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Comments

FDI and the strengthening of the science and technology capacities in Cameroon

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Unfortunately, a large part of FDI in African countries such as Cameroon is only linked to the exploitation of primary commodities, notably petroleum extraction and mining. Related to the need for better transforming primary products, it would be desirable to reinforce the R&D and innovatory capacities of these developing countries through attracting FDI in R&D activities. From this perspective, initiatives such as the New Partnership for Africa's Development (NEPAD) should be encouraged. Regarding R&D, national NEPAD programmes, and measures aiming to encourage the establishment of R&D units of the TNCs of developed countries should be put in place. Countries need to reinforce their national science and technological infrastructures (through the creation of science and technology parks, universities and research centres), their programmes to develop human resources and, the implementation of incentive schemes encouraging businesses, including foreign affiliates, to invest in R&D.

To operationalize this vision, the Government of Cameroon has for some time implemented, through the Ministry of Scientific Research and Innovation, a policy aimed at developing scientific knowledge and its application. The final goal is to elaborate sustainable solutions to the socio-economic and cultural problems of Cameroon. The main strategic axes of this policy are:

- the strengthening of scientific and innovatory capabilities;
- the development of human resources (researchers, engineers, research technicians) able to create the scientific

[1] The views expressed are those of the author and do not necessarily reflect the views of the United Nations, its Member States, or the Institutions to which the author is affiliated.

knowledge and innovations necessary for the development of Cameroon;
- the elaboration and implementation of research projects contributing to solving the development problems of Cameroon.

The Ministry of Scientific Research and Innovation of Cameroon also seeks to ensure that the national scientific community is able to compete and to communicate with the best scientific teams worldwide in various domains. This way the national scientific community should be aware of, and benefit from, scientific progress and innovation that Cameroon may need, wherever that knowledge is to be found.

The main actors of R&D in Cameroon are the public R&D and innovation units, the State universities and the international R&D organizations established in Cameroon. The Ministry of Scientific Research and Innovation supervises eight public R&D and innovation organizations, employing 500 researchers together:

- L'Institut de Recherche Agricole pour le Développement (agriculture);
- L'Institut de Recherches Géologiques et Minières (geology and mining);
- L'Institut de Recherches Médicales et d'Etude de Plantes Médicinales (medicine and medicinal plants);
- L'Institut National de Cartographie (cartography);
- La Mission de Promotion des Matériaux Locaux (locally produced raw materials);
- Le Centre National d'Education (education);
- Le Comité National de Développement des Technologies (technological development); and
- L'Agence Nationale de Radioprotection (protection against radiation).

Since the reform of higher education in 1993, Cameroon now has six State universities. In 2003, 71,091 students were registered at these universities (of which about 2,000 were Ph.D. students). There are eight international R&D organizations established in Cameroon. They are carrying out joint projects with local laboratories. Cameroon, through the Ministry of Scientific Research and Innovation, has developed scientific collaboration with, on the one hand, several countries (France, the United States, the United Kingdom, Belgium, etc.) and, on the other hand, international organizations dealing with science and technology, such as the relevant bodies of the EU, the French public science and technology research organization "Institut de Recherches pour le Développement", the World Bank, the International Atomic Energy Agency, the World Intellectual Property Organization, the African Development Bank, the Food and Agriculture Organization and, the United Nations Educational, Scientific and Cultural Organization.

Thanks to this intensive international cooperation, the R&D organizations of Cameroon are integrated in the global networks of R&D, allowing them to strengthen the competences and productivity of their researchers. The majority of these researchers have already worked with colleagues from developed countries within the framework of joint projects. The Ministry for Scientific Research and Innovation should ensure, using a comprehensive system of evaluation, that local researchers are in a position to compete, and also cooperate, with the best scientific teams of the world in various fields, so as to be aware of scientific progress necessary for the development of Cameroon. The implementation of these research programmes has had promising results in areas as varied as agriculture and livestock farming, energy, hydrology, cartography, health and nutrition and, the development of materials and natural resources.

The local R&D expertise developed through these measures could be used in various ways, including in projects

carried out for foreign affiliates of TNCs established in Cameroon. Generally speaking, TNCs have not yet established R&D units in Cameroon. Nevertheless, the agricultural industry would offer important opportunities for them. Agriculture is an important part of economic activity in Cameroon and, there are important R&D capacities in that industry, notably the Research Institute for Agricultural Development and the University of Dschang. The Research Institute for Agricultural Development is one of the Government's main instruments in the implementation of the national agricultural policy. The Institute carries out a large number of the activities financed by foreign affiliates of foreign TNCs located in Cameroon. The expertise and the innovations provided by the researchers of the Research Institute for Agricultural Development have contributed to the development of an industrial-scale agricultural activity carried out by affiliates of TNCs in the production of bananas, cotton, palm tree oil, cocoa, coffee, maize, rice and beer.

To summarize, the Government of Cameroon is committed to the improvement of the country's attractiveness for FDI in R&D. To that end, concrete measures are being taken to improve the governance of R&D units and to attract investors. Actors operating in the fields of education, R&D and innovation are required to react better to the technological, scientific and professional needs of the private sector and, to contribute to making Cameroon an attractive location for foreign investors looking for human capital.

FDI and R&D: Sri Lanka's experience

Dilip S. Samarasinghe[1]

Many governments have now realized that a key element in achieving economic prosperity, as the developed nations have done in the past, will be to acquire the capability to produce advanced or high value goods. The approach taken by Asian Governments and their investment promotion agencies (IPAs) has been to actively seek FDI, notably in the area now known as business services outsourcing. While India has been the main beneficiary of this trend, other countries, such as Sri Lanka, have also made a few inroads in this direction. One of the main reasons why companies in the developed world opt to set up offices in South Asia is in the competitive relative wages of the sub-continent. Fluency in English is another key consideration. Modern communication systems are another important part. A good example is a United-Kingdom-based medical insurance company that has set up a back office operation in Colombo, Sri Lanka. Every day letters and claims are scanned and sent to Colombo where they are processed. This happens when it is night time in the United Kingdom. By saving on time through back office operations, companies are able to offer a better service to their customers.

FDI in outsourcing has provided benefits to the Asian host countries, including jobs for young people in activities that are new, and indeed never existed before. It is a critical area because it also includes high-technology activities, such as R&D. The jobs created by foreign affiliates of TNCs are also seen as one way to slow down or reverse the massive brain drain from which the sub-region suffers. FDI in advanced areas

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of research offers new opportunities for the skilled, educated and talented people of South Asia to remain in their countries.

TNCs are technological leaders and their presence in a country will inevitable result in a certain level of technological transfer. They can bring in knowledge on how new goods and services can best be produced. This leads to the enhancement of the skills of labour forces and also brings in more advanced management know-how. It is strategically vital for developing countries and, in particular, those of South Asia to succeed in entering the select club of nations that produce complex or high technology goods and services.

The pursuit of FDI also serves as a basis to channel factors of production in an efficient manner. Countries that have succeeded in attracting FDI have experienced a significant growth and diversification of their exports. In Sri Lanka, companies that come under the purview of the country's IPA produce 60% of export in general and 80% of all industrial exports. In Sri Lanka, FDI based investment represents much of the modern sector of the economy.

A key issue that developing countries need to address is how they interact with TNCs. It is now generally accepted by most developing countries that the presence of TNCs in a country is an indicator of the confidence of a large investor in that country. It is very much like a certificate guaranteeing that the country is politically stable and economically sound. Hence, a country that is able to secure the establishment of TNCs on its territory will be considered, to use a newly coined word, "investment friendly".

In Sri Lanka a central authority, the Board of Investment of Sri Lanka (BOI), handles all FDI. The BOI was founded in 1978 by a government that was seeking to liberalize the country's economy, which had been administered for over two decades under socialistic policies with strong controls and a

commitment to import substitution. Sri Lanka was the first South Asian country to move in the direction of economic liberalization before India, Pakistan and Bangladesh.

What makes the BOI different to most IPAs is the sheer scale of its mandate. By the end of 2004, a total of 1,760 companies had invested in Sri Lanka. These employ an estimated 400,000 workers both within and outside the 12 export processing zones. Employees in the zones amount to 121,118. While other IPAs restrict their activities to the attraction of investment, BOI officials call their organization the Investment Management Agency, since it is responsible for attracting investment and processing applications, managing Sri Lanka's export processing zones, managing a separate customs and tax regime aimed at foreign investors and, attracting investment related to infrastructures and other areas. As a result, the organization has a staff of over 1,200 and this size has often led to questions being raised.

While there are many issues confronting FDI in developing countries, the most important consideration a government faces is the type of investment it is seeking to attract. One of the main differences between developing and developed countries is that the developing nations that are seeking to attract FDI are often "generalists". They will not be selective in the type of investment they are seeking to attract, accepting projects from a wide array of sectors and industries.

However, such countries may risk having foreign affiliates whose activity offers very few benefits in economic terms. IPAs of developing nations therefore must move to a more focused approach when seeking investments. Sri Lanka has made some moves in this direction by identifying 12 industries for investment. The BOI has identified those specific priority industries for investment, of which, the eighth is entitled "Research and Development". Unfortunately, there

have been very few inflows in the area of R&D despite the incentives offered.

In R&D, to qualify for incentives, a foreign investor needs to invest a minimum of $50,000. If the project is approved by the BOI, and the agreement signed, the government of Sri Lanka will grant the investor a five-year full tax holiday. Thereafter the investor will pay a 15% concessionary tax. The investor will also benefit from import duty exemption on capital goods. However, this will not be granted for raw materials imported and, there is no exemption from exchange controls.

One of the main reasons for the limited amount of R&D-related FDI flows has been the relatively small size of Sri Lanka. Projects that involve higher technology usually require a more technically qualified workforce, which may not always be available in the quantities sought by the TNCs.

Another reason is the relatively limited number of jobs created through R&D. Governments have always been much more keen to attract investment in areas which provide large-scale employment. Employment generation has been also a traditional objective in Sri Lanka. Job creation has been clearly a primary objective of the Government, especially in industries that can employ lower income sections of the community.

Nevertheless, officials of the BOI have also shown interest in high-technology projects, as they help in skill creation, the diversification of the economy and, result in a certain amount of technology transfer.

The success of developing countries in the future will undoubtedly depend on how they succeed in transforming themselves from generalists to specialists and, by that means attract investments that result in greater technological skills. Within the developing world, Sri Lanka has made its first steps

towards identifying its priorities, although the results so far are more moderate. It remains to be analysed further why very few inflows in the area of R&D have taken place despite the incentives offered.

Summary of the Expert Meeting on the Impact of FDI on Development, held in Geneva, from 24 to 26 January 2005[1]

1. Introduction

In accordance with its agenda, the Expert Meeting on the Impact of FDI on Development discussed the globalization of research and development (R&D) by transnational corporations (TNCs) and its implications for developing countries. The topic reflected a growing recognition in developing countries of the role played by innovation and R&D in development. Innovation and R&D are essential for upgrading technologies, moving up the development ladder and, catching up with developed countries. In technology generation, transfer and diffusion, developing countries are involving TNCs that are major players in global R&D.

In his opening address, the Chairperson of the Expert Meeting stressed the timeliness of linking the topics of R&D and TNCs. He noted not only that selected developing countries now receive more FDI in R&D, but also that the nature of this FDI is changing, in that it is no longer intended only for local market adaptation. The critical question is whether this phenomenon will spread in the future to a larger number of countries and, if so, under what conditions. (None of this is to deny that there are other key actors in many countries engaged in R&D, namely the public sector and the local private sector). The related practical question is what countries can do to harness the activities of TNCs to their own development objectives. On that point, he asked if R&D is a luxury only to be enjoyed by relatively rich societies, and suggested that its

[1] The summary was prepared under the responsibility of the Chairperson of the meeting, H.E. Mr. Enrique Manalo, Ambassador Extraordinary and Plenipotentiary, Permanent Representative of the Philippines to the United Nations Office and other International Organizations in Geneva.

relevance to developing countries in general depends on their aspirations and policies.

Experts discussed the definitions of critical terms in the subject matter. Some stressed the importance of broadening the discussion from R&D to knowledge creation and innovation. Other experts highlighted the importance of looking at cases of R&D in service industries, not just in manufacturing, given that the bulk of world GDP these days is produced by service industries, and R&D is itself a service activity.

2. TNCs and the internationalization of R&D

Several experts stressed that TNCs are only one player in national innovation systems, alongside universities, research centres, domestic firms and other government institutions. TNCs do not generally conduct basic research, and perhaps it is not even desirable to push them into that area. In the interaction of TNCs with other players, the main question is how developing countries can become more actively involved in the process of global knowledge generation and diffusion by leveraging the activities of TNCs in a way that complements domestic efforts.

R&D and innovative activities have generally been confined to the home countries of TNCs much more than manufacturing activities have been. The standard explanation refers to the complexity of R&D activities and the need for geographical proximity. Nevertheless, in recent years R&D activities have become more internationally mobile, and developing countries are starting to become nodes in global innovation networks. In fact, examples of highly complex R&D-related work – such as chip design – were highlighted by some experts to indicate that complexity may no longer constitute a barrier to the internationalization of innovation. It was also noted that the markets for knowledge workers and technology are also becoming increasingly international.

Some experts stressed the importance of distinguishing between different phases in the internationalization of R&D. Until the 1960s, R&D tended to be very "sticky" and stayed in home countries. Starting in the 1960s, the first wave of R&D internationalization involved mainly asset-exploiting R&D aimed at adaptation of products for local markets. The second wave began in the 1970s, and was primarily directed towards adapting specific new products to particular local markets. In the third wave – starting in the 1980s – R&D internationalization was driven by the need for firms to find complementary expertise abroad, notably in other developed countries. This trend was intensified from the 1990s onward and, in the fourth wave there was increasing demand for scientific expertise of a scale and scope that could not be easily met without expanding internationally. In this phase, "asset-augmenting" R&D has also grown in importance.

3. Regional patterns

While most R&D activities remain in developed countries, experts concluded that developing countries are becoming more important as both host and home countries of FDI in R&D. In recent years, China and India have become the leaders of the developing world in FDI in R&D, partly because of their large and fast-growing markets and, their large supply of low-cost engineers and scientists. While noting that important examples of R&D by foreign affiliates could be identified in all parts of the developing world, the experts indicated that these two countries have been particularly successful in attracting "asset-augmenting" R&D conducted with a view to developing processes and products for global markets.

Experts noted that in Latin America and the Caribbean, R&D activities of TNCs are relatively limited, especially when compared to Asia. One of the reasons for this is that in most

Latin American and Caribbean countries, FDI policies focus on attracting large quantities of FDI and do not pay much attention to the nature of FDI. R&D-related FDI in the region is of an adaptive type, with some degree of new product development for local or regional conditions. However, more recently, some countries such as Brazil have begun to attract increasing FDI in R&D oriented towards global applications (for instance in the case of R&D in automobile components).

Experts also observed that Africa attracts low levels of FDI in general and negligible R&D-related activities. The few R&D activities to be found are restricted to the application of existing knowledge rather than the development and application of new ideas. This was attributed to three main reasons: first, the mismatch between science and FDI policies (in many African countries, science, technology and innovation have not been mainstreamed in development strategies); second, a lack of linkages between investment promotion policies and research polices – indeed most FDI policies focus on financial capital rather than knowledge accumulation and human capital (investment promotion agencies (IPAs) for instance, focus more on turnkey projects); and third, the lack of a culture of public-private partnerships. The need to develop proper technology and innovation polices was stressed. In this respect NEPAD was urged to make efforts to improve infrastructure in Africa and enhance the development of science, technology and innovation policies in the region.

4. Drivers and determinants

The issue of the size of host countries was mentioned by various experts as a factor in attracting R&D-related FDI. The situation of the LDCs was singled out since they usually have a very small R&D base. However, it was indicated, that there are areas where R&D-related FDI could develop. In Nepal for example, opportunities exist in the agricultural sector (tea gardening and herbal medicine). It was recognized that LDCs

deserve special attention and assistance to help them face the problems they encounter in this area.

A number of drivers of the current internationalization of R&D were identified. One key driver is the increased competitive pressure created by liberalization and technological progress (not least in the area of information and communication technologies), which forces firms to spend more on R&D and speed up the innovation process, while seeking to reduce costs and find the necessary skills. For some developing countries, this has opened new avenues to link up with global innovation networks. Various supply and demand factors, along with policies, were identified as important explanations to why, and in which locations, the globalization of R&D takes place. They include the desire to supply large and fast-growing markets; physical proximity to global manufacturing bases; the search for lower-cost overseas R&D personnel and, for new ideas and innovative capabilities. Dramatic changes in design methodology and organization on the supply side have also contributed to a greater need to globalize R&D work. In India, the existence of reputed national research institutes and, the management style of local companies for example, were also mentioned as specific factors attracting FDI in R&D. The presence of Indian nationals in the R&D centres in developed countries could also influence the choices of TNCs in locating their overseas laboratories in India.

Experts noted that TNCs from developed countries are no longer the only source of R&D-related FDI. There is also growing FDI in R&D (from a low level) by developing country TNCs, e.g. from the Republic of Korea, China and India. Overall, motivations for such FDI tend to be similar to those for R&D-related FDI from developed-country TNCs (for example, to support local sales abroad, to be near global manufacturing bases and, to hire foreign experts). However, while in developing locations the main purpose appears to be to exploit existing knowledge, which is generally second-generation

technology, in developed locations the main motivation is to enhance innovative capability by acquiring local knowledge and technology. Some experts concluded that cost advantages are of relatively low importance as a driver for developing-country TNCs' R&D investments abroad. Experts agreed that more research is required on R&D-related FDI from developing countries in order to develop a better understanding of this relatively recent phenomenon.

5. Development impact

A number of positive and negative potential impacts on host economies were identified. Key direct positive impacts mentioned included the creation of well paid employment for scientists and engineers; better use of locally available materials; technology transfer (new equipment, laboratories, etc.); and the design of consumer products better suited to domestic needs. Indirect positive effects include spillovers to local firms; the inculcation of an R&D culture in local firms; the development of new disciplines and specializations at local universities; the development of R&D clusters; and spin-offs of by-products that TNCs do not want to develop themselves.

As for negative impacts of FDI inflows in R&D, experts mentioned the risk of crowding out in the labour market, making it more difficult for local firms to attract talent; the risk of crowding out local research units; limited linkages between foreign affiliates and local firms and institutions and, the risk of domestic R&D activities being closed down as a result of foreign entry, notably through acquisition. The net impact on a host economy depends on the nature of the R&D undertaken and the specific circumstances of the host economy. It was noted that the development of domestic skills and innovation capabilities is essential not only to attract FDI in R&D but also to benefit from such investment.

The extent to which developing countries could benefit from knowledge diffusion and innovation also depends on the extent to which a TNC is embedded in the wider network of research operations, including domestic firms and the public sector. The mode of these interactions is also important, e.g. through non-equity or equity forms; with suppliers, customers, competitors and universities; through outsourcing and offshoring and, through the establishment of research consortia.

6. Policies matter

There was general agreement among experts that active policies by governments could play a leading role in creating and facilitating the right conditions to attract and benefit from FDI in R&D. Key instruments mentioned by experts related to science, innovation and technology policies, as well as FDI policy. Many experts emphasized that in the light of the shift towards more knowledge-based activities and increased internationalization of innovation activities, policy-making aimed at attracting and benefiting from FDI in R&D needs to treat the two policy areas in a holistic and coherent way. Several experts noted that in many countries there is a lack of coherence between FDI policies and science and technology policies.

Among general policy instruments, some experts mentioned FDI liberalization and the strengthening of the national science and technology base, including research institutions. Specific policy instruments that can be considered include incentives, performance requirements, investment targeting, and the provision of public goods (notably low-cost and high-quality infrastructure). One expert noted that in some developing countries, high tariffs on imported R&D-related inputs hamper those countries' efforts to create or develop R&D capabilities. The importance of policies in the area of education and skills development and efforts to strengthen the national innovation system was stressed by various experts. There is also

a need to secure an appropriate division of responsibility between central and local governments.

In this context, special attention was paid to the role of IPAs. In many developing countries, IPAs do not pay adequate attention to the potential for attracting FDI that could contribute to knowledge accumulation, but focus rather on capital accumulation in tangible assets. It was argued that an IPA needs to be well embedded in the overall system of national innovation and that promotion activities should be aligned with a country's overall development and innovation strategy. In the case of the Czech Republic, for example, the IPA has a mandate to promote R&D in both foreign and domestic companies; to attract FDI, and to advocate improvements in the country's technological infrastructure; to work with both existing and new investors to encourage new R&D-related investment and, to promote closer linkages between R&D conducted by foreign affiliates on the one hand, and that conducted by domestic firms and universities, on the other.

An important function of policies is to promote closer integration between TNCs and other R&D players, including domestic firms, universities, and other agencies, in order for host countries to capture more of the benefits of knowledge creation and diffusion. Without good linkages between all these actors, knowledge will not be diffused and innovation promoted. Some experts were of the opinion that developing countries in general could benefit from the globalization of R&D but could not use it directly to upgrade the competitiveness of their science and technology capabilities. To do that, they have to complement FDI in R&D with efforts by local public institutions and the private sector. This point was raised for instance, in the case of China and some African countries. A number of experts emphasized the importance of building a balanced partnership between the public and private sectors.

Small developing countries may find it more difficult to successfully engineer strategies to attract FDI in R&D, as they have weak bargaining power and small markets. In this context, a key policy challenge is to set priorities and focus on niches where they could have a comparative or competitive advantage. The development of local capabilities and skills is also essential for such countries to take advantage of opportunities that may be created by the increased mobility of knowledge. Developing such skills and capabilities (particularly in engineering) and building a national strategy to take advantage of opportunities is a long-term process that could take 20 or 30 years, but the rewards of success could be high. Some experts pointed out that it has been done before, showing that small size is not an absolute constraint. Even small developing countries can find a niche for themselves and target specialized R&D activities to match their strengths. A number of experts stressed the need for the prioritization of government goals in related areas. Some argued that regional cooperation could offer opportunities for smaller countries to make themselves more attractive. Others suggested that the building of cooperation and partnership with other countries could go beyond the borders of given regions. International cooperation and the sharing of experience with other countries could also help smaller economies to develop their ability to design and implement appropriate policies.

Experts discussed the role of performance requirements in maximizing the benefits of R&D-related FDI in developing countries. While there was no consensus on the usefulness of performance requirements, several experts noted the importance of distinguishing between mandatory and voluntary performance requirements. The use of mandatory requirements related to R&D and technology transfer is not prohibited by the WTO Agreement on Trade-related Investment Measures, but has become increasingly restricted in various bilateral trade and investment agreements. However, when linked to the provision of incentives (or other advantages), such requirements are still generally permitted. One expert mentioned the importance of

offsetting agreements to encourage R&D-related FDI in large infrastructure industries.

Experts also discussed the role of incentives in attracting R&D-related FDI. Some found them useful in attracting investment in R&D in a host country by pioneer firms, who would later be followed by their competitors. Others questioned the usefulness of R&D incentives, arguing that TNCs tend to base their investment decisions in this area more on other factors, such as access to skills. The point was made that countries need to weigh carefully the costs and benefits involved. In this context, some experts noted that benefits to the company receiving an incentive should be assessed against the benefits accruing to the host economy, notably through spillover effects. The R&D work of foreign affiliates has been found in some countries to catalyse domestic R&D activities, help universities to identify new areas where skills development is needed and, attract more interest in technological fields from prospective students.

Several experts raised the issue of intellectual property rights (IPRs). It was noted that high levels of intellectual property protection are often sought by TNCs locating R&D in developing countries but, that the empirical evidence on the impact of IPRs on FDI in R&D is mixed. Referring to the discussion and work undertaken at the WTO in the context of the TRIPS Agreement, one expert recalled that the protection and enforcement of IPRs should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, as stated in Article 7 of the Agreement.

One expert noted that there is a general lack of awareness in developing countries that intellectual property represents assets that can be registered and used to generate income and, that the utilization of intellectual property as assets is important for development in an increasingly knowledge-intensive economy.

Some experts argued that developing countries should develop better intellectual property strategies covering the creation, ownership and commercial leveraging of locally developed research. This would involve, among other things, helping individual researchers and scientists to better understand the importance and value of intellectual property, as well as creating the appropriate incentive structures for them to protect new innovations. It was argued that, by becoming better at using their IPR regimes, developing countries would also become more interesting as partners to TNCs. One expert raised the issue of applying IPR concepts to indigenous knowledge.

Some experts stressed the need to develop public research institutions in the early phases of development. Such initiatives could help to foster the development of skills and raise a country's absorptive capacity. For example, it was noted that Cameroon has established a publicly funded institute for agricultural research around which the Government hopes to create public-private partnerships.

The role of home-country policies in encouraging TNCs to invest in R&D in developing countries and thus bringing benefits to these countries was also addressed. Some experts mentioned the potentially positive role of home countries in promoting FDI in R&D in developing countries, for instance by reducing the risks faced by TNCs when conducting R&D activities in foreign developing countries. The European Union for example, has contributed to the innovation systems of developing countries by encouraging an exchange of scientists and closer interaction between universities in developing countries and EU member countries. On the other hand, an expert noted the concern of some developing countries that developed countries are not fully meeting their transfer of technology obligations in terms of providing incentives to their enterprises to transfer technology to LDCs, as stipulated in the

TRIPS agreement (Article 66.2), although no specific example was given in the course of the discussion on this issue.

7. International cooperation

Some experts called for more bilateral cooperation between relevant institutions in developing and developed countries with a view to fostering policy formulation and stronger innovation systems in the concerned countries. An example of mutually beneficial cooperation between developed home countries of TNCs and developing host countries exists between France and universities in China. This cooperation has resulted in the training of highly qualified researchers who could find employment both in local institutes and firms and in affiliates of French TNCs.

In the light of the importance of innovation and R&D for economic development, and to build on the São Paulo Consensus highlighting the economic development dimension of corporate social responsibility, a suggestion was made to create a list of indicators to assess and measure the contributions of TNCs to the transfer of technology to developing countries. Such a list would be a new contribution to the analysis of the globalization of R&D in the context of assessing what could now be called the "corporate developmental responsibility" of firms.

Some experts regretted that among the Millennium Development Goals of the United Nations, there is no specific goal on science, technology and innovation. The need to explore the possibilities for the international community to support the strengthening of developing countries' national innovation systems, including enhancing opportunities for developing countries to benefit from the internationalization of R&D activities by TNCs, was highlighted. Such support could include both technical and financial assistance.