

# Development in Brief



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## Innovations in Developing and Emerging Countries

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Much human development progress is attributable to groundbreaking innovations, such as medical breakthroughs in the development of vaccines that have helped reduce mortality rates worldwide. It therefore comes as no surprise that the growing challenges faced by developing countries – from climate protection to safeguarding jobs – are going hand in hand with a call for innovative solutions. But what exactly does the term ‘innovations’ mean in the development context, where do innovations arise, and what contribution can international cooperation make?

### **Incremental innovations ensure that existing knowledge is further developed and adapted to local circumstances**

In the development context, the term ‘innovations’ is rarely understood to mean radical world firsts; it usually means products, procedures or services which, although new and advanced in the respective local context, have already been disseminated around the world. In the case of consumer products, for instance, this often involves simplified and less expensive versions of products developed in industrialised countries. These are then adapted incrementally to local circumstances and preferences, so that lower income groups can use them, and afford them.

### **Necessity is the mother of invention: many ideas originate in developing countries**

Innovation paths are not determined exclusively by industrialised countries, however. Many new ideas arise in developing countries themselves, e.g. as a result of the lack of local infrastructure. Products or services are then created which have never before existed in that form in industrialised

countries. In a few such cases, common stages of development are even leapfrogged. One familiar example is the Kenyan money transfer system M-Pesa. Given the lack of banking infrastructure, this innovative approach makes use of the growing field of information and communication technologies (ICT). The service facilitates financial transactions through mobile banking, and is also available to people who have previously had no access to the financial system. In Kenya alone there are already 17 million registered users. The increasing dissemination of ICT in particular has led to the emergence of a wide variety of innovative solutions in developing countries that also broaden the scope for development-policy action. Examples are found e.g. in the fields of rural health care (e-health), transparency and citizen participation (e-governance), and education (e-learning).

### **Innovations also spread in the opposite direction and create market opportunities**

Traditional competitive advantages such as raw materials or low labour costs are often no longer sufficient to guarantee competitiveness. Consequently, the economic development of many developing countries and emerging economies will in the future be more dependent on their ability to translate knowledge into innovations. Simple and low-cost product and process innovations create export opportunities in countries with a similar development status, and drive growth in South-South trade. Some products that were originally designed for use in developing countries, such as low-cost and portable ultrasound units, are now also finding markets in industrialised countries (reverse innovation).

### **The supply of innovative solutions to poverty-related problems remains low**

Despite the positive trend, in many areas there is still a lack of innovations that specifically address the needs of poor groups. For instance, there is often still a lack of development of affordable medicines and diagnostic procedures for neglected, poverty related diseases. Such innovations usually arise in response to market pressure. However, since the prospects of profit are thin and the risks usually high, the incentive for researchers and the private sector to invest in identifying solutions to the specific problems of poor groups is little. This ‘innovation gap’ is being filled sporadically by development actors or social enterprises that are more interested in reducing poverty than in potential profit. Their idea factories manufacture pro-poor innovations such as mosquito nets impregnated with insecticides to prevent malaria, or low-cost irrigation pumps that enable farmers to practice agriculture profitably.

### **Innovations require expertise and finance**

This brief overview demonstrates that the origin and range of innovations can vary widely. Whether innovations are incremental, radical or pro-poor, they are all important steps toward successfully tackling the numerous challenges faced by developing countries and emerging economies.

International cooperation in many forms can play an important catalytic role in this context. Through direct investment or joint development projects it can provide countries with easier access to existing knowledge, e.g. by transferring innovative environmental and climate-related technologies. Local potential for innovation can be mobilised and supported through special lines of funding for innovative enterprises and research. And the enabling frameworks for innovation can be strengthened systemically by providing advisory inputs, investing in education and scientific infrastructure, and promoting partnerships between the private sector and research institutions. ■