For Official Use

The attached proposal for future work under Investment Policy Analysis has been prepared by the Ad Hoc Task Group on Foreign Direct Investment and Technology, chaired by Manfred Schekulin, Delegate from Austria.

This note is submitted for discussion under item 5c of the agenda at the CIME meeting on 14-15 December 2000.

Contact: Kathryn Gordon (telephone: 33-1 45 24 98 42; fax: 33-1 44 30 61 35; e-mail: kathryn.gordon@oecd.org).

98546

Document complet disponible sur OLIS dans son format d’origine
Complete document available on OLIS in its original format
CIME Ad Hoc Group “FDI and New Technology”

Has technology changed the investment behaviour of companies and, if so, how?

Synthesis Paper

1. Recent technological developments have changed business decision-making -- including international investment decisions -- in basic ways. The business press and management consultants now commonly describe progress in telecommunications, computing and logistics as “disruptive technologies” that will fundamentally and irrevocably change the conditions of competition in most sectors and regions. Most recently, the development of the Internet into an all-encompassing information, communication and marketing tool has not only created completely new “virtual” business-models (for example, online auction houses), but also changed the way traditional “bricks-and-mortar” businesses operate. Only a few weeks ago, General Electric announced that it expects to lower its operating costs by 15 per cent both in 2001 and in 2002 by reshaping its organisation according to the requirements of the Internet. That is three times their fast-growing annual productivity gain of 3-4 per cent and amounts to savings of US$ 30 billion within two years.

2. The time seems ripe for the investment community to take stock of these developments and to assess their implications for international investment flows and, accordingly, investment policy.

3. Some developments are worth particular notice:

   • At a microeconomic level, technology has altered the importance and the perception of time and distance in business strategy. In many cases distance has been rendered irrelevant by technologies that make the instant exchange of data and information possible, allowing, for example, service providers such as airlines and financial institutions to outsource their back office operations. On the other hand with (theoretically) everybody having instant access to all information via the internet, time has become an ever scarer resource.

   • Organisational arrangements within and among firms have changed -- hierarchies have been flattened; the boundaries separating a firm from its business partners have been blurred and the importance of networks of various kinds has increased. On the other hand, the “managerial span” has become broader allowing small headquarters to run huge business conglomerates dispersed around the globe.

   • Technological progress and other structural changes have magnified the importance of intangible assets (e.g. human capital, firm-level know-how). By some estimates, the value of such assets now exceeds the value of the business sector’s physical capital in advanced economies. A well educated workforce, the quality of training and research infrastructures – both public and private -- and access to and protection of technology and know-how are increasingly important considerations in investment decisions.

   • The surge of information and communication industries has considerable macroeconomic consequences, too. The OECD’s growth study suggests foreign investment plays an
important role in the dissemination of gains from innovation, especially for developing countries.  

- If this is true and foreign investments are instrumental in the shift to a higher non-inflationary growth, attracting (enough and the right form of) foreign investment is essential in any country’s attempt to end on the right side of the “digital divide”. Of course, the new forces that are affecting business are also affecting governments. Technological change asks governments to keep pace with the design, implementation and adjustment of investment policies. New technologies are also circumscribing their abilities to pursue solely domestic investment policies and are rendering existing barriers to investment inconsequential.

4. The influence of these developments depends on many factors and varies greatly by sector, sub-sector and by region. Some examples from the actual business behaviour illustrate this diversity:

- **Labour costs versus time-to-market:** The Spanish retailer, Zara, does not follow established investment and outsourcing patterns in the apparel industry. The company produces its clothes in Europe because it feels that Europe’s higher labour costs are less important to its success than the advantages of being able to bring products to the markets as quickly as possible.

- **Tightening of “just-in-time” delivery requirements:** In a new VW plant in Argentina, “just-in-time” delivery means within a 5-10 minute window and inventories have been slashed to next to nothing by relying on tight logistics management and close relationships with suppliers. This closeness to suppliers has become a key factor in investment decisions in the automotive industry. By the same token, whoever is able to attract an automotive plant will get additional investments (and value added and jobs) by suppliers.

- **The spatial and organisational dimensions of knowledge management:** At companies like IBM and Daimler Chrysler employees from different plants, even different countries, use new technologies to form “virtual communities” that share expertise and professional experiences and to co-operate on projects. Going beyond the firm, the emergence of technology poles (e.g. Silicon Valley) and, more recently, of technology incubators like Idealab! in Los Angeles and Softbank in Tokyo demonstrates the networking requirements of the “knowledge economy”.

Some questions of interest from an investment policy point of view:

1) **Have the characteristics of companies that invest abroad changed as a result of technological developments?** Here, two competing theses are found in the business literature: A) New technologies reduce the transaction costs and risks of investments thereby allowing aa) more and ab) smaller companies to invest ac) farther away. B) New technologies render many investments unnecessary because they allow the participation in (procurement and distribution) markets without physical presence.

---

1 The literature review for the Growth Study states the following: “Using cross country data over 1960-85, Lee (1995) finds that the ratio of imported to domestic capital goods in investment has a significant positive effect on the per capita income growth across countries, in particular, in developing countries.” ECO/CPE/WP1(2000)7ANN page 18.
2) Will technological and related organisational developments change the traditional complementary relationship between trade (in goods and services) and foreign direct investment? Again two lines of thinking are possible: A) With capital available and closeness to markets becoming more and more essential investments may more and more substitute cross border trade. B) With intra-company exchange of goods and services being the most dynamic sector of trade, an increase in investments and the consequent increase in the number and size of multinational companies will further boost cross border trade.

3) If it is true that the requirements of the “new economy” mean that hierarchical structures are on the retreat both within and between companies and are being replaced by networking among peers what does that mean for investments? New forms of cross-border co-operation? A revival of joint ventures? Do incentives for the creation of voluntary “clusters”, e.g. through – private or government sponsored - technology parks, “incubators” etc. have a discernible influence on investment flows? Does inward and outward investment contribute to the technological capability of domestic firms?

4) More generally: Have the criteria for choosing investment locations changed because of technological developments? If so, what are now the key considerations? How do they vary among sectors and are they markedly different in high tech industries? What are the consequences for government policies?

5) Most fundamentally: Can the preliminary evidence of a positive correlation between foreign investments and the technology-driven transition to a “new economy” defined as high tech, high growth and low inflation be substantiated? If so, what kind of investment policy framework is likely to be successful in supporting an effective integration of national economies into the emerging “global new economy”? 

6) Last but not least: How can a vicious circle where the most developed countries become even more attractive investment locations thereby further enhancing their growth potential while the lesser developed economies find themselves trapped on the wrong side of a new “digital divide” be avoided? Or positively formulated: Can investments and the related technology transfers be used by developing countries/emerging markets to leapfrog certain development phases (e.g., fixed-line telephones) and to move directly into higher and more competitive levels of economic activity?

Possible structure of a CIME work program on technology issues

5. The economic literature on these issues is -- as the attached (and by no means complete) bibliography demonstrates -- vast. The investment aspect has so far not attracted much attention, though. And where the studies do touch upon investment issues they often do so only inter alia.

6. As the “new economy” discussion is likely to become even more dominant in the foreseeable future, a CIME work program addressing the technology/investment interface seems highly appropriate. Such a work program could consist of the following elements:
**Phase 1: Fact-finding**

7. As the standard data on investment flows and stocks routinely screened by OECD, IMF and UNCTAD will not suffice to answer the relevant questions, an initial phase of search for and compilation of the dispersed information and expertise existing is an essential first step of any systematic work program. This phase would also help to establish the necessary links to outside experts both from academia and from the business sector. It would also draw on recent and ongoing research within the OECD\(^2\).

8. The tangible result would be a comprehensive survey of literature and available data focussed around the questions 1) – 5) mentioned above. As no such survey seems to exist to date this effort, that would take approximately 6 months, would be a valuable achievement in itself, but would beyond that build the basis for phase 2.

**Phase 2: Identification and in depth analysis of selected investment policy issues**

9. The results could be presented and discussed at the June 2001 CIME meeting. The committee could then identify (2 to 3) issues that it wants to look into more closely either because the available information is not sufficient or because they are of particular interest from an investment policy point of view. The in depth analysis could take the form of further secretariat studies, discussions on committee level and the organisations of workshops. It would take place between September 2001 and June 2002.

**Phase 3: Presentation of results**

10. The results including possible policy recommendations could than be presented around the 2002 ministerial meeting. The main vehicle would be a publication that could be complemented by an international conference devoted to the subject.

---

2. This would include research carried out by the OECD National Innovation Systems Project and published under the title “OECD Proceedings -- Boosting Innovation - the Cluster Approach”. With regard to ongoing work in the OECD, the case study work of DSTI on “Measuring the Impacts of E-commerce on Business” is relevant to this work as well.


