusters have been variously defined as sets of economic actors concentrated along a value chain or agglomerations of sectorally specialized agents within a geographically delimited space. While geographical proximity always brings a minimal exchange of information, it does not ensure a process of knowledge sharing or technology capacity-building. Similarly, the presence of passive externalities such as the availability of an appropriately skilled labour pool or the stimulus of emulation does not guarantee the presence of critical actors needed to form a dynamic system, or intense formal and informal cooperation which leads to collective efficiency.

51. Indeed, policy interventions may play a major role in the field of cluster promotion, but this should be confined to revitalizing only already existing clusters with high growth potential. Local forces have to stimulate the generation of common externalities and the provision

innovative, value-adding services, thereby laying the foundation for endogenous growth. Traditional habits and practices of local actors with respect to innovation and technology are also decisive in the transformation of simple clusters into competitive production systems. Focused measures (e.g. the creation of technical schools, research centres, export promotion boards, quality certification institutes) and trigger mechanisms (e.g. strengthening business associations, subsidizing export initiatives, promoting brand names and new product/location images, establishing strategic alliances among public and private actors) can play a role in stimulating and supporting change, tacit knowledge flows and interactive learning. Successful experience from both the developed and the developing world shows that with suitable help in the form of technological assistance, financial support and a stimulating environment, clusters can produce goods with a high technological content and become competitive on a global scale.

52. Although clusters are the result of a spontaneous tendency for SMEs of the same or similar sub-sector to locate close to each other, there are also organized efforts to set up clusters from scratch, mainly through science parks or technical incubators – the grouping together of "start-ups" of small businesses usually based on more advanced technologies. Often situated close to universities or research institutes, they benefit from the technological advice and help of faculty members as well as from the more practical administrative support services of the incubator and, in many cases, the interchange with other scientifically or technically minded entrepreneurs. The limitations of such forms of constructed spatial agglomerations, however, are that they often lack effective mechanisms to stimulate networking among the firms artificially clustered, are poorly managed and, even more importantly, contribute little to the growth of the local economy, because of their isolation.

### 2.6.2. Linkages

53. Interfirm linkages can be a remarkable source of technology diffusion and mastery. There are many types of linkages—backward, forward, R&D and spillover effects. The most fruitful are the backward linkages between large and small enterprises. In some cases horizontal linkages are established through networking activities and formal and informal cooperation among local SMEs. In other cases, vertical linkages can be fostered with larger corporations that are prepared to offer assistance and advice to small businesses. TNC–SME linkages whereby transnational corporations (TNCs) build up competitive supply chains can help SMEs access new and diversified markets, and information on market trends, acquire and master new technologies and skills, and solve cash flow/finance problems. It is most important that the TNC share its technical road map with the SME so it can preposition itself and be ready for changes in market and technology trends.

54. The example of countries such as Ireland, Malaysia, Mexico, the Philippines, South Africa and Singapore indicates that the developmental impact of TNC–SME linkages can be instrumental in modernizing and dynamizing local industries. According to UNIDO (2002), these countries upgraded their local productive capacities and enhanced their industrial

performance by integrating into the TNC supply chain. Experience shows, however, that this does not happen automatically. It requires a partnership among all stakeholders: government, TNCs, SMEs and their support agencies.

55. The Government must have the vision and commitment to integrate business linkages into its overall development strategy; it must attract the right TNCs; it must ensure that its population has the right skills; it must give economic incentives to both the TNCs and SMEs alike; and it must engage in public–private sector dialogue in order to constantly adapt the strategy to changing conditions. The SME support agencies must give selective support to SMEs to make the SME partnership ready by enhancing their core competencies in terms of management and technical skills. TNCs must adopt a systematic approach to mentoring and coaching SMEs and be willing to delegate to local managers who best know how to work with local enterprises. Probably one of the most successful programmes is the Malaysian business linkage programme, which develops supplier capabilities and competencies and provides business opportunities through partnerships between government, TNCs and SME support agencies.

### 2.6.3. Financing technology

56. The role of finance in an enterprise's ability to acquire, diffuse and master technology has largely been ignored. The difficulties that SMEs face in obtaining finance are more pronounced when it comes to obtaining financing for technology investment. The outcome of technology investments, especially in research and development projects, establishing technology start-ups, launching new products or adapting new products, is highly uncertain, with the possible returns to the investment materializing only after lengthy periods.

57. Technology-based SMEs also have a number of characteristics which are not attractive to the local banking community, namely:

- Their success is linked to difficult-to-value growth potential derived from scientific knowledge and intellectual property;
- The lack tangible assets in the early stages of their life cycles which may be used as collateral;
- Their products have little or no track record, are largely untested in markets and usually have high obsolescence rates.

58. These factors imply that they are even more vulnerable than other SMEs generally to asymmetric information about risks and default probabilities given that it is almost impossible for financiers to attach probabilities to the potential outcome of the investments. Financiers sometimes use specialized expert advice to evaluate or appraise technology investments in an attempt to reduce the information asymmetry inherent in this area.

59. The high risks and specialized nature of the risks involved in financing technology-based SMEs make it difficult if not impossible for commercial banks to finance technology-based SMEs. They can, however, play a useful role in financing technology upgrades for SMEs in developing countries, especially if additional incentives such as loan guarantees are provided.

60. The more suitable private sector instrument for financing technology-based SMEs is venture capital. Venture capitalists are willing to accept higher risks than banks in exchange for potentially large gains from sales of shares in the company, they do not require collateral and the financing is long- or medium-term. However, the requirements for establishing a vibrant venture capital market in a country are very stringent. They include a well-regulated and liquid financial market that provides a mechanism for investors to exit their investments and a large supply of projects/firms with high growth potential. Therefore, venture capital has taken hold only in a very small number of economies (Israel, Taiwan Province of China and the United States).

*61. It is, however, clear that private sector financing on its own is not a sufficient source of funds for technology-based SMEs, especially in countries that have a bank-dominated financial system and weak traditions of equity financing. Therefore, government financial support in some form is needed, for example in the form of grants, loans guarantees and equity stakes, to remedy some of the market failures that exist in regard to financing technology-based SMEs and start-ups. Government involvement is especially needed where uncertainty and long lead times discourage the usual supply of finance. The risks to government financing, such as creating market distortions, moral hazard and adverse selection, should be closely examined when government intervention is exercised.*

### 2.7. ICT and e-commerce

62. Information and communication technologies (ICTs) have an impact not only on every single branch of industry but also on every service in an economy. ICT is unique in that it affects every firm and organization as well as every function within them. At the present time, institutional and organizational change is lagging behind changes in ICTs. Nevertheless, ICT-producing and using sectors have accounted for the bulk of overall productivity growth in a wide range of countries that belong to the Organisation for Economic Co-operation and Development (OECD). The real spillover effects are in the user industries. However, to feel these effects it is critical to absorb and use ICT efficiently. If Governments in developing countries do not solve the problems of connectivity, access and skills gap, their SMEs will lack an important tool for attaining competitiveness. For many SMEs, it will either be e-business or no business.

63. ICTs have the potential to alter economic activity. They can be used to replace traditional means of communication, to manage business documentation and information (databases), to perform usual business operations (inventory control) and to engage in business transactions or e-commerce (business to business or business to consumer). According to the OECD, many start-ups that sold and/or purchased exclusively on-line have disappeared and growth in e-commerce has been less spectacular than predicted. Use of the Internet by SMEs in OECD

countries to carry out business transactions remains limited and varies according to the position in the supply chain (customer or supplier). Purchasing is more common than selling among SMEs. Use of the Internet for purchases seems to be sensitive to firm size. The value of Internet sales in 2000 ranged from 0.4 per cent and 1.8 per cent of total sales for the few OECD countries that currently measure electronic sales. Sales via electronic data interchange are at least twice sales via the Internet. The main reason why businesses are not conducting transactions electronically is a perception that electronic commerce is not suited to the nature of their business. SMEs need help to adapt their business processes to e-commerce. This is difficult because of the gap between the current IT skills of workers and those needed by SMEs. To overcome SME reluctance, EU policy makers are considering a number of actions (see box 1.).

**Box 1. Potential actions for public Institutions**

- Develop a handbook for SMEs on "Electronic commerce: How to do it" (including basic information such as how to reserve an Internet address, etc.);
- Do road shows on SME-relevant issues, providing clearly structured, easy-to-understand information on the use of the Internet as a means for transactions or on showcase examples from other small or medium-sized companies;
- Open a "service bureau" for SMEs where they can get centralized help;
- Circulate (via national or regional institutions, e.g. the Mittelstandsvereinigungen in Germany) a list of potential contacts and institutions that provide support in specific areas.

**Source:** Booz-Allen & Hamilton, "G7 Global Marketing For SMEs" First Annual Conference, Bonn, 7-9 April 1997. From the website: http://europa.eu.int/ISPO/ecommerce/sme/reports/wayforward.htm#wayforward.

64. While e-commerce in OECD countries is more a question of SME awareness and the ability to adapt traditional business operations, e-commerce readiness in developing countries is still mainly a function of connectivity and access. Connectivity is measured by the number of internet hosts, personal computers, mainlines and mobiles. Access could be measured by the number of Internet users and the cost of a local call. Only three developing countries are in the top 25 in UNCTAD's index of ICT diffusion (see table 6, Addendum 1): Hong Kong, China (9$^{th}$), Singapore (14$^{th}$) and Republic of Korea (23$^{rd}$). The index shows that Governments that have formulated and implemented an ICT strategy rank high. Twenty-four out of the top 50 countries have such strategies. Those countries that did not make it into the top 50 and have strategies are Argentina (58$^{th}$), Peru (66$^{th}$), Colombia (96$^{th}$) and India (132$^{nd}$). Despite having an ICT strategy, they were dragged down by unusually low connectivity. *Therefore, Governments must both formulate a strategy and have the resources to finance it.*

## 3. POLICY COHERENCE: DOMESTIC POLICIES AND PROGRAMMES TO BUILD CAPABILITIES AS OPPOSED TO INTERNATIONAL RULES AND PRACTICES

65. The policy directions indicated so far for achieving competitiveness at the micro level need to be evaluated in terms of their consistency with international and regional agreements. For example, Governments might be constrained in their ability to promote micro improvements by macro policies such as structural adjustment policies, the Basle II Capital Accord, the EU rules for establishing a single financial market and the WTO agreement on subsidies, among others.

66. The new economic model of trade liberalization, privatization, deregulation and FDI as advocated by the Bretton Woods institutions largely ignored the microeconomic conditions for development and SMEs. The prescriptions of the Washington Consensus failed to deliver the expected results in terms of growth, productivity, equity and environmental impact in most developing countries. Development requires not only macroeconomic and political stability but also well-functioning markets and institutions. The Washington Consensus failed to include policies both for institution-building and for microeconomic improvements in the areas of competition, technology and enterprise.

67. The impact of overly restrictive fiscal and monetary policies can defeat industrial policies and microimprovements. For example, while the International Monetary Fund helped Thailand avert a collapse of its banking system, the policies to save the financial system affected the domestic economy particularly SMEs, far more than anyone anticipated without achieving the main aim, which was to shore up the baht.

68. Ironically, Japan was more concerned with the state of the Thai micro economy and the ability of Thai SMEs to survive the credit crunch. This was largely because the Japanese understood that the viability and competitiveness of its TNCs rested on the well-being of Thai SME suppliers (Régnier, 2000).

69. A preliminary analysis of the impacts of the World Bank's Economic and Structural Adjustment Programme (ESAP) undertaken by Zimbabwe from 1991 to 1998 showed that it introduced fundamental changes in the SME sector. First, there was a dramatic increase in the number of urban SMEs and a substantial reduction in the number of rural ones. Aggregate employment in the SME sector increased over the ESAP period, disproportionately in urban SMEs. Second, there was a shift from higher-value formal goods to lower-value informal goods produced by SMEs. It is believed that the decline in the real incomes of potential SME customers resulting from the ESAP led to an increased demand for SME products as consumers substituted away from the higher-priced formal sector goods. Devaluation also caused consumers to buy SME goods instead of pricier imports. Third, there was a relative decline in manufacturing SMEs, partly as a result of the greater availability of imports due to trade liberalization (the weaker Zimbabwe dollar notwithstanding). There was a tremendous increase in the number of

SMEs engaged in commerce (especially vending). It could be that retrenched workers turn to vending because the skill requirements are lower. Thus, the ESAP moved Zimbabwe production down the value chain, that is in the opposite direction from that needed to improve competitiveness. Fourth, the role of women in the SME sector also changed. Once nearly three quarters of all Zimbabwean SMEs were female-owned; by 1998 this proportion was just above half. Greater competition from retrenched workers (who were mostly male) may have caused some female-run businesses to fold (McPherson, 2000).

70. The proposed new Basle II Capital Accord, which replaces the 1988 Accord in 2007, aims to align risks with capital requirements. While the proposal could improve the functioning of financial markets, it may have a negative impact on SME finance in the short to medium term. First, under the new accord, the risk weighting on loans to SMEs could change from the current 100 per cent to 150 per cent because loans to SMEs are perceived as very risky and in general are made against inadequate collateral. However, there is a proposal that the risk weights for SME exposures of less than 1 million euro be reduced from 100 per cent to 75 percent. If the risk weights are increased, this will cause the bank to increase the risk premium charged to the SME. The use of ratings to determine the risk weights could also affect SMEs since the cost of providing them with a rating is extremely high. Rating firms will find it difficult to use their current scales and practices to rate SMEs, because they generally lack knowledge of the SME risk profile. If the SME does not have a risk rating, this will increase the risk weights. The higher the bank's risk the higher the reserves required and since such reserves often earn minimal interest, banks will be tempted to avoid SME lending altogether.

71. Some European SMEs are concerned that the banking sector will apply the new ratings guidelines inflexibly, making new loans expensive and time-consuming. According to KfW every third German company says that it has become more difficult to access bank credit. Basle II forces banks to scrutinize their customers more closely, including estimating a company's probability of default and soft factors such as operational and entrepreneurial risks. Loans will become more expensive and, above all, labour-intensive if banks do not adopt more innovative methods for evaluating SMEs. SMEs complain that demands for timely and detailed financial reports will be too expensive. Likewise, it will be difficult for banks in developing countries to carry the cost of sophisticated internal risk assessment. Basle II assigns a lower capital requirement (a subsidy) to banks with sophisticated internal risk assessments, without paying much attention as to whether these assessments work. Internal processes on their own do not keep banks away from bad loans.

72. The WTO Agreement on Subsidies and Countervailing Measures (ASCM) might narrow the national policy space to strengthen competitiveness at the enterprise level. The agreement uses four criteria to determine the existence of a subsidy:

- It should be a financial contribution;
- It should be a contribution from a government (or public) body;

- It should confer a benefit;
- It should be specific (certain enterprises, industries, regions.

73. Articles 8 and 9 introduced a traffic light mechanism whereby prohibited subsidies (for export or import substitution or contingent on local content) were red light, while yellow light subsidies were actionable and green light subsidies were non-actionable. The ASCM section on non-actionable subsidies has lapsed. This was the result of a decision taken by the developing countries because they thought that developed countries would use them as "safe harbours". This has created an environment that lacks legal security, as Governments could be subject to procedural harassment, which could have a detrimental effect on public assistance for technology. Some developing country experts are recommending that the transition period be extended for developing countries on export subsidies and that technology subsidies be reclassified as "non-actionable" exclusively for developing countries. It was also suggested that it is important to negotiate special classes for SMEs to be included in the WTO Agreements, as this sector is largely neglected in trade agreements and could be seen as a non-distortionary horizontal policy measure.

74. UNCTAD recommended in *WIR 2002* that certain incentives offered to foreign or domestic firms that have a development impact should be non-actionable. Such development impacts would involve the creation of more and deeper linkages, the provision of technology, and the training of local suppliers and their personnel. The distortive effects of such measures could be reduced by open and transparent processes with regular reporting and accounting of the costs of incentives used, accompanied by an assessment of their effectiveness (Hughes and Brewster, 2002).

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