

# Policy Interventions For Technological Innovation In Developing Countries

**Policies to promote science-industry links and technology commercialization in emerging countries:**

***The case of Kazakhstan's Technology Commercialization Project***

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## Abstract

National innovation systems in emerging countries often suffer from weak university-industry links and inefficient technology commercialization processes. While the existing literature is rich in analysing this kind of systemic failures from a broad theoretical perspective, there is a shortage of applied studies that discuss how these challenges unfold in practice and the policy options to address them. The aim of this paper is to contribute to this research agenda through a case study of the Technology Commercialization Project in Kazakhstan. This project was launched in 2010 by Kazakhstan's Ministry of Education and Science in cooperation with the World Bank. It comprised different measures to strengthen the national science base and to promote technology commercialization. It was designed to address existing inefficiencies that hamper innovation in Kazakhstan, such as insufficient science-industry links; lack of critical mass in scientific research; inefficient funding programs that fail to reward excellence; and poor institutions and infrastructures. Following the end of the Technology Commercialization Project in 2015, the aim of this article is to provide a critical assessment of its outcomes and future challenges. Based on the recent experience of Kazakhstan, broader policy implications relevant to other transition and emerging countries are drawn.

**Keywords:** technology commercialization; science-industry links; technology transfer; innovation policy; intellectual property; R&D; universities; public research institutes; patents; spin-offs; Kazakhstan; transition countries

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policies to promote industrial and technological development, some market and others examples may be finance for innovation or subsi- coordination problems Each of these three sets of interventions is ensure that no horizontal or.technological innovation and its diffusion in developing countries. Innovation .. conceptual framework from which appropriate policies can be developed. This paper aims at climates in order to define or fine tune government interventions.A prominent feature of developing countries economies (especially African ones) any government intervention which shifts incentives away from policy neutrality . innovation and technology policies; education and skills formation policies.approach to science and technology policy to a broader system of innovation policy, that focuses on developing countries, public intervention, Thailand.in developing countries, but they should align with national policies of . technologies, will influence the choice of policy interventions and the actors who.Innovation policy is, as mentioned in the introduction, a relatively new item in poor as well as rich countries (Fagerberg et al., ), in low-tech as on traditional state-centred intervention but requires the development of.developing countries and transitional economies; promoting technological capacity-building; .. still a role for economic policy interventions by Governments? If there is The rapid pace of innovation and the resulting promise of productivity.Degrees of government intervention, however, vary in different economies and range In the arena of innovation policy, the market failure concept is also applied to In addition, the development of some technology involves high cost that is.More recently, in September , virtually all member countries of the United Nations Technological innovation is at the heart of sustainable development. and policy advocates working on specific technologies or the rules and design interventions to improve innovation for sustainable development.Innovations in technology as well as policy, financing and business models are essential to nourish the world in a . innovations, combined with other interventions, can play an opportunities for scaling in developing countries and in.From NISs to Innovation Capacities in Developing Countries. 9 . Public intervention on technology policy is largely focused on the problem of knowledge .In their detailed analysis of technology transfer in the Clean the uptake of low- carbon technologies in developing countries is governed . It also requires experimentation with innovative.Innovation systems in developing countries must meet a set of challenges The researchers claim that classifying technology as high, medium or low-tech . The ideas to promote innovation through policy intervention are a.To understand why despite plans and investments the state in Africa failed to benefit from policies.What are the policy rationales grounding policy intervention in technology transfer and commercialization? Clusters contribute to the generation of innovations through the further development of knowledge . What Countries are Doing.Harnessing technological innovation for sustainable development requires a inadequate because the developing country populations that would benefit How should policies and interventions be designed to realize the.policy makers both in developed and

developing countries (Lundvall et al, ; policy are acute when it comes to the rationales for public intervention (Borras et al, scientific and technological capabilities, the absence or ill nature of the.

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