Knowledge and Innovation for Inclusive Development

This two-year project analyses the impact of innovation and related policies on inclusive development. Addressing the needs of policymakers in both key non-member economies and OECD countries, the aims of the project are to:

- Provide evidence on the impacts of innovation and related policies on inclusive development, focusing on industrial, social and territorial inequalities; and
- Develop concrete policy solutions to support countries in reconciling their innovation and inclusive development agendas, including options for scaling up inclusive innovations in education.

The analysis will focus on China, Colombia, India, Indonesia and South Africa and also draw on other countries’ experiences.

Overview

The objective to achieve inclusive development is at the top of many governments’ agendas because high levels of inequalities negatively affect well-being and growth. Yet, innovation policies have as yet only been assessed in terms of their impact on the growth of aggregate value. This is because innovation is central for development both to address social challenges and to improve economic performance and create jobs.

However, the impacts of innovation and growth are not always inclusive from various perspectives:

- First, they are not necessarily “socially inclusive” as they can increase inequalities in income and opportunities of different groups in society.
- Second, innovation dynamics and policies have impacts on “industrial inclusiveness”: the extent to which an economy’s firms and institutions differ in their innovation and productivity performance. Many emerging and developing economies have economic structures characterised by “islands of excellence” that co-exist with a group of weakly performing firms or institutions, and a substantial informal economy. Industrial inclusiveness also has impacts on social inclusiveness; these arise from the latter’s effects on employment and wages as well as the nature of products being made available on markets.
- Third, innovation dynamics and policies affect “territorial inclusiveness”: the geographic dimensions of industrial and social inequalities underpin inequalities between urban and rural areas or neighbourhoods in the same city.
Project Summary

In order to develop concrete policy solutions, the project will develop a framework to analyse innovation and related policies from the perspective of industrial, social and territorial inclusiveness. It will take into consideration key characteristics of the innovation system and beyond that affect innovation policies’ impacts.

It will have four strands of work, each mobilising areas of OECD competence in innovation, education, and regional development, and development co-operation:

- **Innovation Policies for Inclusive Development**: This work will analyse the impacts of key innovation policies on industrial inclusiveness as well as their indirect effects on social inclusiveness. It will also focus on identifying ways to make traditional innovation policies more inclusive. Moreover, the project will investigate the conditions required for scaling up “inclusive innovation” initiatives.

- **Policy Impacts on Territorial Inclusiveness**: This work will discuss the geographical dimension of inclusive development and identify strategies to overcome industrial and social inequalities across places. There will be a particular focus on those policies that help bring out the positive spillovers of innovation policies for people and firms in different types of regions (urban and rural contexts) as well as complementary policies in other fields that enhance these spillovers.

- **Inclusive Innovation in Education**: This work will explore inclusive innovations for delivering better-quality education to marginalised populations. The objectives will be i) to raise awareness on inclusive innovation models in education, ii) to distinguish the conditions in which these kinds of innovations thrive and thereby iii) to identify opportunities for policy makers to support scaling up of successful initiatives of this type.

- **Policy Implications for Development Assistance and Developing Countries**: This work will focus on exploring how the project’s findings can apply to the institutional setting, policy frameworks, domestic capacity and economic structure of developing countries at more incipient levels of industrial and social development - and how it can inform development assistance provided by the countries under review to their neighbours, either through bilateral or triangular development assistance.

The analysis will focus on China, Colombia, India, Indonesia and South Africa, when possible, and draw on examples from OECD and other non-OECD countries so as to identify specific inclusive policies for
innovation. It is to be expected that a number of the mechanisms which link innovation and innovation policies to inequalities in developing countries are also in place in developed ones. Hence some of the conclusions of the project will apply to OECD countries as well.

Project Framework

The framework for analysing policy impacts takes into consideration three dimensions of inclusiveness: social inclusiveness, industrial inclusiveness and territorial inclusiveness. It also distinguishes policies depending on whether they focus mainly on one or on other dimensions of inclusiveness.

Tentative Project Framework for Analysing Policy Impacts in the Context of Development

Three sets of policies are identified. A first set of policies focuses on increasing overall revenue in a utilitarian perspective without specific focus on the distribution of benefits, and mainly impacts industrial inclusiveness. A second set of policies are, by contrast, explicitly focused on social inclusiveness. A third set of policies affect both social inclusiveness and industrial inclusiveness simultaneously, e.g. through differentiated territorial effects on firms and populations. The framework for analysing policy impacts also takes into consideration the characteristics of the innovation system and beyond that affect innovation policies’ impacts.

Yet, it is worth noting that the various dimensions of inclusiveness are closely connected and that policies typically impact multiple dimensions, at least indirectly due to interaction effects. For instance, industrial inclusiveness has implications for social inclusiveness. These effects arise from the latter’s effects on employment and wage conditions, factor reallocations as well as potentially the nature of products being made available on markets (e.g. health research addressing higher income consumers’ needs). Such
impacts, particularly where redistributive schemes are weak, can substantially impact on inequalities in income and opportunities.

Understanding the impacts of diverse policies on inclusiveness is complex and attempts at responding to all would not allow the project to develop useful policy recommendations. It is for that reason that the project will not seek to cover all areas extensively but rather focus on four key dimensions.

**Project Dimensions**

**Dimension 1: Innovation Policies for Inclusive Development**

The dimension will focus on i) the impacts of dominant innovation policies on industrial inclusiveness and the indirect effects on social inclusiveness. ii) approaches towards scaling up “inclusive innovation” initiatives with respect to social inclusiveness.

- **Impacts of Key Innovation Policies on Industrial Policies and their Implications for Social Development**

This line of work will analyse the impacts of key *innovation policies on industrial and social inclusiveness* and map *both direct and indirect effects*. This will not only depend on the nature of policies but also on key dimensions of countries’ innovation systems and beyond.

The project will, first, use the framework to describe, based on available qualitative as well as statistical data, *industrial inclusiveness* in selected countries. It will then investigate the *impacts of their policies on industrial inclusiveness*. The analysis will, third, *apply the framework* to study innovation policies of China, Colombia, India, Indonesia and South Africa.

Regarding the policies for analysis, a first policy dimension is the extent to which innovation policies prioritise leading “islands of excellence” by privileging these actors’ access to resources. Another pertinent policy dimension relates to the extent to which innovation policies prioritise *certain economic activities* (e.g. biotechnology or agriculture) as it will shape industrial inclusiveness. Moreover, the way innovation policies support *creation and destruction processes* is a key topic for industrial inclusiveness. To the extent that innovation continuously induces transformations, the question will be about managing the process and resulting implications on industrial inclusiveness.

The analysis will require identifying key characteristics of the *innovation system and beyond* that affect innovation policies’ impacts. This includes understanding how market failures, which are often stronger in emerging countries, affect firms differentially and how the existing policy mix provides solutions. For instance, if markets do not provide finance for viable innovation projects and if there are no policies in place to provide such financing, then only firms with financial resources will benefit from public support for the commercialisation of innovation.
Knowledge and Innovation for Inclusive Development

- **Policies for Scaling Up “Inclusive Innovation” Initiatives**

One way for innovation to contribute to social inclusiveness is via “inclusive innovations”. The question then arises is whether and, if so, how policies can support inclusive innovations to have bigger effects. Many successful inclusive innovations were initiated by local communities and operate with their own internal dynamics. Government intervention has to consider carefully how to build on those initiatives. Since public resources are limited, the relative importance of inclusive innovation approaches relative to other schemes (e.g. redistribution) needs to be explored.

Efforts to scale up successful “inclusive innovation” initiatives will need to overcome a variety of challenges. Their nature will likely differ substantially across different countries and the project will, in consultation with the national counterparts, select the most relevant focus for specific country studies. These include notably the following:

- **Exploring Opportunities for Scaling Up.** A number of innovations aimed at lower-income groups have a very local component and it is often the adaptation to the local context that has been the basis for substantial and sustainable welfare improvement outcomes. This suggests that scaling up “inclusive innovation” projects requires thinking about how processes for creating local inclusive innovations can be fomented elsewhere rather than seeking diffusion of the created innovations themselves.

- **Dealing with Potentially Complex Governance Issues.** Governance issues can be magnified for “inclusive innovation” initiatives because these policies will often require closer coordination with other policy areas such as, for example, health and education. Moreover, reaching lower-income groups often requires multi-level governance, e.g. cooperation beyond the national at the regional and sub-regional levels. The overall challenge consists in managing transaction costs so as to maximise project impacts on target groups.

- **Effective Ways of Involving Multiple Actors.** The success stories of existing “inclusive innovation” initiatives are in many cases a result of successful multi-stakeholder cooperation, such as private businesses, NGOs, universities and research institutions, as well as local communities, suggesting the importance of finding effective ways of involving multiple actors.

- **International Cooperation and Peer Learning on Inclusive Innovation.** International cooperation and learning from the existing policy experiences can help governments adopt best policy approaches in this emerging policy domain.

- **Evaluation of Inclusive Innovation Policies.** Evaluating progress made on policy implementation is also important including the question about adequate qualitative and quantitative evaluation mechanisms.

**Dimension 2: Policy Impacts for Territorial Inclusiveness**

There is an inherently spatial dimension to inclusive development. Inequalities across people and firms occur both within and across regions.

However, innovation-related resources tend to be concentrated within certain cities and regions, leaving many others behind. The developing world is often characterized by territorial “islands of excellence” which
are well integrated in global innovation networks but entirely disconnected from surrounding areas. These territorial “islands of excellence” are generally based in big and dynamic urban centres, where R&D labs of multinationals and knowledge intensive business services companies are located. However, a few miles away, under-development and poverty traps persist. Yet, the notion of distance, and its impact on innovation system phenomena, differs among countries.

This strand of work will identify strategies to overcome barriers to inclusiveness within cities as well as across regions, including to rural areas that are far from leading innovation hubs. It aims to address the issue from two angles:

- Maximising the spillovers of territorial “islands of excellence” to surrounding areas.

There are opportunities to reduce the knowledge divide, making such benefits more inclusive. An assessment will be made of common policy instruments and their role in effectively extending the innovation benefits beyond the territorial islands of excellence. Mechanisms to support the integration of different regional hubs into national and global innovation networks will also be addressed.

- Promoting inclusive development in rural and urban settings

Most innovation-related policies by design and by default concern urban areas. Rural areas face different conditions for innovation that often require other policy measures. Innovation policies may support sectors or clusters that are present in rural areas (often based on natural resources or tourism), or those that address social challenges that are particularly present in rural areas. The specific assets, needs, or development bottlenecks also require support from the sub-national authorities often responsible for developing strategies or implementing complementary policies, if not the innovation policies directly.

The analysis will be based on case studies generally from the priority countries of the project. Examples from the case studies and other desk research will be used to develop a typology of how different types of places can be considered in policies for innovation that strive for inclusive development. When possible, quantitative analysis using regionalised data will be used to identify elements of territorial inclusiveness of these knowledge and innovation-related activities as well as the possible spillovers from one region to another.

Dimension 3: Inclusive Innovation in Education

Developing and emerging countries have experimented with a number of inclusive innovations for delivering better-quality education to marginalised populations at low cost. The aims of the project will be 1) to identify inspiring examples of inclusive innovation in the education sector (between 50 and 100 illustrative cases that could inspire practice in other countries) and 2) to analyse the conditions in which they arise and the extent to which they could be scaled or inspire similar initiatives in other countries.

Analysing the impact of these practices will be of high relevance for all countries. The project will also contribute to raising awareness of education policy- and decision-makers of low cost innovations that could improve the delivery of education systems or address the challenges of access to education within the
Inclusive innovation in education poses a number of policy questions that the project will examine. These questions relate to cost, scalability, as well as to the precise features that make them effective.

Different “business models” can make inclusive innovation low cost or affordable to underprivileged populations. Low cost products or services grouped under the concept of “frugal innovation” correspond to different realities. Low-cost ICT equipment, such as laptops or tablets, with limited functionality compared to the full cost version, have also been developed to make them affordable to public authorities that distribute them to pupils in their region or country. The source of economies of inclusive innovation may also stem from business models that entail contribution of volunteers or public and private subsidies. In other words, affordable access to quality goods and services may be granted through donations schemes.

An assessment of the sources of cost reduction may shed light on different cost efficiency or affordability models of inclusive innovation in education. One major element will be to understand how apparent decrease in quantity or quality can be overcome in different models.

A closely related topic is the identification of what matters for their possible scalability. To what extent and in what conditions can inclusive innovations be effective in different contexts? Would they be as effective if implemented by public authorities or in other contexts?

Some inclusive innovations may need to be adapted more radically to new contexts. One key question for policy- and other decision-makers is to identify the key features that make inclusive innovations effective. The involvement of local communities in the delivery seems to be a common feature of many, though not all inclusive innovations. Where this is the case, one can wonder how the models could be replicated or adapted by commercial or governmental organisations.

Dimension 4: Identifying the Project’s Policy Implications for Developing Countries

This work will focus on adapting the innovation “toolbox” to the structures and realities in poorer countries so as to explore how such approaches can best be shaped and implemented.

The project will focus on whether and how findings from OECD research on more inclusive national science, technology and innovation strategies and assessment frameworks could be applicable to, and address, the social and economic needs of poor people (the “bottom of the pyramid) in a range of lower-income developing country settings.

One of the greatest challenges the development community faces today is how to rapidly and durably lift the billions of people living at the “bottom of the pyramid” out of absolute poverty. Science, technology and innovation play fundamental roles in powering growth and improving wellbeing, and for decades the donor community has been engaged across the developing world to strengthen knowledge systems, invest in applied science in key sectors, and foster technology transfer through direct investment and “twinning” arrangements between OECD and developing country enterprises. Attention has already focused on facilitating the development and diffusion of “appropriate technology”, relying on local materials, simple designs and production methods adapted to local resources, capacities and conditions. These efforts have,
however, not always focused explicitly on ensuring there is a concomitant direct, tangible and widespread impact on lower-income groups.

Yet, inclusive innovation is gaining visibility and traction. Within the development assistance community, inclusive innovation has been very much a part of aid efforts for many years - although it has not been “badged” as such. A wide variety of simple, stripped-down products developed through donor support have dramatically improved the wellbeing and livelihoods of billions of poor people. But the role of innovation has not been systematically promoted in its own right by the donor community - much less as a vehicle for reaching the bottom of the pyramid.

There is scope now – particularly through emerging information and communications technologies – to accelerate and expand efforts to reach the “bottom of the pyramid” through inclusive innovation policies and initiatives. The development assistance community can profit from the insights of policymakers in emerging, developing and OECD countries working in these areas.

This strand of the project will explore whether, and how, the innovation policy framework being developed through the project as a way of promoting more inclusive industrial and social development—which is a priori appropriate for rapidly industrialising economies characterised by dual economies – can also be of relevance and “fit” with the policy frameworks, domestic capacity and economic structure of developing countries that are at more incipient levels of industrialisation e.g. without a large, modern, technologically advanced productive sector.

In working with one pilot country, an effort would be undertaken to identify the elements of the project’s tool(s) and the emerging policy framework on innovation for inclusive development that are most relevant beyond the country to its neighbours. The outcome of these findings could then be discussed with various stakeholders to ascertain the applicability of the framework to neighbouring countries, and the utility/scope for sharing findings with regional development institutions (as e.g. SADC, UNECA and NEPAD); see if there is interest in providing development assistance by supporting “inclusive innovation” policies in neighbouring countries; test the applicability of the project’s framework in the context of neighbouring countries; assess whether/how inclusive innovation strategies could be pursued through triangular assistance modes of co-operation.

Depending on the outcome of the findings from the analyses, a set of recommendations will be developed and shared with relevant experts in the development community.
Knowledge and Innovation for Inclusive Development

Stakeholder Involvement

The project is conducted in close co-operation with its Advisory Group, composed of representatives from the project’s partner countries and volunteer delegates from the OECD’s Committee for Scientific and Technology Policy. The different strands of work also involve other OECD committees. The project closely engages with experts in the field and relevant international and national initiatives on various dimensions of the projects. The November 2012 Conference on Innovation for Inclusive Innovation, which was jointly organized by the South African Department of Science and Technology and the OECD, was a first step that initiated dialogue and co-operation with stakeholders.

Timeline

In 2013 and 2014 the project will produce several working papers to explore the various dimensions of the project and collect relevant evidence. A publication in 2014 will distill the main policy solutions identified. The project’s findings will also be integrated as part of the OECD-World Bank Innovation Policy Platform.

Events

The project will engage in a series of conferences and workshops to exchange with experts, consult with policy makers and communicate the project’s results widely. The OECD Global Forum of the Knowledge Economy in Istanbul on 22-23 October 2013 will be one instance for discussions. An experts meeting focused on the initial findings of the project is planned for spring 2014. A high-level event in 2014 will present the project’s final results.

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