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INVESTMENT POLICY AND SCIENCE, TECHNOLOGY AND INNOVATION POLICY REVIEWS: METHODOLOGY AND EXPERIENCES

Note by the UNCTAD secretariat

Executive summary

This note contains a brief overview of the national policy reviews carried out by the UNCTAD secretariat. It introduces the investment policy reviews undertaken in Egypt, Peru, Uganda and Uzbekistan, and the science, technology and innovation policy reviews undertaken for Colombia and Jamaica. This note complements the individual country reviews by drawing common policy implications with respect to such issues as determinants of foreign direct investment, privatization, policy coherence, economic linkages, inter-firm collaboration, infrastructure and support institutions.

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CONTENTS

Introduction

1. UNCTAD undertakes investment policy reviews with member States that so desire in order to familiarize other Governments and the international private sector with an individual country's investment environment and policies, (in accordance with paragraph 89(c) of "A Partnership for Growth and Development"). Reviews have been carried out for Egypt, Uganda and Uzbekistan, and are under way for Ecuador and Peru. The next round of investment reviews includes Kenya, Mauritius, Pakistan and Zimbabwe. The reviews have benefited from the financial support of the United Nations Development Programme (UNDP) and the Government of Switzerland.

2. UNCTAD undertakes science, technology and innovation policy (STIP) reviews with interested countries in order to identify options for national action, especially those which foster technological capability and innovation and the transfer of and diffusion of technology, (in accordance with paragraph 89(k) of "A Partnership for Growth and Development" and resolution 1995/4 of the Economic and Social Council). STIP reviews have been carried out in Colombia and Jamaica, and are under way in Ethiopia and the United Republic of Tanzania. Requests for similar reviews have been received from Belarus, Cuba, Lithuania, Myanmar, Romania and Venezuela. The STIP reviews have benefited from the financial support of UNDP and the Governments of Italy and the Netherlands.

3. In order to facilitate consideration of the individual country reviews, and their methodology and experiences, the present note provides a brief overview of the work completed and in progress. Some of the more general policy implications arising from the completed investment and STIP reviews are also outlined.

I. Investment policy reviews

A. Methodology

4. The investment policy reviews assess a country's investment environment and policies. In particular, the reviews examine the country's objectives and competitive position in attracting foreign direct investment (FDI), evaluate the country’s FDI policy and institutional framework, and delineate its policy options. Details on the evaluation methodology are provided in the annex. The reviews go beyond an examination of how FDI policies look on paper, and investigate how successful those policies are in practice in achieving stated national objectives. Since investor response is based on both policy and non-policy factors, a key feature of the reviews is to survey both actual and potential investors to find out how they perceive current investment conditions and opportunities in the target country. Based on an analysis of investor perceptions and also of the relevant FDI trends at the regional and global level, the reviews assess the country's core competencies in attracting FDI, and then gauge the effectiveness of policies in leveraging the competitive strengths of a country and in remedying potential weaknesses. Although the reviews have a country focus, they proceed in a global context, comparing the country's policies, strengths and weaknesses with those of other countries, particularly in the same region. The reviews are underpinned by the data and analysis contained in UNCTAD’s *World Investment Report*.

5. The investment policy reviews are carried out by UNCTAD staff and by external and national experts, and they involve public and non-governmental institutions, including the private sector. The reviews are presented and discussed in national workshops involving public officials and other interested groups. The final reports are widely disseminated.

B. Experience

6. **Egypt.** The investment review of Egypt was initiated in July 1997 and completed in March 1999. A number of national experts prepared background papers.

A survey of 88 foreign companies operating in Egypt was carried out. Two national workshops were held, one in Cairo, sponsored by the Egyptian Federation of Industries, and the other in Alexandria, sponsored by the Alexandria Business Association. The participants, numbering over 200, included company executives from ABB, Arab Bank, Microsoft, Nile Clothing and Oriental Weavers. The review notes the efforts being made to improve the policy environment as well as areas where there is room for further improvement. The review also notes that the broad range of reforms to support export-led private sector growth has not yet attracted much export-oriented production, and suggests elements for an FDI strategy.

7. **Uganda.** The investment review of Uganda was initiated in January 1998 and completed in August 1999. The review notes that Uganda has made great strides in improving economic conditions and the investment climate, and has been rewarded with a revival of inward FDI flows, which have been among the highest in Africa. The legal and policy framework for investment is generally sound, but efforts to modernizing the investment code and orient the investment agency towards FDI promotion need to be followed through. Infrastructure and utilities constrain new investment and need improvement. An eight-point plan for investment promotion is proposed, and is to be presented to the Government at a cabinet briefing in September 1999, in parallel with the national workshop on the review.

8. **Peru.** The investment review of Peru was initiated in November 1997, with the commissioning of national experts to prepare a background study and undertake an investor survey. A fact-finding mission was carried out in December 1998 and the report is due to be finalized in September 1999. The review notes that Peru has dramatically improved its investment climate in the 1990s, and that FDI inflows have been high by world standards, enabling Peru to become one of the top 10 host developing countries. The country’s investment policy framework compares favourably with that of any country in the world. However, Peru still needs to attract more steady inflows of FDI, to diversify the sources of such investment, and to channel both foreign and domestic savings into new productive investment.

9. **Uzbekistan.** The investment review of Uzbekistan was initiated in November 1997 with a joint fact-finding mission involving staff from UNCTAD and the Organization for Economic Co-operation and Development (OECD), as well as an international expert. The report was issued in April 1999. The review identifies both the innate strengths of the country as an investment destination, and several economic and investment policy weaknesses that appear to have led to investment levels that are well below the country’s potential. The review sets out 10 recommendations addressed to the Government of Uzbekistan to improve the investment climate and further boost the country’s attractiveness as a destination for FDI. The recommended reforms are aimed at making Uzbekistan the prime foreign investment destination in Central Asia and an example of best practice for other countries in the region.

II. Science, Technology and Innovation Policy reviews

A. Methodology

10. The STIP reviews assess the effectiveness of a country’s science and technology (S&T) policies in supporting innovative activity in the enterprise sector. Traditionally, S&T policies and institutions (e.g. national laboratories, university research institutes and technical standards bodies) have aimed at the generation of new knowledge, but for many developing countries the main priorities are the transfer and diffusion of existing technology, the building of technological capabilities of productive enterprises, and fostering their capacity to innovate and compete in the global economy. Thus, there is often a need to orient S&T policies and institutions towards the needs of the users of innovations. STIP reviews assess

how well the country’s S&T infrastructure supports innovation and technological change at the enterprise level.

11. The methodological framework of the STIP reviews is the "national system of innovation" (NSI), defined as the network of economic agents whose actions initiate, import, adapt and diffuse new technologies, taken together with the public and private institutions and policies that influence their innovative behaviour and performance. In the NSI perspective, S&T institutions (the suppliers) and productive enterprises (who provide the demand) interact with one another and, through the exchange of information and knowledge, bring new products and processes into economic use. The important players include universities, technological institutions, research and development (R&D) centres, industry associations, financial institutions and, of course, enterprises of all kinds, large and small. The STIP reviews map a country’s NSI and assess how the elements of the national policy framework relevant to the NSI can be enhanced to support innovation activities in enterprises.

12. The STIP reviews comprise a background country report prepared by the national counterpart institution and an evaluation report prepared by an international team of experts that includes members of the secretariat. The two reports are discussed at a national round-table meeting, and later issued as a single publication.

B. Experience

13. **Colombia.** The first STIP review was undertaken in Colombia in 1995-1997. Among the recommendations that have been, or are being, implemented are: the restructuring of current financing schemes for existing and additional R&D resources; the transfer and allocation of sufficient resources for R&D and innovation in general; and other public sector initiatives reflected in the refocusing of public expenditures to take into consideration innovation activities and programmes. The national training agency has been restructured to incorporate training for innovation. In addition, national bodies charged with the strengthening of intermediary institutions (e.g. the standards and quality control institute, business support agencies) have been advised on innovation-related S&T policies and on how these can be better integrated into the institutions. The response of both the public and private sectors to this exercise has been positive.

14. **Jamaica.** The second STIP review was undertaken in Jamaica in 1997-1998. A number of recommendations proposed by the review team have been adopted, particularly in the information technology sector. Eight projects, covering the fields of education, technology and entertainment have been designed and are at the implementation stage. These stem directly from the review. Currently the Jamaican National Commission on Science and Technology is considering and seeking resources pertaining to the recommendations made in the entertainment sector (particularly music) and in the agro-business sector. The Jamaican NSI is being developed and, as proposed by the STIP review, will feature the integration of the country's national institutions. As a follow-up to the review, a subregional project entitled "Becoming a global player: opportunities in the music industry for developing countries" has been initiated. Several other Caribbean countries, including Cuba and Trinidad and Tobago, have shown interest in this project.

15. **Ethiopia.** The third STIP review was initiated in Ethiopia in November 1997. The Ethiopian Investment Authority and the Ethiopian Science and Technology Commission have jointly prepared the country background report. An evaluation mission consisting of UNCTAD officials and three international experts was carried out in November 1998. The mission focused on five areas identified by the Government as priorities: the small and medium-sized enterprise sector, investment, policy coordination, agriculture and the leather industry. The evaluation report is scheduled for completion in August 1999. The final round-table meeting presenting

the conclusions and recommendations of the review to the Government is scheduled for September 1999.

III. Policy implications

16. In all the developing countries reviewed, inward FDI has been registering an upward trend. FDI has also been contributing to capital formation in countries where domestic savings are low, (such as Uganda). However, FDI should be seen as complementary to domestic efforts. High national savings and investment rates, as well as technological capabilities, tend to attract greater FDI inflows. The main national objective in seeking FDI is the package of benefits that can accompany foreign capital, including technology, managerial know-how and privileged access to world markets.

17. **FDI determinants.** A key factor contributing to greater FDI inflows is the macroeconomic and policy environment. Almost all the countries reviewed are characterized by political stability, encouraging macroeconomic indicators and transparent, investor-friendly policy regimes. In the UNCTAD country surveys, investors cited a friendly regulatory environment, liberalized rules for FDI and a growing economy as important factors in selecting an investment location. However, a country's competitiveness is also determined by the microeconomic environment in which firms operate. In this respect, most of the countries reviewed have been generally less successful in creating a conducive environment for business operations. The obstacles include factors such as bureaucratic procedures and regulatory frameworks, infrastructural bottlenecks, a shortage of technically trained personnel and the relative absence of support institutions.

18. **Privatization.** FDI is attracted by privatization opportunities. While privatization is expected to lead to increased efficiency and productivity, it may not always add new capacities, at least in the short term (as in Uganda). FDI inflows into privatized sectors appear greater where there are, from the outset, transparent rules backed by effective implementation. Best practice in Peru includes the strategic design of transactions (e.g. in utilities) to appeal more to industrial investors rather than to financial investors, transactions executed by investment banks and the development of concessions or "build-operate-transfer" contracts after the privatization programme, thus facilitating the private management of infrastructure projects in certain utilities. The present modest levels of FDI in Uzbekistan are due to the country’s deliberate choice of a transition policy of economic reform that has so far precluded privatization of the utilities and major State enterprises.

19. **Policy coherence.** The investment environment can be improved by ensuring greater policy coherence and implementing government policies more effectively. In Uzbekistan, for example, the individual policies of Government agencies either fail to support the Government's objectives or in some cases actually work against these objectives. Similar tendencies are also observed in Ethiopia, where the investment regime is relatively more open than the technology regime with respect to technology transfer. Incoherent policies give conflicting signals to potential investors, and therefore synchronization of complementary policies through inter-agency collaboration at the stages of policy formulation and implementation is vital.

20. **Infrastructure.** The hidden costs arising from weak infrastructures can offset the advantages of low labour costs (as in Uganda). Poor road networks raise transport costs and increase delivery time. An irregular supply of electricity means that manufacturing operations cannot operate at full capacity. Building an efficient infrastructure is mainly the domain of public investment and development assistance, although there are opportunities for private sector participation in some areas.

21. **Linkages.** In most countries, FDI has not created strong linkages in the local economy. The value added by foreign firms tends to be the labour component, as many

inputs and components are imported. A chain-of-production approach has been used successfully in Colombia to encourage the formation of backward and forward linkages. In order to address technological problems faced by enterprises participating in particular productive value-added chains (e.g. textiles-clothing, steel-mechanics, wood-pulp, paper-printing), specific incentive mechanisms were developed to stimulate enterprises to develop high-tech products designed and produced locally. This approach, when combined with a strategy based on attracting FDI into targeted sectors of comparative advantage, where raw materials and other inputs are available in the country, could help to create clusters of industries, in which suppliers, customers, subcontractors and support institutions are present. As a result of such a strategy, FDI can help to create stronger linkages within an economy.

22. **Support institutions.** Technology and business support services can help firms shift from low value added activities to high value-added activities. In many countries, S&T support institutions exist, but operate in isolation from one another, and with few linkages to the productive sector (see the STIP reviews for Colombia and Jamaica)[1]. Bringing S&T closer to the needs of local production and building a nexus between formal centres of knowledge generation and production remains a serious challenge. One policy priority could be to urge public research institutes to collaborate with the private sector and to encourage enterprises to invest in R&D, if not for the generation of new technologies then for the adaptation of imported technologies and their effective utilization. Public training institutions may require reorientation in line with the needs of production. Support can also be provided through the creation of venture and risk capital funds. Such funds, especially those aimed at small and medium-sized enterprises, are common in the industrialized world. Generally, there is an inadequate demand for technology services by the enterprise sector.

23. **Inter-firm collaboration.** Policies should be designed to promote inter-firm collaboration, in terms of sharing and pooling knowledge and resources. Interaction between firms creates synergies and beneficial externalities, and fosters the development of dynamic clusters of industries (as in the case of the coffee and cut-flower clusters in Colombia). The field survey conducted in Ethiopia shows that firms that have links with other firms undertake technical change faster than firms operating independently. On the other hand, firms that fail to learn or to engage in innovative activities are either those that operate in a less competitive environment or those that do not face pressure to change. Thus, horizontal and vertical knowledge flows between firms, clients and suppliers are important. One implication for policy is that partnerships and cooperation between foreign firms and domestic enterprises can promote learning in local companies.

[1] UNCTAD/ITE/IIP/5 and UNCTAD/ITE/IIP/6

Annex

Evaluation methodology of the investment policy reviews

1. The investment policy review evaluates a country's FDI regime both in terms of the declared national objectives and, on a comparative basis, in relation to international best practice. The evaluation considers the content of policy instruments, the administrative procedures through which policies are implemented and actual practice as experienced by investors. This analysis is undertaken on the basis of questionnaires sent to the Government and to firms with operations in the country, supplemented by other sources. The following areas are examined:

(a) Policy and operational framework for FDI:

(i) The main regulatory conditions for foreign investors: entry and establishment; ownership and control requirements; sectoral restrictions; authorization and reporting; operational conditions (including performance requirements, licences, personnel requirements); and standards of treatment;

(ii) The main protections for foreign investors: national and most-favoured-nation treatment; fair and equitable treatment; legal protection and guarantees (including general standards and specific standards on, e.g., expropriation); transfer of funds and repatriation of profits and capital invested (including exchange controls and currency convertibility); access to international means for settlement of investment disputes; and standards for foreign investors provided by international instruments (bilateral, regional, interregional, multilateral);

(iii) Additional standards that govern foreign investors: competition policy (including restrictive business practices); monopoly regime; public sector privatization; merger and acquisitions regime; market preferences; accounting and reporting; consumer protection; environmental protection; and quality and safety standards;

(iv) Any special regulatory conditions for non-equity arrangements, such as management contracts, licensing and franchising and "build-operate-transfer" schemes;

(v) Any special provisions for specific sectors and industries, particularly those of present or future importance for FDI;

(vi) The structure of fiscal and financial incentive measures and preferential market treatment offered at all levels of government, including discretionary or ad hoc incentives;

(vii) Other promotional measures, such as: investor services (e.g. information, "one-stop shops", post-investment services); investor facilities (e.g. infrastructure, export processing zones, science parks); and home country measures (bilateral tax treaties, trade preferences, development aid);

(b) Administrative procedures and practices:

(i) The institutional framework for FDI and its *modus operandi*, including issues such as: degree of centralization of the bureaucracy; the degree of discretion given in the interpretation and implementation of policies; the level of complexity or simplification of administrative operations; the extent to which implementation is monitored; and the costs and benefits of promotional programmes;

(ii) Transaction costs and the efficiency of administrative procedures as perceived by business, in terms of practical issues such as delays in obtaining approvals. This includes areas such as the judicial system (e.g. the predictability of business contracts), the fiscal regime for business activities and the banking and financial system and security markets.

2. **Policy coherence.** Given the interlinkages between investment, trade, the transfer and diffusion of technology and financial transactions, it is important that policies in these various spheres point in the same direction in a coherent and complementary fashion.