

Article

Indigenous Knowledge and Developing Countries' Innovation Systems: The Case of Namibia

Jussi S. Jauhiainen^{1,2,*} and Lauri Hooli²

¹ Institute of Ecology and Earth Sciences, University of Tartu, 50090 Tartu, Estonia

² Department of Geography and Geology, University of Turku, Turku FI-20014, Finland; lauri.hooli@utu.fi

* Correspondence: jusaja@utu.fi; Tel.: +358-2-333-51

Received: 15 July 2016; Accepted: 21 December 2016; Published: 2 March 2017

Abstract: This article analyzes in-depth the development trajectory of the innovation systems (IS) in the case of Namibia. The research data consists of documents, interviews and studies related to IS development in Namibia from the 1990s until early 2016. The case study highlights the spatiotemporal challenges of creating an IS in a developing country with limited STI resources and the potential mismatch between related strategies and practices. IS is a broad framework that identifies and maps potential relevant actors for innovation development but it does not necessarily enhance interactions between the actors of IS. For developing countries, the doing-using-interacting mode of innovation fits better when the aim is to integrate indigenous knowledge (IK) into an IS. An IK-included IS can facilitate participatory development processes, foster socioeconomic resilience of local communities and enhance the comparative advantage of a developing country.

Keywords: Innovation systems; Indigenous knowledge; Developing countries; Namibia; Africa

1. Introduction

A knowledge economy based on knowledge creation and a well-established innovation system (IS) is a critical driver of socioeconomic success in the most developed countries (Tödtling *et al.*, 2013). The concept and application of an IS—the cooperation between all economic, social, political, institutional, and organizational factors, and all other factors influencing the development, diffusion, and application of innovations (Edquist, 2005: 182)—have become a recent policy tool in developing countries to foster transformative change. Key national actors, supported by the international donor community, have conceived that innovation-driven regional development fosters a knowledge economy, resilience to various changes and the capacity to create new growth paths (OECD, 2012).

Notwithstanding the growing popularity of the IS, the development and implementation of innovation

policies in developing countries is not sufficiently analyzed. Few studies have addressed the IS in-depth and their creation in developing countries. Most scholars have conducted analyses under the label of “developing countries” rather than “developed” middle-income and BRICS countries, such as South Korea, Taiwan, Brazil, and China (Watkins *et al.*, 2015). Much less attention has been paid to the creation of IS in poorer countries, especially in sub-Saharan Africa (Muchie *et al.*, 2003; Bartels & Koria, 2014; Oyelaran-Oyeyinka, 2014). Furthermore, there are substantial differences among developing countries in their socioeconomic contexts and their capacity to reach advanced knowledge-based societies and economies (see Intanakumnerd *et al.* 2002; Arocena & Sutz, 2003; Lundvall *et al.*, 2009; Bartels & Koria, 2014; Yun *et al.*, 2015).

Additionally, there is a policy transfer issue in regards to ISs. Despite many innovation scholars’ claims that the imitation of successful innovation policies of more developed countries does not produce outstanding results in developing countries (see Tödting & Trippel, 2005; Hidalgo *et al.*, 2007; Asheim *et al.*, 2011), innovation and technology policies are transferred from developed to developing countries. This means a heavy emphasis on research and development (R&D) and science, technology and innovation (STI) modes of innovation (Daka & Toivanen, 2014). According to Oyelaran-Oyeyinka (2014: 485), the promotion of horizontal collaboration of economic and non-economic actors has not been the key focus of innovation policies in sub-Saharan Africa. Instead, most attention has been on the transfer of skills and equipment from developed countries.

This article takes a novel perspective on IS in developing countries. As authors of this article, we analyze in-depth the development trajectory of the IS in the case of Namibia. The case study highlights the spatiotemporal challenges of creating an IS in a developing country with limited STI resources and the potential mismatch between related strategies and practices. International policy makers, donor communities, and experts are actively involved in IS development in developing countries, but they seldom understand how an IS can be properly developed, applied and governed in the specific cultural and political setting of different developing countries (Gebhardt, 2013). This challenges the needed focus of IS on smart specialization through place-based economic diversification policies supported by unique assets, characteristics and comparative advantages in the regions (McCann & Ortega-Argiles, 2013; Boschma, 2015).

The main focus in this article is to discuss indigenous knowledge (IK) in and with the IS in a developing country. IK is locally embedded knowledge that is context-specific, accumulated over time and unique to a given culture, society or local community (Sillitoe & Marzano, 2009). IK is often transmitted orally or through demonstration and imitation, and it is learned by repetition (Subba Rao, 2006), thus having characteristics of the doing–using–interaction (DUI) mode of development (see Lundvall *et al.*, 2009). IK is one strategic direction of the innovation policy in many sub-Saharan African countries and elsewhere in developing countries. However, hardly any previous research exists about the role of IK in innovation policies and ISs. IK may provide a potential competitive advantage towards fostering the content and impact of ISs in developing countries and create needed related varieties of IS. As our case study illustrates, however, various challenges exist in the creation of IK-based innovations and accommodating these innovations as inherent parts of innovation policy.

The theoretical framework is exemplified with a case study of Namibia, a transition country in southwestern Africa. In the context of sub-Saharan Africa, the case of Namibia is relevant because it was early in institutionalizing the national IS in the 1990s. International development aid and foreign

Download English Version:

<https://daneshyari.com/en/article/8940860>

Download Persian Version:

<https://daneshyari.com/article/8940860>

[Daneshyari.com](https://daneshyari.com)