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Challenges and dynamics of FinTech crowd funding: An innovation system approach

Jarunee Wonglimpiyarat

College of Innovation, Thammasat University, Anekprasong 3 Bldg., Prachan Rd., Bangkok 10200, Thailand

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ABSTRACT

FinTech crowd funding mechanism has gained popularity as an alternative of entrepreneurial financing worldwide. This paper reviews the challenges and dynamics of FinTech crowd funding platforms in the continents of USA, Europe and Asia. The case study analysis of Thailand, an emerging Asian country, under the policy direction of "Thailand 4.0" provides interesting results that can be applied to other developing economies with regard to start-up financing. The findings point out the barriers both at the policy and operation levels underlying the Thai entrepreneurial innovation system. The paper provides lessons and implications to strengthen the FinTech crowd funding platform.

1. Introduction

Crowd funding, a type of start-up financing, has emerged as an alternative financing platform to support entrepreneurial ventures and small businesses. The governments of many countries have set the policy direction in moving their economies towards innovation driven nations. The objective of this paper is to explore the dynamics of FinTech crowd funding in the major continents/countries of USA, Europe and Asia. Particularly, the study analyses FinTech crowd funding platform in the entrepreneurial innovation system under the policy direction of "Thailand 4.0".

The structure of this paper is organised as follows. Following the introductory section, this paper has 4 further sections. Section 2 reviews the theoretical literature on national innovation system (NIS) and financial policies to support innovation development as well a venture capital and FinTech crowd funding. Section 3 explains the methodological framework. Section 4 reviews the challenges and dynamics of FinTech crowd funding platform in the major continents/countries of USA, Europe and Asia. Specifically, it analyses the case study of Thailand's financial innovation system as well as the crowd funding platform to support entrepreneurship. The lessons learnt from the empirical analyses with regard to start-up financing can be applied to other developing economies. The policy recommendations and conclusions are drawn in Section 5.

2. Theoretical framework

2.1. National innovation system (NIS) and financial policies to support innovation development

The concept of the national innovation system (NIS) refers to the interactive system of institutions, private and public firms, universities and government agencies, aiming at the production, diffusion and exploitation of knowledge within national borders. Interactions can be achieved through both market mechanisms and non-market mechanisms such as collaboration and long-term

E-mail address: jaruneew@tu.ac.th.

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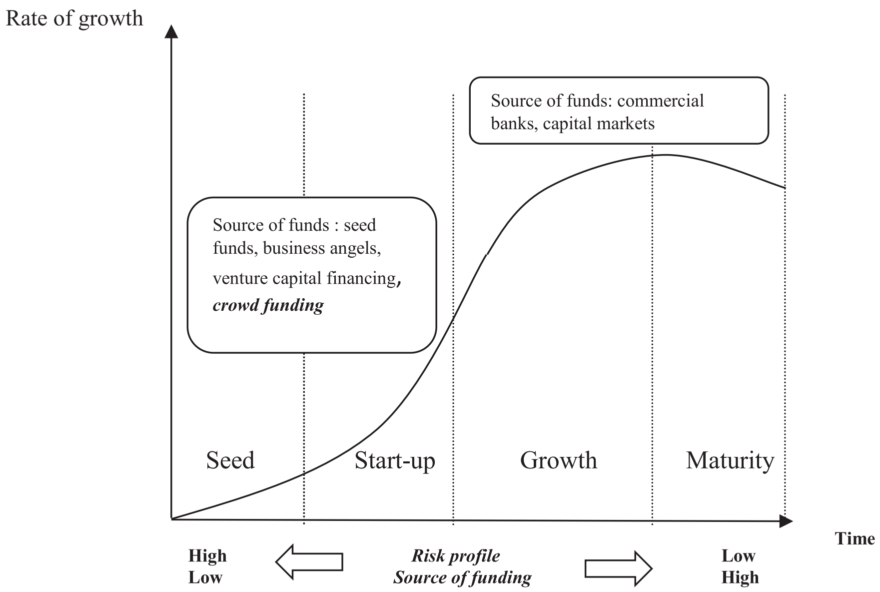

Fig. 1. Funding requirement along the life cycle of the technology-based firms.
Source: The author's design.

network arrangements. The NIS concept is a dynamic tool to investigate, formulate, plan and position the national economic and social development by using technology and innovation as the main driving force (Carlsson, 2006; Lundvall, 1992, 1998, 1999, 2003; Mani, 2004).

Financial policies play an increasing important role in guiding the direction of innovation system development. The financial policies are among the key operational priorities in developing countries to support investment by local firms, especially small and medium-sized enterprises (SMEs), and transnational corporations investing in these countries (David, Hall, & Toole, 2000; Hall & van Reenen, 2000; Hyytinen & Toivanen, 2005). In knowledge-based economies, economic growth is increasingly dependent upon innovation whereby access to finance is seen as a critical factor in this process (Bygrave & Timmons, 1992; Freeman & Soete, 1997; Pissarides, 1999).

A close review of the studies on the financial system for supporting innovation reveals that the difficulties of firms lie in their early stages of business development and innovation process (Gompers & Lerner, 2001, 2004). In developing countries, the government financing mechanism plays an important role in innovation system (Mani, 2004). The set of institutions and financial policies are used to support technology and innovation development so that the efforts of research and development (R&D) institutions and industries can lead to effective technology commercialisation, bringing about business creation and economic growth. In other words, the government financing mechanisms provide the much-needed support to nurture the development of technology and assist the process of commercialising innovations.

Fig. 1 shows the funding requirement along the life cycle of technology-based firms from seed, start-up to growth and maturity stages. It can be seen that in the early stage of the life cycle, start-up firms often face difficulties from lack of collateral to access financial resources from banks and other financial institutions. In the entrepreneurial financing perspective, firms need capital to turn new ideas into the prototypes and prepare for commercial launch. Nevertheless, given the risky nature of financing new ventures, the source of finance for early stage ventures is rather limited. Therefore, the seed funds, business angels, venture capital (VC) and crowd funding provide important sources of risk finance for high risk, early stage start-ups. Seed funds or capital from private individuals play an important part in the growth of technology-based firms. In later stages (growth stage onwards), commercial banks and capital markets are critical for further growth of successful technology-based firms.

2.2. Venture capital and FinTech crowd funding

Venture capital (VC) financing plays a leading role in the early stages of innovation development. VC is one form of equity financing used to fund high-risk promising operating companies, often high-technology firms with high growth and exit potential. By definition, VC is a high-risk, potentially high-return investment to support business creation and growth. It is a source of funds that typically finance new and rapidly growing companies through equity participation (Bygrave & Timmons, 1992; Gompers & Lerner, 2001).

The VC funding becomes part of the financial innovation system in which the government actively uses VC as a method for commercialising innovations. VC is regarded as the high-profile way of injecting capital to transform the economy. It is a high-risk financing investment which venture capitalists expect high returns in the form of capital gains and dividend (Dixon, 1990; Pandey & Jang, 1996). The concept of modern VC is defined by Megginson (2002) as a professionally managed pool of money raised for the