Available online at www.sciencedirect.com

ScienceDirect

Procedia - Social and Behavioral Sciences 169 (2015) 161 – 169

Procedia
Social and Behavioral Sciences

The 6th Indonesia International Conference on Innovation, Entrepreneurship and Small Business, 12 – 14 August 2014

Developing New Ideas & Capability-Based Framework for Innovation Process: Firm Analysis for Indonesia

Arif Hartono[a,b]*

[a]*Management Department, Faculty of Economics, Universitas Islam Indonesia, Yogyakarta 55283, Indonesia*
[b]*PhD Student, Warwick Business School, The University of Warwick, Coventry CV4 7AL, UK*

Abstract

This paper aims to propose a new holistic measure of innovation that encompasses the various narrow definition of innovation along three steps of the innovation process, namely new ideas and capability-based framework. The framework consists of three sequential steps such as news ideas generation, conversion and exploitation. Compared to the previous studies, this framework will be the pioneer that provides the following contribution such as the integration of new ideas and relevant a firm's capability, a wider range of internal and external new ideas sources and types of innovation as the output of innovation activities. The developed framework will be tested to measure innovation activities of the Indonesian firms from a wide range of size and types of industry background

Peer-review under responsibility of Center for Innovation, Entrepreneurship, and Leadership (CIEL), School of Business and Managements (SBM), Institut Teknologi Bandung (ITB).

Keywords: new ideas; firm capability; innovation process; firm level; Indonesia

* Corresponding author.
E-mail address: phd13ah@mail.wbs.ac.uk

Peer-review under responsibility of Center for Innovation, Entrepreneurship, and Leadership (CIEL), School of Business and Managements (SBM), Institut Teknologi Bandung (ITB).
doi:10.1016/j.sbspro.2015.01.298

1. Introduction

1.1. Innovation in Developing Countries

Innovation role as the important driving force of economic development is widely acknowledged. Evidences have shown that innovation is the main driver of prosper, growth and sustain a high profit for firms (e.g. Drucker, 1988; Christensen 1997). In the case of industrialised countries, evidence from innovation studies at the firm level showing the positive links between R&D, innovation and productivity (Griffith et al., 2004; Griffith et al., 2006; OECD 2009). However, evidence shows that firms' ability to transform R&D into innovation in developing countries is much more mixed than in industrialised countries (Crespi & Zuniga, 2012). Previous studies from newly industrialised countries such as South Korea (Lee & Kang, 2007), Malaysia (Hegde & Shapira, 2007), Taiwan (Yan Aw et al., 2008), China (Jefferson et al., 2006) reveal that a positive association between R&D, innovation and productivity. In addition, evidence shows that the higher levels of investment in innovation (i.e. R&D) lead to a higher propensity to introduce technological innovation in firm level in the following developing countries Argentina (Arza & Lopez, 2010; Chudnovsky et al., 2006), Brazil (Raffo et al., 2008) and Bulgaria (Stoevsky, 2005). In contrary, evidence from Chile (Alvarez et al., 2010; Benavente, 2006) and India (Krishnan & Jha, 2011, p. 22); do not support the findings. In the case of Indian firms, "conventional innovation indicators – such as R&D intensity and patenting activity – does not give the impression of a strong innovation strategy in these firms" (Krishnan & Jha, 2011, p. 22).

It is often argued that many firms in the developing countries rely on 'reinventing the wheel' strategy and do not heavily rely on R&D efforts (Basant & Fikkert, 1996); accordingly imitation and acquisition technology seem to be more important than performing R&D and innovation activities (Bell & Pavitt, 1993). Altenburg et al., (2008) adds that firms in emerging economies are laggards in innovation, especially in cutting-edge innovations. However, recent evidence derived from case studies in emerging economies such as Korea (Yong Choung et al., 2014), show that some innovation systems are currently in a transition period from being adopters and imitators (catch-up period) of foreign technology; to being creators of new technology and process (post catch-up period), aiming to be a player in global market. This suggests that developing endogenous innovation capabilities is possible.

Previous scholars have studied innovation in developing countries from a wide range of perspectives for instance: intellectual property and patent (e.g. Chen & Puttitanun, 2005; Lee et al., 2013); technological innovation (e.g. Almeida & Fernandes, 2008; Becheikh, 2013; Crespi & Zuniga, 2012; Srinivas & Sutz, 2008; Zhao et al., 2005); R&D investment and activities (Alvarez et al., 2010; Arza & Lopez, 2010; Benavente, 2006; Chudnovsky et al., 2006; Crespi & Zuniga, 2012; Hegde & Shapira, 2007; Jefferson et al., 2006; Lee & Kang, 2007; Raffo et al., 2008; Stoevsky, 2005; Yan Aw et al., 2008). One of the main weaknesses of the mentioned studies is that they tend to use one aspect of innovation such as IP and patent, R&D investment or technological innovation rather than a multi-dimensional construct that might not be appropriate for developing countries (Bogliacino et al., 2009). Battisti & Stoneman (2010) add that one aspect of innovation, for example technological innovation, is not sufficient to gain competitiveness and it avoids synergistic effects as well as joint adoption of other aspects.

1.2. Innovation Activities of Indonesian Firms

Indonesia is predicted to be one of the emerging economic giants from the MINT (Mexico, Indonesia, Nigeria and Turkey) countries. It is also predicted that the Indonesian economy has the potential to be the ninth largest in the world by 2050 (BBC, 2014). To achieve this, Indonesia need to learn from China's experience. Many economists argue that China now has reached a phenomenon known as a 'middle trap income', as the country is not able to achieve rapid growth to be a high income country (Flanders, 2012). According to the World Bank, increasing competitive ability in the economy and fostering innovation is the answer to overcome such phenomenon (Flanders, 2012). Accordingly, innovation measurement must be conducted to support any relevant strategy and policy that involve interconnectedness between policy, research and statistics in order to shed light on strategy and policy (Sloan, 2006). However, despite its importance the knowledge of the innovation mode and the overall innovation dynamic by Indonesian firms is quite fragmented and limited.

Bogliacino et al., (2009) reviewed published innovation survey conducted in developing countries in Europe, Asia, Africa and Latin America regions. They revealed that innovation surveys similar to the European ones based