Business and Industry Advisory Committee to the OECD

Comité Consultatif Economique et Industriel Auprès de l' OCDE

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Science, Technology and the OECD
A Strategic Vision

Introduction

The OECD plays a central and important role to help governments discuss and better understand trends and interdependencies that influence economic policies and their implementation, and to compare national experiences using these approaches. Science and technology policy forms an integral part of this work.

BIAC mirrors the range of policy issues that the OECD covers. Our objectives are on the one hand to contribute to the OECD's work in ways that illuminate the nature of business activities and reflect business priorities; and on the other to provide our members with information on this work and its implications for business. BIAC is involved in a broad range of OECD activities, because the quality of the analytical output is widely recognised by the business community to be of high quality and direct interest.

In particular, we aim to contribute a unique perspective and practical experience to activities that concern science and technology. This paper sets out areas where BIAC currently believes it is important to focus these activities.

The primary channel for work on science and technology policy within the OECD is the Committee for Scientific and Technological Policy (CSTP). The strategic objectives of this committee are to identify and assist the implementation of micro-policy reforms needed for enhancing innovation, growth and productivity in knowledge-based economies. One priority is to develop policy-relevant, internationally-comparable statistics and indicators for the knowledge-based economy. Special attention is given to areas such as the globalisation of productive and research activities, human resources in science and technology, intellectual property rights, biotechnology and information technology. Where feasible and where resources permit, work is being undertaken to include information on and increase cooperation with key non-member economies.

The relevance of science and technology policies extends beyond the work of CSTP itself, because of key interdependencies. Education, trade and fiscal policies are important examples. There are already situations in which the OECD takes a 'cross-cutting' approach to its work and where science, technology and technology-led innovation are important, for example in the case of sustainable development. Although the need for focus is evident and BIAC believes that the strength of the OECD rests on the depth and rigour of its work, nonetheless, these cross-functional components are of particular importance as economies make the transition to a greater knowledge dependency within the context of an open, global market environment. BIAC believes that these considerations should feature centrally in the selection, design and execution of OECD's work.

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Suggested Action Plan for OECD

Priorities and Strategic Objectives

The work programmes of committees such as CSTP fit well within the broader context of the OECD's medium-term priorities, including understanding the mechanisms through which innovation and development and adoption of new and improved technologies contribute to economic growth and greater social welfare. Through these activities, the OECD makes important contributions that document key trends and issues of science and technology policy, inform national and international debates on these issues, and contribute to a better understanding of all other areas of public policy in which the role of science and technology is significant.

BIAC follows the broad spectrum of these activities with interest: work on science and technology indicators; science-innovation interfaces; the development and mobility of human resources; intellectual property rights; innovation; the diffusion of knowledge; and access to research data obtained using public funding. The BIAC Technology Committee has set up a special ad-hoc group on IPR as well as an informal network for the China innovation project. Members of the Technology Committee also liaise closely with other BIAC committees that contribute to OECD work on biotechnology, education and general trade and fiscal policy.

Today, BIAC sees that national governments are making considerable efforts to ensure their comparative advantage in what have become complex, open yet inter-dependent knowledge-based economies. Questions concerning the parts played by actors such as companies, public institutes, governments and civil society, asked and answered in one way at a previous time, require re-examination in the face of this growing complexity and interdependency.

Without good understanding of the processes by which science and technology reach the marketplace and benefit civil society today, resilient solutions for the future are unlikely to be found. It is essential to understand those parameters that support the creation of sustainable innovation-friendly environments. This work involves studying many aspects of the economy, and must correspondingly be carried out in a truly cross-cutting fashion.

In view of these considerations, BIAC recommends OECD to focus on developing a clear understanding of topics such as the following:

- *Encouraging value creation and economic growth in knowledge economies*

As the knowledge component of economies increases, processes of value creation change. The parts played by intellectual activities such as R&D and intellectual assets such as IPRs, software, organisational procedures, brands and reputation are evolving and becoming more significant. One consequence, for example, is that while service content grows, other skills and activities such as manufacturing and technology development do not necessarily become less important as a result. Consequently, economies must develop new mixes of resources and skills within appropriate ecosystems. OECD has key responsibilities in documenting the changing processes of value creation, the evolving nature of activities such as R&D, the consequences of supporting greater service content and the development of new mechanisms of intellectual property protection, thereby illustrating how the knowledge economy works and showing how economies are being and can be organised to reap the benefits.

Considerable work has already been done to evaluate the effectiveness of national innovation systems. By understanding the results and benefits that this understanding has generated, we can be more certain that available analytical methods offer suitable tools for looking forward.

- *Effectively managing knowledge creation and knowledge use as global activities*

The growing internationalisation of activities such as research & development and of public knowledge institutes such as universities provides new opportunities to combine local strengths and benefit from specialisations on a global scale. While this offers great potential for benefit, some inevitably see the trends as a threat or 'race to the bottom'. In order to gain the opportunities that do exist, fair rules and efficient procedures are required across wide areas of public policy, for example concerning the use and protection of intellectual property, and the organisation, governance and role of public institutes. The Brussels conference on internationalisation of R&D offered an excellent starting point for discussions in this area, and we recommend that this understanding should be deepened through a dedicated OECD work programme in this area.

- *Gaining benefit from the consequences of Open Innovation, particularly within Public-Private Partnerships*

Open Innovation has become a reality in many sectors of economic activity, not only between companies but increasingly at a strategic level among public and private partners. This offers tremendous opportunities but also raises new challenges, such as the role of public research institutes, and concerning consistent procedures and regulations within and among nations (such as between R&D and State Aid policies on the one hand, and for knowledge flows within trans-national networks on the other). Questions to be addressed concern the part that national initiatives, programmes and procurement activities play in stimulating innovation, how public institutes in one country can most effectively involve and benefit economic actors based in another, and what controls and restrictions, if any, it is legitimate to place on the flow of intellectual assets that result from such collaborations.

- *Documenting flows of human capital as well as technology*

There are good data available concerning flows of traditional technologies. Insight concerning the flow of new areas of knowledge and concerning the mobility and career pathways of the highly qualified personnel who carry this knowledge is less advanced, yet important in order to reap the benefits from innovation. OECD has a key role to play in improving the statistical basis for measuring these flows of technology and people, documenting the controls and forms of governance that facilitate these flows, and thereby developing recommendations on how to benefit from these developments. Recent activities on Business-Education Partnerships (Dublin, January 2005) and Doctoral Programmes (Paris, September 2004) provided useful insight, which we believe can be developed further in collaboration with CSTP.

- *Encouraging innovation in health care technology*

BIAC strongly supports OECD's mandate to facilitate innovation in health care technology, recognizing that such innovation leads to better health outcomes for citizens, greater efficiencies in health care, improved competitiveness, and stronger economic growth. To maintain a continuing flow of innovation in health care technology requires development of a sound understanding of the policy environment and other conditions that enable innovation, encourage diffusion, and facilitate uptake. By promoting better understanding of these factors, the OECD can help member governments to identify and remove barriers to innovation. BIAC encourages the CSTP to undertake work involving the use of existing and new measures to assess the results of innovation, such as improved health outcomes, cost savings to governments and other payers, and advances in economic growth and competitiveness.

- *Fostering a high-quality international system for IPR*

Effective intellectual property protection is one of the central pillars on which the knowledge-based economy and global markets rest. International IPR regimes are facing considerable pressures as the nature of discovery and innovation change. A high-quality IPR system responding to these new challenges and developments is essential to provide a workable policy framework for innovation. OECD has a continued important role to play in this area. BIAC particularly welcomes that phase 1 of the OECD counterfeiting project has now been launched and looks forward to being actively involved in the implementation of the project.

- *Analysing the innovation systems of the major emerging economies and their impact on OECD countries*

BIAC welcomes the growth of the OECD's outreach programme in China and its important role in fostering an open policy dialogue with Chinese authorities. We are particularly pleased that the OECD and China have now decided to extend their cooperation to the area of innovation and have called upon the OECD to continue to do so for other areas, including continuing the constructive dialogue that was launched on protecting and enforcing intellectual property rights. In addition to studying the Chinese innovation system, we feel that OECD should also address possible barriers for foreign investors (e.g., compulsory technology transfer to obtain investment approval or contracts for public procurement).

BIAC looks forward to discussing these issues with the CSTP and OECD staff in more detail and stands ready to assist the Organisation and its members in bringing these programmes forward.