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Lean innovation: Family firm succession and patenting strategy in a dynamic institutional landscape

Michael Carney[a,*], Jing Zhao[b], Limin Zhu[b]

[a] John Molson School of Business, Concordia University, Montréal, Québec, Canada
[b] Renmin University of China, Beijing, China

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ABSTRACT

The paper is motivated by recent findings about family firms (FFs) ability to 'do more with less' in the innovation process, which we dub 'lean innovation'. We consider lean innovation patenting strategies in an emerging market context that is undergoing improvement in its intellectual property protection (IPP) regime. Grounded in upper echelons theory we expect that the initiation of an intra-family succession will lead to generational shift in a FFs approach to IPP, as evinced in its patenting strategy. Applying a difference in difference methodology we are able to compare FFs who have undertaken an intra-family succession with FFs who have not yet initiated a succession process. Further, we consider the second difference as a strategy change between the pre-and post-succession period thereby isolating the effects of the post-succession change on patenting strategy. We also distinguish between different patent types (invention, utility, and design), and consider FF propensity to patent, and patent conversion rates. Based on generational differences between founders and successors we find successors are significant adopters of lean innovation patenting strategies. We add to the sparse literature on succession in emerging market FFs and contribute to improved understandings of long-term FF strategic adaptation in a dynamic institutional landscape.

1. Introduction

Studies of FFs' innovation capabilities have accelerated recently producing a stream of new findings. Much of the new research challenges the once widely held view that FFs innovation capability will be constrained by conservatism, tradition, risk, and loss aversion (Gómez-Mejía, Cruz, Berrone, & De Castro, 2011; Chrisman & Patel, 2012) and that the conservative tendency will be accentuated as a firm ages generationally (Morck, Stangeland, & Yeung, 2000). Recent findings suggest the family tradition can be a source of innovation (De Massis, Fratini, Kotlar, & Petruzelli, 2016); that FFs demonstrate a distinct advantage with incremental innovation (Nieto, Santamaria, & Fernandez, 2015) and that there is much heterogeneity in FF innovation capability, with some situations that produce superior innovation (Chrisman, Chua, De Massis, Frattini, & Wright, 2015). While the overall pattern of these diverse strands of work remain entangled (Röd, 2016), a recurrent theme in the recent literature suggests that, compared with non-FFs, while FFs typically invest fewer resources in innovation they tend to generate greater innovation output from their investment (Classen, Carree, Van Gils, ö Peters, 2014; Diéguez-Soto, Manzaneque, ö Rojo-Ramírez, 2016; Matzler, Veider, Hautz, ö Stadler, 2015), a conversion rate suggesting that FFs "do more with less" (Duran, Kammerlander, Van Essen, ö Zellweger, 2016), which we dub lean innovation.

However, little is known about how succession effects FFs' potential to benefit from lean innovation. Succession forms 'the core of the family business literature' (Sharma, Chrisman, ö Chua, 1997: 22) and recent studies suggest succession can be an opportunity for firm renewal (Cucculelli, Le Breton-Miller ö Miller, 2016), and a potentially pivotal time for redirecting innovation strategy (Hauck ö Prügl, 2015). In some cases the presence of a younger successor may drive a more expansive innovation agenda (Bannò, 2016) but the relationship between succession and subsequent lean innovation performance is not fully fleshed out. Moreover, existing work on lean innovation is focused on advanced European countries, where protection for innovation output is well-developed. There are no studies of FFs capacity for lean innovation in emerging markets, where FFs comprise a significant proportion of the economy and where innovation output is not always well protected.

We addressed this gap in the literature by considering differences in lean innovation performance between publicly-listed family-owned and controlled firms that have initiated the succession process with those that have not yet to do so. Our research context is a dynamic emerging

* Corresponding author.
E-mail addresses: Michael.Carney@Concordia.ca (M. Carney), zhaojing@rbs.org.cn (J. Zhao), zhulimin123@ruc.edu.cn (L. Zhu).

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market which in the recent past has been characterized by weak intellectual property protection regime providing few incentives for entrepreneurs to seek patent protection for their innovations. However, over the last decade political leaders have endeavoured with some success to strengthen property rights. Given FFs parsimonious approach to R&D investment we reason that lean innovation will become increasingly appropriate strategy in a competitive market with growing protection for intellectual property. Specifically, we hypothesize that as the rising generation enter into leadership positions they will be more likely to enact a lean innovation strategy compared with their forebears whose leadership tenure coincided with a weak property rights regime. We situate our study in an upper echelons perspective (Hambrick ö Mason, 1984; Hambrick, 2007) which views executive succession as an opportunity to inject 'new blood' into strategic decision-making. In this perspective, succession represents an adaptive event in the life cycle of the firm with the potential to realign firm strategy with current market imperatives that have become misaligned under the inertia of a previous leader (Boeker, 1997).

Our primary contribution is to identify and generate insight into the FFs innovation literature within the time frame of intra-family leadership succession, a topic described by Hauck and Prügl (2015:106) as a 'blind spot' in the literature. Specifically, we contribute to a growing lean innovation research stream emphasizing FFs unique constraints and their ability to translate disadvantages into advantages. Further, we add to the sparse literature on succession dynamics in an emerging market context and contribute to improved understandings of intergenerational adaptation in a dynamic institutional landscape. In the following section, we introduce our research context and describe our theoretical foundations followed by the development of three hypotheses, data, methods, results and a discussion of research and practitioner implications.

2. Research context

We emphasize two salient features of the institutional environment in our research context: the legal environment for intellectual property protection (IPP) and private entrepreneurs' social legitimacy. First, firms seek to patent their proprietary products and processes to appropriate returns from their innovation investments. However, patents cannot provide iron clad protection for all proprietary technologies and the process of registering and enforcing patents can be costly. Hence, the decision to patent is a strategic decision for FFs' owner managers. Much of the firms' decision calculus will depend on the efficacy of the legal system and more generally, a country's appropriability regime, the system of intellectual property protection that govern an innovators ability to capture the profits generated by an innovation (Teece, 1986:287). As a matter of course FFs should be expected to value patents since they often serve as a vital tool for long-term wealth preservation (Bannò, 2016; Matzler et al., 2015). However, the efficacy of the appropriability regime to assign and protect intellectual property is variable around the world: in some countries patents are strictly observed but in others enforcement against their infringement is lax.

The setting for our study is China: a dynamic institutional and market landscape which in just four decades has risen from among the category of most impoverished and underdeveloped economies to become world's second-largest economy. The record of IPP in China is checkered. Historically, China's elites did not view the infringement of IP as a wrongful (Alford, 1995). The tradition of weak IPP has carried over into China's early reform period (1978–2001), with damaging consequences for innovation-oriented SMEs (Zhu, Wittmann, ö Peng, 2012). Moreover, China's lax appropriability regime has produced a wide array of infringement issues including intellectual property theft, pirating, counterfeiting, and product adulteration, which have tarnished China's reputation as a manufacturing superpower (Meyer, 2008). In the early years of reform there was little incentive for entrepreneurs to seek IPP protection with patents but that the situation is changing (Peng, Ahlstrom, Carraher, ö Shi, 2017). Foreign states have exerted pressure on China to clamp down on rampant piracy and party officials now recognize that to support the transition toward an innovation driven economy will require an appropriability regime that will furnish incentives for both domestic entrepreneurs and foreign investors if they are to invest in high-risk innovation activities.

The myriad institutional changes in Chinese society are far reaching and too great to catalogue here but we raise two pertinent developments. First, over the past two decades China's government has implemented substantial formal legal support for IPP. China joined the World Trade Organisation in 2001, which entails commitment to respecting intellectual property. These and other measures are bearing fruit: in the last decade China has experienced a surge in patenting activity due to IPP law amendments (Hu ö Jefferson, 2009) as well as a more general enforcement of property rights for private business owners. In 2016 China was recognised as the world's 25th most innovative economy as documented by the World Intellectual Property Organisation. China's IPP regime is not yet fully developed nor is it static, with ongoing evolution many entrepreneurs are now seeking the protection of patents, copyright and trademarks (Huang, 2017)

A second relevant contextual factor concerns a generational shift in FFs social legitimacy, that is, the way in which China's private entrepreneurs are perceived in the rest of society. Economic growth in China is powered by both politically favored state-owned enterprises (SOEs) as well as public and private family owned and controlled firms. However, in the early reform period China's private entrepreneurs were considered to be "pariahs" (Nee, 1992) encountering discrimination (Yamakawa, Peng, ö Deed, 2008), low social legitimacy (Xu, Lu ö Gu, 2014), harassment and expropriation by the government bureaucracy (Peng, 2004). In the absence of social legitimacy many private firms sought to disguise their identity portraying themselves as collective or municipal-owned enterprises (Chen, 2007).

Private entrepreneurs founding businesses in the early stages of reform would have been raised in the tumultuous years following the consolidation of the Communist Party's power. In this period, Chinese society was rocked by hardship, famine, and the political violence of the Cultural Revolution. Given the uncertainty and privation of these years, an entrepreneur, born in the mid-1950s would likely be imprinted with a conservative and cautious outlook on life. Given their poor political and economic standing this generation of entrepreneurs would bring a conservative orientation to the firms they founded and managed (Ghorbani ö Carney, 2016).

Recently, the founding generation has begun to step aside from leadership positions. Yet, the family-centric model of corporate ownership remains strong with extremely high levels of intra-family succession intention (De Massis, Sieger, Chua, ö Vismara, 2016). A recent survey finds that 90% of Asia's business owners are planning to hand over the control of their business to a rising generation family member (Schultz, 2015). Compared with their parents the rising generation of intra-family successors now inheriting leadership roles in publicly listed FFs were raised in a muchchanged environment. The rising generation has little experience of poverty and uncertainty, most have grown up wealthy and are likely to be better educated, and many will possess business and engineering degrees from prestigious foreign universities degrees. Due to China's one child policy many successors will have no siblings (Cao, Cumming ö Wang, 2015). Moreover, societal attitudes towards successful entrepreneurs are also changing with prominent entrepreneurs, such as Jackie Ma and Huateng Ma, founders of Internet giants AliBaba and Tencent (wechat), enjoying cult status in the popular media. Given the improving social legitimacy of private entrepreneurs and their privileged upbringing of successors we expect the rising generation to exhibit a more confident and expansive approach to